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SENDING ALL THE RIGHT SIGNALS

18 Industrial Automation and Control Cables

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Belden IndustrialTuff® Cables

Introduction

Tough Cables for Tough Environments

Today, more than ever, manufacturing productivity depends upon seamless data communication and automation systems. And both depend upon high-performance cabling solutions.

Depend on Belden

Belden has developed the world's most comprehensive line of industrial cabling solutions for applications like yours: whether you are networking your factory floor or your process equipment and devices to their controllers…and on to the control room, or relaying data between the control room, the engineering department, and remote manufacturing sites — or, all of the above. From your petrochemical, automotive manufacturing, pharmaceutical, power generation, pulp and paper, metals, food and beverage, or general manufacturing plant to your corporate headquarters — and everywhere in between — Belden has your cabling solution.

Most importantly you can have the peace-of-mind that is inherent with the use of Belden products since all Belden cables are manufactured in ISO 9001:2000 certified facilities to the industry's highest standards of quality, utilizing the most advanced equipment, systems, controls and processes available.

Belden cables give you the performance you need day after dependable day.

Innovative Technology

Bonded-Pairs

Many DataTuff® Industrial Ethernet cables feature Belden's patented bonded-pair technology. Bonded-pairs provide *Installable Performance®* — superior electrical performance even after the stresses of installation. Bonded-pairs exhibit the most robust and reliable electrical performance in the industry.

Shielding

The evolution of technology maintains steady demand for sophisticated cable shielding. Belden meets that demand with innovative shielding and shield effectiveness testing methods to supply you with high quality, dependable cable.

Belden's exclusive patented Beldfoil® design, with its aluminum/polyester foil, was the first shield to offer 100 percent cable protection against radiated emission and ingress at audio and radio frequencies.

Armoring

Belden's innovative armoring technology delivers maximum physical protection in harsh environments. Additional benefits include reduced cost of conduit, easier installation and re-routing, plus additional shielding.

Belden has the capability to protect data, electronic, instrumentation and control cables with interlocking steel or aluminum armor as well as continuous corrugated aluminum armor. Smooth or corrugated protective metal tapes are also available.

To Specify Part Number:

1	2	3456
Overall Jacket Type	Armor Type	Core Trade Number

Overall Jacket Type

Code	Material
1	PVC
3	CPE
4	TPE
5	HDPE
6	Oil Res II
7	Haloarrest®

Armor Type

Code	Material
2	Aluminum Interlock
3	Steel Interlock
8	Continuous Corrugated Aluminum

Insulation and Jacket

Belden formulates many of its own insulations and jacket compounds. As a result, they provide superior performance under a variety of hostile environmental conditions. See "Technical Information" at the back of this section for further details.

Intrinsically Safe Wiring

In accordance with NEC Article 504, intrinsically safe cables are colored blue for easy identification. Belden offers several industrial cables in intrinsically safe blue to meet your requirements for intrinsically safe wiring. Contact the NEC and/or your local inspector for specific guidelines.

Custom Capabilities

Most of our Industrial cables are available from stock. Many of these are available off the shelf from distributors. If you have a new or unusual application or you cannot find an Industrial cable in this catalog section that meets your technical requirements, contact Technical Support at 1-800-BELDEN-1.

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PLC/DCS Cable Cross Reference Guide

PLC/DCS Manufacturer	System Name	Belden Part Number	
ABB/Bailey Controls	FOUNDATION Fieldbus	See Protocol listings on page 8.6	
	Industrial IT 800 X A	9880	Network Trunk Cable
	Infinet	9880	Network Trunk Cable
		9463	Blue Hose® (Standard)
	Masterpiece 200	9880	Network Trunk Cable
		9907	Thin Network Trunk Cable
	MICRO-DCI	3105A	1-Pair, RS-485
	MICROLINK	9860	Twinax, 16 AWG, 124 Ohm
	Modcell	3105A	1-Pair, RS-485
	Profibus DP & PA	See Protocol listings on page 8.6	
Allen-Bradley/ Rockwell Automation	ControlNet™	See Protocol listings on page 8.6	
	DeviceNet™	See Protocol listings on page 8.6	
	DH, DH+, Remote I/O	9463	Blue Hose (Standard)
		9463F	Flexible Version (9463)
		129463	Aluminum Armor (9463)
		139463	Steel Armor (9463)
		189463	Continuous Armor (9463)
		YR28826	Dual Version (9463)
		YC39151	Dual Armored (9463)
		9463DB	Direct Burial (9463)
		YR29565	Various Color Jackets (9463)
		3072F	600V TC Rated (9463)
		YR41104	Low Smoke, Halogen Free
		YR28764	Super Thick (PLTC)
		89463	FEP 200°C, Plenum
	DH-485	3074F	600V Tray Cable
		3106A	1.5-Pair, RS-485 (PLTC)
		9842	2-Pair, RS-485
		YM39500	Flexible Version (3106A)
	Industrial Ethernet	See Protocol listings on page 8.6	
	Longline Communications	8723	Interface Cable
		88723	Plenum Version
Cutler-Hammer/ Westinghouse	IMPACC System	YR29090	Proprietary Trunk Cable
	I/Q System	9463	Blue Hose (Standard)
Emerson Process Management (Fisher/ Rosemont Systems) — Delta V	DeviceNet	See Protocol listings on page 8.6	
	FOUNDATION Fieldbus (Type SP50 ISA/IEC)	See Protocol listings on page 8.6	
	HART	See Protocol listings on page 8.6	
	Industrial Ethernet	See Protocol listings on page 8.6	
	Modbus	See Protocol listings on page 8.6	
	Profibus DP	See Protocol listings on page 8.6	
	Provox Plus	3091A	RG-11 Quad Shield PVC
		3131A	RG-6 Quad Shield PVC
	RS-485	See Protocol listings on page 8.6	
GE Fanuc — I/O Bus	DeviceNet	See Protocol listings on page 8.6	
	Genius 9030, 9070 PAC System	YR29841	PLTC Version
		9182	Communications Bus
		89182	Plenum Version
	Interbus®-S	See Protocol listings on page 8.6	
	Modbus®	See Protocol listings on page 8.6	
	Profibus	See Protocol listings on page 8.6	

PLC/DCS Manufacturer	System Name	Belden Part Number	
GE Fanuc — Sensor Device Networks	DeviceNet	See Protocol listings on page 8.6	
	SDS	See Protocol listings on page 8.6	
Honeywell	Access 4000 System	9248	RG-6 PVC
	FOUNDATION Fieldbus (Type SP50 ISA/IEC)	See Protocol listings on page 8.6	
	IPC 620 System I/O	9271	Twinax, 25 AWG, 124 Ohm
	IPC 620 System Serial Interface	9729	Up to 4,000 ft.
		9182	Up to 10,000 ft.
		89182	Plenum
	Series C	RS-485	Foundation Fieldbus Industrial Ethernet
	3000 UCN & LCN	3131A	RG-6 Quad Shield PVC
		3094A	RG-11 Quad Shield PVC
Honeywell Microswitch Division	Smart Distributed System	3086A	Mini
		3087A	Micro
Invensys/ Foxboro	FOUNDATION Fieldbus (Type SP50 ISA/IEC)	See Protocol listings on page 8.6	
	I/A Series Carrier Band	8233	Small Trunk
		3095A	Plenum
		9290	Drop Cable
	I/A Series Fieldbus	9207	Twinax
		89207	200°C, Plenum
		3073F	600V Tray Cable
	I/A Series Node Bus	9880	Trunk Cable
		89880	Plenum Version
	Industrial Ethernet	See Protocol listings on page 8.6	
Limitorque	DCC100	3105A	Actuator Bus Cable, 1-Pair, RS-485
Matsushita	FP Series C-NET	9207	Twinax, 20 AWG, Stranded, 100 Ohm
		9860	Twinax, 16 AWG, Solid, 124 Ohm
	FP Series MEWNET-F	9207	Twinax, 20 AWG, Stranded, 100 Ohm
		9860	Twinax, 16 AWG, Solid, 124 Ohm
	FP Series MEWNET-H	9248	RG-6, 75 Ohm, 18 AWG
	FP Series MEWNET-TR	9207	Twinax, 20 AWG, Stranded, 100 Ohm
		9860	Twinax, 16 AWG, Solid, 124 Ohm
	FP Series MEWNET-W	9207	Twinax, 20 AWG, Stranded, 100 Ohm
		9806	4-Pair, RS-232, RS-422
	FP Series MEWNET-W2	9207	Twinax, 20 AWG, Stranded, 100 Ohm
		9860	Twinax, 16 AWG, Solid, 124 Ohm
	FP Series TRNET	9207	Twinax, 20 AWG, Stranded, 100 Ohm
		9860	Twinax, 16 AWG, Solid, 124 Ohm

FEP = Fluorinated Ethylene-propylene

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PLC/DCS Cable Cross Reference Guide *(continued)*

PLC/DCS Manufacturer	System Name	Belden Part Number	
Mitsubishi Electric Automation	**CC-Link**	See Protocol listings on page 8.6	
	DeviceNet	See Protocol listings on page 8.6	
	Melsecnet II (10/10H)	**1505A**	Precision RG-59/U Coax
		1505F	High-Flex 1505A
		1506A	Plenum Precision RG-59/U, Outdoor, Direct Burial
		8241	Standard RG-59/U Coax
		8241F	High-Flex 8241F
	Modbus	See Protocol listings on page 8.6	
	Profibus DP	See Protocol listings on page 8.6	
	Serial Communications	**8777**	Control and Instrumentation Interconnect Cable
Modicon/ Schneider AEG	**Industrial Ethernet**	See Protocol listings on page 8.6	
	Modbus	**8777**	Modem Drop Cable, 22 AWG, 3-Pair
		128777	Aluminum Armor (8777)
		138777	Steel Armor (8777)
		88777	FEP 200°C, Plenum
	Modbus II	**3092A**	RG-6 Quad Shield PVC
		3132A	RG-6 Quad Shield, 150°C, Plenum
		3092F	RG-6 Quad Shield PVC, Flexible Version
		123092A	Aluminum Armor (3092A)
		133092A	Steel Armor (3092A)
	Modbus Plus	**YM29560**	24 AWG, 1-Pair, RS-485
		YC39000	Aluminum Armor (YM29560)
		YC39222	Steel Armor (YM29560)
		YQ29258	24 AWG, 1-Pair, 150°C, Plenum
	Remote I/O	**3092A**	RG-6 Quad Shield PVC
		3092F	RG-6 Quad Shield PVC, Flexible Version
		123092A	Aluminum Armor (3092A)
		133092A	Steel Armor (3092A)
		123092F	Aluminum Armor, RG-6 Quad Shield PVC
		3132A	RG-6 Quad Shield, 150°C, Plenum
		3094A	RG-11 Quad Shield PVC
		123094A	Aluminum Armor (3094A)
		133094A	Steel Armor (3094A)
		3095A	RG-11 Quad Shield, 150°C, Plenum
Omron	**ComboBus/D (DeviceNet™)**	See DeviceNet Protocol listings on page 8.6	
	ComboBus/S	**9409**	18 AWG, 1-Pair, 300V PLTC Control
		9318	18 AWG, 1-Pair, 300V PLTC Control, Shielded
		3073	600V Tray Cable, Twinax
		89740	18 AWG, 1-Pair, 300V, Control

PLC/DCS Manufacturer	System Name	Belden Part Number	
Omron *(continued)*	**Controller Link**	**9207**	Twinax
		89207	Twinax, 200°C, Plenum
		9815	Twinax, 100 Ohm, Direct Burial
		3073F	600V Tray Cable, Twinax
	SYSBUS-2	**3073F**	600V Tray Cable, Twinax
	SYSMAC BUS	**9841**	22 AWG, 1-Pair, RS-485
		3105A	22 AWG, 1-Pair, RS-485
	SYSMAC LINK	**9231**	RG-59U Coax
Phoenix Contact	**DeviceNet**	See Protocol listings on page 8.6	
	Industrial Ethernet	See Protocol listings on page 8.6	
	Interbus®-S	See Protocol listings on page 8.6	
	Profibus DP FMS & PA	See Protocol listings on page 8.6	
Reliance/A-B	**Auto Max Distributed Power**	**M9B021**	2-Fiber Breakout
		I100255	2-Fiber Loose Tube PVC
		I100266	2-Fiber Loose Tube CPE
	R-Net	**9259**	RG-59 PVC
		89259	RG-59, 200°C, Plenum
Rotork	**Pakscan II E RS-485**	**3105A**	22 AWG, 1-Pair, RS-485
Siemens/ Moore	**FMC** (Field Mountable Controller)	**3105A**	1-Pair, RS-485
		3106A	1.5-Pair, RS-485
		3107A	2-Pair, RS-485
		3108A	3-Pair, RS-485
		3109A	4-Pair, RS-485
	FOUNDATION Fieldbus (Type SP50 ISA/IEC)	See Protocol listings on page 8.6	
	Hiway	**9860**	Network Trunk Cable
	Industrial Ethernet	See Protocol listings on page 8.6	
	MODULNET	**3094A**	RG-11 Quad Shield PVC
		3131A	RG-6 Quad Shield PVC
	Profibus DP & FMS (Purple)	See Protocol listings on page 8.6	
	Profibus PA (Blue)	See Protocol listings on page 8.6	
	SINEC Series H1	**9907**	Thin Network Trunk Cable
		9880	Network Trunk Cable
	SINEC Series H2B	**3131A**	RG-6 Quad Shield
		3094A	RG-11 Quad Shield
	SINEC Series L1	**3107A**	2-Pair, RS-485
	SINEC Series L2	**3079A**	300V Twinax
	Thicknet Ethernet Trunk	**9880**	Network Trunk Cable
		129880	Aluminum Interlocked Armor Trunk
		139880	Steel Interlocked Armor Trunk
	Thinnet Ethernet Trunk	**9907**	Thin Network Trunk Cable

FEP = Fluorinated Ethylene-propylene

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PLC/DCS Cable Cross Reference Guide *(continued)*

PLC/DCS Manufacturer	System Name	Belden Part Number	
Smar	**FOUNDATION Fieldbus** (Type SP50 ISA/IEC)	See Protocol listings on page 8.6	
	Industrial Ethernet	See Protocol listings on page 8.6	
	Profibus DP FMS & PA	See Protocol listings on page 8.6	
	RS-485	See Protocol listings on page 8.6	
Square D/ Schneider AEG	**FIP/Fieldbus**	**3079A**	22 AWG, 1-Pair, Shielded
		123079A	Aluminum Armor (3079A)
	Industrial Ethernet	See Protocol listings on page 8.6	
	Model 50, RS-422 Cable	**8760**	18 AWG, 1-Pair, Shielded
		128760	Aluminum Armor (8760)
	Passport I/O – I/O Net	**3105A**	22 AWG, 1-Pair, RS-485
		123105A	Aluminum Armor (3105A)
		3106A	22 AWG, 1.5-Pair, RS-485
		123106A	Aluminum Armor (3106A)
	Power Logic	**9841**	24 AWG, 1-Pair, RS-485
		9842	24 AWG, 2-Pair, RS-485
Square D/ Schneider AEG	**Seriplex®**	**3124A**	CBL-1822-P20
		3125A	CBL-1622-P16
		3126A	CBL-162212-P16
		123124A	Aluminum Armor (3124A)
		123125A	Aluminum Armor (3125A)
		123126A	Aluminum Armor (3126A)
		9463	Blue Hose® (Standard)
		9463F	Flexible Version (9463)
		129463	Aluminum Armor (9463)
		139463	Steel Armor (9463)
		189463	Continuous Armor (9463)
		YR28826	Dual Version (9463)
		9463DB	Direct Burial (9463)
		YR29565	Various Color Jackets 9463)
	SY/Net Network Trunk Cable	**3072F**	600V TC Rated (9463)
		YR41194	Low-Smoke, Halogen-Free
		YR28764	Super Thick (PLTC)
		89463	FEP 200°C, Plenum
	SY/Net TNIM Cable	**9272**	20 AWG, 1-Pair, Shielded
		89272	FEP 200°C, Plenum

PLC/DCS Manufacturer	System Name	Belden Part Number	
Yokogawa — CENTUM	**DeviceNet™**	See Protocol listings on page 8.6	
	FOUNDATION Fieldbus (Type SP50 ISA/IEC)	See Protocol listings on page 8.6	
	HART	See Protocol listings on page 8.6	
	Industrial Ethernet	See Protocol listings on page 8.6	
	Profibus	See Protocol listings on page 8.6	
	RS-485	See Protocol listings on page 8.6	
Yokogawa — FA-M3	**DeviceNet**	See Protocol listings on page 8.6	
	Industrial Ethernet	See Protocol listings on page 8.6	
	Modbus	See Protocol listings on page 8.6	
	Profibus	See Protocol listings on page 8.6	
	RS-485	See Protocol listings on page 8.6	
Yokogawa — STARDOM	**DeviceNet**	See Protocol listings on page 8.6	
	FOUNDATION Fieldbus (Type SP50 ISA/IEC)	See Protocol listings on page 8.6	
	HART	See Protocol listings on page 8.6	
	Industrial Ethernet	See Protocol listings on page 8.6	
	Profibus	See Protocol listings on page 8.6	
	RS-485	See Protocol listings on page 8.6	
Westinghouse	**WDPF**	**9292**	RG-11 PVC

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Industrial Communications Protocol Cross Reference

System Name	Belden Part Number	
Can Open/HART/ RS-485	**3105A**	1-Pair, RS-485 (PLTC)
	3106A	1.5-Pair, RS-485 (PLTC)
	3107A	2-Pair, RS-485 (PLTC)
CC-Link	**YR47198**	20 AWG/3c, Foil + Braid Shield
	YR47205	20 AWG/3c Shielded + 18 AWG/2c Power
ControlNet™	**3092A**	RG-6 PVC Quad Shield
	3092F	RG-6 PVC Quad Shield, Flex Version, Aluminum Braid
	YR28890	RG-6 PVC Quad Shield, Flex Version, Copper Braid
	3093A	RG-6 FEP Quad Shield, Plenum
	123092A	Aluminum Armor (3092A)
	133092A	Steel Armor (3092A)
	183092A	Continuous Armor (3092A)
DataHighway (DH) & DataHighway Plus (DH+) Remote I/O	**9463**	20 AWG Twinax, Blue Hose
	3072F	600V, TC Blue Hose
	9463DB	Direct Burial Blue Hose
	9463F	High-Flex, Blue Hose
	89463	High-Temp, Plenum Blue Hose
	129463	Aluminum Armor (9463)
	139463	Steel Armor (9463)
	189463	Continuous Armor (9463)
	YR28826	Dual Blue Hose
	YC39151	Dual Armored Blue Hose
	YR28764	Thick Wall PLTC Blue Hose
	YR29565	Colored Blue Hose
	YR41104	Low-Smoke, Zero-Halogen Blue Hose
DeviceNet™	**3082A**	PVC (Thick)
	3082F	High-Flex (Thick)
	3082K	CL2 (Flat)
	3082KP	Auxiliary Power (Flat)
	3083A	CPE (Thick)
	3084A	PVC (Thin)
	3084F	High-Flex (Thin)
	3085A	CPE (Thin)
	7895A	CL2 PVC (Cable III Mid)
	7896A	CL1 PVC (Type V Trunk Cable)
	7897A	CL1 PVC (Thick)
	7900A	CL1 Unshielded (Drop Cable IV)
FOUNDATION Fieldbus (Type SP50 ISA/IEC)	**3076F**	Type A, H1 1900m (31.25K)
	3077F	Type B, H1 1200m (31.25K)
	HSE	Copper & Fiber (see *Cables for Industrial Ethernet*, pg. 18.6)
Hart/RS-485/ Can Open	**3105A**	1-Pair, RS-485 (PLTC)
	3106A	1.5-Pair, RS-485 (PLTC)
	3107A	2-Pair, RS-485 (PLTC)
Industrial Ethernet	**7932A**	Cat 5e, 2-Pair, Bonded
	7933A	Cat 5e, 2-Pair, Bonded, Shielded
	7918A	Cat 5e, 4-Pair
	7924A	Cat 5e, 4-Pair, Bonded, Flexible
	7930A	Cat 5e, 4-Pair, Flexible
	7922A	Cat 5e, 4-Pair, Bonded, PLTC
	7934A	Cat 5e, 4-Pair, Bonded, Burial

System Name	Belden Part Number	
Industrial Ethernet *(continued)*	**11700A**	Cat 5e, 4-Pair, Bonded, Upjacketed
	11700A2	Cat 5e, 4-Pair, Bonded, Upjacketed, Oil Res II
	121700A	Cat 5e, 4-Pair, Bonded, Armored
	7919A	Cat 5e, 4-Pair, Shielded
	7921A	Cat 5e, 4-Pair, Bonded, Shielded (Foil + Braid)
	7927A	Cat 6, 4-Pair, Bonded
	7931A	Cat 6, 4-Pair, Bonded, Gas Res, High + Low Temperature
	11872A	Cat 6, 4-Pair, Bonded, Upjacketed
	121872A	Cat 6, 4-Pair, Bonded, Armored
Interbus®-S	**3119A**	18 AWG/3c, 24 AWG/3-Pair, Composite
	3120A	24 AWG/3-Pair
IronWorks®	**8471**	16 AWG, 1-Pair, UL AWM 2598
	8917	16 AWG, 1-Cond, UL AWM 1015
	85102	16 AWG, 2-Cond, VW1, Plenum
Modbus	**8777**	22 AWG, 3-Pair, Modem Drop Cable
	128777	Aluminum Armor (8777)
	138777	Steel Armor (8777)
	88777	FEP 200°C, Plenum (8777)
Profibus DP & FMS (Purple)	**3079A**	22 AWG 300V Twinax
	3079E	22 AWG 300V Twinax, Flex Version
Profibus PA (Blue)	**3076F**	18 AWG, 2-Conductors, Type A
RS-485/HART/ Can Open	**9841**	1-Pair
	82841	1-Pair, Plenum
	89841	1-Pair, Plenum, High-Temperature
	9842	2-Pair
	82842	2-Pair, Plenum
	9843	3-Pair
	9844	4-Pair
	7200A	1-Pair, RS-485, Hi-Flex
	7201A	2-Pair, RS-485, Hi-Flex
	7202A	3-Pair, RS-485, Hi-Flex
	7203A	4-Pair, RS-485, Hi-Flex
	7206A	1-Pair, RS-485, Hi-Flex
	3105A	1-Pair, RS-485 (PLTC)
	3106A	1.5-Pair, RS-485 (PLTC)
	3107A	2-Pair, RS-485 (PLTC)
	3108A	3 Pair, RS-485 (PLTC)
	3109A	4 Pair, RS-485 (PLTC)
Seriplex®	**3124A**	1-Pair 18 AWG, 1-Pair 22 AWG
	3125A	1-Pair 16 AWG, 1-Pair 22 AWG
	3126A	1-Pair 16 AWG, 1-Pair 22 AWG, 1-Pair 12 AWG
	123124A	Aluminum Armor (3124A)
	123125A	Aluminum Armor (3125A)
	123126A	Aluminum Armor (3126A)
Smart Distributed System (SDS)	**3086A**	1-Pair 16 AWG, 1-Pair 20 AWG
	3087A	2-Pairs 22 AWG

FEP = Fluorinated Ethylene-propylene

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케이블 콘(주) 기술지원팀 :: 콘넥터 문의 0707-434-7701 케이블 문의 0707-434-7702

Industrial Data Solutions® — Industrial Ethernet

DataTuff® Twisted Pair and TrayOptic® Fiber Optic Cables
Overview

The reliability of your industrial Ethernet network depends on the cable infrastructure. Data transmission errors can lead to interruptions in critical control functions resulting in lost production time and even safety issues. Belden's family of industrial Ethernet cables is designed to withstand the rigors of industrial environments. Whether it's exposure to oil and sunlight, temperature variation, abrasion and crushing, or the presence of electromagnetic interference (EMI) or radio frequency interference (RFI), turn to Belden for the solution.

Belden offers an extensive line of high performance cables in both copper constructions with DataTuff cables as well as fiber optic designs with TrayOptic cables.

Performance Assurance from Blue Hose® to Industrial Ethernet

To assist you in achieving optimum network performance, Belden has built quality and reliability into each cable it manufactures. Decades of leadership and experience in supplying reliable high-end cable solutions, such as Blue Hose®, to industrial networks and control systems are combined to give you industrial Ethernet cables that perform to maximum network capability.

Our dedication to quality manufacturing practices and processes assures consistent products of uncompromising quality.

Installable Performance® with Patented Bonded-Pair Technology

Belden's Bonded-Pair versions of DataTuff cables are unique in the industry to give you an Installable Performance advantage. This patented design yields superior electrical performance even after the effects and stresses of pulling, twisting and bending during typical installations.

This performance advantage is achieved by bonding the individual insulated conductors along their longitudinal axes, resulting in uniform conductor-to-conductor spacing and the elimination of gaps between conductors that can occur during installation. This is a critical construction feature because non-uniform conductor spacing and gaps change the physical characteristics of the cable such that the electrical performance of the cable suffers. Only Bonded-Pair cables deliver the electrical integrity you demand.

TrayOptic Cables

Belden® TrayOptic cables are a line of indoor/outdoor fiber optic cables designed to meet the demanding requirements of industrial applications. When the installation demands the combination of sophisticated fiber optic technology and rugged durability, turn to Belden.

DataTuff® Industrial Ethernet Cable Selection Guide

Part No.	No. of Pairs	Shielding		Conductor		Installation		Environmental Issues						Industrial Grade Jacket		
		Unshielded	Shielded *	Solid	Stranded **	Installation Stress Resistance†	Pull Tension	Oil Resistance	UV Sunlight Resistance	CMX/ Outdoor	Under-ground (burial)	Gasoline Resistance	Hi/Lo Temp	Heavy	Upjacket	Armored
Category 5e Cable																
new 7932A EtherNet/IP	2	●		●		●	20	●	●					●		
new 7933A EtherNet/IP	2		●	●		●	20	●	●					●		
7923A EtherNet/IP	4	●		●		●	40	●	●	●				●		
7918A	4	●		●			35	●	●	●				●		
7924A	4	●			●	●	40	●	●	●				●		
new 7930A	4	●			●		25	●	●	●				●		
new 7922A PLTC	4	●		●		●	40	●	●	●				●		
new 7934A EtherNet/IP	4	●		●		●	40		●		●			●		
7928A EtherNet/IP	4	●		●		●	40	●	●			●	●	●		
11700A EtherNet/IP	4	●		●		●	40	●	●	●					●	
new 11700A2 Oil Res I&II	4	●		●		●	40	●	●						●	
121700A	4	●		●		●	40	●	●							●
new 121700R	4	●		●		●	40	●	●							●
7929A	4		●	●		●	35	●	●	●				●		
7919A	4		●	●			25	●	●	●				●		
7921A EtherNet/IP	4		●	●		●	75	●	●	●				●		
Category 6 Cable																
7927A	4	●		●		●	45	●	●					●		
7931A	4	●		●		●	40	●	●			●	●	●		
11872A	4	●		●		●	45								●	
121872A	4	●		●		●	45	●	●							●

*Shielded products are recommended for high-noise environments. **Stranded products are recommended where more flexibility is needed.
†Products with Bonded-Pair technology provide Installable Performance® advantages — refer to Belden's Bonded-Pair Cable Bulletin #BP02

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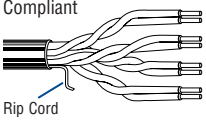
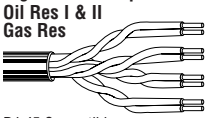
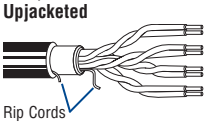
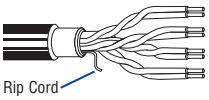
케이블 콘(주) 기술지원팀 :: 콘넥터 문의 0707-434-7701 케이블 문의 0707-434-7702

Industrial Data Solutions® — Industrial Ethernet

Category 5e DataTuff® Twisted Pair Cables, 2-Pair and 4-Pair Heavy-Duty Sunlight and Oil-Resistant Jackets

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Standard Lengths Ft.	Standard Lengths m	Standard Unit Wt. Lbs.	Standard Unit Wt. kg	Nominal OD Inch	Nominal OD mm	Freq. (MHz)	Max. Atten. (dB/ 100m)	Min. PSUM NEXT (dB)	Min. PSUM ACR (dB/ 100m)	Min. PSUM ELFEXT (dB/ 100m)	Input Imped. (Ω)	Min. RL (dB)
Enhanced Cat 5e • 24 AWG Bonded-Pairs Solid BC Conductors • Rip Cord • See Color Codes below																
Polyolefin Insulation • .030″ Industrial Grade Sunlight- and Oil-resistant PVC Jacket (Black, Red or Teal)																
EtherNet/IP Compliant Rip Cord	**7932A** new	NEC: CMR CEC: CMR FT4	2	1000 2000 ▲	304.8 609.6	19.0 38.0	8.61 17.24	.207	5.26	1	2.0	65.3	63.3	60.8	100±12	20.0
										4	4.0	56.3	52.3	48.7	100±12	23.6
										8	5.7	51.8	46.1	42.7	100±12	25.4
										10	6.4	50.3	43.9	40.8	100±12	26.0
										16	8.1	47.3	39.1	36.7	100±12	26.0
										25	10.3	44.3	34.1	32.8	100±15	25.5
										31.25	11.6	42.9	31.3	30.9	100±15	25.0
										62.5	16.8	38.4	21.6	24.8	100±15	23.5
										100	21.7	35.3	17.1	20.8	100±15	22.5
										155	27.7	32.5	4.7	16.9	100±18	19.0
										200	32.0	30.8	3.0	14.7	100±20	19.0
										250	36.4	29.3	—	12.8	100±20	18.0
										350	44.3	27.2	—	9.9	100±22	17.0
▲2000 ft. put-up available in Black only. • M-12 or RJ-45 Compatible • Jacket sequentially marked at 2 ft. intervals Cable passes -40°C Cold Bend per UL1581 • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°C to +75°C** Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126																
EtherNet/IP Compliant  Rip Cord	**7923A**	NEC: CMR, CMX-Outdoor CEC: CMR FT4	4	1000 2000 ▲	304.8 609.6	28.0 54.0	12.7 24.5	.230	5.84	1	2.0	65.3	63.3	60.8	100±12	20.0
										4	4.0	56.3	52.3	48.7	100±12	23.6
										8	5.7	51.8	46.1	42.7	100±12	25.4
										10	6.4	50.3	43.9	40.8	100±12	26.0
										16	8.1	47.3	39.1	36.7	100±12	26.0
										25	10.3	44.3	34.1	32.8	100±15	25.5
										31.25	11.6	42.9	31.3	30.9	100±15	25.0
										62.5	16.8	38.4	21.6	24.8	100±15	23.5
										100	21.7	35.3	17.1	20.8	100±15	22.5
										155	27.7	32.5	4.7	16.9	100±18	19.0
										200	32.0	30.8	3.0	14.7	100±20	19.0
										250	36.4	29.3	—	12.8	100±20	18.0
										350	44.3	27.2	—	9.9	100±22	17.0
▲2000 ft. put-up available in Black only. • RJ-45 Compatible • Jacket sequentially marked at 2 ft. intervals Cable passes -40°C Cold Bend per UL1581• Installation Temperature: -25°C to +75°C • Operating Temperature: -40°C to +75°C** Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126 • P-07-KA060003-MSHA*																
Polyolefin Insulation • Waterblocked Sunlight- and Oil-resistant Black Polyethylene Jacket																
EtherNet/IP Compliant **Halogen-Free Burial**	**7934A** new	—	4	1000	304.8	25.0	11.34	.230	5.84	1	2.0	62.3	60.0	60.8	100±15	20.0
										4	4.1	53.3	49.0	48.7	100±15	23.6
										8	5.8	48.8	43.0	42.7	100±15	25.4
										10	6.5	47.3	41.0	40.8	100±15	26.0
										16	8.2	44.3	36.0	36.7	100±15	26.0
										20	9.3	42.8	33.5	34.7	100±15	26.0
										25	10.4	41.3	30.9	32.8	100±15	25.5
										31.25	11.7	39.9	28.0	30.9	100±15	25.0
										62.5	17.0	35.4	19.0	24.8	100±15	23.5
										100	22.0	32.3	11.0	20.8	100±15	22.5
										155	28.1	29.5	1.4	16.9	100±25	15.8
										200	32.0	27.8	1.0	14.7	100±25	15.0
RJ-45 Compatible • Jacket sequentially marked at 3 ft. intervals Cable passes -40°C Cold Bend per UL1581 • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°C to +75°C** Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126 • Waterblocked per Telcordia, IEC and ICEA																
Plenum • FEP Insulation • Sunlight-, Oil- and Gas-resistant Black FEP Jacket																
EtherNet/IP Compliant **High & Low Temp Oil Res I & II Gas Res** 	**7928A**	NEC: Limited Combustible FHC 25/50 CMP CEC: CMP FT6	4	1000	304.8	24.0	10.9	.187	4.75	1	2.0	65.3	63.3	60.8	100±12	20.0
										4	4.0	56.3	52.3	48.7	100±12	23.6
										8	5.7	51.8	46.1	42.7	100±12	25.4
										10	6.4	50.3	43.9	40.8	100±12	26.0
										16	8.1	47.3	39.1	36.7	100±12	26.0
										25	10.3	44.3	34.1	32.8	100±15	25.5
										31.25	11.6	42.9	31.3	30.9	100±15	25.0
										62.5	16.8	38.4	21.6	24.8	100±15	23.5
										100	21.7	35.3	17.1	20.8	100±15	22.5
										155	27.7	32.5	4.7	16.9	100±18	19.0
										200	32.0	30.8	3.0	14.7	100±20	19.0
										250	36.4	29.3	—	12.8	100±20	18.0
										350	44.3	27.2	—	9.9	100±22	17.0
RJ-45 Compatible Cable passes -70°C Cold Bend per UL1581 • Installation Temperature: -55°C to +150°C • Operating Temperature: -70°C to +150°C** Jacket sequentially marked at 2 ft. intervals • Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126																
Polyolefin Insulation • PVC Inner Jacket • .035″ Industrial Grade PVC Outer Jacket (Black, Gray, Red, Teal or Blue)																
EtherNet/IP Compliant **Upjacketed**  Rip Cords	**11700A**	NEC: CMR, CMX-Outdoor CEC: CMR FT4	4	1000 3000 †	304.8 914.4	39.0 117.0	17.7 53.2	.285	7.24	1	2.0	65.3	63.3	60.8	100±12	20.0
										4	4.0	56.3	52.3	48.7	100±12	23.6
										8	5.7	51.8	46.1	42.7	100±12	25.4
								Nominal Core OD:		10	6.4	50.3	43.9	40.8	100±12	26.0
										16	8.1	47.3	39.1	36.7	100±12	26.0
								.200	5.08	25	10.3	44.3	34.1	32.8	100±15	25.5
										31.25	11.6	42.9	31.3	30.9	100±15	25.0
										62.5	16.8	38.4	21.6	24.8	100±15	23.5
										100	21.7	35.3	17.1	20.8	100±15	22.5
										155	27.7	32.5	4.7	16.9	100±18	19.0
										200	32.0	30.8	3.0	14.7	100±20	19.0
										250	36.4	29.3	—	12.8	100±20	18.0
										350	44.3	27.2	—	9.9	100±22	17.0
†3000 ft. put-up available in Black only. • Outer jacket is sunlight- and oil-resistant. • Jacket sequentially marked at 2 ft. intervals Cable passes -40°C Cold Bend per UL1581 • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°C to +75°C** RJ-45 Compatible • Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126 • P-07-KA060005-MSHA*																
Oil Res I & II Upjacketed  Rip Cord	**11700A2** new	NEC: CMR CEC: CMR FT4	4	1000 †† 2000 ††	304.8 609.6	42.0 86.0	19.1 39.1	.285	7.24	1	2.0	65.3	63.3	60.8	100±12	20.0
										4	4.0	56.3	52.3	48.7	100±12	23.0
										8	5.7	51.8	46.1	42.7	100±12	24.5
								Nominal Core OD:		10	6.4	50.3	43.9	40.8	100±12	25.0
										16	8.1	47.3	39.1	36.7	100±12	25.0
								.200	5.08	25	10.3	44.3	34.1	32.8	100±15	24.3
										31.25	11.6	42.9	31.3	30.9	100±15	23.6
										62.5	16.8	38.4	21.6	24.8	100±15	21.5
										100	21.7	35.3	17.1	20.8	100±15	20.1
										155	27.7	32.5	4.7	16.9	100±18	19.0
										200	32.0	30.8	3.0	14.7	100±20	19.0
										250	36.4	29.3	—	12.8	100±20	18.0
										350	44.3	27.2	—	9.9	100±22	17.0
††1000 ft. put-up available in Black or Blue only, 2000 ft. put-up in Black only. • RJ-45 Compatible • Outer jacket is sunlight resistant. Cable passes -10°C Cold Bend per UL1581 • Installation Temperature: +5°C to +75°C • Operating Temperature: -10°C to +75°C** Jacket sequentially marked at 2 ft. intervals • Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126																

ACR = Attenuation Crosstalk Ratio • BC = Bare Copper • ELFEXT = Equal Level Far-end Crosstalk • NEXT = Near-end Crosstalk • PSUM = Power Sum • RL = Return Loss • TC = Tinned Copper

*Pennsylvania Department of Environmental Resources and United States Mine Safety and Health Administration Certification.
**Subject to length de-rating.

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DataTuff Color Codes: **Pair 1** = White/Blue Stripe & Blue, **Pair 2** = White/Orange Stripe & Orange, **Pair 3** = White/Green Stripe & Green, **Pair 4** = White/Brown Stripe & Brown
For two pair products: use color codes for Pairs 2 & 3

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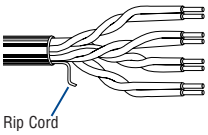
Industrial Data Solutions® — Industrial Ethernet

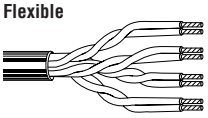
Category 5e DataTuff® Twisted Pair Cables, 2-Pair and 4-Pair Heavy-Duty Sunlight and Oil-Resistant Jackets

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Standard Lengths Ft.	Standard Lengths m	Standard Unit Wt. Lbs.	Standard Unit Wt. kg	Nominal OD Inch	Nominal OD mm	Freq. (MHz)	Max. Atten. (dB/ 100m)	Min. PSUM NEXT (dB)	Min. PSUM ACR (dB/ 100m)	Min. PSUM ELFEXT (dB/ 100m)	Input Imped. (Ω)	Min. RL (dB)
Enhanced Cat 5e • 22 AWG Bonded-Pairs Solid Bare Copper Conductors • Rip Cord • See Color Code Chart (below)																
Polyolefin Insulation • .030″ Industrial Grade Sunlight- and Oil-resistant Black PVC Jacket																
PLTC  Rip Cord	**7922A** new	NEC: PLTC, CMR, CMX-Outdoor CEC: CMR FT4	4	1000	304.8	46.3	21.0	.301	7.65	1	2.0	65.3	63.3	60.8	100±12	20.0
				2000	609.6	92.5	42.0			4	4.0	56.3	52.3	48.7	100±12	23.0
										8	5.7	51.8	46.1	42.7	100±12	24.5
										10	6.4	50.3	43.9	40.8	100±12	25.0
										16	8.1	47.3	39.1	36.7	100±12	25.0
										25	10.3	44.3	34.1	32.8	100±15	24.3
										31.25	11.6	42.9	31.3	30.9	100±15	23.6
										62.5	16.8	38.4	21.6	24.8	100±15	21.5
										100	21.7	35.3	17.1	20.8	100±15	20.1
										155	27.7	32.5	4.7	16.9	100±18	19.0
										200	32.0	30.8	3.0	14.7	100±20	19.0
										250	36.4	29.3	—	12.8	100±20	18.0
										350	44.3	27.2	—	9.9	100±22	17.0

Cable passes -25°C Cold Bend per UL1581 • Installation Temperature: -10°C to +75°C • Operating Temperature: -25°C to +75°C**
Jacket sequentially marked at 2 ft. intervals • Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126

Enhanced Cat 5e • 24 AWG Bonded-Pairs Stranded (7x32) TC Conductors • See Color Code Chart (below)

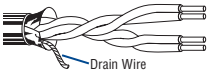
Polyolefin Insulation • .030″ Industrial Grade Sunlight- and Oil-resistant PVC Jacket (Black, Red or Teal)

Stranded Flexible 	**7924A**	NEC: CMR, CMX-Outdoor CEC: CMR FT4	4	1000	304.8	30.0	13.6	.242	6.15	1	2.4	65.3	62.9	60.8	100±12	20.0
				2000 †	609.6	58.0	26.3			4	4.8	56.3	51.5	48.7	100±12	23.6
										8	6.8	51.8	45.0	42.7	100±12	25.4
										10	7.7	50.3	42.6	40.8	100±12	26.0
										16	9.7	47.3	37.5	36.7	100±12	26.0
										25	12.4	44.3	31.9	32.8	100±15	25.5
										31.25	13.9	42.9	29.0	30.9	100±15	25.0
										62.5	20.2	38.4	18.3	24.8	100±15	23.5
										100	26.0	35.3	9.2	20.8	100±18	22.5
										155	33.2	32.5	—	16.9	100±18	19.0
										200	38.4	30.8	—	14.7	100±20	19.0
										250	43.7	29.3	—	12.8	100±20	18.0
										350	53.2	27.2	—	9.9	100±22	17.0

†2000 ft. put-up available in Black only. • RJ-45 Compatible • Jacket sequentially marked at 2 ft. intervals
Cable passes -40°C Cold Bend per UL1581 • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°C to +75°C**
Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151; 5,734,126 and 5,763,823

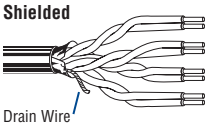
Enhanced Cat 5e • 24 AWG Bonded-Pairs Solid BC Conductors • Overall Beldfoil® Shield (100%) • Drain Wire • See Color Codes (below)

Polyolefin Insulation • .030″ Industrial Grade Sunlight- and Oil-resistant PVC Jacket (Black, Red or Teal)

EtherNet/IP Compliant **Shielded**  Drain Wire	**7933A** new	NEC: CMR CEC: CMR FT4	2	1000	304.8	32.0	14.5	.227	5.77	1	2.0	62.3	60.3	60.8	100±15	20.0
				2000 ▲	609.6	64.8	29.4			4	4.1	53.3	49.2	48.7	100±15	23.6
										10	6.5	47.3	40.8	40.8	100±15	26.0
										16	8.2	44.3	36.1	36.7	100±15	26.0
										31.25	11.7	39.9	28.2	30.9	100±15	25.0
										62.5	17.0	35.4	18.4	24.8	100±15	23.5
										100	22.0	32.3	10.3	20.8	100±15	22.5
										200	32.4	27.8	1.0	14.7	100±25	15.0

▲2000 ft. put-up available in Black only. • M-12 or RJ-45 Compatible • Shield is bonded to jacket inner wall for electrical stability.
Cable passes -40°C Cold Bend per UL1581 • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°C to +75°C**
Jacket sequentially marked at 2 ft. intervals • Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126

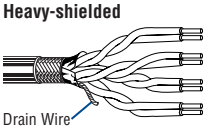
Polyolefin Insulation • .030″ Industrial Grade Sunlight- and Oil-resistant PVC Jacket (Black or Blue)

Shielded  Drain Wire	**7929A**	NEC: CMR, CMX-Outdoor CEC: CMR FT4	4	1000	304.8	37.0	16.8	.265	6.73	1	2.0	62.3	60.3	60.8	100±15	20.0
				2000 ▲	609.6	72.0	32.7			4	4.1	53.3	49.2	48.7	100±15	23.0
										10	6.5	47.3	40.8	40.8	100±15	25.0
										16	8.2	44.3	36.1	36.7	100±15	25.0
										31.25	11.7	39.9	28.2	30.9	100±15	23.6
										62.5	17.0	35.4	18.4	24.8	100±15	21.5
										100	22.0	32.3	10.3	20.8	100±15	20.1
										200	32.4	27.8	1.0	14.7	100±25	15.0

▲2000 ft. put-up available in Black only. • RJ-45 Compatible • Shield is bonded to jacket inner wall for electrical stability.
Cable passes -40°C Cold Bend per UL1581 • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°C to +75°C**
Jacket sequentially marked at 2 ft. intervals • Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126 • P-07-KA060003-MSHA*

Enhanced Cat 5e • 24 AWG Bonded-Pairs Solid BC Conductors • Overall Beldfoil (100%) + TC Braid Shield (70% Coverage) • Drain Wire◆

Polyolefin Insulation • .030″ Industrial Grade Sunlight- and Oil-resistant PVC Jacket (Black, Red, Blue or Teal)

EtherNet/IP Compliant **Heavy-shielded**  Drain Wire	**7921A**	NEC: CMR, CMX-Outdoor CEC: CMR FT4	4	1000	304.8	55.0	24.9	.330	8.38	1	2.0	62.3	60.3	60.8	100±15	20.0
				2000 ▲	609.6	106.0	48.1			4	4.1	53.3	49.2	48.7	100±15	23.6
										10	6.5	47.3	40.8	40.8	100±15	26.0
										16	8.2	44.3	36.1	36.7	100±15	26.0
										31.25	11.7	39.9	28.2	30.9	100±15	25.0
										62.5	17.0	35.4	18.4	24.8	100±15	23.5
										100	22.0	32.3	10.3	20.8	100±15	22.5

▲2000 ft. put-up available in Black only. ◆24 AWG solid spiral drain wire.
Cable passes -40°C Cold Bend per UL1581 • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°C to +75°C**
Jacket sequentially marked at 2 ft. intervals • Third party verified to TIA/EIA-568-B.2, Category 5e • NEMA WC-63.1 Category 5e • U.S. Patents 5,606,151 and 5,734,126

ACR = Attenuation Crosstalk Ratio • AL = Aluminum • BC = Bare Copper • ELFEXT = Equal Level Far-end Crosstalk • NEXT = Near-end Crosstalk • PSUM = Power Sum • RL = Return Loss • TC = Tinned Copper

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*Pennsylvania Department of Environmental Resources and United States Mine Safety and Health Administration Certification.
**Subject to length de-rating.

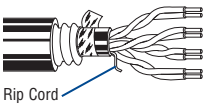
DataTuff Color Codes: **Pair 1** = White/Blue Stripe & Blue, **Pair 2** = White/Orange Stripe & Orange, **Pair 3** = White/Green Stripe & Green, **Pair 4** = White/Brown Stripe & Brown
For two pair products: use color codes for Pairs 2 & 3

견적문의 Belden114@CableCon.kr / 0707-434-7704 / Fax. 02-744-0909 / www.CableCon.co.kr

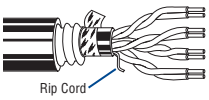
케이블 콘(주) 기술지원팀 :: 콘넥터 문의 0707-434-7701 케이블 문의 0707-434-7702

Industrial Data Solutions® — Industrial Ethernet

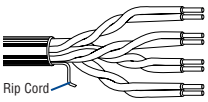
Category 5e DataTuff® Twisted Pair Cables, 4-Pair
Heavy-Duty Sunlight and Oil-Resistant Jackets

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Standard Lengths Ft.	Standard Lengths m	Standard Unit Wt. Lbs.	Standard Unit Wt. kg	Nominal OD Inch	Nominal OD mm	Freq. (MHz)	Max. Atten. (dB/ 100m)	Min. PSUM NEXT (dB)	Min. PSUM ACR (dB/ 100m)	Min. PSUM ELFEXT (dB/ 100m)	Input Imped. (Ω)	Min. RL (dB)
Enhanced Cat 5e • 24 AWG Bonded-Pairs Solid BC Conductors • Polyester Wrap • Rip Cord • See Color Code Chart (below)																
AL Interlocked Armor • Polyolefin Insulation • PVC Inner Jacket • .045″ Industrial Grade PVC Outer Jacket (Black or Gray)																
Interlocked AL Armor  Rip Cord	**121700A**	NEC: CM CEC: HL CMG FT4	4	1000 3000 †	304.8 914.4	159.0 459.0	72.0 210.6	.530	13.46	1	2.0	65.3	63.3	60.8	100±12	20.0
										4	4.0	56.3	52.3	48.7	100±12	23.0
										8	5.7	51.8	46.1	42.7	100±12	24.5
								Nominal Core OD:		10	6.4	50.3	43.9	40.8	100±12	25.0
										16	8.1	47.3	39.1	36.7	100±12	25.0
								.200	5.08	25	10.3	44.3	34.1	32.8	100±15	24.3
										31.25	11.6	42.9	31.3	30.9	100±15	23.6
										62.5	16.8	38.4	21.6	24.8	100±15	21.5
										100	21.7	35.3	17.1	20.8	100±15	20.1
										155	27.7	32.5	4.7	16.9	100±18	19.0
										200	32.0	30.8	3.0	14.7	100±20	19.0
										250	36.4	29.3	—	12.8	100±20	18.0
										350	44.3	27.2	—	9.9	100±22	17.0

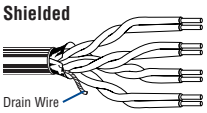
†3000 ft. put-up available in Black only. • RJ-45 Compatible • Outer jacket is sunlight- and oil-resistant.
Cable passes -40°C Cold Bend per UL1581 • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°C to +75°C**
Jacket sequentially marked at 1 meter intervals • Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126

AL Interlocked Armor • Polyolefin Insulation • PVC Inner Jacket • .045″ Industrial Grade PVC Outer Jacket (Black or Blue)																
Interlocked AL Armor -40°C Cold Impact  Rip Cord	**121700R** new	NEC: CM CEC: HL CMG FT4	4	1000 3000 5000 †	304.8 914.4 1524.0	159.0 459.0 690.0	72.0 210.6 313.0	.530	13.46	(Same as above)						
								Nominal Core OD:								
								.200	5.08							

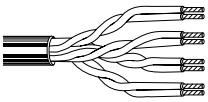
†5000 ft. put-up available in Blue only. • RJ-45 Compatible • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°C to +75°C**
Outer jacket is sunlight- and oil-resistant. • Jacket sequentially marked at 1 meter intervals • Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126

Cat 5e • 24 AWG Solid Bare Copper Conductors • Twisted Pairs • Rip Cord • See Color Code Chart (below)																
Polyolefin Insulation • .030″ Industrial Grade Sunlight- and Oil-resistant PVC Jacket (Black or Blue)																
 Rip Cord	**7918A**	NEC: CMR, CMX-Outdoor CEC: CMR FT4	4	1000 2000 ††	304.8 609.6	28.0 52.0	12.7 23.6	.230	5.84	1	2.0	62.3	60.3	60.8	100±15	20.0
										4	4.1	53.3	49.2	48.7	100±15	23.0
										10	6.5	47.3	40.8	40.8	100±15	25.0
										16	8.2	44.3	36.1	36.7	100±15	25.0
										31.25	11.7	39.9	28.2	30.9	100±15	23.6
										62.5	17.0	35.4	18.4	24.8	100±15	21.5
										100	22.0	32.3	10.3	20.8	100±15	20.1
										200	32.4	27.8	1.0	14.7	100±25	15.0

††2000 ft. put-up available in Black only. • RJ-45 Compatible • Jacket sequentially marked at 2 ft. intervals
Cable passes -40°C Cold Bend per UL1581 • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°C to +75°C** • Third party verified to TIA/EIA-568-B.2, Category 5e

Cat 5e • 24 AWG Solid BC • Twisted Pairs • Overall Beldfoil® Shield (100% Coverage) • 24 AWG Stranded TC Drain Wire • See Color Code Chart																
Polyolefin Insulation • .030″ Industrial Grade Sunlight- and Oil-resistant PVC Jacket (Black or Blue)																
Shielded  Drain Wire	**7919A**	NEC: CMR, CMX-Outdoor CEC: CMR FT4	4	1000 2000 †	304.8 609.6	35.0 68.0	15.9 30.9	.265	6.73	1	2.0	62.3	60.3	60.8	100±15	20.0
										4	4.1	53.3	49.2	48.7	100±15	23.0
										10	6.5	47.3	40.8	40.8	100±15	25.0
										16	8.2	44.3	36.1	36.7	100±15	25.0
										31.25	11.7	39.9	28.2	30.9	100±15	23.6
										62.5	17.0	35.4	18.4	24.8	100±15	21.5
										100	22.0	32.3	10.3	20.8	100±15	20.1

†2000 ft. put-up available in Black only. • RJ-45 Compatible • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°C to +75°C** • Cable passes -40°C Cold Bend per UL1581
Shield is bonded to jacket inner wall for electrical stability. • Jacket sequentially marked at 2 ft. intervals • Third party verified to TIA/EIA-568-B.2, Category 5e • P-07-KA060004-MSHA*

Cat 5e • 24 AWG Stranded (7x32) Bare Copper Conductors • Twisted Pairs • See Color Code Chart (below)																
Polyolefin Insulation • .030″ Industrial Grade Sunlight- and Oil-resistant Black PVC Jacket																
Stranded/Flexible 	**7930A** new	NEC: CMR, CMX-Outdoor CEC: CMR FT4	4	1000 2000	304.8 609.6	29.0 56.0	13.2 25.4	.240	6.09	1	2.5	62.3	59.8	60.8	100±15	20.0
										4	4.9	53.3	48.4	48.7	100±15	23.0
										10	7.8	47.3	39.5	40.8	100±15	25.0
										16	9.9	44.3	34.4	36.7	100±15	25.0
										31.25	14.1	39.9	25.8	30.9	100±15	23.6
										62.5	20.4	35.4	15.0	24.8	100±15	21.5
										100	26.4	32.3	5.9	20.8	100±15	20.1
										200	38.9	27.8	—	14.7	100±25	15.0

Installation Temperature: 0°C to +75°C • Operating Temperature: -25°C to +75°C** • Cable passes -25°C Cold Bend per UL1581
RJ-45 Compatible • Jacket sequentially marked at 2 ft. intervals • Third party verified to TIA/EIA-568-B.2, Category 5e • P-07-KA060003-MSHA*

ACR = Attenuation Crosstalk Ratio • BC = Bare Copper • ELFEXT = Equal Level Far-end Crosstalk • FEP = Fluorinated Ethylene-propylene •
NEXT = Near-end Crosstalk • PSUM = Power Sum • RL = Return Loss • TC = Tinned Copper

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*Pennsylvania Department of Environmental Resources and United States Mine Safety and Health Administration Certification.
**Subject to length de-rating.

Color Codes: DataTuff

Pair No.	Color Combination
1	White/Blue Stripe & Blue
2	White/Orange Stripe & Orange
3	White/Green Stripe & Green
4	White/Brown Stripe & Brown

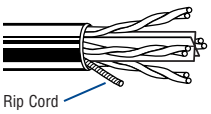
For two pair products: use color codes for Pairs 2 & 3

견적문의 Belden114@CableCon.kr / 0707-434-7704 / Fax. 02-744-0909 / www.CableCon.co.kr

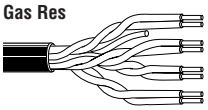
케이블 콘(주) 기술지원팀 :: 콘넥터 문의 0707-434-7701 케이블 문의 0707-434-7702

Industrial Data Solutions® — Industrial Ethernet

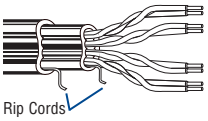
Category 6 DataTuff® Twisted Pair Cables, 4-Pair
Heavy-Duty Jackets

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Standard Lengths Ft.	Standard Lengths m	Standard Unit Wt. Lbs.	Standard Unit Wt. kg	Nominal OD Inch	Nominal OD mm	Freq. (MHz)	Max. Atten. (dB/ 100m)	Min. PSUM NEXT (dB)	Min. PSUM ACR (dB/ 100m)	Min. PSUM ELFEXT (dB/ 100m)	Input Imped. (Ω)	Min. RL (dB)
Enhanced Cat 6 • 23 AWG Bonded-Pairs Solid BC Conductors • Patented E-Spline Center Member • Rip Cord • See Color Code Chart																
Polyolefin Insulation • .030″ Industrial Grade Sunlight- and Oil-resistant Black PVC Jacket																
 Rip Cord	**7927A**	NEC: CMR CEC: CMR FT4	4	1000 2000	304.8 609.6	44.0 88.0	20.0 39.9	.251 x .339	6.38 x 8.61	1	1.9	80.3	78.5	70.8	100±12	20.0
										10	5.7	65.3	59.6	50.8	100±12	25.0
										31.25	10.2	57.9	47.7	40.9	100±15	25.0
										62.5	14.7	53.4	38.7	34.9	100±15	25.0
										100	18.9	50.3	31.4	30.8	100±15	25.0
										155	23.9	47.5	23.5	27.0	100±15	22.8
										200	27.5	45.8	18.3	24.8	100±15	21.7
										250	31.2	44.3	13.2	22.8	100±20	20.5
										350	37.7	40.2	4.5	19.9	100±22	19.8
										400	40.6	39.3	0.6	18.8	100±22	19.5
										500	46.2	37.8	>0.0 ◆	16.8	100±22	18.4
										550	48.8	37.2	—	16.0	100±22	18.0
										600	51.4	36.6	—	15.2	100±22	17.6

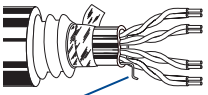
RJ-45 Compatible • Jacket sequentially marked at 2 ft. intervals • Third party verified to TIA/EIA-568-B.2-1, Category 6
Cable passes -40°C Cold Bend per UL1581 • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°C to +75°C**
◆PSUM ACR >0 is guaranteed to 460 MHz. • U.S. Patents 5,606,151; 5,734,126; 5,789,711 and 6,297,454-B1

Cat 6 • 23 AWG Bonded-Pairs Solid BC Conductors • See Color Code Chart (below)																
Plenum • FEP Insulation • Sunlight-, Oil- and Gas-resistant Black FEP Jacket																
High & Low Temp **Oil Res I & II** **Gas Res** 	**7931A**	NEC: Limited Combustible FHC 25/50 CMP CEC: CMP FT6	4	1000	304.8	35.0	15.9	.214	5.44	1	2.0	72.3	70.3	64.8	100±15	20.0
										10	6.0	57.3	51.3	44.8	100±15	25.0
										20	8.5	52.8	44.3	38.7	100±15	25.0
										31.25	10.7	49.9	39.2	34.9	100±15	23.6
										62.5	15.4	45.4	30.0	28.8	100±15	21.5
										100	19.8	42.3	22.5	24.8	100±15	20.1
										200	29.0	37.8	8.8	18.7	100±22	18.0
										250	32.8	36.3	3.5	16.8	100±32	17.3

RJ-45 Compatible
Cable passes -70°C Cold Bend per UL1581 • Installation Temperature: -55°C to +150°C • Operating Temperature: -70°C to +150°C**
Jacket sequentially marked at 2 ft. intervals • Third party verified to TIA/EIA-568-B.2-1, Category 6 • U.S. Patents 5,606,151 and 5,734,126

Enhanced Cat 6 • 23 AWG Bonded-Pairs Solid BC Conductors • Rip Cord • See Color Code Chart (below)																
Polyolefin Insulation • PVC Inner Jacket • .035″ Industrial Grade PVC Outer Jacket (Black or Gray)																
Upjacketed  Rip Cords	**11872A**	NEC: CM CEC: CM FT1	4	1000	304.8	66.0	30.0	.475 x .265	12.07 x 6.73	1	1.9	72.3	70	64.8	100±12	20.0
										4	3.7	63.3	59	52.7	100±12	23.0
										10	5.9	57.3	51	44.8	100±12	25.0
										16	7.5	54.3	46	40.7	100±12	25.0
										31.25	10.6	49.9	39	34.9	100±15	23.6
										62.5	15.4	45.4	30	28.8	100±15	21.5
								Nominal Core OD:		100	19.8	42.3	25	24.8	100±15	21.0
										155	25.1	39.5	14	20.9	100±15	21.0
								.365 x .165	9.27 x 4.19	200	29.0	37.9	10	18.7	100±15	21.0
										310	37.1	34.9	—	14.9	100±20	18.0
										350	39.8	34.2	—	13.9	100±22	17.0
										400 †	43.0	33.3	—	12.7	100±32	14.0
										500 †	49.0	31.8	—	10.8	100±32	14.0

†Value provided for information only. • RJ-45 Compatible • Cable passes -25°C Cold Bend per UL1581
Installation Temperature: -10°C to +75°C • Operating Temperature: -25°C to +75°C**
Jacket sequentially marked at 2 ft. intervals • Verified to TIA/EIA-568-B.2-1, Category 6 • U.S. Patents 5,606,151, 5,734,126 and 5,821,467

Enhanced Cat 6 • 23 AWG Bonded-Pairs Solid BC Conductors • Polyester Wrap • Rip Cord • See Color Code Chart (below)																
AL Interlocked Armor • Polyolefin Insulation • PVC Inner Jacket • .055″ Industrial Grade PVC Outer Jacket (Black or Gray)																
Interlocked AL Armor  Rip Cord	**121872A**	NEC: CM CEC: HL CMG FT4	4	1000	304.8	222.0	100.6	.684	17.37	1	1.9	72.3	70	64.8	100±12	20.0
										4	3.7	63.3	59	52.7	100±12	23.0
										10	5.9	57.3	51	44.8	100±12	25.0
										16	7.5	54.3	46	40.7	100±12	25.0
										31.25	10.6	49.9	39	34.9	100±15	23.6
										62.5	15.4	45.4	30	28.8	100±15	21.5
								Nominal Core OD:		100	19.8	42.3	25	24.8	100±15	21.0
										155	25.1	39.5	14	20.9	100±15	21.0
								.365 x .165	9.27 x 4.19	200	29.0	37.9	10	18.7	100±15	21.0
										310	37.1	34.9	—	14.9	100±20	18.0
										350	39.8	34.2	—	13.9	100±22	17.0
										400 †	43.0	33.3	—	12.7	100±32	14.0
										500 †	49.0	31.8	—	10.8	100±32	14.0

†Value provided for information only. • RJ-45 Compatible • Jacket sequentially marked at 1 meter intervals
Cable passes -40°C Cold Bend per UL1581 • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°C to +75°C**
Verified to TIA/EIA-568-B.2-1, Category 6 • U.S. Patents 5,606,151, 5,734,126 and 5,821,467

ACR = Attenuation Crosstalk Ratio • AL = Aluminum • BC = Bare Copper • ELFEXT = Equal Level Far-end Crosstalk • NEXT = Near-end Crosstalk • PSUM = Power Sum • RL = Return Loss • TC = Tinned Copper
**Subject to length de-rating.

Color Codes: DataTuff

Pair No.	Color Combination
1	White/Blue Stripe & Blue
2	White/Orange Stripe & Orange
3	White/Green Stripe & Green
4	White/Brown Stripe & Brown

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케이블 콘(주) 기술지원팀 :: 콘넥터 문의 0707-434-7701 케이블 문의 0707-434-7702

Industrial Data Solutions® — Industrial Ethernet

TrayOptic® Heavy-Duty, All-Dielectric Fiber Optic Cables
Loose Tube — Indoor/Outdoor Riser & Tray

Applications

- Industrial and other harsh environment applications
- Factory automation
- Direct burial

Product Description

Laser Optimized Fiber to handle Gigabit Ethernet light sources and expanded bandwidth requirements. Passes IEEE 383-2003 flame test. Waterblocking agent for moisture protection. CPE outer jacket option provides extra chemical or abrasion resistance.

Jacket Material	PVC or CPE
Strength Member	Aramid Yarn
Jacket Color	Orange

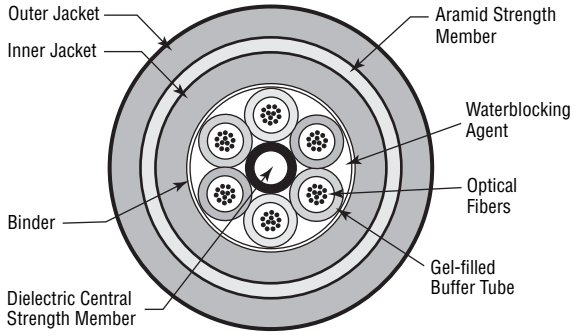
Ratings

Riser	
UL Type	OFNR
cUL Type	OFN FT4
Flame Resistance	IEEE 383-2003

Specifications

Temperature Range	
Storage	-40 to +70°C
Operating	-40 to +70°C
Crush Resistance (EIA-455-41)	500 lbs./in. min.
Impact Resistance (EIA-455-25)	3.3 ft.-lbs./25 impacts min. @ 2.2N-m
Cyclic Flexing (EIA-455-104)	25 cycles, 12 lbs., 20 x OD radius min.
Min. Bend Radius	
Installation	20 x OD
Long Term	15 x OD
Maximum Installation Load	600 lbs. (2700 N)
Optical Specifications	See page 10.2

Fiber Bundle Detail



No. of Fibers	Fibers Per Tube	Outside Diameter		PVC Jacket			CPE Jacket		
		Inches	mm	Belden Part No.	Weight Lbs./1000′	Weight kg/km	Belden Part No.	Weight Lbs./1000′	Weight kg/km
TrayOptic Series									
Riser (NEC/CEC OFNR/OFN FT4)									
2	2	0.440	11.18	**I100255**	88	131	**I100266**	83	124
4	4	0.440	11.18	**I100455**	88	131	**I100466**	83	124
6	6	0.440	11.18	**I100655**	88	131	**I100666**	83	124
8	4	0.440	11.18	**I400855**	88	131	**I400866**	83	124
12	6	0.440	11.18	**I601255**	88	131	**I601266**	83	124
18	6	0.440	11.18	**I601855**	88	131	**I601866**	83	124
24	6	0.440	11.18	**I602455**	88	131	**I602466**	83	124
36	6	0.440	11.18	**I603655**	88	131	**I603666**	83	124
48	12	0.540	13.72	**I604855**	136	202	**I604866**	129	192
60	12	0.540	13.72	**I606055**	136	202	**I606066**	129	192
72	12	0.540	13.72	**I607255**	136	202	**I607266**	129	192

All optical fiber products can be supplied in compliance with RoHS regulations. Please contact Customer Service for more details.

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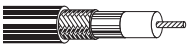
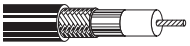
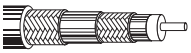
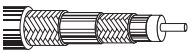
Industrial Data Solutions® — Industrial Ethernet

Coaxial Cables

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Conductor (stranding) Diameter Nom. DCR	Nominal Core OD Inch	Nominal Core OD mm	Shielding Materials Nom. DCR	Nominal OD Inch	Nominal OD mm	Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance pF/Ft.	Nominal Capacitance pF/m	Nominal Attenuation MHz	Nominal Attenuation dB/ 100 Ft.	Nominal Attenuation dB/ 100m
Thinnet 10Base2 Ethernet • 20 AWG Stranded (19x32) .037″ TC Conductor • Duobond® II (100% Coverage) + TC Braid (93% Coverage)																			
Foam Polyethylene Insulation • Gray PVC Jacket																			
UL AWM	**9907**	NEC:	500	152.4	12.5	5.7	20 AWG	.102	2.59	Duobond II	.185	4.70	50	80%	25.4	83.3	1	.43	1.4
Style 1354		CL2	U-1000	U-304.8	25.0	11.4	(19x32)			+ 93%							10	1.30	4.3
(30V 60°C)		CM	1000	304.8	25.0	11.4	.037″			TC Braid							50	2.90	9.5
		CEC:	1640	500.0	41.0	18.6	TC			5.8Ω/M′							100	4.20	13.8
		CM	U-2500	U-762.0	60.0	27.3	8.8Ω/M′			19.0Ω/km			For Plenum versions of 9907, see 89907 or 82907.				200	6.10	20.0
			2500	762.0	62.5	28.4	28.9Ω/km										400	8.90	29.2
			3280	1000.0	82.0	37.3											700	12.10	39.7
																	900	13.90	45.6
DEC Part No. 17-01248-00																	1000	14.80	48.6
Plenum • Foam FEP Insulation • Gray Fluorocopolymer Jacket																			
150°C	**89907**	NEC:	500	152.4	13.0	5.7	20 AWG	.095	2.41	Duobond II	.160	4.06	50	80%	25.4	83.3	1	.43	1.4
		CL2P	1000	304.8	24.0	10.9	(19x32)			+ 93%							10	1.30	4.3
		CMP	2500†	762.0	60.0	27.3	.037″			TC Braid							50	2.90	9.5
		CEC:					TC			5.8Ω/M′							100	4.18	13.8
		CMP FT6					8.8Ω/M′			19.0Ω/km							200	6.10	20.0
							28.9Ω/km										400	9.20	30.2
RG-58/U Type																	700	12.90	42.3
DEC Part No. 17-01246-00																	900	15.00	49.2
Suitable for Outdoor and Direct Burial applications.																	1000	16.00	52.5
Thicknet 10Base5 Ethernet • 12 AWG Solid .086″ Bare Copper Conductor • Duobond IV* Quad Shield (100% Coverage)																			
Foam Polyethylene Insulation • Yellow PVC Jacket																			
UL AWM	**9880**	NEC:	500	152.4	66.0	30.0	12 AWG	.243	6.17	Duobond IV	.405	10.29	50	78%	26.0	85.0	1	.19	.62
Style 1478		CL2	1000	304.8	131.0	59.5	(solid)			(Duobond II							5	.37	1.21
(30V 60°C)		CM	1640	500.0	219.0	99.9	.086″			+ 94% TC Braid							10	.52	1.71
		CEC:					BC			+ Duofoil®							50	1.20	3.94
		CM					1.4Ω/M′			+ 90% TC			For Plenum version of 9880, see 89880.				100	1.70	5.58
							4.7Ω/km			Braid)							200	2.55	8.37
										1.5Ω/M′							400	3.90	12.80
										5.0Ω/km							700	5.50	18.10
DEC Part No. 17-00451-00																	900	6.50	21.30
Ring-band stripes marked every 2.5 meters to aid users in tap placement.																	1000	6.90	22.60
Plenum • Foam FEP Insulation • Orange Fluorocopolymer Jacket																			
150°C	**89880**	NEC:	1000	304.8	134.0	60.9	12 AWG	.245	6.22	Duobond IV	.375	9.53	50	78%	26.0	85.0	1	.18	.59
		CL2P	1640†	500.0	224.7	102.1	(solid)			(Duobond II							5	.37 max.	1.21
		CMP					.086″			+ 90% TC Braid							10	.52 max.	1.71
		CEC:					BC			+ Duofoil							50	1.15	3.77
		CMP FT6					1.4Ω/M′			+ 90% TC							100	1.65	5.41
							4.7Ω/km			Braid)							200	2.45	8.04
										1.5Ω/M′							400	3.80	12.50
DEC Part No. 17-00324-00										5.0Ω/km							700	5.60	18.40
Ring-band stripes marked every 2.5 meters to aid users in tap placement.																	900	6.80	22.30
Suitable for Outdoor and Direct Burial applications.																	1000	7.20	23.60

BC = Bare Copper • DCR = DC Resistance • FEP = Fluorinated Ethylene-propylene • TC = Tinned Copper

Contact the Belden Customer Service Department for a Comprehensive Connector Cross Reference. **1-800-BELDEN-1**.

*Duobond IV = Duobond II + 94% tinned copper braid + Duofoil® + 90% tinned copper braid.
(Plenum version is Duobond II + 90% tinned copper braid + Duofoil + 90% tinned copper braid.)

† Spools and/or UnReel® cartons are one piece, but length may vary ±10% from length shown.

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케이블 콘(주) 기술지원팀 :: 콘넥터 문의 0707-434-7701 케이블 문의 0707-434-7702

Industrial Data Solutions® — Industrial Twinax

Belden® Blue Hose® Selection Guide for PLC and DCS Applications

Part No.	Description	Specifications
9463	**Blue Hose Standard Data Highway Cable** A Standard Data Highway Cable that is sometimes referred to as Blue Hose. Designed to be used in light industrial environments. Available in Blue, Brown or Orange up to 10,000 ft. special lengths.	1-pair, 20 AWG stranded (7x28) tinned copper, polyethylene insulation (color coded Blue, Clear), Beldfoil® + 55% tinned copper braid and drain wire, Blue sunlight-resistant PVC jacket. Nominal diameter: .238″.
3072F	**600V Data Highway Cable — UL Type TC** A DataTray® cable designed for cable tray use in industrial applications. Cable can occupy same tray or conduit as 600V power cables.	1-pair, 18 AWG stranded (7x26) tinned copper, flame-retardant polyolefin insulation (color coded Blue, White), Beldfoil + 55% tinned copper braid and drain wire, Blue sunlight-resistant PVC jacket. Nominal diameter: .324″. UL-1277 600V TC/PLTC/ITC/CMG.
9463F	**High-Flex Cable** A highly flexible version of the standard Blue Hose cable. The cable also has heavier braid coverage for better noise immunity.	1-pair, 20 AWG stranded (42x36) tinned copper, polyethylene insulation (color coded Blue, Clear), Beldfoil + 85% tinned copper braid, Blue sunlight-resistant PVC jacket. Nominal diameter: .243″.
YR28826*	**Dual Blue Hose Cable** Dual Data Highway/Remote I/O cable has two Twinax pairs individually shielded with an overall braid. Designed for use in daisy chain applications or applications requiring two Blue Hose cables.	2-pair, 20 AWG stranded (7x28) tinned copper, polyethylene insulation (color coded Blue, Clear), each pair Beldfoil shielded (1 pair Blue tape and 1 pair Green tape), 85% tinned copper braid and drain wire, Blue PVC jacket. Nominal diameter: .382″.
YC39151*	**Dual Armored Data Highway Cable** Features two twinax pairs individually shielded with an overall braid, an inner PVC jacket, aluminum interlocked armor, with an outer PVC jacket. Designed for use in daisy chain applications or applications requiring two Blue Hose cables, with the extra mechanical protection and electrical shielding provided by the armor.	2-pair, 20 AWG stranded (7x28) tinned copper, polyethylene insulation (color coded Blue, Clear), each pair Beldfoil shielded, 55% tinned copper braid and drain wire, Blue PVC inner jacket, aluminum interlocked armor, Blue sunlight-resistant PVC outer jacket. Nominal diameter: .820″.
9463DB	**Gel-Filled Direct Burial Cable** A gel-filled Blue Hose cable featuring a low-density polyethylene (LDPE) jacket. Especially suited for high-moisture environments and burial applications.	1-pair, 20 AWG stranded (7x28) tinned copper, polyethylene insulation (color coded Blue, Clear), Beldfoil + 55% tinned copper braid and drain wire, CoreGuard® flooding compound, Blue sunlight-resistant low density polyethylene jacket. Nominal diameter: .240″.
89463	**Plenum Cable** A plenum, 200°C grade cable that is suitable for installations where high and low temperatures, as well as corrosive environments, are encountered.	1-pair, 20 AWG stranded (7x28) tinned copper, FEP insulation (color coded Blue, Clear), Beldfoil + 76% tinned copper braid and drain wire, Blue FEP jacket. Nominal diameter: .203″.
YR28764*	**Thick-Wall, Heavy-Duty Cable — UL Type PLTC** A rugged, heavy-duty cable specially designed for abusive environments. A .069″ thick jacket provides extra protection against cuts and abrasion.	1-pair, 20 AWG stranded (7x28) tinned copper, polyethylene insulation (color coded Blue, Clear), Beldfoil + 55% tinned copper braid and drain wire, Blue sunlight-resistant PVC jacket. Nominal diameter: .380″.
YR41104*	**Low Smoke, Zero Halogen Cable** For applications concerned with smoke emissions, toxicity and electronic component corrosion.	1-pair, 20 AWG stranded (7x28) tinned copper, polyethylene insulation (color coded Blue, Clear), Beldfoil + 55% tinned copper braid and drain wire, Blue Haloarrest® jacket. Nominal diameter: .256″.
129463	**Aluminum Interlocked Armor Blue Hose Cable** Features interlocked aluminum armor combined with a PVC jacket and is an ideal alternative to conduit installation. Provides both mechanical protection and electrical shielding. Up to 25 Data Highway cables can be bundled under one sheath.	1-pair, 20 AWG stranded (7x28) tinned copper, polyethylene insulation (color coded Blue, Clear), Beldfoil + 55% tinned copper braid and drain wire, Blue PVC inner jacket, aluminum interlocked armor, Blue PVC sun-light-resistant outer jacket. Nominal overall diameter: .563″.
139463	**Steel Interlocked Armor Blue Hose Cable** Features interlocked galvanized steel armor combined with a PVC jacket. Provides mechanical protection and electrical shielding, as well as prevention against the low-frequency 60 Hz magnetic noise from power lines. Up to 25 cables can be bundled under one sheath.	1-pair, 20 AWG stranded (7x28) tinned copper, polyethylene insulation (color coded Blue, Clear), Beldfoil + 55% tinned copper braid and drain wire, Blue PVC inner jacket, steel interlocked armor, Blue sunlight-resistant outer PVC jacket. Nominal overall diameter: .563″.
189463	**Continuously Corrugated Aluminum Armor Blue Hose Cable** Features continuously corrugated aluminum armor combined with a PVC jacket. Provides mechanical protection, electrical shielding and is impervious to moisture.	1-pair, 20 AWG stranded (7x28) tinned copper, polyethylene insulation (color coded Blue, Clear), Beldfoil + 55% tinned copper braid and drain wire, Blue PVC inner jacket, continuously corrugated aluminum armor, Blue sunlight-resistant PVC outer jacket. Nominal overall diameter: .500″.
YR29565*	**Colored Blue Hose** When your application calls for multiple Blue Hose cables you can rest assured that Belden has the solution. This special construction is available in Red, Yellow, Green, White or Pink.	1-pair, 20 AWG stranded (7x28) tinned copper, polyethylene insulation (color coded Blue, Clear), Beldfoil + 55% tinned copper braid and drain wire, sunlight-resistant PVC jacket. Nominal diameter: .238″.

*Custom made product. Minimum order quantity may apply.

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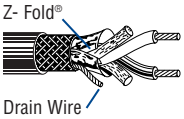
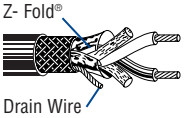
Industrial Data Solutions® — Industrial Twinax

Blue Hose® Cables

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Conductor (stranding) Diameter Nom. DCR	Nominal Core OD Inch	Nominal Core OD mm	Shielding Materials Nom. DCR	Nominal OD Inch	Nominal OD mm	Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance pF/Ft.	Nominal Capacitance pF/m	Nominal Attenuation MHz	Nominal Attenuation dB/ 100 Ft.	Nominal Attenuation dB/ 100m
78 Ohm • 20 AWG Stranded (7x28) .038″ TC Conductors • Beldfoil® (100% Coverage) + TC Braid Shield (55% Coverage) • TC Drain Wire																			
Polyethylene Insulation • Blue Sunlight-resistant PVC Jacket (Color Code: Clear, Blue)																			
Blue Hose UL AWM Style 2464 (300V 80°C) Z- Fold®  Drain Wire	**9463**	NEC: CM CL2 CEC: CM	100 U-500 500 U-1000 1000▲ 6000▲† 10000◆†	30.5 U-152.4 152.4 U-304.8 304.8 1828.8 3048.0	4.2 18.5 18.5 37.0 37.0 222.0 370.0	1.9 8.4 8.4 16.8 16.8 100.9 168.0	20 AWG (7x28) .038″ Tinned Copper 9.5Ω/M′ 31.0Ω/km	.154	3.91	Beldfoil +55% TC Braid 4.1Ω/M′ 13.4Ω/km	.238	6.05	78	66%	19.7	64.6	1 10 50 100 200 400	.6 2.1 5.0 7.5 11.0 16.0	2.0 6.9 16.4 24.6 36.1 52.5
												CPE jacket optional.							
Allen-Bradley P/N 1770-CD • P-7K-SC-182141-MSHA* ▲1000 ft. and 6000 ft. put-ups also available in Brown, Orange or Purple. ◆10000 ft. put-up available in Brown or Orange only. †Final put-up length may vary ±10% from length shown.)																			
Polyethylene Insulation • Blue Sunlight-resistant LDPE Jacket (Color Code: Clear, Blue)																			
Flooded Direct Burial Blue Hose 300V 80°C Z- Fold®  Drain Wire	**9463DB**	—	1000 5000	304.8 1524.0	33.0 155.0	15.0 70.4	20 AWG (7x28) .038″ Tinned Copper 9.5Ω/M′ 31.0Ω/km	.154	3.91	Beldfoil +55% TC Braid 4.1Ω/M′ 13.4Ω/km	.240	6.10	78	66%	19.7	64.6	1 10 50 100 200 400	.6 2.1 5.0 7.5 11.0 16.0	2.0 6.9 16.4 24.6 36.1 52.5
Allen-Bradley P/N 1770-CD																			
78 Ohm • 20 AWG Stranded (42x36) .038″ TC Conductors • Overall Beldfoil (100% Coverage) + TC Braid Shield (85% Coverage)																			
Polyethylene Insulation • Blue Sunlight-resistant PVC Jacket (Color Code: Clear, Blue)																			
High-Flex Blue Hose UL AWM Style 2464 (300V 60°C) 	**9463F**	NEC: CM CL2 CEC: CM	1000 5000	304.8 1524.0	42.0 205.0	19.1 93.1	20 AWG (42x36) .038″ Tinned Copper 9.5Ω/M′ 31.0Ω/km	.154	3.91	Beldfoil +85% TC Braid 5.0Ω/M′ 6.4Ω/km	.243	6.17	78	66%	19.7	64.6	1 10 50 100 200 400	.6 2.1 5.0 7.5 11.0 16.0	2.0 6.9 16.4 24.6 36.1 52.5
Allen-Bradley P/N 1770-CD • P-7K-SC-182141-MSHA*																			
78 Ohm • 20 AWG Stranded (7x28) .038″ TC Conductors • Overall Beldfoil (100% Coverage) + TC Braid Shield (76% Coverage) • Drain Wire																			
Plenum • FEP Insulation • Blue FEP Jacket (Color Code: Clear, Blue)																			
High Temperature Blue Hose 300V 200°C Z- Fold® Drain Wire	**89463**	NEC: CMP CL2P CEC: CMP FT6	1000 2500	304.8 762.0	34.0 90.0	15.4 40.9	20 AWG (7x28) .038″ Tinned Copper 9.5Ω/M′ 31.0Ω/km	.151	3.83	Beldfoil +76% TC Braid 4.1Ω/M′ 13.4Ω/km	.203	5.16	78	69%	19.7	64.6	1 10 50 100 200 400	.6 2.1 5.0 7.5 11.0 16.0	2.0 6.9 16.4 24.6 36.1 52.5
Allen-Bradley P/N 1770-CD																			

DCR = DC Resistance • FEP = Fluorinated Ethylene-propylene • LDPE = Low-density Polyethylene • TC = Tinned Copper

*Pennsylvania Department of Environmental Resources and United States Mine Safety and Health Administration Certification.

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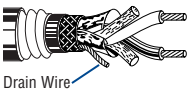
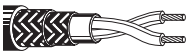
Industrial Data Solutions® — Industrial Twinax

Blue Hose® and Other Twinaxial Cables

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Conductor (stranding) Diameter Nom. DCR	Nominal Core OD Inch	Nominal Core OD mm	Shielding Materials Nom. DCR	Nominal OD Inch	Nominal OD mm	Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance pF/Ft.	Nominal Capacitance pF/m	Nominal Attenuation MHz	Nominal Attenuation dB/ 100 Ft.	Nominal Attenuation dB/ 100m
78 Ohm • 20 AWG Stranded (7x28) TC Conductors • Overall Beldfoil® (100% Coverage) + TC Braid Shield (55% Coverage) • TC Drain Wire																			
Aluminum Interlocked Armor • PE Insulation • Blue Sunlight-resistant PVC Outer Jacket* (Color Code: Clear, Blue)																			
Aluminum Armored Blue Hose 300V 60°C Drain Wire	**129463**	NEC: CM CL2 CEC: CM, CMG FT4, HLBCD (Haz Loc)	1000† 6000†	304.8 1828.8	122.0 924.0	55.5 420.0	20 AWG (7x28) .038″ Tinned Copper 9.5Ω/M′ 31.0Ω/km	.154	3.91	Beldfoil +55% TC Braid 4.1Ω/M′ 13.4Ω/km	Inner Jacket: .238 Overall: .563	6.05 14.30	78	66%	19.7	64.6	1 10 50 100 200 400	.6 2.1 5.0 7.5 11.0 16.0	2.0 6.9 16.4 24.6 36.1 52.5
*Blue PVC inner jacket. Allen-Bradley P/N 1770-CD																			
Steel Interlocked Armor • PE Insulation • Blue Sunlight-resistant PVC Outer Jacket* (Color Code: Clear, Blue)																			
Steel Armored Blue Hose 300V 60°C Drain Wire	**139463**	NEC: CM CL2 CEC: CM, CMG FT4, HLBCD (haz loc)	1000† 6000†	304.8 1828.8	220.0 1488.0	100.0 676.4	20 AWG (7x28) .038″ Tinned Copper 9.5Ω/M′ 31.0Ω/km	.154	3.91	Beldfoil +55% TC Braid 4.1Ω/M′ 13.4Ω/km	Inner Jacket: .238 Overall: .563	6.05 14.30	78	66%	19.7	64.6	1 10 50 100 200 400	.6 2.1 5.0 7.5 11.0 16.0	2.0 6.9 16.4 24.6 36.1 52.5
*Blue PVC inner jacket. Allen-Bradley P/N 1770-CD																			
Continuously Corrugated AL Armor • PE Insulation • Blue Sunlight-resistant PVC Outer Jacket* (Color Code: Clear, Blue)																			
Continuously Armored Blue Hose 300V 60°C  Drain Wire	**189463**	NEC: PLTC	2000†	609.6	258.0	117.1	20 AWG (7x28) .038″ Tinned Copper 9.5Ω/M′ 31.0Ω/km	.154	3.91	Beldfoil +55% TC Braid 4.1Ω/M′ 13.4Ω/km	Inner Jacket: .238 Overall: .500	6.05 12.70	78	66%	19.7	64.6	1 10 50 100 200 400	.6 2.1 5.0 7.5 11.0 16.0	2.0 6.9 16.4 24.6 36.1 52.5
*Blue PVC inner jacket. Allen-Bradley P/N 1770-CD																			
78 Ohm • 20 AWG Stranded (7x28) .038″ Tinned Copper Conductors • Tinned Copper Braid Shield (93% Coverage)																			
Polyethylene Insulation • Blue PVC Jacket (Color Code: Clear, Blue)																			
UL AWM Style 2092 (300V 60°C)	**9272**	NEC: CM CEC: CM	100 U-500 500 U-1000 1000	30.5 U-152.4 152.4 U-304.8 304.8	4.5 20.5 20.0 41.0 40.0	2.0 9.3 9.1 18.6 18.2	20 AWG (7x28) .038″ Tinned Copper 9.5Ω/M′ 31.0Ω/km	.156	3.96	93% TC Braid Shield 3.4Ω/M′ 11.2Ω/km	.244	6.20 For Plenum version of 9272, see 89272. CPE jacket optional.	78	66%	19.7	64.6	1 10 50 100 200 400	.6 2.1 5.0 7.5 11.0 16.0	2.0 6.9 16.4 24.6 36.1 52.5
95 Ohm • RG-22B/U Type • 18 AWG Stranded (7x26) Bare Copper Conductors†† • TC Double Braid Shield (95% Coverage)																			
Polyethylene Insulation • PE Inner Jacket • Black Non-contaminating PVC Outer Jacket																			
80°C VW-1 	**9250**	—	500 1000	152.4 304.8	61.5 121.0	27.9 54.9	18 AWG (7x26) .046″ BC 6.6Ω/M′ 21.5Ω/km	.285	7.24	2 TC Braid 95% Shield .9Ω/M′ 3.0Ω/km	.416	10.57 CPE jacket optional.	95	66%	16.0	52.5	1 10 20 50 100 400	.3 .9 1.3 2.1 3.0 6.3	1.0 3.0 4.3 6.9 9.8 20.7

††One conductor has tinned center strand.

AL = Aluminum • BC = Bare Copper • DCR = DC Resistance • PE = Polyethylene • TC = Tinned Copper

†Final put-up length may vary ±10% from length shown.

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Industrial Data Solutions® — Industrial Twinax

Twinaxial Cables

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Conductor (stranding) Diameter Nom. DCR	Nominal Core OD Inch	Nominal Core OD mm	Shielding Materials Nom. DCR	Nominal OD Inch	Nominal OD mm	Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance pF/Ft.	Nominal Capacitance pF/m	Nominal Attenuation MHz	Nominal Attenuation dB/ 100 Ft.	Nominal Attenuation dB/ 100m
100 Ohm • 20 AWG Stranded (7x28) .037″ One TC, One BC Conductor • Duofoil® (100% Coverage) + TC Braid Shield (86% Coverage)																			
Polyethylene Insulation • Polyethylene Inner Jacket • Black PVC Outer Jacket																			
75°C IBM P/N 7362211	**9207**	NEC: CMG CL2 CEC: CMG FT4	100 U-500 500 1000 1640 2000 3280 5000	30.5 U-152.4 152.4 304.8 500.0 609.6 1000.0 1524.0	7.1 34.0 34.5 68.0 111.5 136.0 219.8 350.0	3.2 15.5 15.7 30.9 50.7 61.8 99.9 159.1	20 AWG (7x28) .037″ 1 TC 1 BC 9.5Ω/M′ 31.0Ω/km	.236	5.99	Duofoil + 86% TC Braid 2.5Ω/M′ 8.2Ω/km	.330	8.38	100	66%	14.5	47.6	1 10 50 100 200 400	.3 1.2 2.8 4.1 6.4 10.2	1.0 3.9 9.2 13.5 21.0 33.5
													For Plenum version of 9207, see 89207. CPE jacket optional.						
124 Ohm • 25 AWG Stranded (7x33) .021″ Tinned Copper Conductors • Beldfoil® (100% Coverage) • Stranded Tinned Copper Drain Wire																			
Polyethylene Insulation • Blue PVC Jacket (Color Code: Clear, Blue)																			
UL AWM Style 2092 (300V 60°C) Shorting Fold	**9271**	NEC: CM CEC: CM	100 500 U-1000 1000	30.5 152.4 U-304.8 304.8	3.2 14.0 27.0 28.0	1.5 6.4 12.3 12.7	25 AWG (7x33) .021″ Tinned Copper 31.8Ω/M′ 104.3Ω/km	.170	4.32	100% Beldfoil Shield 12.0Ω/M′ 39.4Ω/km	.240	6.10	124	66%	12.2	40.0	1 10 50 100 200 400	.6 1.7 3.6 5.0 6.9 9.6	2.0 5.6 11.8 16.4 22.6 31.5
													CPE jacket optional.						
124 Ohm • 16 AWG Solid .051″ Bare Copper Conductors • Duofoil (100% Coverage) + Tinned Copper Braid Shield (90% Coverage)																			
Foam Polyethylene Insulation • Black PVC Jacket (Color Code: Clear, Blue)																			
UL AWM Style 2448 (30V 60°C)	**9860**	NEC: CMX CEC: CMX	500 1000 2000	152.4 304.8 609.6	52.0 103.0 202.0	23.6 46.8 91.8	16 AWG (solid) .051″ Bare Copper 4.2Ω/M′ 13.8Ω/km	.322	8.18	Duofoil +90% TC Braid 1.3Ω/M′ 4.3Ω/km	.440	11.18	124	78%	10.9	35.8	1 10 50 100 200 400	.2 .7 1.8 2.9 4.1 6.2	.6 2.3 5.9 9.5 13.5 20.3
													CPE jacket optional.						
150 Ohm • 22 AWG Stranded (19x34) .031″ Tinned Copper Conductors • Duofoil (100% Coverage) • Stranded Tinned Copper Drain Wire																			
Datalene® Insulation • Black PVC Jacket (Color Code: Black, Yellow)																			
UL AWM Style 2668 (30V 60°C) VW-1	**9182**	NEC: CL2X CMX CEC: CMX	U-500 500 1000	U-152.4 152.4 304.8	22.5 23.0 44.0	10.2 10.4 20.0	22 AWG (19x34) .031″ Tinned Copper 14.0Ω/M′ 45.9Ω/km	.275	6.98	100% Duofoil Shield 6.3Ω/M′ 20.7Ω/km	.345	8.76	150	78%	8.8	28.9	1 10 50 100 200 400	.4 1.2 2.7 4.3 6.2 8.8	1.3 3.9 8.9 14.1 20.3 28.9
													For Plenum version of 9182, see 89182. Dual version: YR41609 CPE jacket optional.						
Plenum • Foam FEP Teflon® Insulation • Black FEP Teflon Jacket (Color Code: Black, Yellow)																			
	89182	NEC: CMP CL2P CEC: CMP FT6	100 500† 1000†	30.5 152.4 304.8	6.4 28.0 53.0	2.9 12.7 24.1	22 AWG (19x34) .031″ Tinned Copper 14.0Ω/M′ 45.9Ω/km	.278	7.06	100% Duofoil Shield 6.3Ω/M′ 20.7Ω/km	.307	7.80	150	78%	8.8	28.9	1 10 50 100 200 400	.4 1.2 2.7 4.3 6.2 8.8	1.3 3.9 8.9 14.1 20.3 28.9

BC = Bare Copper • DCR = DC Resistance • FEP = Fluorinated Ethylene-propylene • TC = Tinned Copper

†Spools are one piece, but length may vary ±10% from length shown.

Teflon is a DuPont trademark.

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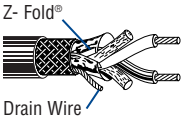
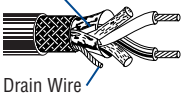
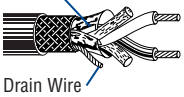
Industrial Data Solutions® — Industrial Twinax

DataTray® 600V Twinaxial Cables

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Conductor (stranding) Diameter Nom. DCR	Nominal Core OD Inch	Nominal Core OD mm	Shielding Materials Nom. DCR	Nominal OD Inch	Nominal OD mm	Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance pF/Ft.	Nominal Capacitance pF/m	Nominal Attenuation MHz	Nominal Attenuation dB/ 100 Ft.	Nominal Attenuation dB/ 100m
18 AWG Stranded (7x26) Tinned Copper Conductors • Overall Beldfoil® (100% Coverage) + TC Braid Shield (55% Coverage) • TC Drain Wire																			
Flame-retardant Polyolefin Insulation • Blue Sunlight-resistant PVC Jacket (Color Code: Natural, Blue)																			
UL Type TC 600V 75°C Z- Fold®  Drain Wire P-MSHA-C-7K-1827*	**3072F**	NEC: CMG, ITC TC, PLTC CEC: CMG FT4	250 500 1000 2500 5000† 10000†	76.2 152.4 304.8 762.0 1524.0 3048.0	17.5 35.0 69.0 170.0 345.0 710.0	8.0 15.9 31.3 77.2 156.6 322.3	18 AWG (7x26) .046″ Tinned Copper 6.9Ω/M′ 22.7Ω/km	.192	4.88	Beldfoil +55% TC Braid (100% Shield) 3.2Ω/M′ 10.4Ω/km	.324	8.23	78	65%	19.5	64	1 10 50 100 200 400	.5 2.0 3.8 5.4 7.6 10.7	1.7 6.5 12.4 17.6 24.8 35.1
												For CPE jacketed version order Part No. YM45044.							
UL Type TC 600V 75°C Z- Fold®  Drain Wire	**3073F**	NEC: CMG, ITC TC, PLTC CEC: CMG FT4	250 1000 5000†	76.2 304.8 1524.0	21.0 85.0 420.0	9.5 38.6 190.7	18 AWG (7x26) .046″ Tinned Copper 6.9Ω/M′ 22.7Ω/km	.246	6.25	Beldfoil +55% TC Braid (100% Shield) 2.9Ω/M′ 9.6Ω/km	.388	9.86	100	65%	15.3	50.2	1 10 50 100 200 400	.4 1.3 3.0 4.2 6.0 7.5	1.3 4.4 9.7 13.8 19.5 24.7
												CPE jacket optional.							
UL Type TC 600V 75°C Z- Fold®  Drain Wire	**3074F**	NEC: CMG, ITC TC, PLTC CEC: CMG FT4	500 1000 2500	152.4 304.8 762.0	62.5 121.0 300.0	28.4 54.9 136.2	18 AWG (7x26) .046″ Tinned Copper 6.9Ω/M′ 22.7Ω/km	.328	8.33	Beldfoil +55% TC Braid (100% Shield) 2.8Ω/M′ 9.1Ω/km	.460	11.68	124	65%	12.3	40.3	1 10 50 100 200 400	.3 1.1 2.4 3.4 4.8 6.8	1.1 3.5 7.8 11.1 15.7 22.2
												CPE jacket optional.							

DCR = DC Resistance • TC = Tinned Copper if conductor, or Tray Cable if NEC rating.

*Pennsylvania Department of Environmental Resources and United States Mine Safety and Health Administration certification.

†Final put-up length may vary -0 to +10% from length shown.

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Industrial Data Solutions® — Industrial Coax

ControlNet™ Quad Shielded Coax

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Conductor (stranding) Diameter Nom. DCR	Nominal Core OD Inch	Nominal Core OD mm	Shielding Materials Nom. DCR	Nominal OD Inch	Nominal OD mm	Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance pF/Ft.	Nominal Capacitance pF/m	Nominal Attenuation MHz	Nominal Attenuation dB/ 100 Ft.	Nominal Attenuation dB/ 100m
RG-6/U Type • 18 AWG Solid Bare Copper-covered Steel Conductor • Duobond® IV* Quad Shield (100% Coverage)																			
Foam Polyethylene Insulation • PVC Jacket (Black or Intrinsically Safe Blue)																			
	3092A	NEC: CL2R CMR CEC: CMG FT4	500	152.4	20.0	9.1	18 AWG (solid) .040″ BCCS 28.0Ω/M′ 91.8Ω/km	.180	4.57	Duobond IV Quad Shield 3.6Ω/M′ 11.8Ω/km	.298	7.57	75	82%	16.2	53.1	1	.35	1.1
			1000	304.8	39.0	17.7											2	.38	1.2
			2000	609.6	78.0	35.4											5	.45	1.5
			2500	762.2	92.5	42.0											10	.59	1.9
																	20	.86	2.8
													Sweep tested 5 MHz to 50 MHz.				50	1.37	4.5
													CPE jacket optional.				100	1.97	6.5
																	200	2.82	9.3
																	300	3.48	11.4
Allen-Bradley P/N 1786																	400	4.04	13.3
Plenum • Foam FEP Insulation • Fluorocopolymer Jacket (Black or Intrinsically Safe Blue◆)																			
150°C	**3093A**	NEC: CMP CEC: CMP FT6	1000◆	304.8	40.0	18.2	18 AWG (solid) .040″ BCCS 28.0Ω/M′ 91.8Ω/km	.170	4.32	Duobond IV Quad Shield 3.6Ω/M′ 11.8Ω/km	.274	6.96	75	82%	16.3	53.5	1	.36	1.2
			2000†	609.6	80.0	36.3											2	.38	1.2
			2500†	762.0	95.0	43.1											5	.50	1.6
																	10	.65	2.1
																	20	.95	3.1
													Sweep tested 5 MHz to 50 MHz.				50	1.50	4.9
																	100	2.12	7.0
																	200	2.99	9.8
◆Blue available as standard in 1000 ft. only.																	300	3.66	12.0
Suitable for Outdoor and Direct Burial applications. • Allen-Bradley P/N 1786																	400	4.23	13.9
RG-6/U Type • 20 AWG Stranded (105x40) Bare Copper Conductor • Duobond IV* Quad Shield (100% Coverage)																			
Foam Polyethylene Insulation • Black PVC Jacket																			
High-Flex	**3092F**	NEC: CL2R CMR CEC: CMG FT4	1000	304.8	44.0	20.0	20 AWG (105x40) .040″ Bare Copper 10.5Ω/M′ 34.4Ω/km	.183	4.65	Duobond IV Quad Shield 3.6Ω/M′ 11.8Ω/km	.303	7.70	75	79%	17.0	55.8	1	.36	1.2
			5000	1524.0	220.0	99.8											2	.47	1.5
																	5	.80	2.6
													Sweep tested 5 MHz to 400 MHz.				10	1.20	3.9
													CPE jacket optional.				20	2.00	6.6
																	50	3.20	10.5
													123092F — Aluminum Armor				100	4.60	15.1
													133092F — Steel Armor				200	6.50	21.3
IEEE 802.4 MAP/IEEE 802.7 Mini-MAP. • Allen-Bradley P/N 1786																	300	8.00	26.2
For Rockwell authorized Flexible ControlNet order YR28890 (Tinned Copper Braid version).																	400	9.30	30.5
RG-6/U Type • 18 AWG Solid Bare Copper-Covered Steel Conductor • Duobond IV* Quad Shield (100% Coverage)																			
Aluminum Interlocked Armor • Foam Polyethylene Insulation • PVC Inner Jacket • Black PVC Sunlight Resistant Outer Jacket																			
75°C	**123092A** new	NEC: CM CEC: CMG, FT4, HL	1000††	304.8	180.0	81.7	18 AWG (solid) .040″ BCCS 28.0Ω/M′ 91.9Ω/km	.180	4.57	Duobond IV Quad Shield 3.6Ω/M′ 11.8Ω/km	Inner Jacket .298	7.57	75	82%	16.2	53.2	1	.35	1.2
											Overall: .620	15.75					2	.38	1.3
																	5	.45	1.5
																	10	.59	1.9
																	20	.86	2.8
																	50	1.37	4.5
													Sweep tested 5 MHz to 50 MHz.				100	1.97	6.5
													CPE jacket optional.				200	2.82	9.3
													133092A — Steel Armor				300	3.48	11.4
Allen-Bradley P/N 1786																	400	4.04	13.3
Jacket sequentially marked at 1 meter intervals.																			
Continuously Corrugated Aluminum Armor • Foam Polyethylene Insulation • PVC Inner Jacket • Black PVC Outer Jacket																			
75°C	**183092A** new	NEC: CL2, CM	2000▲	609.6	350.0	158.9	18 AWG (solid) .040″ BCCS 28.0Ω/M′ 91.9Ω/km	.180	4.57	Duobond IV Quad Shield 3.6Ω/M′ 11.8Ω/km	Inner Jacket .298	7.57	75	82%	16.2	53.2	1	.35	1.2
											Overall: .570	14.48					2	.38	1.3
																	5	.45	1.5
																	10	.59	1.9
																	20	.86	2.8
																	50	1.37	4.5
													Sweep tested 5 MHz to 50 MHz.				100	1.97	6.5
																	200	2.82	9.3
Allen-Bradley P/N 1786																	300	3.48	11.4
Jacket sequentially marked at 2 ft. intervals.																	400	4.04	13.3

BCCS = Bare Copper-covered Steel • DCR = DC Resistance • FEP = Fluorinated Ethylene-propylene

*Duobond IV Quad Shield = Duobond II Foil + 60% aluminum braid + Duofoil + 40% aluminum braid.

†Final put-up length may vary 0 to +10% from length shown.
††Final put-up length may vary ±5% from length shown.
▲Final put-up length may vary ±10% from length shown.

ControlNet is a ControlNet International trademark.

견적문의 Belden114@CableCon.kr / 0707-434-7704 / Fax. 02-744-0909 / www.CableCon.co.kr

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Industrial Data Solutions® — Industrial Coax

ControlBus™ Quad Shielded Coax

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Conductor (stranding) Diameter Nom. DCR	Nominal Core OD Inch	Nominal Core OD mm	Shielding Materials Nom. DCR	Nominal OD Inch	Nominal OD mm	Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance pF/Ft.	Nominal Capacitance pF/m	Nominal Attenuation MHz	Nominal Attenuation dB/ 100 Ft.	Nominal Attenuation dB/ 100m
RG-6/U Type • 20 AWG Stranded (105x40) Bare Copper Conductor • Duobond® IV* Quad Shield (100% Coverage)																			
Foam Polyethylene Insulation • Black PVC Jacket																			
High-Flex	**3092F**	NEC:	1000	304.8	44.0	20.0	20 AWG	.183	4.65	Duobond IV	.303	7.70	75	79%	17.0	55.8	1	.36	1.2
		CL2R CMR	5000	1524.0	225.0	102.2	(105x40)			Quad							2	.47	1.5
		CEC:					.040″			Shield							5	.80	2.6
		CMG					Bare			3.6Ω/M′							10	1.20	3.9
		FT4					Copper			11.8Ω/km							20	2.00	6.6
							10.5Ω/M′										50	3.20	10.5
							34.4Ω/km										100	4.60	15.1
																	200	6.50	21.3
																	300	8.00	26.2
																	400	9.30	30.5
RG-6/U Type • 18 AWG Solid Bare Copper-covered Steel Conductor • Duobond IV* Quad Shield (100% Coverage)																			
Gas-Injected Foam Polyethylene Insulation • Gray PVC Jacket																			
	3131A	NEC:	1000	304.8	41.0	18.6	18 AWG	.180	4.57	Duobond IV	.300	7.62	75	82%	16.2	53.1	1	.35	1.1
		CL2R CMR	2500	762.0	100.0	45.4	(solid)			Quad							2	.38	1.2
		CEC:					.040″			Shield							5	.45	1.5
		CMR FT4					BCCS			3.6Ω/M′							10	.59	1.9
							28.0Ω/M′			11.8Ω/km							20	.86	2.8
							91.8Ω/km										50	1.37	4.5
																	100	1.97	6.5
																	200	2.82	9.3
																	300	3.48	11.4
																	400	4.04	13.3
Plenum • Foam FEP Insulation • Gray Fluorocopolymer Jacket																			
150°C	**3132A**	NEC:	1000	304.8	36.0	16.3	18 AWG	.170	4.32	Duobond IV	.274	6.96	75	82%	16.3	53.5	1	.36	1.2
		CMP					(solid)			Quad							2	.38	1.2
		CEC:					.040″			Shield							5	.50	1.6
		CMP FT6					BCCS			3.6Ω/M′							10	.65	2.1
							28.0Ω/M′			11.8Ω/km							20	.95	3.1
							91.8Ω/km										50	1.50	4.9
																	100	2.12	7.0
																	200	2.99	9.8
																	300	3.66	12.0
																	400	4.23	13.9
RG-11/U Type • 14 AWG Solid Bare Copper-covered Steel Conductor • Duobond IV* Quad Shield (100% Coverage)																			
Gas-Injected Foam Polyethylene Insulation • Gray PVC Jacket																			
	3094A	NEC:	500	152.4	35.5	16.1	14 AWG	.280	7.11	Duobond IV	.407	10.34	75	82%	16.2	53.1	1	.16	.5
		CL2R CMR	1000	304.8	62.0	28.1	(solid)			Quad							2	.18	.6
		CEC:	2000	609.6	140.0	63.6	.064″			Shield							5	.26	.9
		CMG FT4					BCCS			1.5Ω/M′							10	38	1.2
							11.0Ω/M′			4.9Ω/km							20	.55	1.8
							36.1Ω/km										50	.83	2.7
																	100	1.17	3.8
																	200	1.60	5.3
																	300	1.99	6.5
																	400	2.30	7.5
Plenum • Foam FEP Insulation • Gray Fluorocopolymer Jacket																			
150°C	**3095A**	NEC:	1000	304.8	76.0	34.5	14 AWG	.280	7.11	Duobond IV	.387	9.83	75	82%	16.5	54.1	1	.17	.6
		CMP					(solid)			Quad							2	.22	.7
		CEC:					.064″			Shield							5	.28	.9
		CMP FT6					BCCS			3.9Ω/M′							10	.40	1.3
							11.0Ω/M′			12.8Ω/km							20	.60	2.0
							36.1Ω/km										50	1.20	3.9
																	100	1.70	5.6
																	200	2.50	8.2
																	300	3.04	10.0
																	400	3.50	11.5

Sweep tested 5 MHz to 400 MHz.
CPE jacket optional.

IEEE 802.4 MAP/IEEE 802.7 Mini-MAP.

Sweep tested 5 MHz to 400 MHz.
CPE jacket optional.

IEEE 802.4 MAP/IEEE 802.7 Mini-MAP.
Tap marks every 2.6 meters to aid users in installation.

Sweep tested 5 MHz to 400 MHz.

IEEE 802.4 MAP/IEEE 802.7 Mini-MAP.
Tap marks every 2.6 meters to aid users in installation.
Suitable for Outdoor and Direct Burial applications.

Sweep tested 5 MHz to 400 MHz.
CPE jacket optional.

IEEE 802.4 MAP
Tap marks every 2.6 meters to aid users in installation.

Sweep tested 5 MHz to 400 MHz.

IEEE 802.4 MAP
Tap marks every 2.6 meters to aid users in installation.
Suitable for Outdoor and Direct Burial applications.

BCCS = Bare Copper-covered Steel • DCR = DC Resistance • FEP = Fluorinated Ethylene-propylene

*Duobond IV Quad Shield = Duobond II Foil + 60% aluminum braid + Duofoil® + 40% aluminum braid.

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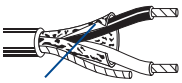
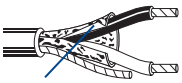
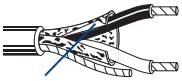
Industrial Data Solutions® — Industrial Data

DataBus® ISA/SP-50 FOUNDATION Fieldbus or PROFIBUS Cables

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Conductor (stranding) Diameter Nom. DCR	Nominal Core OD Inch	Nominal Core OD mm	Shielding Materials Nom. DCR	Nominal OD Inch	Nominal OD mm	Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance pF/Ft.	Nominal Capacitance pF/m	Nominal Attenuation MHz	Nominal Attenuation dB/ 100 Ft.	Nominal Attenuation dB/ 100m
FOUNDATION Fieldbus/PROFIBUS PA • 18 AWG Stranded (7x26) TC Conductors • Beldfoil® Shield (100% Coverage) • TC Drain Wire																			
Polyolefin Insulation • Orange or Blue PVC Jacket (Color Code: Blue, Orange)																			
Type A 300V 105°C (31.25 KBits/sec)  Shorting Fold	**3076F**	NEC: PLTC CM ITC CEC: CM	250 500 1000 2500 5000†	76.2 152.4 304.8 762.0 1524.0	10.5 18.5 37.0 85.0 170.0	4.8 8.4 16.8 38.6 77.2	(2) 18 AWG (7x26) .048″ Tinned Copper 7.5Ω/M′ 24.6Ω/km	.088	2.24	100% Beldfoil Shield 7.5Ω/M′ 24.6Ω/km	.253	6.43	100 @ 31.25 KHz	66%	24.0	78.7	.039	.08	.26
FOUNDATION Fieldbus • 22 AWG Stranded (7x30) TC Conductors • Beldfoil Shield (100% Coverage) • Tinned Copper Drain Wire																			
Polyolefin Insulation • Orange PVC Jacket (Color Code: Blue, Orange)																			
Type B 300V 105°C (31.25 KBits/sec)  Shorting Fold	**3077F**	NEC: PLTC CM ITC CEC: CM	500† 1000†	152.4 304.8	11.0 23.0	5.0 10.4	(2) 22 AWG (7x30) .030″ Tinned Copper 17.1Ω/M′ 56.0Ω/km	.059	1.50	100% Beldfoil Shield 11.4Ω/M′ 37.4Ω/km	.196	4.97	100 @ 31.25 KHz	66%	23.5	77.1	.039	.14	.45
FHDPE Insulation • Orange PVC Jacket (Color Code: Blue, Orange)																			
High Speed▲ 300V 75°C (1.0 & 2.5 MBits/sec)  Shorting Fold	**3078F**	NEC: PLTC CM CEC: CM	250 500 1000 2500	76.2 152.4 304.8 762.0	10.0 23.0 44.0 115.0	4.5 10.4 20.0 52.2	(2) 22 AWG (7x30) .030″ Tinned Copper 17.1Ω/M′ 56.1Ω/km	.121	3.07	100% Beldfoil Shield 3.3Ω/M′ 11.1Ω/km	.351	8.92	150 @ 1 MHz	78%	8.5	27.9	.250 .625 1.250 3.125	.18 .26 .34 .55	.59 .85 1.12 1.81
PROFIBUS DP • 22 AWG Solid Bare Copper Conductors • Beldfoil (100% Coverage) + Tinned Copper Braid Shield (65% Coverage)																			
FHDPE Insulation • Chrome or Purple PVC Jacket (Color Code: Red, Green)																			
300V 75°C UL AWM 20201 (600V) Siemens Sinec L2 cable.	**3079A**	NEC: PLTC CMG CEC: CMG FT4	1000 2000 3600	304.8 609.6 1097.6	56.0 112.0 201.6	25.4 50.8 91.4	(2) 22 AWG (solid) .026″ Bare Copper 16.0Ω/M′ 52.5Ω/km	.099	2.52	Beldfoil + 65% TC Braid Shield (100% Coverage) 3.9Ω/M′ 12.8Ω/km	.315	8.00	150	78%	8.5	27.9	.2 4.0 16.0 100.0 300.0	.27 .67 1.37 3.75 6.52	.9 2.2 4.5 12.3 21.4
PROFIBUS DP • 22 AWG Stranded (7x30) Bare Copper Conductors • Beldfoil (100% Coverage) + TC Braid Shield (65% Coverage)																			
FR-FPE Insulation • Purple PVC Jacket (Color Code: Red, Green)																			
300V 75°C	**3079E**	NEC: PLTC CMG CEC: CMG FT4	1000 1640 3280	304.8 500.0 1000.0	44.0 73.8 144.3	20.0 33.5 65.5	(2) 22 AWG Stranded (7x30) Bare Copper 16.0Ω/M′ 52.5Ω/km	.099	2.52	Beldfoil + 65% TC Braid Shield (100% Coverage) 3.9Ω/M′ 12.8Ω/km	.315	8.00	150	78%	8.5	27.9	.2 4.0 16.0	.34 .81 1.64	1.1 2.7 5.4

DCR = DC Resistance • FHDPE = Foamed High-Density Polyethylene • FR-FPE = Flame-Retardant Polyethylene • FRNC = Flame-Retardant Non-Corrosive • LSZH = Low-Smoke Zero-Halogen • TC = Tinned Copper

†Final put-up length may vary -0 to +10% from length shown.

▲For HSE, see Industrial Ethernet Section for copper and fiber cables.

123076F — Version with Aluminum Interlocked Armor
133076F — Version with Steel Interlocked Armor
YM47023 — CPE jacketed version
YM46698 — Black & White color-coded pairs
YM47090 — Various colored jackets
YM41725 — LSZH (FRNC) jacketed version

Fieldbus: Orange jacket. Profibus PA: Intrinsically Safe Blue jacket. Blue available as standard in 1000 ft. put-up only.

123077F — Version with Aluminum Interlocked Armor
133077F — Version with Steel Interlocked Armor
CPE and LSZH jacketed versions also available.

123078F — Version with Aluminum Interlocked Armor
133078F — Version with Steel Interlocked Armor
CPE and LSZH jacketed versions also available.

123079A — Aluminum Interlocked Armor
133079A — Steel Interlocked Armor
YR45047 — CPE jacketed version
YR44731 — LSZH (FRNC) jacketed version

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Industrial Data Solutions® — Industrial Data

DeviceBus® for ODVA DeviceNet™

DeviceNet Communications Rate Table

Communications Rate	Maximum Distance																			
	3082A		3082F		3082K		3083A		3084F		3084A/3085A		7895A		7896A		7897A		7900A	
	Ft.	m	Ft.	m	Ft.	m	Ft.	m	Ft.	m	Ft.	m	Ft.	m	Ft.	m	Ft.	m	Ft.	m
125 Kbps	1640	500	1640	500	1378	420	1640	500	328	100	328	100	984	300	1378	420	1640	500	328	100
250 Kbps	820	250	820	250	656	200	820	250	328	100	328	100	820	250	656	200	820	250	328	100
500 Kbps	328	100	328	100	246	75	328	100	328	100	328	100	328	100	328	100	328	100	328	100

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Shielding Materials Nom. DCR	Color Code	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg				Inch	mm			pF/Ft.	pF/m	MHz	dB/ 100 Ft.	dB/ 100m
600V Class 1 Thick • 15 and 18 AWG Stranded TC Conductors • Individually Foil Shielded (100% Coverage) + Overall TC Braid (65% Coverage)																		
PVC/Nylon Insulation (Power) • **FEP Insulation** (Data) • **Gray Sunlight/Oil-resistant PVC Jacket**																		
High Velocity Thick 600V 75°C	**7897A**	NEC: TC-ER	500 1000 2000	152.4 304.8 609.6	69.5 135.0 274.0	31.6 61.3 124.4	(2)15 AWG TC (19x28) 3.6Ω/M′ 11.8Ω/km (2)18 AWG TC (19x30) 6.9Ω/M′ 22.6Ω/km	100% Individual Foil + Overall 65% TC Braid 1.8Ω/M′ 5.9Ω/km	Power Pair: Red&Black Data Pair: Blue&White	.460	11.7	— 120	— 75%	— 12.0	— 39.4	— .125 .500 1.000	— .13 .25 .40	— .43 .82 1.31
18 AWG stranded (19x30) tinned copper drain wire. Meter marks on jacket to aid users in installation. Allen-Bradley P/N 1485 CPI-A																		
600V Class 1 ODVA Cable V • 16 and 18 AWG Stranded TC Cond. • Individ. Foil Shielded (100% Coverage) + Overall TC Braid (65% Coverage)																		
PVC/Nylon Insulation (Power) • **F-R Polypropylene Insulation** (Data) • **Gray Sunlight/Oil-resistant PVC Jacket**																		
600V 75°C	**7896A**	NEC: TC-ER	500 1000 2000	152.4 304.8 609.6	89.0 168.0 340.0	40.4 76.2 154.2	(2)16 AWG TC (19x29) 4.9Ω/M′ 16.1Ω/km (2)18 AWG TC (19x30) 6.9Ω/M′ 22.6Ω/km	100% Individual Foil + Overall 65% TC Braid 1.8Ω/M′ 5.9Ω/km	Power Pair: Red&Black Data Pair: Blue&White	.525	13.34	— 120	— 64%	— 14.7	— 48.2	— .125 .500 1.000	— .13 .25 .40	— .43 .82 1.31
C(UL) AWM I/II A/B 16 AWG stranded (19x29) tinned copper drain wire. Meter marks on jacket to aid users in installation. Allen-Bradley P/N 1485 CPI-A																		
600V Class 1 ODVA Cable IV • 16 and 18 AWG Stranded Tinned Copper Conductors • Unshielded																		
PVC/Nylon Insulation (Power) • **F-R Polypropylene Insulation** (Data) • **Gray Sunlight/Oil-resistant PVC Jacket**																		
Drop 600V 75°C	**7900A**	NEC: TC-ER CEC: FT1	500 1000	152.4 304.8	51.0 105.0	23.1 47.6	(2)16 AWG TC (19x29) 4.9Ω/M′ 16.1Ω/km (2)18 AWG TC (19x30) 6.9Ω/M′ 22.6Ω/km	Unshielded	Power Pair: Red&Black Data Pair: Blue&White	.430	10.92	— 120	— 64%	— 14.7	— 48.2	— .125 .500 1.000	— .13 .25 .40	— .43 .82 1.31
C(UL) AWM I/II A/B Meter marks on jacket to aid users in installation. Allen-Bradley P/N 1485 CPI-C																		

DCR = DC Resistance • FEP = Fluorinated Ethylene-propylene • F-R = Flame-retardant • TC = Tinned Copper • TC-ER = Tray Cable Exposed Run per 2005 NEC Article 336

ODVA DeviceNet is an Open DeviceNet Vendor Association, Inc. trademark.

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Industrial Data Solutions® — Industrial Data

DeviceBus® for ODVA DeviceNet™

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Conductor (stranding) Diameter Nom. DCR	Shielding Materials Nom. DCR	Color Code	Nominal OD Inch	Nominal OD mm	Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance pF/Ft.	Nominal Capacitance pF/m	Nominal Attenuation MHz	Nominal Attenuation dB/ 100 Ft.	Nominal Attenuation dB/ 100m
300V Class 2 Thick • 15 and 18 AWG Stranded TC Cond. • Individually Foil Shielded (100% Coverage) + Overall TC Braid (65% Coverage)																		
PVC Insulation (Power) • **FPE Insulation** (Data) • **Sunlight- and Oil-resistant PVC Jacket** (Available in Gray or Red)																		
Thick 75°C	**3082A**	NEC: CMG, PLTC-ER CEC: CMG FT4	500† 1000 2000†	152.4 304.8 609.6	71.0 138.0 280.0	32.2 62.6 127.0	(2)15 AWG TC (19x28) 3.6Ω/M′ 11.8Ω/km (2)18 AWG TC (19x30) 6.9Ω/M′ 22.6Ω/km	100% Individual Foil + Overall 65% TC Braid 1.8Ω/M′ 5.9Ω/km	Power Pair: Red&Black Data Pair: Blue&White	.480	12.19	— 120	— 75%	— 12.0	— 39.4	— .125 .500 1.000	— .13 .25 .36	— .43 .82 1.18
†500 ft. and 2000 ft. put-ups not available in Red. UL AWM 20201 (600V) • C(UL) AWM I/II A 18 AWG stranded (19x30) tinned copper drain wire. Meter marks on jacket to aid users in installation. • Allen-Bradley P/N 1485 CPI-A																		
High-Flex Thick 75°C	**3082F**	NEC: CMG, PLTC-ER CEC: CMG FT4	500† 1000 2000†	152.4 304.8 609.6	72.5 140.0 284.0	32.9 63.5 128.8	(2)15 AWG TC (65x33) 3.6Ω/M′ 11.8Ω/km (2)18 AWG TC (65x36) 6.9Ω/M′ 22.6Ω/km	100% Individual Foil + Overall 65% TC Braid 1.8Ω/M′ 5.9Ω/km	Power Pair: Red&Black Data Pair: Blue&White	.480	12.19	— 120	— 75%	— 12.0	— 39.4	— .125 .500 1.000	— .13 .25 .36	— .43 .82 1.18
†500 ft. and 2000 ft. put-ups not available in Red. UL AWM 20201 (600V) • C(UL) AWM I/II A 18 AWG stranded (65x36) tinned copper drain wire. Meter marks on jacket to aid users in installation. • Allen-Bradley P/N 1485 CPI-A																		
PVC Insulation (Power) • **FPE Insulation** (Data) • **Yellow CPE Jacket**																		
Thick 75°C	**3083A**	NEC: CMG, PLTC CEC: CMG FT4	1000 2000	304.8 609.6	137.0 278.0	62.1 126.1	(2)15 AWG TC (19x28) 3.6Ω/M′ 11.8Ω/km (2)18 AWG TC (19x30) 6.9Ω/M′ 22.6Ω/km	100% Individual Foil + Overall 65% TC Braid 1.8Ω/M′ 5.9Ω/km	Power Pair: Red&Black Data Pair: Blue&White	.475	12.07	— 120	— 75%	— 12.0	— 39.4	— .125 .500 1.000	— .13 .25 .36	— .43 .82 1.18
18 AWG stranded (19x30) tinned copper drain wire. Meter marks on jacket to aid users in installation. • Allen-Bradley P/N 1485 CPI-A																		
300V Class 2 Thin • 22 and 24 AWG Stranded TC Conductors • Individ. Foil Shielded (100% Coverage) + Overall TC Braid (65% Coverage)																		
PVC Insulation (Power) • **FPE Insulation** (Data) • **Gray Sunlight- and Oil-resistant PVC Jacket**																		
Thin 75°C	**3084A**	NEC: CL2 CMG CEC: CMG FT4	500 1000† 2000	152.4 304.8 609.6	22.0 47.0 96.0	10.0 21.3 43.6	(2)22 AWG TC (19x34) 17.5Ω/M′ 57.4Ω/km (2)24 AWG TC (19x36) 91.9Ω/km	100% Individual Foil + Overall 65% TC Braid 28.0Ω/M′ 10.5Ω/km	Power Pair: Red&Black Data Pair: Blue&White 3.2Ω/M′	.280	7.11	— 120	— 75%	— 12.0	— 39.4	— .125* .500* 1.000*	— .29* .50* .70*	— .95* 1.64* 2.30*
†1000 ft. put-up also available in Red. 22 AWG stranded (19x34) tinned copper drain wire. • C(UL) AWM I/II A Meter marks on jacket to aid users in installation. • Allen-Bradley P/N 1485 CPI-C																		
High-Flex Thin 75°C	**3084F**	NEC: CL2 CMG CEC: CMG FT4	500 1000 2000	152.4 304.8 609.6	22.0 47.0 96.0	10.0 21.3 43.6	(2)22 AWG TC (154x44) 17.5Ω/M′ 57.4Ω/km (2)24 AWG TC (105x44) 28.0Ω/M′ 91.9Ω/km	100% Individual Foil + Overall 65% TC Braid 3.2Ω/M′ 10.5Ω/km	Power Pair: Red&Black Data Pair: Blue&White	.275	6.99	— 120	— 75%	— 12.0	— 39.4	— .125* .500* 1.000*	— .29* .50* .70*	— .95* 1.64* 2.30*
C(UL) AWM I/II A 22 AWG stranded (26x36) tinned copper drain wire. Meter marks on jacket to aid users in installation. • Allen-Bradley P/N 1485 CPI-C																		
PVC Insulation (Power) • **FPE Insulation** (Data) • **Yellow CPE Jacket**																		
Thin 75°C	**3085A**	NEC: CL2 CMG CEC: CMG FT4	500 1000 2000	152.4 304.8 609.6	25.0 47.0 96.0	11.4 21.4 43.6	(2)22 AWG TC (19x34) 17.5Ω/M′ 57.4Ω/km (2)24 AWG TC (19x36) 28.0Ω/M′ 91.9Ω/km	100% Individual Foil + Overall 65% TC Braid 3.2Ω/M′ 10.5Ω/km	Power Pair: Red&Black Data Pair: Blue&White	.280	7.11	— 120	— 75%	— 12.0	— 39.4	— .125* .500* 1.000*	— .29* .50* .70*	— .95* 1.64* 2.30*
22 AWG stranded (19x34) tinned copper drain wire. Meter marks on jacket to aid users in installation. • Allen-Bradley P/N 1485 CPI-C																		

DCR = DC Resistance • FPE = Foam Polyethylene • PLTC-ER = Power Limited Tray Cable - Exposed Run per 2005 NEC Article 725 • TC = Tinned Copper

*These values are Maximum Attenuation.

ODVA DeviceNet is an Open DeviceNet Vendor Association, Inc. trademark.

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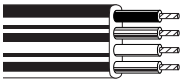
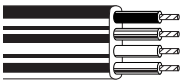
Industrial Data Solutions® — Industrial Data

DeviceBus® for ODVA DeviceNet™

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Conductor (stranding) Diameter Nom. DCR	Shielding Materials Nom. DCR	Color Code	Nominal OD Inch	Nominal OD mm	Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance pF/Ft.	Nominal Capacitance pF/m	Maximum Attenuation MHz	Maximum Attenuation dB/100 Ft.	Maximum Attenuation dB/100m
300V Class 2 ODVA Cable III • 20 and 18 AWG Stranded TC Cond. • Indiv. Foil Shielded (100% Coverage) + Overall TC Braid (65% Coverage)																		
PVC Insulation (Power) • **FPE Insulation** (Data) • **Gray Sunlight/Oil-resistant PVC Jacket**																		
Mid 75°C 	**7895A**	NEC: CMG PLTC CEC: CMG FT4	500 1000	152.4 304.8	41.0 84.0	18.6 38.1	(2)18 AWG TC (19x30) 6.9Ω/M′ 22.6Ω/km (2)20 AWG TC (19x32) 10.9Ω/M′ 35.8Ω/km	100% Individual Foil + Overall 65% TC Braid 3.2Ω/M′ 10.5Ω/km	Power Pair: Red&Black Data Pair: Blue&White	.378	9.60	— 120	— 75%	— 12.0	— 39.4	— .125 .500 1.000	— .29 .50 .70	— .95 1.64 2.30
UL AWM 20201 (600V) 20 AWG stranded (19x32) tinned copper drain wire. Meter marks on jacket to aid users in installation.																		
Flat • 16 AWG Stranded (19x29) Tinned Copper Conductors • Unshielded																		
PVC Insulation (Power) • **FPE Insulation** (Data) • **Gray Sunlight-resistant PVC Jacket**																		
Class 2 300V 75°C 	**3082K**	NEC: CMG CL2 PLTC CEC: CMG FT4	246 656 1378	75.0 200.0 420.0	30.8 78.7 165.4	14.0 35.7 75.1	(4)16 AWG TC (19x29) 4.9Ω/M′ 16.1Ω/km	Unshielded	Power Pair: Red&Black Data Pair: Blue&White	.760 x .210	10.92 x 5.33	— 120	— 75%	— 14.7	— 48.2	— .125 .500 1.000	— .13 .25 .40	— .43 .82 1.31
Allen-Bradley P/N 1485 CPI-G																		
PVC Insulation • Black Sunlight-resistant PVC Jacket																		
Class 1 **Power** 600V 75°C 	**3082KP**	NEC: CMG, ITC, PLTC, TC CEC: CMG FT4	246 656 1378	75.0 200.0 420.0	32.0 81.3 170.9	14.5 36.9 77.6	(4)16 AWG TC (19x29) 4.9Ω/M′ 16.1Ω/km	Unshielded	Red&Black, Blue&White	.760 x .210	10.92 x 5.33	—	—	—	—	— .125 .500 1.000	— .13 .25 .40	— .43 .82 1.31
Allen-Bradley P/N 1485 CPI-G																		

DCR = DC Resistance • FPE = Foam Polyethylene • F-R = Flame-retardant • TC = Tinned Copper if conductor, or Tray Cable if NEC rating.

ODVA DeviceNet is an Open DeviceNet Vendor Association, Inc. trademark.

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Industrial Data Solutions® — Industrial Data

DeviceBus® for Honeywell Smart Distributed System

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Conductor (stranding) Diameter Nom. DCR	Shielding Materials Nom. DCR	Color Code	Nominal OD Inch	Nominal OD mm	Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance pF/Ft.	Nominal Capacitance pF/m	Nominal Attenuation MHz	Nominal Attenuation dB/ 100 Ft.	Nominal Attenuation dB/ 100m
22 AWG Stranded Tinned Copper Conductors • Each Pair Individually Beldfoil® Shielded (100% Coverage) • Drain Wire																		
PVC Insulation (Power) • **FPE Insulation** (Data) • **Gray PVC Jacket**																		
UL AWM Style 2464 30V 80°C CSA AWM I/II A	**3087A**	NEC: CL2 CEC: FT1	500 1000 2000	152.4 304.8 609.6	19.0 41.0 84.0	8.6 18.6 38.1	(4)22 AWG (19x34) .030″ Tinned Copper 17.5Ω/M′ 57.4Ω/km	100% Beldfoil Each Pair	Power Pair: Blue&Brown Data Pair: Black&White	.290	7.37	— 120	— 76%	— 12.0	— 39.4	— .125 .500 1.000	— .23 .42 .60	— .76 1.38 1.97
Micro Cable (Drop) 22 AWG stranded (19x34) tinned copper drain wire.																		
16 and 20 AWG Stranded Tinned Copper Conductors • Each Pair Individually Beldfoil Shielded (100% Coverage) • Drain Wire																		
PVC Insulation (Power) • **FPE Insulation** (Data) • **Gray PVC Jacket**																		
UL AWM Style 2464 30V 80°C CSA AWM I/II A	**3086A**	NEC: CL2 CEC: FT1	500 1000	152.4 304.8	43.5 88.0	19.7 39.9	(2)16 AWG TC (19x29) .067″ 3.6Ω/M′ 11.8Ω/km (2)20 AWG TC (19x32) .041″ 10.0Ω/M′ 32.8Ω/km	100% Beldfoil Each Pair	Power Pair: Blue&Brown Data Pair: Black&White	.398	10.11	— 120	— 76%	— 12.0	— 39.4	— .125 .500 1.000	— .18 .35 .47	— .59 1.15 1.54
Mini Cable (Trunk) 20 AWG stranded (19x32) tinned copper drain wire.																		

DCR = DC Resistance • FPE = Foamed Polyethylene • TC = Tinned Copper

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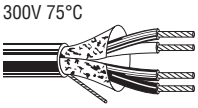
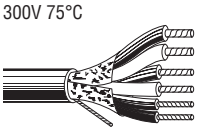
Industrial Data Solutions® — Industrial Data

DeviceBus® for Square D/Seriplex®

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Conductor (stranding) Diameter Nom. DCR	Shielding Materials Nom. DCR	Color Code	Nominal OD Inch	Nominal OD mm	Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance* pF/Ft.	Nominal Capacitance* pF/m
18 and 22 AWG Stranded Tinned Copper Conductors • Overall 100% Beldfoil® Shield (100% Coverage) • 22 AWG (7x30) TC Drain Wire															
Foam HDPE Insulation (Power) • **Foam HDPE Insulation** (Data) • **Orange PVC Jacket**															
UL AWM Style 20201 (600V 75°C) Seriplex CBL 1822-P18	**3124A**	NEC: CL2 CM CEC: CM	1000	304.8	47.0	21.3	(2)18 AWG (16x30) .040″ TC 6.8Ω/M′ 21.3Ω/km	100% Overall Beldfoil Shield 10.7Ω/M′ 35.1Ω/km	Power Cdrs: Red&Black	.308	7.82	—	—	20.0	65.6
							(2)22 AWG (7x30) .030″ TC 18.1Ω/M′ 59.4Ω/km		Data Cdrs: White&Green			—	78%	16.0	52.5
16 and 22 AWG Stranded Tinned Copper Conductors • Overall 100% Beldfoil Shield (100% Coverage) • 22 AWG (7x30) TC Drain Wire															
Foam HDPE Insulation (Power) • **Foam HDPE Insulation** (Data) • **Orange PVC Jacket**															
300V 75°C  Seriplex CBL 1622-P1	**3125A**	NEC: CL2 CM CEC: CM	500 1000	152.4 304.8	31.5 63.0	14.3 28.6	(2)16 AWG (26x30) .060″ TC 4.5Ω/M′ 14.8Ω/km	100% Overall Beldfoil Shield 10.7Ω/M′ 35.1Ω/km	Power Cdrs: Red&Black	.368	9.35	—	—	28.0	91.9
							(2)22 AWG (7x30) .030″ TC 18.1Ω/M′ 59.4Ω/km		Data Cdrs: White&Green			—	78%	16.0	52.5
16, 22 and 12 AWG Stranded Tinned Copper Conductors • Overall Beldfoil Shield (100% Coverage) • 22 AWG (7x30) TC Drain Wire															
Foam HDPE Insulation (Control) • **Foam HDPE Insulation** (Data) • **PVC Insulation** (Power) • **Orange PVC Jacket**															
300V 75°C  Seriplex CBL 162212-P16	**3126A**	NEC: CL2 CM CEC: CM	1000	304.8	112.0	50.8	(2)16 AWG (26x30) .060″ TC 4.5Ω/M′ 14.7Ω/km	100% Overall Beldfoil Shield 10.7Ω/M′ 35.1Ω/km	Control Cdrs: Red&Black	.486 x .363	12.34 x 9.22	—	—	28.0	91.9
							(2)22 AWG (7x30) .030″ TC 18.1Ω/M′ 59.4Ω/km		Data Cdrs: White&Green			—	78%	16.0	52.5
							(2)12 AWG (65x30) .090″ TC 1.8Ω/M′ 5.9Ω/km		Power Cdrs: Black&White, Red&White			—	—	—	—

DCR = DC Resistance • HDPE = High-density Polyethylene • TC = Tinned Copper

*Capacitance between one conductor and other conductors connected to shield.

Square D/Seriplex is a Square D/Schneider AEG trademark.

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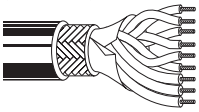
Industrial Data Solutions® — Industrial Data

DeviceBus® for Phoenix Contact InterBus®-S

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Shielding Materials Nom. DCR	Color Code	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance*	
			Ft.	m	Lbs.	kg				Inch	mm			pF/Ft.	pF/m
18 and 24 AWG Stranded Tinned Copper Conductors • Overall Beldfoil® Shield (100% Coverage) + Tinned Copper Braid (90% Coverage)															
PVC Insulation (Power) • **PE Insulation** (Data) • **Green Polyurethane Jacket**															
UL AWM Style 20233 (300V 80°C) 	**3119A**	—	500 1000	152.4 304.8	35.5 71.0	16.1 32.2	(3)18 AWG (7x26) .060″ TC 6.6Ω/M′ 21.7Ω/km (3pr)24 AWG (7x32) .024″ TC 23.4Ω/M′ 76.8Ω/km	100% Overall Beldfoil + 90% TC Braid 2.7Ω/M′ 8.9Ω/km	Power: Red, Blue, Green w/ Yellow Stripe Data: Pink&Gray, White&Brown, Yellow&Green	.333	8.46	— 100	— 66%	— 15.4	— 50.5
24 AWG Stranded Tinned Copper Conductors • Overall 100% Beldfoil Shield (100% Coverage) + Tinned Copper Braid (90% Coverage)															
Polyethylene Insulation • Green Polyurethane Jacket															
UL AWM Style 20233 (300V 80°C)	**3120A**	—	500 1000	152.4 304.8	26.0 49.0	11.8 22.2	(3pr)24 AWG (7x32) TC 26.0Ω/M′ 85.3Ω/km	100% Overall Beldfoil + 90% TC Braid 2.7Ω/M′ 8.9Ω/km	Pink&Gray, White&Brown, Yellow&Green	.277	7.04	100	66%	15.4	50.5

DCR = DC Resistance • PE = Polyethylene • PVC = Polyvinyl Chloride • TC = Tinned Copper

*Capacitance between one conductor and other conductors connected to shield.

InterBus-S is a Phoenix Contact trademark.

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Industrial Data Solutions® — Industrial Data

EIA Industrial RS-485 PLTC/CM

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Color Code	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Nom. DCR Cond.	Nom. DCR Shield	Nominal OD Inch	Nominal OD mm	Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nom. Capacitance * pF/Ft.	Nom. Capacitance * pF/m	Nom. Capacitance ** pF/Ft.	Nom. Capacitance ** pF/m
22 AWG Stranded (7x30) TC Conductors • Twisted Pairs • Overall Beldfoil® Shield (100% Coverage) + TC Braid (90% Coverage) • Drain Wire▲																		
Datalene® Insulation • Black UV Resistant PVC Jacket (CPE jacket optional)																		
Oil Res II 300V	**3105A▼**	NEC: CM PLTC CEC: CM FT1	1	See Chart (below)	500 1000 5000 †	152.4 304.8 1523.9	23.0 50.0 255.0	10.4 22.7 115.8	14.7Ω/M′ 48.2Ω/km	2.8Ω/M′ 9.2Ω/km	.284	7.21	120	78%	11.0	36.1	20.9	68.6
															For CPE jacketed version order Part No. YR44345			
	3106A	NEC: CM PLTC CEC: CM FT1	1.5◆	White/Orange, Orange/White, Blue/White	500 1000 5000 †	152.4 304.8 1523.9	27.0 51.0 260.0	12.3 23.2 118.1	14.7Ω/M′ 48.2Ω/km	2.8Ω/M′ 9.2Ω/km	.300	7.62	120	78%	11.0	36.1	20.9	68.6
															For CPE jacketed version order Part No. YR46721			
	3107A▼	NEC: CM PLTC CEC: CM FT1	2	See Chart (below)	1000 4000 5000 †	304.8 1219.2 1523.9	69.0 300.0 385.0	31.3 136.2 174.8	14.7Ω/M′ 48.2Ω/km	1.8Ω/M′ 5.9Ω/km	.356	9.04	120	78%	11.0	36.1	20.9	68.6
															For CPE jacketed version order Part No. YR46792			
	3108A	NEC: CM PLTC CEC: CM FT1	3	See Chart (below)	1000 2000	304.8 609.6	93.0 184.0	42.2 83.5	14.7Ω/M′ 48.2Ω/km	1.5Ω/M′ 4.9Ω/km	.420	10.67	120	78%	11.0	36.1	20.9	68.6
															For CPE jacketed version order Part No. YR45287			
	3109A	NEC: CM PLTC CEC: CM FT1	4	See Chart (below)	1000 2000	304.8 609.6	107.0 218.0	48.6 99.0	14.7Ω/M′ 48.2Ω/km	1.4Ω/M′ 4.6Ω/km	.420	10.67	120	78%	11.0	36.1	20.9	68.6
															For CPE jacketed version order Part No. YR44768			
AL Interlocked Armor • Datalene® Insulation • PVC Inner Jacket • Black UV Resistant PVC Outer Jacket																		
300V	**123107A** new	NEC: CM PLTC CEC: CMG FT4	2	See Chart (below)	5000 ††	1523.9	1140.0	514.1	14.7Ω/M′ 48.2Ω/km	1.8Ω/M′ 5.9Ω/km	.650	16.51	120	78%	11.0	36.1	20.9	68.6

▼3015A and 3107A are DMX512 Type.
▲22 AWG stranded tinned copper drain wire.

▲22 AWG stranded tinned copper drain wire.

DCR = DC Resistance • TC = Tinned Copper

* Capacitance between conductors.
** Capacitance between one conductor and other conductors connected to shield.

† Final put-up length may vary -0 to +10% from length shown.
†† Final put-up length may vary ±10% for spools or reels and ±5% for UnReel® cartons from length shown.

◆All conductors are under the braid shield; one pair is under the Beldfoil shield.

Color Code Chart

Pair No.	Color Combination
1	White/Blue Stripe Blue/White Stripe
2	White/Orange Stripe Orange/White Stripe
3	White/Green Stripe Green/White Stripe
4	White/Brown Stripe Brown/White Stripe

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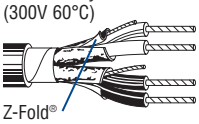
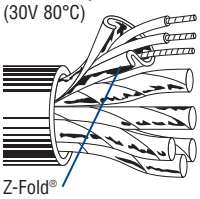
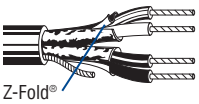
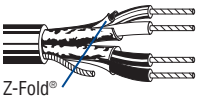
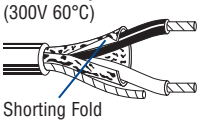
Industrial Data Solutions® — Interconnect Cable

Shielded Twisted Pair Cables

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Color Code	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Nom. DCR Cond.	Nom. DCR Shield	Nominal OD Inch	Nominal OD mm	Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nom. Capacitance * pF/ Ft.	Nom. Capacitance * pF/ m	Nom. Capacitance ** pF/ Ft.	Nom. Capacitance ** pF/ m
24 AWG Stranded (7x32) TC Conductors • Twisted Pairs • Individually Beldfoil® Shielded (100% Coverage) • 24 AWG Stranded TC Drain Wire																		
Datalene® Insulation • Chrome PVC Jacket																		
UL AWM Style 2493 (300V 60°C)	**9729**	NEC: CM CEC: CM	2	Red&Black, White&Black	100	30.5	4.3	2.0	24.0Ω/M′	15.0Ω/M′	.266	6.76	100	76%	12.5	41.0	23.2	76.1
					500	152.4	20.5	9.3	78.7Ω/km	49.3Ω/km								
					1000	304.8	39.0	17.7										
					10000	3048.0	390.0	177.1										
 Z-Fold®													For Plenum version of 9729, see 89729 or 82729.					
24 AWG stranded (7x32) tinned copper drain wire.																		
22 AWG Stranded (7x30) TC Conductors • Twisted Pairs • Individually Beldfoil Shielded (100% Coverage) • 22 AWG Stranded TC Drain Wire																		
Polypropylene Insulation • Chrome PVC Jacket																		
UL AWM Style 2919 (30V 80°C)	**8777**	NEC: CM CEC: CM	3	Red&Black, White&Black, Green&Black	100	30.5	4.6	2.1	15.0Ω/M′	10.6Ω/M′	.273	6.93	50	66%	30	98	55	180
					250	76.2	11.0	5.0	49.2Ω/km	34.8Ω/km								
					U-500	U-152.4	21.0	9.5										
					500	152.4	21.0	9.5										
					U-1000	U-304.8	41.0	18.6										
					1000	304.8	42.0	19.1										
					1640	499.9	67.2	30.5										
					3280	999.7	137.8	62.5										
					5000	1524.0	210.0	95.3										
					10000	3048.0	450.0	204.3										
 Z-Fold®													For Plenum versions of 8777, see 88777, 87777 or 82777.					
22 AWG stranded (19x34) tinned copper drain wire.																		
22 AWG Stranded (7x30) TC Conductors • Twisted Pairs • Individually Beldfoil Shielded (100% Coverage) • 24 AWG Stranded TC Drain Wire																		
Polypropylene Insulation • Chrome PVC Jacket (Pairs Cabled on Common Axis to Reduce Diameter)																		
300V RMS 60°C	**8723**	NEC: CM CEC: CM	2	Red&Black, Green&White	100	30.5	2.3	1.0	16.0Ω/M′	14.7Ω/M′	.168	4.27	45	66%	35	115	62	203
					U-500	U-152.4	10.5	4.8	52.5Ω/km	48.3Ω/km								
					500	152.4	10.0	4.5										
					U-1000	U-304.8	20.0	9.1										
					1000	304.8	20.0	9.1										
					1640	499.9	32.8	14.9										
					U-2000	U-609.6	40.0	18.2										
					2000	609.6	40.0	18.2										
					3280	999.7	65.6	29.8										
					5000	1524.0	95.0	43.1										
					10000	3048.0	200.0	90.8										
 Z-Fold®													For Plenum versions of 8723, see 88723, 87723 or 82723.					
24 AWG stranded (7x32) tinned copper drain wire.																		
Plenum • FEP Insulation • Red FEP Jacket (Pairs Cabled on Common Axis to Reduce Diameter)																		
300V RMS, Non-conduit	**88723**	NEC: CMP CEC: CMP FT6	2	Red&Black, Green&White	100	30.5	3.4	1.5	16.0Ω/M′	14.7Ω/M′	.148	3.76	40	69%	35	115	67	220
					500	152.4	11.0	5.0	52.5Ω/km	48.3Ω/km								
					1000	304.8	21.0	9.5										
 Z-Fold®																		
24 AWG stranded (7x32) tinned copper drain wire.																		
18 AWG Stranded (16x30) TC Conductors • Twisted Pair • Overall Beldfoil Shield (100% Coverage) • 20 AWG Stranded TC Drain Wire																		
Polyethylene Insulation • Chrome PVC Jacket																		
UL AWM Style 2092 (300V 60°C)	**8760**	NEC: CM CEC: CM	1	Black &Clear	250	76.2	6.8	3.1	—	—	.222	5.64	—	—	24	79	44	144
					U-500	U-152.4	13.0	5.9										
					500	152.4	13.0	5.9										
					U-1000	U-304.8	26.0	11.8										
					1000	304.8	26.0	11.8										
					2000	609.6	50.0	22.7										
					5000	1524.0	135.0	61.3										
					10000	3048.0	260.0	118.0										
 Shorting Fold													For Plenum versions of 8760, see 88760, 87760 or 82760.					
20 AWG stranded (7x28) tinned copper drain wire.																		

DCR = DC Resistance • FEP = Fluorinated Ethylene Propylene • PVC = Polyvinyl Chloride • TC = Tinned Copper

* Capacitance between conductors.
**Capacitance between one conductor and other conductors connected to shield.

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VFD (Variable Frequency Drive) Cable

1000V UL Flexible Motor Supply Cable

Description	Part No.	AWG	Cond. Stranding	Standard Lengths Ft.	Standard Lengths m	Standard Unit Wt. Lbs.	Standard Unit Wt. kg	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
4-cond. (3) Stranded TC Circuit Conductors + (1) Ground* • Overall Beldfoil® (100% Coverage) + TC Braid Shield (85% Coverage) • TC Drain Wire*													
XLPE Insulation (Circuit Condrs) • **PVC Insulation** (Ground) • **Black Sunlight- and Oil-resistant PVC Jacket**													
1000V UL Flexible Motor Supply Cable 600V UL 1277 Type TC-ER per 2005 NEC Article 336 1000V CSA AWM I/II A/B FT4 90°C Wet/Dry	**29500**	16	26x30	250†	76.2	46.2	21.0	.53	13.46	128	568	3.9	99.06
				500†	152.4	93.0	42.2						
	All Allen-Bradley Series 160 and 1305 drives.			1000†	304.8	182.0	82.6						
				6000†	1828.8	1080.0	490.3						
	29501	14	41x30	250†	76.2	59.7	27.1	.55	13.97	212	942	4.5	114.30
				500†	152.4	120.0	54.5						
	Allen-Bradley 1336F(S)-BRF05 through BRF100			1000†	304.8	233.0	105.8						
				5000†	1524.0	1215.0	551.6						
	29502	12	65x30	250†	76.2	69.8	31.7	.60	15.24	336	1495	4.9	124.46
				500†	152.4	151.5	68.8						
				1000†	304.8	298.0	135.3						
	Allen-Bradley 1336F(S)-BRF150, BRF200			5000†	1524.0	1570.0	712.8						
	29503	10	105x30	250†	76.2	91.3	41.4	.66	16.76	525	2335	5.4	137.16
				500†	152.4	194.5	88.3						
				1000†	304.8	375.0	170.3						
	Allen-Bradley 1336F(S)-B015			5000†	1524.0	2025.0	919.4						
	29504	8	7x19x29	250†	76.2	158.5	72.0	.89	22.61	1328	5906	7.3	185.42
				500†	152.4	332.0	150.7						
				1000†	304.8	660.0	299.6						
	Allen-Bradley 1336F(S)-B020			5000†	1524.0	3135.0	1423.3						
	29505	6	7x19x27	250†	76.2	221.3	100.5	.99	25.15	2048	9109	8.0	203.20
				1000†	304.8	906.0	411.3						
	Allen-Bradley 1336F(S)-B025, B030			3500†	1066.8	3206.0	1455.5						
	29506	4	7x19x25	250†	76.2	319.5	145.1	1.15	29.21	3152	14021	9.2	233.68
				1000†	304.8	1231.0	558.9						
	Allen-Bradley 1336F(S)-BX040, B040			3000†	914.4	3843.0	1744.7						
Color Code: ICEA Method 4 (Black and Numbered); Green/Yellow Ground	**29507**	2	7x19x23	250†	76.2	437.8	198.7	1.29	32.77	4872	21672	10.5	266.70
				500†	152.4	875.5	397.5						
UL Direct Burial. XHHW-2, RHW-2 rated circuit conductors.	Allen-Bradley 1336F(S)-B050, BX060, B060			1000†	304.8	1711.0	776.8						
				2000†	609.6	3682.0	1671.6						
Three (3) Stranded TC Circuit Conductors + (3) Symmetrical Bare Copper Grounds • (2) Spiral Copper Tape Shields (100% Coverage)													
XLPE Insulation (Circuit Condrs) • **Black Sunlight- and Oil-resistant PVC Jacket**													
1000V UL Flexible Motor Supply Cable 600V UL 1277 Type TC-ER per 2005 NEC Article 336 600V CSA AWM I/II A/B FT4 90°C Wet/Dry	**29528** new	1	7x19x22	250 ††	76.2	398.8	181.0	1.20	30.48	2650	11788	12.0	304.8
				1000 ††	304.8	1642.0	746.0						
				3000 †	1524.0	4779.0	2169.7						
	29529 new	1/0	7x19x21	250 ††	76.2	525.8	238.7	1.29	32.77	3537	15733	12.9	327.7
				1000 ††	304.8	2050.0	930.7						
				2000 †	609.6	3954.0	1795.1						
	29530 new	2/0	7x19x20	250 ††	76.2	602.0	273.3	1.40	35.56	4200	18682	14.0	355.6
				1000 ††	304.8	2362.0	1072.4						
				2000 †	609.6	4744.0	2153.8						
	29531 new	3/0	7x19x19	250 ††	76.2	699.5	317.6	1.52	38.61	5025	22352	15.2	386.1
				1000 ††	304.8	2708.0	1229.4						
Color Code: ICEA Method 4 (Black and Numbered)				3000 †	1524.0	5436.0	2467.9						
	29532 new	4/0	7x19x18	250 ††	76.2	881.0	400.0	1.68	42.67	6670	29670	16.8	426.7
UL Direct Burial. XHHW-2 circuit conductors.				500 ††	152.4	1873.0	850.3						
				1500 †	457.2	5619.0	2551.0						

TC = Tinned Copper • TC-ER = Tray Cable - Exposed Run per 2005 NEC Article 336 • XLPE = Cross-linked Polyethylene

*Ground(s) and drain wire(s) are same AWG as circuit conductors.

†Final put-up length may vary ±10% from length shown.
††Final put-up length may vary ±5% from length shown.

Encoder Cables

Belden also offers the following standard cables for encoder applications. Encoder cables help feed information to the microprocessor regarding both the speed and the position of the rotor.

Part No.	Pairs	AWG
8790 (Power Supply)	1	18
9729	2	24
9730, 89730	3	24
9728	4	24
9892	4	20

See Index for page numbers.

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Belden Infinity® Flexible Automation Cable

Overview and Application Guide

Belden Infinity is a complete line of control, data, video, and power cables specifically designed to handle the rigorous speeds and near-constant motion encountered in automated equipment such as robots, pick and place machines, automatic handling systems, multi-axis machine tools, and conveyor systems.

When the application demands highly flexible cables offering exceptional cable life and performance, specify Belden Infinity.

Belden Infinity Means More Performance And Longer Life

Reduced Cable Memory — Belden Infinity's unique design and neutralized cabling, results in cables that are relaxed, with almost no memory.

Greater Flex Life — Belden Infinity cables offer superior flexibility and are able to handle the vigorous motions and high speeds encountered in automated equipment.

Greater System Uptime — Belden Infinity cables combine specialized manufacturing techniques with precision copper stranding and rugged insulation and jacketing compounds to maximize flex life and reliability.

No Talc Problems — Unlike the potentially harmful talc used in other cables, Belden's non-toxic, non-irritating slipper compound facilitates flexing and also complies with OSHA regulations. It's safer for employees and operators and is less likely to contaminate solder joints or mechanical compounds.

CE Conformity — All Belden Infinity cables are CE marked per the Conformité Européenne low voltage directive, allowing trade of product in Europe.

Custom Designs — Other designs available upon request.

Product Series Descriptions

- **C-TC+** — The C-TC+ series is designed for C-track and extreme flex applications up to 9 million flex cycles*. This series utilizes super fine stranding and some of the tightest lay lengths allowed by UL, providing outstanding flex life.
- **FCC** — The FCC series is a cost effective alternative for C-track and moderate flexing applications rated up to 1 million flex cycles*.
- **Flex Data Cables** — Belden Infinity Flex Data cables are designed for industrial applications where precise data transmission is combined with high-flexing. These cables are ideal for effective operation of computer controlled equipment or other automated production processes, even in harsh environments.
- **Flex Vision** — Belden Infinity Vision cables are continuous flex video cables designed for machine vision applications. They are ideal for motion-controlled video and with inspection and measurement equipment.

Application Guide

Belden Infinity Series	C-Track Systems	Multi-Axis Machining	Robotics	Automated Assembly Systems	Material Handling Systems	Pick & Place Systems	Automated Storage Retrieval	Gantry Systems	Machine Vision	Motion-Controlled Video	Inspection & Measure Equip.	Festooning	Servo	Power
FCC Oil & abrasion resistant 600V UL & CSA rated Life Expectancy: Over 1 million flex cycles*	●	●		●	●	●	●	●			●	●	●	●
C-TC+ Oil & abrasion resistant 600V UL & CSA rated Life Expectancy: Over 9 million flex cycles*	★	★	●	★	★	★	★	★			★	★	★	★
DATA Oil & abrasion resistant 300V UL & CSA rated Life Expectancy: Over 1 million flex cycles*	●	●	●	●	●	●	●	●			●	●		
VISION 30V UL & CSA rated Life Expectancy: Over 1 million flex cycles*	●	●		●	●	●	●	●	★	✚	✚	●		

● Good ✚ Better ★ Best

*Based on proper installation techniques in a C-track cable guide.

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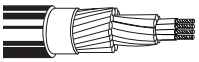
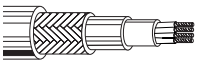
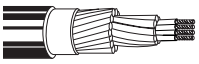
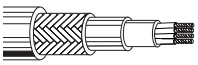
Belden Infinity® Flexible Automation Cable

600V C-TC+ Control Cables for Extreme Flexing
(9 Million Flex Cycles*)

Description	Part No.	No. of Cond.	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Insulation Thickness Inch	Insulation Thickness mm	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N
20 AWG Stranded (74x38) Bare Copper Conductors • Unshielded • Color Code: Red w/numbers + Green/Yellow ground														
PVC Insulation • Orange Oil- and Abrasion-resistant PVC Jacket														
UL AWM Style 2587 (600V 90°C) CSA AWM I/II A/B	**7101A**	3	250 † 500 † 1000 †	76.2 152.4 304.8	11.0 24.5 47.0	5.0 11.1 21.3	.020	.51	.045	1.14	.275	6.99	45	200
	**7102A**	4	250 † 500 † 1000 †	76.2 152.4 304.8	13.3 27.5 53.0	6.0 12.5 24.1	.020	.51	.045	1.14	.295	7.49	59	262
	7105A	9	250 † 500 † 1000 †	76.2 152.4 304.8	29.8 52.0 104.0	13.5 23.6 47.2	.020	.51	.055	1.40	.435	11.05	130	578
	7106A	12	250 † 500 † 1000 †	76.2 152.4 304.8	32.3 66.5 134.0	14.6 30.2 60.8	.020	.51	.055	1.40	.455	11.56	178	792
	7107A	18	250 † 500 †	76.2 152.4	50.0 101.0	22.7 45.9	.020	.51	.065	1.65	.545	13.84	260	1156
Temp Rating: -40° to 90°C (-5° to 90°C flexing)	**7108A**	25	250 † 500 †	76.2 152.4	71.5 143.5	32.5 65.2	.020	.51	.080	2.03	.665	16.89	370	1645
20 AWG Stranded (74x38) Bare Copper Conductors • TC Braid Shield (85% Coverage) • Color Code: Red w/numbers + Green/Yellow ground														
PVC Insulation • PVC Inner Jacket • Orange Oil- and Abrasion-resistant PVC Outer Jacket														
UL AWM Style 2587 (600V 90°C) CSA AWM I/II A/B	**7106AS**	12	250 † 500 †	76.2 152.4	57.5 116.0	26.1 52.7	.020	.51	Inner: .025 Outer: .055	 .64 1.40	.535	13.59	194	863
														
Temp Rating: -40° to 90°C (-5° to 90°C flexing)														
18 AWG Stranded (114x38) Bare Copper Conductors • Unshielded • Color Code: Red w/numbers + Green/Yellow ground														
PVC Insulation • Orange Oil- and Abrasion-resistant PVC Jacket														
UL AWM Style 2587 (600V 90°C) CSA AWM I/II A/B	**7110A**	3	500 † 1000 †	152.4 304.8	26.0 50.0	11.8 22.7	.020	.51	.035	.89	.300	7.62	69	307
	**7113A**	7	250 † 500 † 1000 †	76.2 152.4 304.8	29.0 55.5 111.0	13.2 25.2 50.4	.020	.51	.060	1.52	.438	11.13	155	689
	7115A	12	250 † 500 †	76.2 152.4	40.3 84.5	18.3 38.4	.020	.51	.060	1.52	.513	13.03	270	1201
	7116A	18	250 † 500 †	76.2 152.4	63.0 126.0	28.6 57.2	.020	.51	.060	1.52	.598	15.19	400	1779
Temp Rating: -40° to 90°C (-5° to 90°C flexing)	**7117A**	25	250 † 500 †	76.2 152.4	89.3 179.0	40.5 81.3	.020	.51	.083	2.11	.744	18.90	570	2535
18 AWG Stranded (114x38) Bare Copper Conductors • TC Braid Shield (85% Coverage) • Color Code: Red w/numbers + Green/Yellow ground														
PVC Insulation • PVC Inner Jacket • Orange Oil- and Abrasion-resistant PVC Outer Jacket														
UL AWM Style 2587 (600V 90°C) CSA AWM I/II A/B	**7111AS**	4	250 † 500 †	76.2 152.4	4.0 60.5	1.8 27.5	.020	.51	Inner: .025 Outer: .050	 .64 1.27	.405	10.29	84	373
	**7115AS**	12	250 † 500 †	76.2 152.4	72.8 144.5	33.1 65.6	.020	.51	Inner: .025 Outer: .065	 .64 1.65	.600	15.24	252	1121

PVC = Polyvinyl Chloride • TC = Tinned Copper

*Based on proper installation techniques in a C-track cable guide.

†Final put-up length may vary ±10% from length shown.

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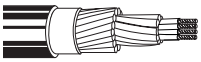
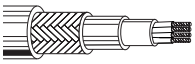
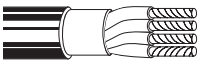
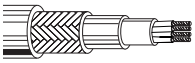
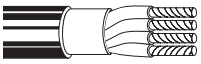
Belden Infinity® Flexible Automation Cable

600V C-TC+ Control Cables for Extreme Flexing
(9 Million Flex Cycles*)

Description	Part No.	No. of Cond.	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Insulation Thickness Inch	Insulation Thickness mm	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N
16 AWG Stranded (190x38) Bare Copper Conductors • Unshielded • Color Code: Red w/numbers + Green/Yellow ground														
PVC Insulation • Orange Oil- and Abrasion-resistant PVC Jacket														
UL AWM Style 2587 (600V 90°C) CSA AWM I/II A/B	**7122A**	3	250 † 500 † 1000 †	76.2 152.4 304.8	16.3 43.5 84.0	7.4 19.8 38.1	.020	.51	.045	1.14	.325	8.26	114	507
	**7125A**	7	250 † 500 † 1000 †	76.2 152.4 304.8	38.5 73.5 148.0	17.5 33.4 67.2	.020	.51	.060	1.52	.480	12.19	260	1156
	7126A	9	250 † 1000 †	76.2 304.8	49.3 195.0	22.4 88.5	.020	.51	.060	1.52	.545	13.84	340	1512
	7127A	12	250 † 500 † 1000 †	76.2 152.4 304.8	53.3 122.5 243.0	24.2 55.6 110.3	.020	.51	.060	1.52	.570	14.48	450	2001
	7128A	18	250 † 500 †	76.2 152.4	85.3 172.0	38.7 78.1	.020	.51	.060	1.52	.670	17.02	680	3025
Temp Rating: -40° to 90°C (-5° to 90°C flexing)	**7129A**	25	250 † 500 †	76.2 152.4	124.5 247.5	56.5 112.4	.020	.51	.080	2.03	.820	20.83	950	4226
16 AWG Stranded (190x38) BC Conductors • TC Braid Shield (85% Coverage) • Color Code: Red w/numbers + Green/Yellow ground														
PVC Insulation • PVC Inner Jacket • Orange Oil- and Abrasion-resistant PVC Outer Jacket														
UL AWM Style 2587 (600V 90°C) CSA AWM I/II A/B	**7123AS**	4	250 † 500 †	76.2 152.4	40.8 78.0	18.5 35.4	.020	.51	Inner: .025	.64	.420	10.67	154	685
									Outer: .040	1.02				
Temp Rating: -40° to 90°C (-5° to 90°C flexing)														
14 AWM Stranded (266x38) Bare Copper Conductors • Unshielded • Color Code: Red w/numbers + Green/Yellow ground														
PVC Insulation • Orange Oil- and Abrasion-resistant PVC Jacket														
UL AWM Style 2587 (600V 90°C) CSA AWM I/II A/B	**7136A**	4	250 † 500 †	76.2 152.4	39.0 74.5	17.7 33.8	.025	.64	.050	1.27	.430	10.92	212	943
														
Temp Rating: -40° to 90°C (-5° to 90°C flexing)														
14 AWG Stranded (266x38) BC Conductors • TC Braid Shield (85% Coverage) • Color Code: Red w/numbers + Green/Yellow ground														
PVC Insulation • PVC Inner Jacket • Orange Oil- and Abrasion-resistant PVC Outer Jacket														
UL AWM Style 2587 (600V 90°C) CSA AWM I/II A/B	**7136AS**	4	250 † 500 †	76.2 152.4	74.0 145.0	33.6 65.8	.025	.64	Inner: .025	.64	.500	12.70	208	925
									Outer: .045	1.14				
Temp Rating: -40° to 90°C (-5° to 90°C flexing)														
12 AWG Stranded (413x38) Bare Copper Conductors • Unshielded • Color Code: Red w/numbers + Green/Yellow ground														
PVC Insulation • Orange Oil- and Abrasion-resistant PVC Jacket														
UL AWM Style 2587 (600V 90°C) CSA AWM I/II A/B	**7145A**	4	250 † 500 †	76.2 152.4	72.5 146.0	32.9 66.3	.030	.76	.075	1.91	.545	13.84	274	1218
														
Temp Rating: -40° to 90°C (-5° to 90°C flexing)														

BC = Bare Copper • TC = Tinned Copper

*Based on proper installation techniques in a C-track cable guide.
†Final put-up length may vary ±10% from length shown.

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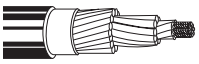
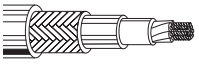
Belden Infinity® Flexible Automation Cable

600V FCC Control Cables for Moderate Flexing
(1 Million Flex Cycles*)

Description	Part No.	No. of Cond.	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Insulation Thickness Inch	Insulation Thickness mm	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N
20 AWG Stranded (10x30) Bare Copper Conductors • Unshielded • Color Code: Black w/numbers + Green/Yellow ground														
PVC Insulation • Gray Oil- and Abrasion-resistant PVC Jacket														
UL AWM Style 2587 (600V 90°C) CSA AWM I/II A/B	**7400A**	2	250 † 500 † 1000 †	76.2 152.4 304.8	11.0 25.0 44.0	5.0 11.4 20.0	.022	.56	.040	1.02	.240	6.10	26	116
	**7401A**	3	250 † 500 † 1000 †	76.2 152.4 304.8	13.0 30.0 59.0	5.9 13.6 26.8	.022	.56	.040	1.02	.250	6.35	39	173
	7402A	4	250 † 500 † 1000 †	76.2 152.4 304.8	15.0 33.0 64.0	6.8 15.0 29.1	.022	.56	.040	1.02	.275	6.99	52	231
	7403A	5	250 † 500 † 1000 †	76.2 152.4 304.8	17.5 38.0 72.0	8.0 17.3 32.7	.022	.56	.040	1.02	.300	7.62	65	289
	7404A	7	250 † 500 † 1000 †	76.2 152.4 304.8	22.0 44.5 86.0	10.0 20.2 39.0	.022	.56	.040	1.02	.345	8.76	91	405
	7405A	9	250 † 500 † 1000 †	76.2 152.4 304.8	29.5 71.5 144.0	13.4 32.5 65.4	.022	.56	.053	1.35	.410	10.41	117	520
	7406A	12	250 † 500 † 1000 †	76.2 152.4 304.8	30.8 88.5 177.0	14.0 40.2 80.4	.022	.56	.053	1.35	.420	10.67	156	693
	7407A	18	250 † 500 †	76.2 152.4	53.5 104.0	24.3 47.2	.022	.56	.053	1.35	.500	12.70	234	1041
Temp Rating: -40° to 90°C (-5° to 90°C flexing)	**7408A**	25	250 † 500 †	76.2 152.4	65.3 130.5	29.6 59.3	.022	.56	.065	1.65	.615	15.62	325	1445
20 AWG Stranded (10x30) BC Conductors • TC Braid Shield (85% Coverage) • Color Code: Black w/numbers + Green/Yellow ground														
PVC Insulation • PVC Inner Jacket • Gray Oil- and Abrasion-resistant PVC Outer Jacket														
UL AWM Style 2587 (600V 90°C) CSA AWM I/II A/B	**7401AS**	3	500 †	152.4	54.0	24.5	.022	.56	Inner: .025 Outer: .035	.64 .89	.320	8.13	45	200
	**7402AS**	4	250 † 500 †	76.2 152.4	32.8 64.0	14.9 29.1	.022	.56	Inner: .025 Outer: .035	.64 .89	.330	8.38	52	231
	7403AS	5	250 † 500 †	76.2 152.4	34.8 68.0	15.8 30.9	.022	.56	Inner: .025 Outer: .035	.64 .89	.370	9.40	65	289
	7404AS	7	250 † 500 †	76.2 152.4	37.8 71.5	17.1 32.5	.022	.56	Inner: .025 Outer: .040	.64 1.02	.420	10.67	91	405
Temp Rating: -40° to 90°C (-5° to 90°C flexing)														

BC = Bare Copper • TC = Tinned Copper

*Based on proper installation techniques in a C-track cable guide.

†Final put-up length may vary ±10% from length shown.

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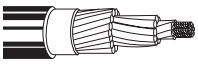
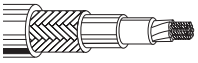
Belden Infinity® Flexible Automation Cable

600V FCC Control Cables for Moderate Flexing
(1 Million Flex Cycles*)

Description	Part No.	No. of Cond.	Standard Lengths		Standard Unit Weight		Insulation Thickness		Jacket Thickness		Nominal OD		Maximum Pull Tension	
			Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Inch	mm	Lbs.	N
18 AWG Stranded (16x30) Bare Copper Conductors • Unshielded • Color Code: Black w/numbers + Green/Yellow ground														
PVC Insulation • Gray Oil- and Abrasion-resistant PVC Jacket														
UL AWM Style 2587 (600V 90°C) CSA AWM I/II A/B	**7409A**	2	250 † 500 † 1000 †	76.2 152.4 304.8	13.3 26.5 51.0	6.0 12.0 23.2	.022	.56	.040	1.02	.264	6.71	50	222
	**7410A**	3	250 † 500 † 1000 †	76.2 152.4 304.8	16.3 25.0 48.0	7.4 11.4 21.8	.022	.56	.040	1.02	.280	7.11	74	329
	7411A	4	250 † 500 † 1000 †	76.2 152.4 304.8	18.8 31.0 58.0	8.5 14.1 26.3	.022	.56	.040	1.02	.305	7.75	98	436
	7412A	5	250 † 500 † 1000 †	76.2 152.4 304.8	21.8 36.0 69.0	9.9 16.3 31.3	.022	.56	.040	1.02	.330	8.38	122	542
	7413A	7	250 † 500 † 1000 †	76.2 152.4 304.8	27.5 46.0 120.0	12.5 20.9 54.5	.022	.56	.040	1.02	.385	9.78	171	760
	7414A	9	250 † 500 † 1000 †	76.2 152.4 304.8	36.5 87.0 174.0	16.6 39.5 79.0	.022	.56	.050	1.27	.452	11.48	220	978
	7415A	12	250 † 500 † 1000 †	76.2 152.4 304.8	40.0 75.5 161.0	18.2 34.3 73.1	.022	.56	.050	1.27	.475	12.07	292	1298
	7416A	18	250 † 500 †	76.2 152.4	55.8 112.5	25.3 51.1	.022	.56	.050	1.27	.560	14.22	440	1957
	7417A	25	250 † 500 †	76.2 152.4	74.3 149.0	33.7 67.6	.022	.56	.072	1.83	.696	17.68	520	2313
	7418A	34	250 † 500 †	76.2 152.4	111.3 215.5	50.5 97.8	.022	.56	.072	1.83	.788	20.02	830	3692
Temp Rating: -40° to 90°C (-5° to 90°C flexing)	**7419A**	41	500 †	152.4	295.0	133.9	.022	.56	.075	1.91	.860	21.84	1001	4453
	7420A	50	250 †	76.2	186.5	84.7	.022	.56	.083	2.11	.940	23.88	1220	5427
18 AWG Stranded (16x30) BC Conductors • TC Braid Shield (85% Coverage) • Color Code: Black w/numbers + Green/Yellow ground														
PVC Insulation • PVC Inner Jacket • Gray Oil- and Abrasion-resistant PVC Outer Jacket														
UL AWM Style 2587 (600V 90°C) CSA AWM I/II A/B	**7411AS**	4	250 † 500 †	76.2 152.4	29.0 56.5	13.2 25.7	.022	.56	Inner: .025 .64 Outer: .032 .81		.365	9.27	83	369
	**7413AS**	7	250 † 500 †	76.2 152.4	37.5 74.0	17.0 33.6	.022	.56	Inner: .025 .64 Outer: .035 .89		.450	11.43	145	645
	7415AS	12	250 † 500 †	76.2 152.4	61.5 124.0	27.9 56.3	.022	.56	Inner: .025 .64 Outer: .045 1.14		.550	13.97	230	1023
	7416AS	18	250 † 500 †	76.2 152.4	83.3 169.0	37.8 76.7	.022	.56	Inner: .025 .64 Outer: .055 1.40		.650	16.51	374	1663
Temp Rating: -40° to 90°C (-5° to 90°C flexing)	**7417AS**	25	250 † 500 †	76.2 152.4	113.8 228.0	51.6 103.5	.022	.56	Inner: .025 .64 Outer: .060 1.52		.765	19.43	520	2313

BC = Bare Copper • TC = Tinned Copper

*Based on proper installation techniques in a C-track cable guide.

†Final put-up length may vary ±10% from length shown.

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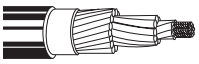
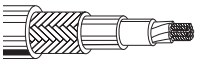
Belden Infinity® Flexible Automation Cable

600V FCC Control Cables for Moderate Flexing
(1 Million Flex Cycles*)

Description	Part No.	No. of Cond.	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Insulation Thickness Inch	Insulation Thickness mm	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N
16 AWG Stranded (26x30) Bare Copper Conductors • Unshielded • Color Code: Black w/numbers + Green/Yellow ground														
PVC Insulation • Gray Oil- and Abrasion-resistant PVC Jacket														
UL AWM Style 2587 (600V 90°C) CSA AWM I/II A/B	**7421A**	2	250 † 500 † 1000 †	76.2 152.4 304.8	15.0 35.0 68.0	6.8 15.9 30.9	.022	.56	.040	1.02	.290	7.37	70	311
	**7422A**	3	250 † 500 † 1000 †	76.2 152.4 304.8	18.8 34.5 65.0	8.5 15.7 29.5	.022	.56	.040	1.02	.305	7.75	105	467
	7423A	4	250 † 500 † 1000 †	76.2 152.4 304.8	22.5 41.5 80.0	10.2 18.8 36.3	.022	.56	.040	1.02	.330	8.38	140	623
	7424A	5	250 † 500 † 1000 †	76.2 152.4 304.8	27.5 49.5 96.0	12.5 22.5 43.6	.022	.56	.040	1.02	.360	9.14	175	778
	7425A	7	250 † 500 † 1000 †	76.2 152.4 304.8	35.0 64.0 129.0	15.9 29.1 58.6	.022	.56	.040	1.02	.425	10.80	236	1050
	7426A	9	250 † 500 † 1000 †	76.2 152.4 304.8	50.5 95.0 190.0	22.9 43.1 86.3	.022	.56	.060	1.52	.540	13.72	304	1352
	7427A	12	250 † 500 † 1000 †	76.2 152.4 304.8	55.3 114.0 220.0	25.1 51.8 100.0	.022	.56	.065	1.65	.565	14.35	405	1801
	7428A	18	250 † 500 †	76.2 152.4	79.0 158.0	35.9 71.7	.022	.56	.065	1.65	.650	16.51	608	2705
	7429A	25	250 † 500 †	76.2 152.4	109.0 218.5	49.5 99.2	.022	.56	.060	1.52	.750	19.05	875	3892
Temp Rating: -40° to 90°C (-5° to 90°C flexing)	**7430A**	34	250 †	76.2	171.3	77.7	.022	.56	.075	1.91	.878	22.30	1145	5093
16 AWG Stranded (26x30) BC Conductors • TC Braid Shield (85% Coverage) • Color Code: Black w/numbers + Green/Yellow ground														
PVC Insulation • PVC Inner Jacket • Gray Oil- and Abrasion-resistant PVC Outer Jacket														
UL AWM Style 2587 (600V 90°C) CSA AWM I/II A/B	**7423AS**	4	250 † 500 †	76.2 152.4	36.0 68.0	16.3 30.9	.022	.56	Inner: .025 Outer: .035	 .64 .89	.400	10.16	140	623
	**7427AS**	12	250 † 500 †	76.2 152.4	81.8 164.5	37.1 74.7	.022	.56	Inner: .025 Outer: .060	 .64 1.52	.630	16.00	420	1868
Temp Rating: -40° to 90°C (-5° to 90°C flexing)	**7428AS**	18	250 † 500 †	76.2 152.4	119.0 238.5	54.1 108.3	.022	.56	Inner: .025 Outer: .070	 .64 1.78	.740	18.80	630	2802

BC = Bare Copper • TC = Tinned Copper

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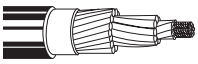
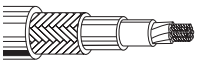
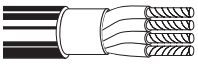
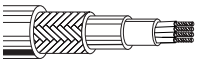
600V FCC Control Cables for Moderate Flexing
(1 Million Flex Cycles*)

Description	Part No.	No. of Cond.	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Insulation Thickness Inch	Insulation Thickness mm	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N
14 AWG Stranded (41x30) Bare Copper Conductors • Unshielded • Color Code: Black w/numbers + Green/Yellow ground														
PVC Insulation • Gray Oil- and Abrasion-resistant PVC Jacket														
UL AWM Style 2587 (600V 90°C) CSA AWM I/II A/B	**7434A**	2	250 †	76.2	34.0	15.5	.023	.58	.045	1.14	.335	8.51	201	894
			500 †	152.4	66.5	30.2								
			1000 †	304.8	92.0	41.8								
	**7435A**	3	250 †	76.2	39.8	18.1	.023	.58	.045	1.14	.350	8.89	201	894
			500 †	152.4	78.5	35.6								
			1000 †	304.8	98.0	44.5								
	7436A	4	250 †	76.2	49.3	22.4	.023	.58	.050	1.27	.395	10.03	201	894
			500 †	152.4	95.0	43.1								
			1000 †	304.8	131.0	59.5								
	7438A	7	500 †	152.4	150.5	68.3	.023	.58	.060	1.52	.525	13.33	373	1659
	7439A	9	250 †	76.2	110.8	50.3	.023	.58	.070	1.78	.620	15.75	480	2135
			500 †	152.4	223.0	101.2								
	7440A	12	250 †	76.2	142.5	64.7	.023	.58	.075	1.91	.660	16.76	640	2847
			500 †	152.4	285.5	129.6								
Temp Rating: -40° to 90°C (-5° to 90°C flexing)	**7442A**	25	250 †	76.2	223.8	101.7	.023	.58	.090	2.29	.930	23.62	1337	5947
14 AWG Stranded (41x30) BC Conductors • TC Braid Shield (85% Coverage) • Color Code: Black w/numbers + Green/Yellow ground														
PVC Insulation • PVC Inner Jacket • Gray Oil- and Abrasion-resistant PVC Outer Jacket														
UL AWM Style 2587 (600V 90°C) CSA AWM I/II A/B	**7436AS**	4	250 †	76.2	49.3	22.4	.023	.58	Inner:		.482	12.24	212	943
			500 †	152.4	95.0	43.1			.025	.64				
									Outer:					
									.055	1.40				
	7438AS	7	250 †	76.2	74.8	33.9	.023	.58	Inner:		.563	14.30	371	1650
			500 †	152.4	150.5	68.3			.025	.64				
Temp Rating: -40° to 90°C (-5° to 90°C flexing)									Outer:					
									.060	1.52				
12 AWG Stranded (65x30) Bare Copper Conductors • Unshielded • Color Code: Black w/numbers + Green/Yellow ground														
PVC Insulation • Gray Oil- and Abrasion-resistant PVC Jacket														
UL AWM Style 2587 (600V 90°C) CSA AWM I/II A/B	**7444A**	3	250 †	76.2	53.5	24.3	.028	.71	.060	1.52	.450	11.43	253	1125
			500 †	152.4	103.5	47.0								
	**7445A**	4	250 †	76.2	63.5	28.8	.028	.71	.070	1.78	.505	12.83	338	1503
			500 †	152.4	124.0	56.3								
Temp Rating: -40° to 90°C (-5° to 90°C flexing)														
12 AWG Stranded (65x30) BC Conductors • TC Braid Shield (85% Coverage) • Color Code: Black w/numbers + Green/Yellow ground														
PVC Insulation • PVC Inner Jacket • Gray Oil- and Abrasion-resistant PVC Outer Jacket														
UL AWM Style 2587 (600V 90°C) CSA AWM I/II A/B	**7445AS**	4	250 †	76.2	85.8	38.9	.028	.71	Inner:		.580	14.73	338	1503
			500 †	152.4	171.5	77.9			.030	.76				
									Outer:					
									.070	1.78				
Temp Rating: -40° to 90°C (-5° to 90°C flexing)														

BC = Bare Copper • TC = Tinned Copper

*Based on proper installation techniques in a C-track cable guide.

†Final put-up length may vary ±10% from length shown.

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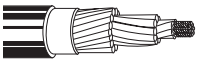
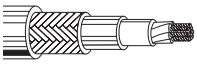
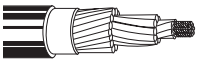
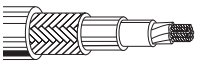
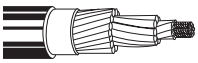
Belden Infinity® Flexible Automation Cable

600V FCC Control Cables for Moderate Flexing
(1 Million Flex Cycles*)

Description	Part No.	No. of Cond.	Standard Lengths		Standard Unit Weight		Insulation Thickness		Jacket Thickness		Nominal OD		Maximum Pull Tension	
			Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Inch	mm	Lbs.	N
10 AWG Stranded (105x30) Bare Copper Conductors • Unshielded (Color Code: Black w/numbers + Green/Yellow ground)														
PVC Insulation • Gray Oil- and Abrasion-resistant PVC Jacket														
UL AWM Style 2587 (600V 90°C) CSA AWM I/II A/B	**7447A**	4	250 † 500 †	76.2 152.4	70.8 142.5	32.1 64.7	.030	.76	.070	1.78	.570	14.48	672	2989
 Temp Rating: -40° to 90°C (-5° to 90°C flexing)														
10 AWG Stranded (105x30) BC Conductors • TC Braid Shield (85% Coverage) • Color Code: Black w/numbers + Green/Yellow ground														
PVC Insulation • PVC Inner Jacket • Gray Oil- and Abrasion-resistant PVC Outer Jacket														
UL AWM Style 2587 (600V 90°C) CSA AWM I/II A/B	**7447AS**	4	250 † 500 †	76.2 152.4	92.8 185.5	42.2 84.3	.030	.76	Inner: .035 Outer: .065	.89 1.65	.660	16.76	546	2429
 Temp Rating: -40° to 90°C (-5° to 90°C flexing)														
8 AWG Stranded (168x30) Bare Copper Conductors • Unshielded • Color Code: Black w/numbers + Green/Yellow ground														
PVC Insulation • Gray Oil- and Abrasion-resistant PVC Jacket														
UL AWM Style 2587 (600V 90°C) CSA AWM I/II A/B	**7450A**	4	250 † 500 †	76.2 152.4	113.8 228.0	51.6 103.5	.045	1.14	.070	1.78	.715	18.16	920	4092
 Temp Rating: -40° to 90°C (-5° to 90°C flexing)														
8 AWG Stranded (168x30) BC Conductors • TC Braid Shield (85% Coverage) • Color Code: Black w/numbers + Green/Yellow ground														
PVC Insulation • PVC Inner Jacket • Gray Oil- and Abrasion-resistant PVC Outer Jacket														
UL AWM Style 2587 (600V 90°C) CSA AWM I/II A/B	**7450AS**	4	250 † 500 †	76.2 152.4	141.3 281.0	64.1 127.6	.045	1.14	Inner: .040 Outer: .065	1.02 1.65	.815	20.70	872	3879
 Temp Rating: -40° to 90°C (-5° to 90°C flexing)														
6 AWG Stranded (266x30) Bare Copper Conductors • Unshielded • Color Code: Black w/numbers + Green/Yellow ground														
PVC Insulation • Gray Oil- and Abrasion-resistant PVC Jacket														
UL AWM Style 2587 (600V 90°C) CSA AWM I/II A/B	**7453A**	4	250 †	76.2	185.0	84.0	.060	1.52	.085	2.16	.925	23.50	1472	6548
 Temp Rating: -40° to 90°C (-5° to 90°C flexing)														

BC = Bare Copper • TC = Tinned Copper

*Based on proper installation techniques in a C-track cable guide.

†Final put-up length may vary ±10% from length shown.

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Belden Infinity® Flexible Automation Cable

300V Flex Data Cables
(1 Million Flex Cycles*)

Description	Part No.	No. of Pairs	UL NEC/ C(UL) CEC Type	RS Type	Color Code	Standard Lengths		Standard Unit Weight		Nominal OD		Maximum Capacitance		Nom. Imped. (Ω)
						Ft.	m	Lbs.	kg	Inch	mm	pF/Ft.	pF/m	
Flex Data • 24 AWG Stranded (41x40) BC Condrs. • Twisted Pairs • Overall Beldfoil® (100% Coverage) + TC Braid Shield (85% Coverage)**														
Foam Polyethylene Insulation with Skin • Green Oil-resistant PVC Jacket														
300V 60°C	**7200A**	1	NEC: CM CEC: CM	232 485	White, Blue	500 1000	152.4 304.8	17.0 38.0	7.7 17.3	.240	6.10	15.0	49.2	120
	7201A	2	NEC: CM CEC: CM	232 485	See Color Code Chart (below)	500 1000	152.4 304.8	31.0 60.0	14.1 27.2	.322	8.18	15.0	49.2	120
	7202A	3	NEC: CM CEC: CM	232 485	See Color Code Chart (below)	500 1000	152.4 304.8	33.5 68.0	15.2 30.9	.347	8.81	15.0	49.2	120
	7203A	4	NEC: CM CEC: CM	232 485	See Color Code Chart (below)	500 1000	152.4 304.8	39.0 79.0	17.7 35.9	.362	9.20	15.0	49.2	120
	7205A	1	NEC: CM CEC: CM	232 422	White, Blue	500 1000	152.4 304.8	17.5 38.0	7.9 17.3	.232	5.89	14.0	45.9	100
Temp Rating: -20° to 60°C (-5° to 60°C flexing)	**7206A**	1	NEC: CM CEC: CM	232 485	White, Blue	1000	304.8	59.0	26.8	.302	7.67	10.0	32.8	150

BC = Bare Copper • TC = Tinned Copper

*Based on proper installation techniques in a C-track cable guide.

**24 AWG stranded (41x40) tinned copper drain wire.

Color Codes: Flex Data

Pair No.	Color Combination
1	White/Blue Stripe & Blue/White Stripe
2	White/Orange Stripe & Orange/White Stripe
3	White/Green Stripe & Green/White Stripe
4	White/Brown Stripe & Brown/White Stripe

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Belden Infinity® Flexible Automation Cable

75 Ohm Flex Vision Coax Cables
(1 Million Flex Cycles*)

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Nom. DCR		Nominal Core OD		Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg	Conductor	Shield	Inch	mm	Inch	mm			pF/Ft.	pF/m	MHz	dB/ 100 Ft.	dB/ 100m
Sub-Mini Type • 30 AWG Stranded (7x38) Tinned Cadmium Bronze Conductor • Tinned Copper "French Braid" Shield (95% Coverage)																			
Foam Polyethylene Insulation • Matte Blue Belflex® Jacket																			
UL AWM	**7500A**	CEC:	250†	76.2	3.0	1.4	108.0Ω/M′	13.3Ω/M′	.056	1.42	.110	2.79	75	78%	16.7	54.8	2.2	.9	2.95
Style 1354		FT1	500†	152.4	5.0	2.3	354.3Ω/km	43.6Ω/km									5	1.4	4.59
30V 80°C			1000†	304.8	9.0	4.1											10	2.0	6.56
CSA AWM I/II A/B																	30	3.4	11.16
																	50	4.4	14.44
																	100	6.4	21.00
Mini Type • 25 AWG Stranded (19x38) Bare Copper Conductor • Tinned Copper "French Braid" Shield (95% Coverage)																			
Foam Polyethylene Insulation • Matte Blue Belflex Jacket																			
UL AWM	**7501A**	CEC:	500†	152.4	7.5	3.4	35.0Ω/M′	9.1Ω/M′	.090	2.29	.146	3.71	75	77%	17.7	58.1	2.2	.6	1.97
Style 1354		FT1	1000†	304.8	14.0	6.4	114.8Ω/km	29.9Ω/km									5	.9	2.95
30V 80°C																	10	1.3	4.27
CSA AWM I/II A/B																	30	2.2	7.22
																	50	2.9	9.52
																	100	4.2	13.78
RG-59 Type • 22 AWG Stranded (19x34) Bare Copper Conductor • Tinned Copper "French Braid" Shield (95% Coverage)																			
Foam Polyethylene Insulation • Matte Blue Belflex Jacket																			
UL AWM	**7502A**	CEC:	250†	76.2	10.5	4.8	13.4Ω/M′	6.4Ω/M′	.146	3.71	.242	6.15	75	79%	18.0	59.1	2.2	.4	1.31
Style 1354		FT1	500†	152.4	15.0	6.8	44.0Ω/km	21.0Ω/km									5	.5	1.64
30V 80°C			1000†	304.8	34.0	15.4											10	.8	2.63
CSA AWM I/II A/B																	30	1.4	4.59
																	50	1.8	5.91
																	100	2.7	8.86
RG-6/U Type • 20 AWG Stranded (7x15x40) Bare Copper Conductor • Tinned Copper "French Braid" Shield (95% Coverage)																			
Foam Polyethylene Insulation • Matte Blue Belflex Jacket																			
UL AWM	**7503A**	CEC:	250†	76.2	12.0	5.5	8.1Ω/M′	11.0Ω/M′	.185	4.70	.275	6.99	75	80%	17.3	56.8	2.2	.3	0.98
Style 1354		FT1	500†	152.4	18.0	8.2	26.6Ω/km	36.1Ω/km									5	.4	1.31
30V 80°C			1000†	304.8	40.0	18.2											10	.6	1.97
CSA AWM I/II A/B																	30	1.1	3.61
																	50	1.5	4.92
																	100	2.2	7.22
RG-11 Type • 16 AWG Stranded (7x37x40) Bare Copper Conductor • Tinned Copper "French Braid" Shield (95% Coverage)																			
Foam Polyethylene Insulation • Matte Blue Belflex Jacket																			
UL AWM	**7504A**	CEC:	1000†	304.8	84.0	38.1	3.5Ω/M′	3.6Ω/M′	.285	7.24	.405	10.29	75	81%	17.3	56.8	2.2	.2	0.66
Style 1354		FT1					11.5Ω/km	11.8Ω/km									5	.3	0.98
30V 80°C																	10	.4	1.31
CSA AWM I/II A/B																	30	.8	2.63
																	50	1.0	3.28
																	100	1.5	4.92

BC = Bare Copper • DCR = DC Resistance • TC = Tinned Copper

*Based on proper installation techniques in a C-track cable guide.

†Final put-up length may vary ±10% from length shown.

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UL Instrumentation Cable

300V Power-Limited Tray Cables — Overview

Construction

Soft annealed bare or tinned copper with PVC flame retardant insulation and jacket. Other insulation and jacket options are available (see table below). Communication wire included on all multi-pair/multi-triad 1000 and 3000 series part numbers, 22 AWG (7x30) bare copper, orange PVC insulation. Nylon rip cord included in all PVC/PVC instrumentation cables.

Other Construction Options:

UL Listed for PLTC	
Insulation/Jacket	Max. Temp Rating
XLPE/PVC	90°C
XLPE/CPE	90°C
PVC/PVC	105°C
PVC/CPE	105°C
PE/PVC	75°C
FPE/PVC	75°C
TPE/TPE	105°C
XLPE/Haloarrest®	90°C

Armoring Capabilities

Belden also has the capability to protect electronic, instrumentation and control cables with interlocking or continuous armor and smooth or corrugated protective metal tapes.

To Specify Part Number

1	2	3456
Overall Jacket Type	Armor Type	Core Trade Number

Overall Jacket

Code	Material
1	PVC
3	CPE
4	TPE
5	HDPE
6	Oil Res II
7	Haloarrest® I

Armor

Code	Material
2	Aluminum Interlock
3	Steel Interlock
8	Continuously Corrugated Aluminum

Application

Cable jackets are resistant to sunlight, moisture and vapor penetration. PVC/PVC constructions, with 3 conductors or more and 20 AWG or larger, are suitable for direct burial.

Unshielded

Twisted non-shielded pairs and triads provide a minimal OD allowing greater tray and conduit fill. Non-shielded instrument pairs may be utilized when recommended by the instrument manufacturer and used in a metallic conduit.

Overall Shield

Recommended for use in instrumentation applications where signals are transmitted in excess of 100 millivolts except in areas where high voltage and current sources create excessive noise interference. The Beldfoil® shield with drain wire provides 100% coverage for maximum shield effectiveness.

Individually Shielded and Overall Shielded

Individually shielded pairs or triads with an overall shield are recommended for use in instrumentation applications where optimum noise rejection is required. Individual pair/triad shields are fully isolated from each other and contain a separate drain wire for grounding, to provide maximum protection from crosstalk and common mode interference. Cables with an overall shield provide additional electrostatic noise protection.

Specifications

- UL Subject 13
- UL Subject 2250
- NEC Article 725 Class 2 and Class 3 Circuits
- NEC Type PLTC Listed, which is approved for cable tray use in Class 1, Division 2, hazardous areas and non-hazardous areas, cable trays, raceways, conduit and supported by messenger wires.
- Sunlight-resistant.
- Oil-resistant per UL Class 43
- NEC Type ITC per Article 727. ITC cables may carry up to 5 amps at 150V, which is significantly greater than that allowed for PLTC only cables. ITC cables may also be installed in specific applications, per the NEC, in addition to those allowed for PLTC.
- UL 1685 (UL 1581) Vertical Tray Flame Test comparable to IEEE 383-1974 (70,000 BTU/hr.) Flame Test.
- PVC/PVC constructions are CMG, FT4, IEEE 1202 and IEEE 383-2003 rated, and meet ICEA T-29-520 Flame Test.
- Design options — call 1-800-BELDEN-1 or 1-800-BELDEN-3.

PLTC-ER

As an option, Belden offers all PVC insulated, PVC jacketed instrumentation cables, and several other insulation and jackets, with a PLTC-ER (Exposed Run) rating, formerly referred to as Open Wiring.

Per NEC Article 725, a PLTC-ER rated cable may be installed in an industrial establishment between a cable tray and the utilization equipment or device. A PLTC-ER rated cable must meet the crush and impact requirements of UL Type MC cable By eliminating the need for metal conduit and/or armor, using a PLTC-ER rated cable results in savings in both installation and maintenance.

Standard lengths may be subject to tolerance. Custom lengths may be available upon request. Contact the Belden Electronics Division Customer Service Department for additional information. 1-800-BELDEN-1 or 1-800-BELDEN-3.

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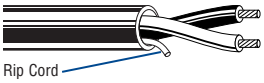
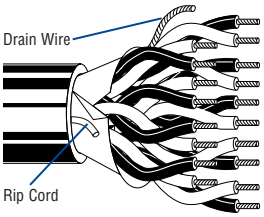
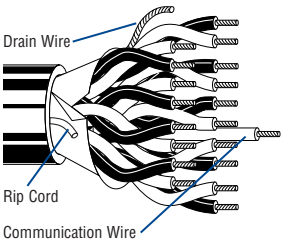
UL Instrumentation Cable

300V Power-Limited Tray Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	No. of Pairs	Color Code	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
22 AWG Pairs Stranded (7x30) Tinned Copper Conductors • Twisted Pairs															
Unshielded • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9407**	1	E2	U-500 U-1000	U-152.4 U-304.8	10.0 19.0	4.3 8.2	.037	.94	.198	5.03	19	84	2.00	50.80
Overall Beldfoil® Shield (100% Coverage) • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9322**	1	E2	U-500 U-1000	U-152.4 U-304.8	11.0 22.0	5.0 10.0	.037	.94	.201	5.10	28	124	2.00	50.80
	9512	2	E2	500 1000	152.4 304.8	22.0 42.0	10.0 19.1	.042	1.07	.310	7.82	46	204	3.00	76.20
	9513	3	E2	500 1000	152.4 304.8	26.5 51.0	11.6 23.2	.042	1.07	.324	8.23	63	280	3.25	82.55
	9514	4	E2	500 1000	152.4 304.8	33.0 67.0	14.8 30.5	.042	1.07	.356	9.04	80	355	3.50	88.90
	9516	6	E2	500 1000	152.4 304.8	45.0 89.0	20.4 40.4	.053	1.35	.418	10.62	118	524	4.25	107.95
	9520	9	E2	500 1000	152.4 304.8	64.5 121.0	29.3 55.0	.053	1.35	.482	12.29	172	765	4.75	120.65
	9521	11	E2	500 1000	152.4 304.8	73.0 147.0	32.7 66.4	.053	1.35	.506	12.85	200	889	5.35	135.89
	9524	15	E2	500 1000	152.4 304.8	89.5 178.0	40.7 80.9	.053	1.35	.594	15.09	280	1245	6.00	152.40
	9526	19	E2	500 1000	152.4 304.8	114.5 224.0	52.0 101.8	.063	1.60	.644	16.36	350	1557	6.33	160.78
	9527	27	E2	500 1000 †	152.4 304.8	156.5 321.0	71.1 145.9	.063	1.60	.763	19.38	500	2224	7.50	190.50
22 AWG Pairs Stranded (7x30) Bare Copper Conductors* • Twisted Pairs															
Overall Beldfoil Shield (100% Coverage) • PVC Insulation • PVC Jacket (Black or Chrome)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**3000A****	2	E1	Bulk††	Bulk	—	—	.043	1.09	.310	7.87	46	204	3.00	76.20
	3004A**	4	E1	Bulk††	Bulk	—	—	.042	1.07	.357	9.01	80	355	3.50	88.90
	3006A**	8	E1	Bulk††	Bulk	—	—	.053	1.35	.450	11.43	172	765	4.75	120.65
	3008A**	12	E1	Bulk††	Bulk	—	—	.053	1.35	.536	13.61	210	934	5.00	127.00
	3010A**	16	E1	Bulk††	Bulk	—	—	.053	1.35	.594	15.09	290	1290	6.00	152.40
	3012A**	24	E1	Bulk††	Bulk	—	—	.065	1.65	.749	19.02	440	1957	7.50	190.50
	3014A**	50	E1	Bulk††	Bulk	—	—	.075	1.91	1.017	25.80	915	4070	9.50	241.30







PVC = Polyvinyl Chloride

*For tinned copper conductors, order with B suffix.
**For Exposed Run rated cable (3000 series only), order with E suffix, e.g. 3000AE.

†Final put-up length may vary ±10% from length shown.
††Bulk = Check length available for specific construction.

E1, E2 = Refer to Industrial Technical Information section for color code.
Alternate color coding available upon request.

Multiple pair or triad cables have each pair/triad numbered for ease of identification.

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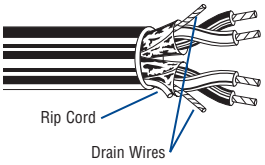
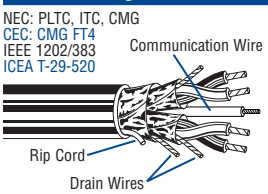
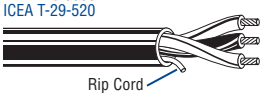
UL Instrumentation Cable

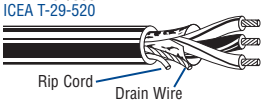
300V Power-Limited Tray Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

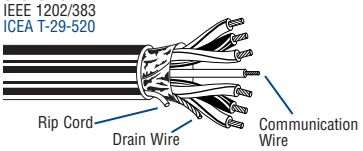
Description	Part No.	No. of Pairs/ Triads	Color Code	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
22 AWG Pairs Stranded (7x30) Tinned Copper Conductors • Twisted Pairs															
Individually Shielded • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9328**	2	E2	500 1000	152.4 304.8	23.5 46.0	10.2 20.9	.042	1.07	.323	8.20	54	240	3.00	76.20
	9329	3	E2	500 1000	152.4 304.8	29.5 60.0	13.4 27.3	.042	1.07	.341	8.66	54	240	3.50	88.90
	9330	4	E2	500 1000	152.4 304.8	39.0 75.0	17.7 34.0	.042	1.07	.372	9.45	110	489	3.50	88.90
	9331	6	E2	500 1000	152.4 304.8	55.0 111.0	24.5 50.4	.053	1.35	.457	11.61	101	449	4.33	109.98
	9332	9	E2	500 1000	152.4 304.8	75.0 145.0	34.1 65.9	.053	1.35	.530	13.46	160	711	5.00	127.00
	9333	11	E2	500 1000	152.4 304.8	89.0 177.0	40.5 80.5	.053	1.35	.592	15.04	160	711	5.50	139.70
	9335	19	E2	500 1000	152.4 304.8	141.5 287.0	64.3 130.5	.063	1.60	.711	18.06	264	1174	6.50	165.10
22 AWG Pairs Stranded (7x30) Bare Copper Conductors* • Twisted Pairs															
Individually Shielded + Overall Beldfoil® Shield (100% Coverage) • PVC Insulation • PVC Jacket (Black or Chrome)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**3001A**†	2	E1	Bulk††	Bulk	—	—	.042	1.07	.324	8.23	54	240	3.25	82.55
	3005A†	4	E1	Bulk††	Bulk	—	—	.043	1.09	.360	9.14	115	511	3.50	88.90
	3007A†	8	E1	Bulk††	Bulk	—	—	.053	1.35	.497	12.62	250	1112	5.25	133.35
	3009A†	12	E1	Bulk††	Bulk	—	—	.053	1.35	.570	14.48	300	1334	5.75	146.05
	3011A†	16	E1	Bulk††	Bulk	—	—	.064	1.63	.674	17.12	350	1557	6.25	158.75
	3013A†	24	E1	Bulk††	Bulk	—	—	.065	1.65	.800	20.32	540	2402	8.00	203.20
	3015A†	50	E1	Bulk††	Bulk	—	—	.075	1.91	1.050	26.67	1330	5916	10.50	266.70
22 AWG Triads Stranded (7x30) Tinned Copper Conductors • Twisted Triads															
Unshielded • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9491**	1	E1	U-500 U-1000	U-152.4 U-304.8	12.5 23.0	5.7 10.4	.037	.94	.208	5.28	29	129	2.00	50.80
Overall Beldfoil Shield (100% Coverage) • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9363**	1	E1	U-500 U-1000	U-152.4 U-304.8	13.5 26.0	6.1 11.8	.037	.94	.208	5.28	29	129	2.00	50.80
22 AWG Triads Stranded (7x30) Bare Copper Conductors* • Twisted Triads															
Overall Beldfoil Shield (100% Coverage) • PVC Insulation • PVC Jacket (Black or Chrome)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**3002A**	2	E1	Bulk††	Bulk	—	—	.043	1.09	.330	8.38	62	275	3.50	88.90
Individually Shielded + Overall Beldfoil Shield (100% Coverage) • PVC Insulation • PVC Jacket (Black or Chrome)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**3003A**	2	E1	Bulk††	Bulk	—	—	.043	1.09	.330	8.38	82	364	3.25	82.55



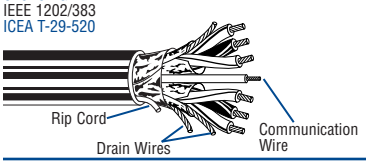








For Exposed Run rated cable, order 3002AE



For Exposed Run rated cable, order 3003AE

*For tinned copper conductors, order with B suffix.
†For Exposed Run rated 3000 series cables, order with "E" suffix, e.g. 3001AE.

E1, E2 = Refer to Technical Information section for color code. Alternate color coding available upon request.
Multiple pair or triad cables have each pair/triad numbered for ease of identification.
††Bulk = Check length available for specific construction.

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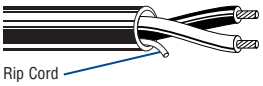
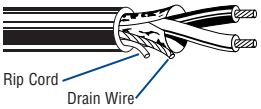
UL Instrumentation Cable

300V Power-Limited Tray Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

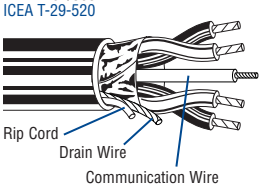
Description	Part No.	No. of Pairs	Color Code	Standard Lengths		Standard Unit Weight		Jacket Thickness		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
20 AWG Pairs Stranded (19x32) Tinned Copper Conductors • Twisted Pairs															
Unshielded • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9408**	1	E2	U-500 U-1000	U-152.4 U-304.8	12.0 23.0	5.5 10.4	.037	.94	.214	5.44	31	138	2.00	50.80



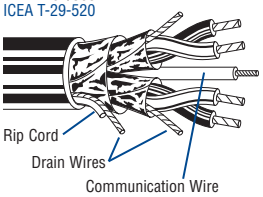
Overall Beldfoil® Shield (100% Coverage) • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9320**	1	E2	U-500 U-1000	U-152.4 U-304.8	14.5 28.0	6.6 12.7	.037	.94	.217	5.51	40	178	2.00	50.80



20 AWG Pairs Stranded (7x28) Bare Copper Conductors • Twisted Pairs															
Overall Beldfoil Shield (100% Coverage) • PVC Insulation • Black PVC Jacket (See chart below for other options)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**1033A**	1	E1	1000 10000 †	304.8 3048.0	30.0 270.0	13.6 122.5	.037	.94	.213	5.41	42	187	2.25	57.15
	3016A	2	E1	Bulk ††	Bulk	—	—	.042	1.07	.332	8.43	92	409	3.75	95.25
	1056A	4	E1	10000 †	3048.0	820.0	372.0	.053	1.35	.408	10.36	135	601	4.25	107.95
	1057A	8	E1	10000 †	3048.0	1410.0	640.2	.053	1.35	.472	11.99	247	1099	5.00	127.00
	1058A	12	E1	7500 †	2286.0	1455.0	660.0	.053	1.35	.564	14.33	359	1597	6.00	152.40
	1059A	16	E1	5000 †	1524.0	1275.0	578.9	.064	1.63	.649	16.48	232	1032	6.50	165.10
	1060A	24	E1	5000 †	1524.0	1735.0	787.7	.064	1.63	.786	19.96	695	3092	8.25	209.55
	1061A	36	E1	2500 †	762.0	1300.0	590.2	.074	1.88	.960	24.38	1031	4587	10.00	254.00
	1062A	50	E1	2500 †	762.0	1825.0	827.8	.074	1.88	1.117	28.37	1423	6330	11.50	292.10



Individually Shielded + Overall Beldfoil Shield (100% Coverage) • PVC Insulation • Black PVC Jacket (Other options below)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**1075A**	2	E1	10000 †	3048.0	650.0	294.8	.042	1.07	.337	8.56	97	432	3.75	95.25
	1076A	4	E1	7500 †	2286.0	787.5	357.5	.053	1.35	.411	10.44	171	761	4.50	114.30
	1077A	8	E1	7500 †	2286.0	1297.5	588.6	.053	1.35	.514	13.06	320	1424	5.50	139.70
	1078A	12	E1	7500 †	2286.0	1942.5	881.1	.064	1.63	.637	16.18	468	2082	6.75	171.45
	1079A	16	E1	5000 †	1524.0	1555.0	705.4	.064	1.63	.704	17.88	617	2745	7.50	190.50
	1091A	20	E1	Bulk ††	Bulk	—	—	.064	1.63	.780	19.81	765	3403	8.25	209.55
	1080A	24	E1	2500 †	762.0	1142.5	518.2	.074	1.88	.863	21.92	914	4066	9.00	228.60
	1081A	36	E1	2000 †	609.6	1436.0	651.9	.074	1.88	1.035	26.29	1359	6046	10.50	266.70
	1082A	50	E1	2000 †	609.6	1858.0	843.5	.074	1.88	1.215	30.86	1878	8355	12.75	323.85



F-R = Flame-retardant

†Final put-up length may vary ±10% from length shown.
††Bulk = Check length available for specific construction.

E1, E2 = Refer to Technical Information section for color code.
Alternate color coding available upon request.

Multiple pair or triad cables have each pair/triad numbered for ease of identification.

To Specify:

1234	A	E
Start with Part No.	Add or replace letter code for desired conductor, insulation & jacket	Add for Exposed Run rating if desired

Conductor, Insulation and Jacket Options**

Bare	Tinned	Insulation/Jacket
A	B	PVC/PVC
C	D	XLPE/PVC
K	L	TPE/TPE
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

**For 1000 and 3000 Series cables only.

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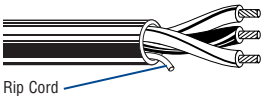
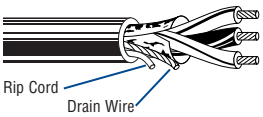
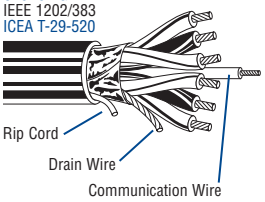
UL Instrumentation Cable

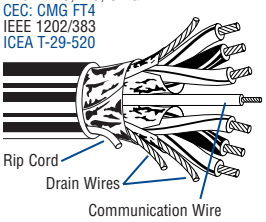
300V Power-Limited Tray Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	No. of Triads	Color Code	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
20 AWG Triads Stranded (19x32) Tinned Copper Conductors • Twisted Triads															
Unshielded • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9492**	1	E1	U-500 U-1000	U-152.4 U-304.8	15.5 29.0	7.0 13.2	.037	.94	.225	5.72	46	205	2.25	57.15
Overall Beldfoil® Shield (100% Coverage) • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9364**	1	E1	U-500 U-1000	U-152.4 U-304.8	17.0 32.0	7.7 14.5	.037	.94	.228	5.79	46	205	2.25	57.15
20 AWG Triads Stranded (7x28) Bare Copper Conductors • Twisted Triads															
Overall Beldfoil Shield (100% Coverage) • PVC Insulation • Black PVC Jacket (See chart below for other options)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**1526A**	1	E1	10000 †	3048.0	310.0	140.6	.037	.94	.215	5.46	42	187	2.20	55.88
	3017A	2	E1	Bulk ††	Bulk	—	—	.055	1.40	.360	9.14	97	432	3.60	91.44
	3020A	4	E1	Bulk ††	Bulk	—	—	.055	1.40	.470	11.94	174	774	4.75	120.65
	3021A	8	E1	Bulk ††	Bulk	—	—	.055	1.40	.560	14.22	330	1468	5.00	127.00
	3022A	12	E1	Bulk ††	Bulk	—	—	.066	1.68	.710	18.03	485	2158	7.00	177.80
	3023A	16	E1	Bulk ††	Bulk	—	—	.064	1.63	.821	20.85	600	2669	7.75	196.85
	3024A	24	E1	Bulk ††	Bulk	—	—	.074	1.88	1.031	26.19	920	4093	9.25	234.95
Individually Shielded + Overall Beldfoil Shield (100% Coverage) • PVC Insulation • Black PVC Jacket (Other options below)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**3018A**	2	E1	Bulk ††	Bulk	—	—	.055	1.40	.372	9.45	102	454	3.75	95.25
	1083A	4	E1	10000 †	3048.0	1410.8	640.9	.053	1.35	.451	11.46	228	1014	4.50	114.30
	1084A	8	E1	7500 †	2286.0	1755.0	796.1	.064	1.63	.575	10.81	432	1922	5.75	146.05
	1085A	12	E1	5000 †	1524.0	1735.0	787.0	.064	1.63	.714	18.14	636	2829	7.15	181.61
	1092A	16	E1	Bulk ††	Bulk	—	—	.064	1.63	.793	20.14	841	3741	7.90	200.66
	1086A	24	E1	2500 †	762.0	1602.5	726.9	.074	1.88	.992	25.20	1250	5561	9.90	251.46
	3067A	36	E1	Bulk ††	Bulk	—	—	.074	1.88	1.292	32.82	1875	6273	13.00	330.20









†Final put-up length may vary ±10% from length shown.
††Bulk = Check length available for specific construction.

E1 = Refer to Technical Information section for color code.
Alternate color coding available upon request.

Multiple pair or triad cables have each pair/triad numbered for ease of identification.

To Specify:

1234	A	E
Start with Part No.	Add or replace letter code for desired conductor, insulation & jacket	Add for Exposed Run rating if desired

Conductor, Insulation and Jacket Options**

Bare	Tinned	Insulation/Jacket
A	B	PVC/PVC
C	D	XLPE/PVC
K	L	TPE/TPE
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

**For 1000 and 3000 Series cables only.

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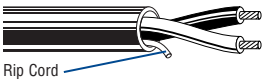
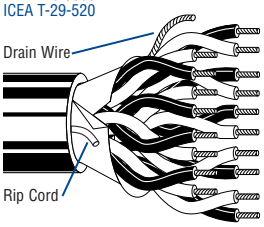
케이블 콘(주) 기술지원팀 :: 콘넥터 문의 0707-434-7701 케이블 문의 0707-434-7702

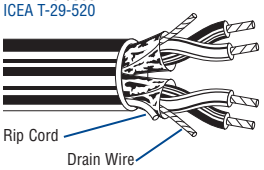
UL Instrumentation Cable

300V Power-Limited Tray Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	No. of Pairs	Color Code	Standard Lengths		Standard Unit Weight		Jacket Thickness		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
18 AWG Pairs Stranded (19x30) Tinned Copper Conductors • Twisted Pairs															
Unshielded • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9409**	1	E2	U-500 U-1000	U-152.4 U-304.8	15.0 28.0	6.8 12.7	.037	.94	.230	5.84	49	218	2.25	57.15
Overall Beldfoil® Shield (100% Coverage) • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9318**	1	E2	U-500 U-1000	U-152.4 U-304.8	17.5 33.0	7.9 15.0	.037	.94	.233	5.92	60	267	2.25	57.15
	9552	2	E2	500 1000	152.4 304.8	35.5 69.0	16.1 31.4	.042	1.07	.368	9.34	65	289	3.70	93.98
	9553	3	E2	500 1000	152.4 304.8	49.5 98.0	22.0 49.4	.053	1.35	.411	10.44	145	645	4.10	104.14
	9554	4	E2	500 1000	152.4 304.8	57.0 112.0	25.8 50.8	.053	1.35	.447	11.35	187	832	4.50	114.30
	9556	6	E2	500 1000	152.4 304.8	78.5 153.0	35.7 69.5	.053	1.35	.497	12.62	270	1201	5.00	127.00
	9559	9	E2	500 1000	152.4 304.8	108.0 215.0	49.0 97.6	.053	1.35	.579	14.71	395	1757	5.80	147.32
	9563	11	E2	500 1000	152.4 304.8	133.0 270.0	60.4 122.5	.063	1.60	.665	16.89	478	2126	6.75	171.45
	9565	15	E2	500 1000	152.4 304.8	169.0 342.0	76.8 155.5	.063	1.60	.739	18.77	640	2847	7.50	190.50
Individually Shielded (100% Coverage) • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9368**	2	E2	500 1000	152.4 304.8	37.5 73.0	17.0 33.2	.042	1.07	.378	9.60	125	556	3.75	95.25
	9369	3	E2	500 1000	152.4 304.8	55.0 109.0	25.0 49.5	.053	1.35	.423	10.74	220	979	4.25	107.95
	3029A	4	E1	Bulk †	Bulk	—	—	.053	1.35	.461	11.71	296	1317	4.50	114.30
	9388	4	E2	500 1000	152.4 304.8	71.5 135.0	32.5 61.4	.053	1.35	.461	11.71	296	1317	4.60	116.84
	9389	6	E2	500 1000	152.4 304.8	97.0 190.0	44.1 86.4	.053	1.35	.538	13.67	440	1957	5.25	133.35
	9390	9	E2	500 1000	152.4 304.8	137.5 270.0	63.0 123.6	.064	1.63	.652	16.56	666	2963	6.50	165.10
	9391	11	E2	500 1000	152.4 304.8	158.5 321.0	72.0 145.9	.064	1.63	.729	18.52	815	3626	7.25	184.15
	9392	15	E2	500 1000	152.4 304.8	209.0 428.0	95.0 194.5	.064	1.63	.808	20.52	1100	4893	8.00	203.20







E1, E2 = Refer to Technical Information section for color code.
Alternate color coding available upon request.

Multiple pair or triad cables have each pair/triad numbered for ease of identification.

†Bulk = Check length available for specific construction.

To Specify:

1234	A	E
Start with Part No.	Add or replace letter code for desired conductor, insulation & jacket	Add for Exposed Run rating if desired

Conductor, Insulation and Jacket Options**

Bare	Tinned	Insulation/Jacket
A	B	PVC/PVC
C	D	XLPE/PVC
K	L	TPE/TPE
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

**For 1000 and 3000 Series cables only.

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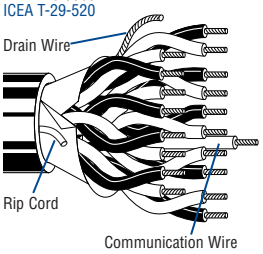
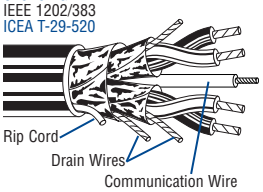
케이블 콘(주) 기술지원팀 :: 콘넥터 문의 0707-434-7701 케이블 문의 0707-434-7702

UL Instrumentation Cable

300V Power-Limited Tray Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	No. of Pairs	Color Code	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
18 AWG Pairs Stranded (7x26) Bare Copper Conductors • Twisted Pairs															
Overall Beldfoil® Shield (100% Coverage) • PVC Insulation • Black PVC Jacket (See chart below for other options)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**1032A**	1	E1	1000 10000 †	304.8 3048.0	38.0 380.0	17.2 172.5	.037	.94	.233	5.92	67	298	2.50	63.50
	3025A	2	E1	10000 †	3048.0	760.0	344.7	.042	1.07	.375	9.53	121	538	3.50	88.90
	1529A	3	E1	7500 †	2286.0	735.0	333.4	.053	1.35	.415	10.54	165	734	4.25	107.95
	1466A	4	E1	7500 †	2286.0	892.5	404.8	.053	1.35	.452	11.48	211	939	4.50	114.30
	1467A	8	E1	7500 †	2286.0	1477.5	670.8	.053	1.35	.523	13.28	390	1735	5.50	139.70
	1468A	12	E1	5000 †	1524.0	1375.0	624.3	.064	1.63	.673	17.09	560	2491	6.75	171.45
	3034A	16	E1	Bulk ††	Bulk	—	—	.066	1.68	.713	18.11	640	2847	7.25	184.15
	1471A	24	E1	2500 †	762.0	1292.5	586.3	.074	1.88	.932	23.67	1105	4916	9.25	234.95
	1472A	36	E1	1250 †	381.0	910.0	413.1	.074	1.88	1.062	26.97	1644	7313	10.50	266.70
	3041A	50	E1	Bulk ††	Bulk	—	—	.074	1.88	1.240	31.50	2240	10049	12.75	323.85
Individually Shielded + Overall Beldfoil (100% Coverage) • PVC Insulation • Black PVC Jacket (Other options below)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**1474A**	2	E1	7500 †	2286.0	720.0	326.9	.053	1.35	.408	10.16	149	663	4.00	101.60
	1475A	4	E1	7500 †	2286.0	1065.0	483.1	.053	1.35	.468	11.89	267	1188	4.75	120.65
	1476A	8	E1	5000 †	1524.0	1185.0	538.0	.053	1.35	.594	15.10	501	2229	6.00	152.40
	1477A	12	E1	5000 †	1524.0	1740.0	789.3	.064	1.63	.737	18.72	779	3465	7.25	184.15
	3035A	16	E1	Bulk ††	Bulk	—	—	.064	1.63	.836	21.20	725	3225	8.50	215.90
	1480A	24	E1	2500 † 5000 †	762.0 1524.0	1712.5 3390.0	777.5 1539.1	.074	1.88	1.019	25.88	1443	6419	10.25	260.35
	1481A	36	E1	Bulk ††	Bulk	—	—	.074	1.88	1.163	29.54	2148	9556	11.75	298.45
	3042A	50	E1	Bulk ††	Bulk	—	—	.084	2.13	1.389	35.28	2935	13057	14.00	355.60





E1 = Refer to Technical Information section for color code.
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†Final put-up length may vary ±10% from length shown.
††Bulk = Check length available for specific construction.

To Specify:

1234	A	E
Start with Part No.	Add or replace letter code for desired conductor, insulation & jacket	Add for Exposed Run rating if desired

Conductor, Insulation and Jacket Options**

Bare	Tinned	Insulation/Jacket
A	B	PVC/PVC
C	D	XLPE/PVC
K	L	TPE/TPE
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

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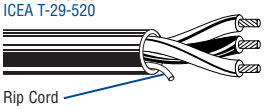
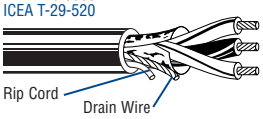
UL Instrumentation Cable

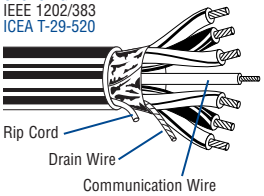
300V Power-Limited Tray Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	No. of Triads	Color Code	Standard Lengths		Standard Unit Weight		Jacket Thickness		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
18 AWG Triads Stranded (19x30) Tinned Copper Conductors • Twisted Triads															
Unshielded • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9493**	1	E1	U-500 U-1000	U-152.4 U-304.8	20.0 38.0	9.1 17.2	.037	.94	.242	6.15	62	276	2.25	57.15
Overall Beldfoil® Shield (100% Coverage) • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9365**	1	E1	U-500 U-1000	U-152.4 U-304.8	22.0 43.0	10.0 19.5	.037	.94	.245	6.22	74	329	2.50	63.50

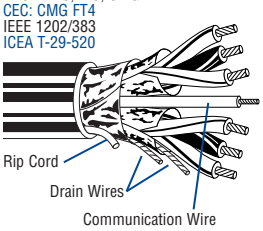




18 AWG Triads Stranded (7x26) Bare Copper Conductors • Twisted Triads															
Overall Beldfoil Shield (100% Coverage) • PVC Insulation • Black PVC Jacket (See chart below for other options)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**1036A**	1	E1	1000 10000 †	304.8 3048.0	43.0 430.0	19.5 195.1	.037	.94	.236	5.99	90	400	2.40	60.96
	3027A	2	E1	Bulk ††	Bulk	—	—	.055	1.40	.420	10.67	165	734	4.25	107.95
	3030A	4	E1	Bulk ††	Bulk	—	—	.055	1.40	.521	13.20	240	1068	4.50	114.30
	3032A	8	E1	Bulk ††	Bulk	—	—	.064	1.63	.580	14.70	501	2229	5.75	146.05
	3036A	16	E1	Bulk ††	Bulk	—	—	.077	1.96	.900	22.86	1050	4671	9.00	228.60
	3038A	24	E1	Bulk ††	Bulk	—	—	.077	1.96	1.020	25.91	1450	6450	10.25	260.35



Individually Shielded + Overall Beldfoil (100% Coverage) • PVC Insulation • Black PVC Jacket (Other options below)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**3028A**	2	E1	Bulk ††	Bulk	—	—	.055	1.40	.450	11.43	175	779	4.50	114.30
	3031A	4	E1	Bulk ††	Bulk	—	—	.053	1.35	.533	13.50	255	1134	5.25	133.35
	3033A	8	E1	Bulk ††	Bulk	—	—	.064	1.63	.654	16.50	560	2491	6.50	165.10
	3068A	12	E1	Bulk ††	Bulk	—	—	.063	1.60	.840	21.30	800	3559	8.50	215.90
	3037A	16	E1	Bulk ††	Bulk	—	—	.074	1.88	.974	24.70	1320	5872	10.50	266.70
	3039A	24	E1	Bulk ††	Bulk	—	—	.074	1.88	1.200	30.50	1620	7207	11.25	285.75



E1 = Refer to Technical Information section for color code.
Alternate color coding available upon request.

Multiple pair or triad cables have each pair/triad numbered for ease of identification.

†Final put-up length may vary ±10% from length shown.
††Bulk = Check length available for specific construction.

To Specify:

1234	A	E
Start with Part No.	Add or replace letter code for desired conductor, insulation & jacket	Add for Exposed Run rating if desired

Conductor, Insulation and Jacket Options**

Bare	Tinned	Insulation/Jacket
A	B	PVC/PVC
C	D	XLPE/PVC
K	L	TPE/TPE
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

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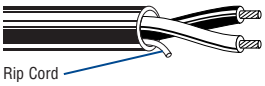
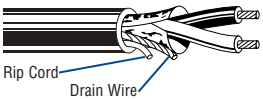
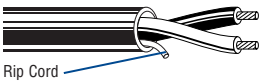
UL Instrumentation Cable

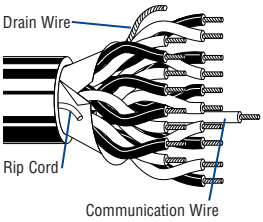
300V Power-Limited Tray Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

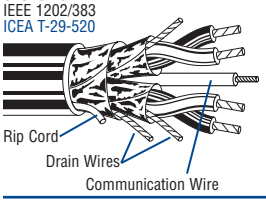
Description	Part No.	No. of Pairs	Color Code	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
16 AWG Pairs Stranded (19x29) Tinned Copper Conductors • Twisted Pairs															
Unshielded • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9410**	1	E2	U-500 U-1000	U-152.4 U-304.8	18.5 36.0	8.4 16.3	.037	.94	.254	6.45	78	347	2.50	63.50
Overall Beldfoil® Shield (100% Coverage) • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9316**	1	E2	U-500 U-1000	U-152.4 U-304.8	21.5 41.0	9.8 18.6	.037	.94	.256	6.50	90	400	2.50	63.50
16 AWG Pairs Stranded (7x24) Bare Copper Conductors • Twisted Pairs															
Unshielded • PVC Insulation • Black PVC Jacket (See chart below for other insulation and jacket options)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**1035A**	1	E1	1000 10000 †	304.8 3048.0	40.0 400.0	18.1 181.4	.037	.94	.254	6.45	71	318	2.50	63.50
Overall Beldfoil Shield (100% Coverage) • PVC Insulation • Black PVC Jacket (See chart below for other options)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**1030A**	1	E1	1000 10000 †	304.8 3048.0	46.0 480.0	20.9 217.7	.037	.94	.257	6.53	94	418	2.50	63.50
	3043A	2	E1	Bulk ††	Bulk	—	—	.053	1.35	.437	11.10	83	369	4.50	114.30
	1528A	3	E1	7500 †	2286.0	967.5	438.9	.053	1.35	.457	11.61	250	1112	4.75	120.65
	1484A	4	E1	7500 †	2286.0	1200.0	544.8	.053	1.35	.495	12.57	330	1468	5.00	127.00
	1485A	8	E1	7500 †	2286.0	2010.0	911.7	.053	1.35	.597	15.16	616	2740	6.00	152.40
	1486A	12	E1	5000 †	1524.0	1965.0	892.1	.064	1.63	.741	18.80	892	3968	7.50	190.50
	3050A	16	E1	Bulk ††	Bulk	—	—	.064	1.63	.831	21.10	661	2940	8.50	215.90
	1489A	24	E1	1250 †	381.0	923.8	419.4	.074	1.88	1.032	26.20	1749	7780	10.50	266.70
	1490A	36	E1	1250 †	381.0	1313.8	596.4	.074	1.88	1.178	29.80	2606	11592	11.75	298.45
	3056A	50	E1	Bulk ††	Bulk	—	—	.088	2.24	1.550	39.37	3615	16082	15.50	393.70
Individually Shielded + Overall Beldfoil Shield (100% Coverage) • PVC Insulation • Black PVC Jacket (Options below)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**1492A**	2	E1	7500 †	2286.0	885.0	401.8	.053	1.35	.450	11.43	232	1032	4.50	114.30
	1493A	4	E1	7500 †	2286.0	1387.5	629.4	.055	1.40	.512	13.11	420	1868	5.00	127.00
	1494A	8	E1	5000 †	1524.0	1640.0	743.9	.066	1.68	.687	17.50	795	3537	7.00	177.80
	1495A	12	E1	2500 †	762.0	1202.5	545.5	.066	1.68	.822	20.73	1170	5205	8.25	209.55
	3051A	16	E1	Bulk ††	Bulk	—	—	.074	1.88	.936	23.77	661	2940	10.00	254.00
	1498A	24	E1	5000 †	1524.0	4340.0	1968.6	.074	1.88	1.149	29.18	2296	10214	11.50	292.10
	1499A	36	E1	Bulk ††	Bulk	—	—	.084	2.13	1.334	33.88	3167	14088	13.50	342.90
	3057A	50	E1	Bulk ††	Bulk	—	—	.088	2.24	1.600	40.64	2066	9190	16.00	406.40











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††Bulk = Check length available for specific construction.

To Specify:

1234	A	E
Start with Part No.	Add or replace letter code for desired conductor, insulation & jacket	Add for Exposed Run rating if desired

Conductor, Insulation and Jacket Options**

Bare	Tinned	Insulation/Jacket
A	B	PVC/PVC
C	D	XLPE/PVC
K	L	TPE/TPE
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

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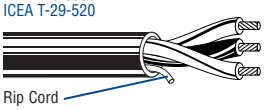
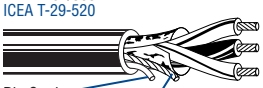
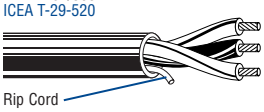
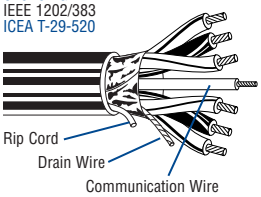
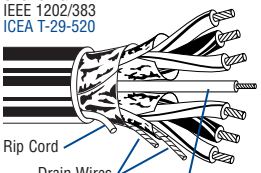
UL Instrumentation Cable

300V Power-Limited Tray Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	No. of Triads	Color Code	Standard Lengths		Standard Unit Weight		Jacket Thickness		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
16 AWG Triads Stranded (19x29) Tinned Copper Conductors • Twisted Triads															
Unshielded • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9494**	1	E1	U-500 U-1000	U-152.4 U-304.8	24.5 48.0	11.1 21.8	.037	.94	.268	6.81	91	405	2.75	69.85
 Rip Cord															
Overall Beldfoil® Shield (100% Coverage)• PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**9366**	1	E1	U-500 U-1000	U-152.4 U-304.8	27.5 54.0	12.5 24.5	.037	.94	.270	6.86	116	516	2.75	69.85
 Rip Cord, Drain Wire															
16 AWG Triads Stranded (7x24) Bare Copper Conductors • Twisted Triads															
Unshielded • PVC Insulation • Black PVC Jacket (See chart below for other options)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**1034A**	1	E1	1000 4000 †	304.8 1219.2	51.0 208.0	23.2 94.4	.037	.94	.268	6.81	107	476	2.75	69.85
 Rip Cord															
Overall Beldfoil Shield (100% Coverage) • PVC Insulation • Black PVC Jacket (See chart below for other options)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**1031A**	1	E1	1000 10000 †	304.8 3048.0	58.0 610.0	26.4 276.7	.037	.94	.271	6.88	130	578	2.75	69.85
	3044A	2	E1	Bulk ††	Bulk	—	—	.053	1.35	.483	12.27	259	1152	4.75	120.65
	3046A	4	E1	Bulk ††	Bulk	—	—	.053	1.35	.570	14.40	473	2104	5.75	146.05
	3048A	8	E1	Bulk ††	Bulk	—	—	.063	1.60	.760	19.30	902	4013	7.50	190.50
	3052A	16	E1	Bulk ††	Bulk	—	—	.074	1.88	1.032	26.21	1758	7821	11.25	285.75
	3054A	24	E1	Bulk ††	Bulk	—	—	.074	1.88	1.180	29.90	2615	11633	11.75	298.45
 Rip Cord, Drain Wire, Communication Wire															
Individually Shielded + Overall Beldfoil Shield (100% Coverage) • PVC Insulation • Black PVC Jacket (Options below)															
NEC: PLTC, ITC, CMG CEC: CMG FT4 IEEE 1202/383 ICEA T-29-520	**3045A**	2	E1	Bulk ††	Bulk	—	—	.053	1.35	.506	12.80	304	1352	5.00	127.00
	3047A	4	E1	Bulk ††	Bulk	—	—	.053	1.35	.569	14.45	563	2505	6.00	152.40
	3049A	8	E1	Bulk ††	Bulk	—	—	.064	1.63	.764	19.41	1081	4809	8.00	203.20
	3069A	12	E1	Bulk ††	Bulk	—	—	.074	1.88	.998	25.35	1500	6673	10.00	254.00
	3053A	16	E1	Bulk ††	Bulk	—	—	.074	1.88	1.150	29.20	2117	9418	11.50	292.10
	3055A	24	E1	Bulk ††	Bulk	—	—	.084	2.13	1.320	33.53	3153	14026	13.25	336.55
 Rip Cord, Drain Wires, Communication Wire															

E1 = Refer to Technical Information section for color code.
Alternate color coding available upon request.

Multiple pair or triad cables have each pair/triad numbered for ease of identification.

†Final put-up length may vary ±10% from length shown.
††Bulk = Check length available for specific construction.

To Specify:

1234	A	E
Start with Part No.	Add or replace letter code for desired conductor, insulation & jacket	Add for Exposed Run rating if desired

Conductor, Insulation and Jacket Options**

Bare	Tinned	Insulation/Jacket
A	B	PVC/PVC
C	D	XLPE/PVC
K	L	TPE/TPE
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

**For 1000 and 3000 Series cables only.

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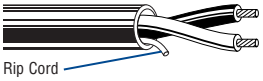
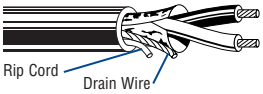
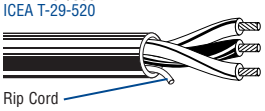
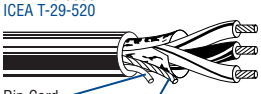
UL Instrumentation Cable

300V Power-Limited Tray Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	No. of Pairs/ Triads	Color Code	Standard Lengths		Standard Unit Weight		Jacket Thickness		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
14 AWG Pairs Stranded (42x30) Tinned Copper Conductors • Twisted Pairs															
Unshielded • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CL3R CEC: FT4 IEEE 1202/383 ICEA T-29-520	**9411**	1	E2	U-500 1000	U-152.4 304.8	28.0 60.0	12.7 27.3	.042	1.07	.322	8.18	124	552	3.25	82.55
 Rip Cord															
Overall Beldfoil® Shield (100% Coverage) • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CL3R CEC: FT4 IEEE 1202/383 ICEA T-29-520	**9314**	1	E2	U-500 1000	U-152.4 304.8	32.5 66.0	14.7 29.9	.042	1.07	.324	8.23	140	623	3.25	82.55
 Rip Cord, Drain Wire															
14 AWG Triads Stranded (42x30) Tinned Copper Conductors • Twisted Triads															
Unshielded • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CL3R CEC: FT4 IEEE 1202/383 ICEA T-29-520	**9495**	1	E1	500 1000	152.4 304.8	43.5 86.0	19.7 39.0	.042	1.07	.340	8.64	186	827	3.50	88.90
 Rip Cord															
Overall Beldfoil Shield (100% Coverage) • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CL3R CEC: FT4 IEEE 1202/383 ICEA T-29-520	**9367**	1	E1	500 1000	152.4 304.8	43.5 88.0	19.7 40.0	.042	1.07	.343	8.71	188	836	3.50	88.90
 Rip Cord, Drain Wire															

E1, E2 = Refer to Technical Information section for color code.
Alternate color coding available upon request.

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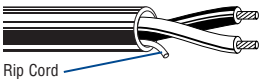
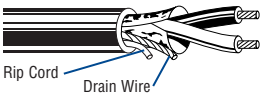
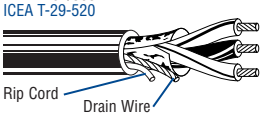
UL Instrumentation Cable

300V Power-Limited Tray Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	No. of Pairs/ Triads	Color Code	Standard Lengths		Standard Unit Weight		Jacket Thickness		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
12 AWG Pairs Stranded (65x30) Tinned Copper Conductors • Twisted Pairs															
Unshielded • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CL3R CEC: FT4 IEEE 1202/383 ICEA T-29-520	**9412**	1	E2	500 1000	152.4 304.8	41.5 83.0	18.8 37.7	.042	1.07	.370	9.40	197	876	4.25	107.95
 Rip Cord															
Overall Beldfoil® Shield (100% Coverage) • PVC Insulation • Chrome PVC Jacket															
NEC: PLTC, ITC, CL3R CEC: FT4 IEEE 1202/383 ICEA T-29-520	**9312**	1	E2	500 1000	152.4 304.8	49.0 96.0	22.3 43.6	.042	1.07	.373	9.47	225	1001	4.25	107.95
 Rip Cord Drain Wire															
12 AWG Triads Stranded (7x20) Bare Copper Conductors • Twisted Triads															
Overall Beldfoil Shield (100% Coverage) • PVC Insulation • Black PVC Jacket (See chart below for other options)															
NEC: PLTC, ITC, CL3R CEC: FT4 IEEE 1202/383 ICEA T-29-520	**3102A**	1	E1	Bulk †	Bulk	—	—	.053	1.35	.432	11.00	315	1401	3.50	88.90
 Rip Cord Drain Wire															

E1, E2 = Refer to Technical Information section for color code.
Alternate color coding available upon request.

†Bulk = Check length available for specific construction.

To Specify:

1234	A	E
Start with Part No.	Add or replace letter code for desired conductor, insulation & jacket	Add for Exposed Run rating if desired

Conductor, Insulation and Jacket Options**

Bare	Tinned	Insulation/Jacket
A	B	PVC/PVC
C	D	XLPE/PVC
K	L	TPE/TPE
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

**For 1000 and 3000 Series cables only.

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UL Instrumentation Cable

Thermocouple Extension Cables and Thermocouple Wire — Overview

Construction Thermocouple Extension Cable

Conductor material determined by the thermocouple extension wire type. FEP or PVC insulated with FEP or PVC jacket. Nylon rip cord included in all PVC-jacketed thermocouple extension cables. Communication wire included on all multi-pair, PVC constructions — 22 AWG (7x30) bare copper orange PVC insulation.

NOTE: The temperature ranges in Table A are applicable only to the thermocouple conductors and not to the cable. The cable must never be exposed to temperatures higher than the maximum temperature ratings shown in Table B.

Table B: Other Insulation/Jacket Options

UL Listed for PLTC	
Insulation/Jacket	**Max. Temp Rating**
XLPE/PVC	90°C
XLPE/CPE	90°C
PVC/PVC	105°C
PVC/CPE	105°C
PE/PVC	75°C
FPE/PVC	75°C
TPE/TPE	105°C
XLPE/Haloarrest®	90°C
FEP/FEP	200°C

Application

Unshielded

Parallel non-shielded extension wire may be utilized in low noise environments when recommended by the instrument manufacturer.

Overall Shield

Recommended, except in areas where high voltage and current sources create excessive noise interference. The Beldfoil® shield with drain wire provides 100% coverage for maximum shield effectiveness.

Individually Shielded

Individually shielded pairs are recommended for use in applications where optimum noise rejection is required.

PVC Insulated, PVC Jacketed Cable Specifications

- UL Subject 13
- UL 1685 (UL 1581) Vertical Tray Flame Test comparable to IEEE 383-1974 (70,000 BTU) Flame Test
- ANSI/MC 96.1–1982
- NEC CMG
- NEC Type PLTC Listed, which is approved for cable tray use in Class 1, Division 2, hazardous areas and non-hazardous areas, cable trays, raceways, conduit and supported by messenger wires.
- NEC Type ITC Listed, which is approved for cable tray use, raceways hazardous locations according to Articles 501, 502, 503 and 504; or as aerial on a cable messenger, and under raised floors in control rooms and rack rooms where arranged to prevent damage to the cable. Usages are allowed based on qualified persons servicing all installations.
- PVC/PVC constructions are CMG, FT4, IEEE 1202 and IEEE 383-2003 rated, and meet ICEA T-29-520 Flame Test.
- UL 1277 TC versions approved for use in Class 1 trays available as special.

Shielded Twisted Pair

(FEP insulated, FEP jacketed cable specifications)

- UL Subject 13
- NFPA 262 (UL 910 Steiner Tunnel Flame Test) comparable to FT6 Flame Test
- ANSI/MC 96.1–1982
- NEC Type CL3P/PLTC Listed, which is approved for use in ducts, plenums and other space used for environmental air.
- UL 1277 TC versions approved for use in Class 1 trays available as special.

Thermocouple Wire

Conductor material determined by the thermocouple type. FEP insulated and jacketed flat constructions.

FEP thermocouple wire is impervious to chemical attack and is flame retardant.

Table A: Thermocouple Identification and Limits of Error — Reference Junction 0°C*

ANSI Symbol	Temperature Range (°C) *(conductor only)*	Limits of Error Standard (°C)	Jacket Color	Insulation Color Code		Conductor Identification	
				Positive (+)	Negative (-)	Positive (+)	Negative (-)
E	0 to 340 340 to 540	±1.7°C ±.50%	Brown	Purple	Red	Chromel® Non-magnetic	Constantan Silver Color
J	0 to 293 293 to 480	±2.2°C ±.75%	Brown	White	Red	Iron Magnetic	Constantan Non-magnetic
K	0 to 293 293 to 980	±2.2°C ±.75%	Brown	Yellow	Red	Chromel Non-magnetic	Alumel® Magnetic
T	0 to 133 133 to 260	±1.0°C ±.75%	Brown	Blue	Red	Copper Copper Color	Constantan Non-magnetic
EX	0 to 200	±1.7°C	Purple	Purple	Red	Chromel	Constantan
JX	0 to 200	±2.2°C	Black	White	Red	Iron	Constantan
KX	0 to 200	±2.2°C	Yellow	Yellow	Red	Chromel	Alumel
TX	0 to 100	±1.0°C	Blue	Blue	Red	Copper	Constantan

Limits of error per ANSI MC96.1-1982. Limits shown do not include system or installation error. Percentages refer to the temperature being measured.

*The Temperature Range and Limits of Error are for standard grade thermocouples, Reference ANSI MC96.1-1982 for special grade thermocouples. The Temperature Ranges for type E, J, K and T thermocouple wires listed above pertain to 20 AWG wire.

Additional constructions available upon request.

Standard lengths may be subject to tolerance. Custom lengths may be available upon request. Contact the Belden Electronics Division Customer Service Department for additional information. 1-800-BELDEN-1

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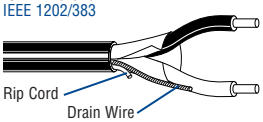
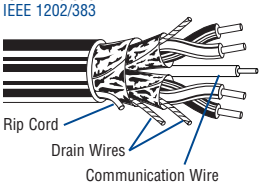
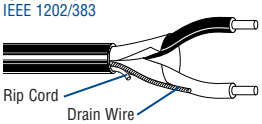
UL Instrumentation Cable

Thermocouple Extension Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	ANSI Type	No. of Pairs	Color Code	Jacket Color	Standard Lengths		Standard Unit Weight		Insulation Thickness		Nominal OD	
						Ft.	m	Lbs.	kg	Inch	mm	Inch	mm
20 AWG Pairs Solid Conductors • (See chart on page 18.53 for conductor specifications by ANSI Type)													
Overall Beldfoil® Shield (100% Coverage) • PVC Insulation • PVC Jacket													
300V 105°C NEC: PLTC, ITC, CMG CEC: CMG FT4 ICEA T-29-520 IEEE 1202/383	**3111A**	JX	1	White, Red	Black	5000 †	1524.0	115.0	52.2	.016	.41	.206	5.23
	3112A	KX	1	Yellow, Red	Yellow	5000 †	1524.0	120.0	54.5	.016	.41	.206	5.23
	3113A	TX	1	Blue, Red	Blue	5000 †	1524.0	115.0	52.2	.016	.41	.206	5.23
Individually Shielded + Overall Beldfoil Shield (100% Coverage) • PVC Insulation • PVC Jacket													
300V 105°C NEC: PLTC, ITC, CMG CEC: CMG FT4 ICEA T-29-520 IEEE 1202/383	**3115A**	JX	2	White, Red	Black	5000 †	1524.0	315.0	143.0	.016	.41	.332	8.43
	1006A	JX	4	White, Red	Black	5000 †	1524.0	480.0	217.9	.016	.41	.383	9.73
	1012A	KX	4	Yellow, Red	Yellow	5000 †	1524.0	530.0	240.6	.016	.41	.383	9.73
	1013A	KX	8	Yellow, Red	Yellow	5000 †	1524.0	825.0	374.6	.016	.41	.503	12.78
	1014A	KX	12	Yellow, Red	Yellow	5000 †	1524.0	1195.0	542.5	.016	.41	.603	15.32
16 AWG Pairs Solid Conductors • (See chart on page 18.53 for conductor specifications by ANSI Type)													
Overall Beldfoil Shield (100% Coverage) • PVC Insulation • PVC Jacket													
300V 105°C NEC: PLTC, ITC, CMG CEC: CMG FT4 ICEA T-29-520 IEEE 1202/383	**1101A**	EX	1	Purple, Red	Purple	10000 †	3048.0	450.0	204.3	.017	.43	.248	6.30
	1000A	JX	1	White, Red	Black	1000 10000 †	304.8 3048.0	42.0 420.0	19.1 190.7	.017	.43	.248	6.30
	1018A	KX	1	Yellow, Red	Yellow	1000 10000 †	304.8 3048.0	42.0 420.0	19.1 190.7	.017	.43	.248	6.30
	1023A	TX	1	Blue, Red	Blue	10000 †	3048.0	450.0	204.3	.017	.43	.248	6.30







Multiple pair cables have each pair numbered for ease of identification.

†Final put-up length may vary ±10% from length shown.

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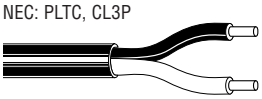
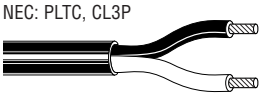
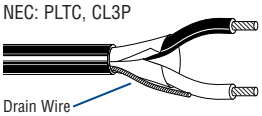
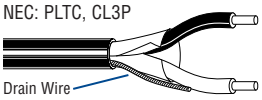
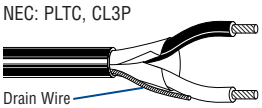
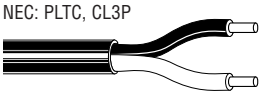
UL Instrumentation Cable

High-Temperature Thermocouple Extension Cables and Thermocouple Wire
Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	ANSI Type	No. of Pairs/ Cond.	Color Code	Jacket Color	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Insulation Thickness Inch	Insulation Thickness mm	Nominal OD Inch	Nominal OD mm
High-Temp Extension Cable • 20 AWG Solid Conductors • (See chart on page 18.53 for conductor specifications by ANSI Type)													
Plenum • Unshielded • FEP Insulation • FEP Jacket													
300V 200°C NEC: PLTC, CL3P 	**83932**	KX	2/c	Yellow, Red	Yellow	500 † 1000 †	152.4 304.8	6.5 12.0	3.0 5.4	.010	.25	.076 x .128	1.93 x 3.25
	83934	TX	2/c	Blue, Red	Blue	1000 †	304.8	13.0	6.0	.010	.25	.076 x .128	1.93 x 3.25
High-Temp Extension Cable • 20 AWG Stranded (7x28) Conductors • (See chart on page 18.53 for conductor specifications by ANSI Type)													
Plenum • Unshielded • FEP Insulation • FEP Jacket													
300V 200°C NEC: PLTC, CL3P 	**83930**	JX	2/c	White, Red	Black	500 † 1000 †	152.4 304.8	7.5 13.0	3.4 6.0	.010	.25	.082 x .140	2.08 x 3.56
Plenum • Overall Beldfoil® Shield (100% Coverage) • FEP Insulation • FEP Jacket													
300V 200°C NEC: PLTC, CL3P  Drain Wire	**83955**	EX	1 pr.	Purple, Red	Purple	500 † 1000 †	152.4 304.8	9.0 16.0	4.1 7.3	.010	.25	.145	3.68
	83950	JX	1 pr.	White, Red	Black	500 † 1000 †	152.4 304.8	9.5 16.0	4.3 7.3	.010	.25	.145	3.68
	83952	KX	1 pr.	Yellow, Red	Yellow	500 † 1000 †	152.4 304.8	9.5 16.0	4.3 7.3	.010	.25	.145	3.68
	83954	TX	1 pr.	Blue, Red	Blue	500 † 1000 †	152.4 304.8	9.0 17.0	4.1 7.7	.010	.25	.145	3.68
High-Temp Extension Cable • 16 AWG Pairs Solid Conductors • (See chart on page 18.53 for conductor specifications by ANSI Type)													
Plenum • Overall Beldfoil Shield (100% Coverage) • FEP Insulation • FEP Jacket													
300V 200°C NEC: PLTC, CL3P  Drain Wire	**1114A**	EX	1	Purple, Red	Purple	5000 †	1524.0	160.0	72.6	.010	.25	.172	4.37
	1115A	JX	1	White, Red	Black	5000 †	1524.0	155.0	70.4	.010	.25	.172	4.37
	1116A	KX	1	Yellow, Red	Yellow	5000 †	1524.0	160.0	72.6	.010	.25	.171	4.34
	1117A	TX	1	Blue, Red	Blue	5000 †	1524.0	160.0	72.6	.010	.25	.172	4.37
High-Temp Extension Cable • 16 AWG Pairs Stranded (7x24) Conductors • (See chart on page 18.53 for conductor specifications by ANSI Type)													
Plenum • Overall Beldfoil Shield (100% Coverage) • FEP Insulation • FEP Jacket													
300V 200°C NEC: PLTC, CL3P  Drain Wire	**83951**	JX	1	White, Red	Black	500 † 1000 †	152.4 304.8	16.0 35.0	7.3 15.9	.010	.25	.189	4.80
	83953	KX	1	Yellow, Red	Yellow	500 † 1000 †	152.4 304.8	16.0 32.0	7.3 14.5	.010	.25	.187	4.75
High-Temp Thermocouple Wire • 20 AWG Solid Conductors • (See chart on page 18.53 for conductor specifications by ANSI Type)													
Plenum • Unshielded • FEP Insulation • FEP Jacket													
300V 200°C NEC: PLTC, CL3P 	**83915**	E	2/c	Purple, Red	Brown	500 † 1000 †	152.4 304.8	7.0 13.0	3.2 6.0	.010	.25	.076 x .128	1.93 x 3.25
	83900	J	2/c	White, Red	Brown	100 500 † 1000 †	30.5 152.4 304.8	2.1 7.0 13.0	1.0 3.2 6.0	.010	.25	.076 x .128	1.93 x 3.25
	83905	K	2/c	Yellow, Red	Brown	100 500 † 1000 †	30.5 152.4 304.8	2.1 7.0 12.0	1.0 3.2 5.4	.010	.25	.076 x .128	1.93 x 3.25
	83910	T	2/c	Blue, Red	Brown	100 500 † 1000 †	30.5 152.4 304.8	2.1 7.0 12.0	1.0 3.2 5.4	.010	.25	.076 x .128	1.93 x 3.25

FEP = Fluorinated Ethylene-propylene

Multiple pair cables have each pair numbered for ease of identification.

†Final put-up length may vary ±10% from length shown.

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UL Instrumentation Cable

600V Tray Cables – Overview

Tray Cable Construction Options

UL Listed for MC and TC				
Insulation/Jacket	Max. Temp Rating		Flame Tests	Ratings*
	Wet	Dry		
PVC-Nylon/PVC (THHN or THWN) 14 AWG & larger	75°C	90°C	UL 1685 FT4/IEEE 1202/383 ICEA T-29-520	ICEA S-73-532 ICEA S-61-402
PVC-Nylon/PVC (TFN or TFFN) 16 & 18 AWG	N/A	90°C	UL 1685 FT4/IEEE 1202/383 ICEA T-29-520	ICEA S-73-532 ICEA S-61-402
XLPE/PVC or CPE (XHHW–2) 14 AWG & larger	90°C	90°C	UL 1685 FT4/IEEE 1202/383 VW-1 rated singles ICEA T-29-520	ICEA S-73-532 ICEA S-66-524
XLPE/PVC or CPE (RFH–2) 16 & 18 AWG	75°C	75°C	UL 1685 FT4/IEEE 1202/383 VW-1 rated singles ICEA T-29-520	ICEA S-73-532 ICEA S-66-524 ICEA S-82-552
FRPO/PVC 18 AWG & larger	—	75°C	UL 1685	
TPE/TPE	75°C	90°C	UL 1685	
FRPO/PVC	75°C	90°C	UL 1685	
XLPE/Haloarrest® (XHHW-2) 14 AWG & larger	90°C	90°C	UL 1685 ICEA T-29-520 FT4/IEEE 1202/383	TC-LS
XLPE/Haloarrest (RFH-2) 16 & 18 AWG	75°C	75°C	UL 1685 ICEA T-29-520 FT4/IEEE 1202/383	TC-LS
FEP/PVC	90°C	90°C	UL 1685	

CPE = Chlorinated Polyethylene • FEP = Fluorinated Ethylene-propylene • FRPO = Flame-retardant Polyolefin • PVC = Polyvinyl Chloride • TPE = Thermoplastic Elastomer • XLPE = Cross-linked Polyethylene

*Applicable to TC-rated cables only.

Construction

Soft annealed bare or tinned copper conductors. PVC insulated with a nylon overcoat, 90°C PVC Jacket, TFN, TFFN or THHN style singles. Nylon rip cord included in all PVC-Nylon/PVC instrumentation cables.

Application

These cables are suitable for installation in wet or dry locations. Cable jackets are resistant to sunlight, moisture and vapor penetration. The cables can be used in raceways, and (supported by messenger wire), outdoor applications and direct burial applications.

Unshielded

Twisted non-shielded instrument pairs provide a minimal OD allowing greater tray and conduit fill. Non-shielded instrument pairs may be utilized when recommended by the instrument manufacturer and used in a metallic conduit.

Overall Shield

Recommended for use in instrumentation applications where signals are transmitted in excess of 100 millivolts except in areas where high voltage and current sources creates excessive noise interference.

The Beldfoil® shield with drain wire provides 100% coverage for maximum shield effectiveness. Copper tape shield available upon request.

Individually Shielded and Overall Shielded

Individually shielded pairs or triads with an overall shield are recommended for use in instrumentation applications where optimum noise rejection is required. Individual pair/triad shields are fully isolated from each other and contain a separate drain wire for grounding, to provide maximum protection from crosstalk and common mode interference. Cables with an overall shield provide additional electrostatic noise protection.

Conductor, Insulation and Jacket Options*

To Specify:	
1234	A
Start with Part No.	Add or replace letter code

Bare	Tinned	Insulation/Jacket
A	B	PVC-Nylon/PVC
C	D	XLPE/PVC
E	F	FRPO/PVC
G	H	XLPE/TPE
K	L	TPE/TPE
M	N	PVC-Nylon/Oil Res II
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest

*For 1000 and 3000 Series cables only.

Specifications

- UL Subject 1277 TC
- UL 1685 (UL1581) Vertical Tray Flame Test comparable to IEEE 383-1974 (70,000 BTU/hr.) Flame Test
- NEC Type TC Listed, which is approved for cable tray use in Class 1, Division 2 areas, per NEC Articles 340, 318 and 501 and for Class 1 circuits as permitted in Article 725
- PVC-nylon/PVC constructions are NEC Type NPLF Listed, which is approved for use in Non Power-Limited Fire Protective Signaling circuits, per NEC Article 760
- PVC-Nylon/PVC, XLPE/PVC and XLPE/CPE constructed cables meet IEEE 1202/IEEE 383-2003/FT4 (70,000 BTU) Flame Test
- XLPE/Haloarrest cables are UL 1277 TC-LS rated

TC-ER Rated Cables

As an option, Belden offers all PVC-nylon/PVC, XLPE/PVC and XLPE/CPE jacketed tray cables with a TC-ER (Exposed Run) rating, formerly referred to as Open Wiring.

Per NEC Article 336, a TC-ER rated cable may be installed in an industrial establishment between a cable tray and the utilization equipment or device. A TC-ER rated cable must meet the crush and impact requirements of UL Type MC cable. By eliminating the need for metal conduit and/or armor, using a TC-ER rated cable results in savings in both installation and maintenance.

MC Cable Ratings Optional

Customize any 600V TC instrumentation cable, with armor and a full-sized ground. See chart below to specify.

To Specify MC Rated Cable			
1	2	3456	A
Overall Jacket Type	Armor Type	Core 4-digit Part No. 600V TC Instrumentation	Conductor, Insulation, Inner Jacket Type

Overall Jacket

Code	Material
1	PVC
3	CPE
4	TPE
5	HDPE
6	Oil Res II
7	Haloarrest

Armor

Code	Material
2	Aluminum Interlock
3	Steel Interlock

Standard lengths may be subject to tolerance. Custom lengths may be available upon request. Contact the Belden Electronics Division Customer Service Department for additional information. 1-800-BELDEN-1.

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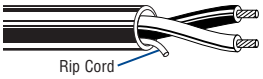
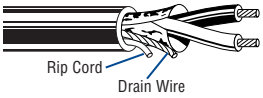
UL Instrumentation Cable

600V Tray Cables

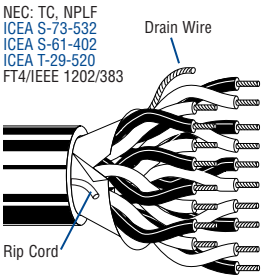
Industrial Grade Sunlight- and Oil-Resistant Jackets

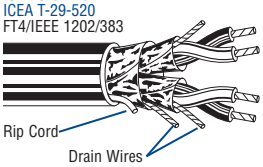
Description	Part No.	No. of Pairs	Color Code	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
18 AWG Pairs Stranded (19x30) Tinned Copper Conductors • Twisted Pairs															
Unshielded • PVC/Nylon Insulation • Black PVC Jacket															
NEC: TC, NPLF ICEA S-73-532, ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**9486**	1	E2	1000	304.8	43.0	19.5	.048	1.22	.275	6.99	50	222	2.75	69.85
Overall Beldfoil® Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket															
NEC: TC, NPLF ICEA S-73-532, ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**9341**	1	E2	500 1000	152.4 304.8	22.0 43.0	10.0 19.5	.048	1.22	.276	7.01	63	280	2.75	69.85





Description	Part No.	No. of Pairs	Color Code	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
18 AWG Pairs Stranded (7x26) Bare Copper Conductors • Twisted Pairs															
Overall Beldfoil Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (See chart below for other options)															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**1120A**	1	E2	10000 †	3048.0	450.0	204.3	.048	1.22	.278	7.06	59	262	2.80	71.12
	3088A	1	E1	10000 †	3048.0	510.0	231.3	.048	1.22	.278	7.06	67	298	2.80	71.12
	1063A	2	E1	10000 †	3048.0	790.0	358.3	.053	1.35	.407	10.34	112	498	4.10	104.14
	1064A	4	E1	7500 †	2286.0	892.5	404.8	.053	1.35	.470	11.94	202	899	4.70	119.38
	1065A	8	E1	7500 †	2286.0	1650.0	748.4	.064	1.63	.599	15.21	381	1695	6.00	152.40
	1066A	12	E1	5000 †	1524.0	1520.0	689.5	.064	1.63	.717	18.21	560	2491	7.20	182.88
	1067A	16	E1	5000 †	1524.0	1905.0	864.1	.064	1.63	.793	20.14	739	3287	8.00	203.20
	1068A	24	E1	2500 †	762.0	1487.5	674.7	.084	2.13	1.017	25.83	1098	4884	10.30	261.62
	1087A	36	E1	1250 †	381.0	1005.0	455.9	.084	2.13	1.178	29.97	1635	7273	11.70	297.18
	1088A	50	E1	Bulk ††	Bulk	—	—	.084	2.13	1.446	36.73	2262	10062	14.50	368.30
Individually Shielded + Overall Beldfoil Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (Options below)															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**1048A**	2	E1	7500 †	2286.0	622.5	282.4	.048	1.22	.381	9.68	140	623	3.80	96.52
	1049A	4	E1	7500 †	2286.0	1057.5	479.7	.053	1.35	.489	12.42	258	1148	4.90	124.46
	1050A	8	E1	7500 †	2286.0	1965.0	891.3	.064	1.63	.654	16.61	350	1557	6.60	167.64
	1051A	12	E1	5000 †	1524.0	1915.0	868.6	.064	1.63	.785	19.94	728	3238	7.90	200.66
	1052A	16	E1	2500 †	762.0	1267.5	574.9	.084	2.13	.898	22.81	963	4284	9.00	228.60
	1053A	24	E1	2500 †	762.0	1907.5	865.2	.084	2.13	1.115	28.32	1434	6379	11.10	281.94
	1054A	36	E1	1250 †	381.0	1270.0	576.1	.084	2.13	1.299	32.99	2139	9515	13.00	330.20
	1038A	50	E1	Bulk ††	Bulk	—	—	.084	2.13	1.527	38.79	2962	13176	15.30	388.62





E1, E2 = Refer to Technical Information section for color code. Alternate color coding available upon request.
Multiple pair or triad cables have each pair/triad numbered for ease of identification.

†Final put-up length may vary ±10% from length shown.
††Bulk = Check length available for specific construction.

To Specify:

1234	A	E
Start with Part No.	Add or replace letter code for desired conductor, insulation & jacket	Add for Exposed Run rating if desired

Conductor, Insulation and Jacket Options**

Bare	Tinned	Insulation/Jacket
A	B	PVC-Nylon/PVC
C	D	XLPE/PVC
E	F	FRPO/PVC
G	H	XLPE/TPE
K	L	TPE/TPE
M	N	PVC-Nylon/Oil Res II
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

**For 1000 and 3000 Series cables only.

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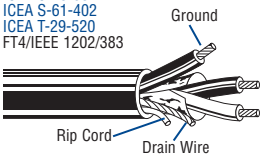
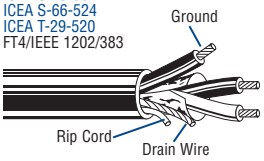
UL Instrumentation Cable

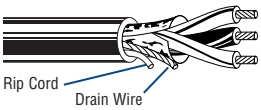
600V Tray Cables

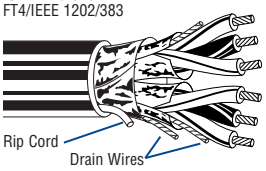
Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	No. of Pairs/ Triads	Color Code	Standard Lengths		Standard Unit Weight		Jacket Thickness		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
18 AWG Pairs Stranded (7x26) Bare Copper Conductors • Twisted Pairs															
Overall Beldfoil Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (Green Ground)															
NEC: TC-ER, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**3088AE**	1	E1	1000 5000 †	3048.0 1524.0	63.0 320.0	28.6 145.3	.048	1.22	.340	8.64	80	356	3.40	86.36
Overall Beldfoil Shield (100% Coverage) • XLPE Insulation • Black PVC Jacket (Green Ground)															
NEC: TC-ER, NPLF ICEA S-73-532 ICEA S-66-524 ICEA T-29-520 FT4/IEEE 1202/383	**3088CE**	1	E1	1000 5000 †	3048.0 1524.0	66.0 375.0	30.0 170.3	.048	1.22	.340	8.64	80	356	3.40	86.36
18 AWG Triads Stranded (7x26) Bare Copper Conductors • Twisted Triads															
Overall Beldfoil® Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (See chart below for other options)															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**1121A**	1	E2	500 † 1000 † 10000 †	152.4 304.8 3048.0	27.5 53.0 560.0	12.5 24.0 254.0	.048	1.22	.282	7.16	90	400	2.75	69.85
	3089A	1	E1	10000 †	3048.0	590.0	267.6	.048	1.22	.284	7.21	90	400	2.75	69.85
Individually Shielded + Overall Beldfoil Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (Options below)															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**3064A**	2	E1	Bulk ††	Bulk	—	—	.048	1.22	.493	12.52	185	823	4.75	120.65
	1093A	4	E1	7500 †	2286.0	1545.0	700.8	.063	1.60	.577	14.66	347	1544	6.00	152.40
	1094A	8	E1	5000 †	1524.0	1755.0	796.1	.063	1.60	.745	18.92	672	2989	7.50	190.50
	1095A	12	E1	2500 † 5000 †	762.0 1524.0	1320.0 2875.0	598.8 1304.1	.084	2.13	.944	23.98	997	4435	9.75	247.65
	3066A	16	E1	Bulk ††	Bulk	—	—	.084	2.13	1.046	26.57	1322	5881	10.50	266.70
	1096A	24	E1	Bulk ††	Bulk	—	—	.084	2.13	1.284	32.61	1971	8767	13.00	330.20









E1, E2 = Refer to Technical Information section for color code.
Alternate color coding available upon request.

Multiple pair or triad cables have each pair/triad numbered for ease of identification.

†Final put-up length may vary ±10% from length shown.
††Bulk = Check length available for specific construction.

To Specify:

1234	A	E
Start with Part No.	Add or replace letter code for desired conductor, insulation & jacket	Add for Exposed Run rating if desired

Conductor, Insulation and Jacket Options

Bare	Tinned	Insulation/Jacket
A	B	PVC-Nylon/PVC
C	D	XLPE/PVC
E	F	FRPO/PVC
G	H	XLPE/TPE
K	L	TPE/TPE
M	N	PVC-Nylon/Oil Res II
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

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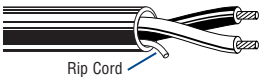
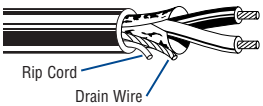
UL Instrumentation Cable

600V Tray Cables

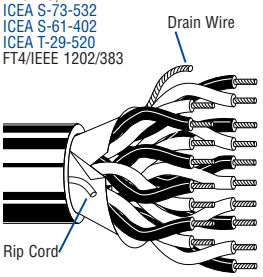
Industrial Grade Sunlight- and Oil-Resistant Jackets

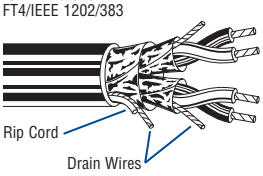
Description	Part No.	No. of Pairs	Color Code	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
16 AWG Pairs Stranded (19x29) Tinned Copper Conductors • Twisted Pairs															
Unshielded • PVC/Nylon Insulation • Black PVC Jacket															
NEC: TC, NPLF ICEA S-73-532, ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**9487**	1	E2	500 1000	152.4 304.8	25.5 54.0	11.6 24.5	.048	1.22	.295	7.49	70	311	3.00	76.20
Overall Beldfoil® Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket															
NEC: TC, NPLF ICEA S-73-532, ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**9342**	1	E2	500 1000	152.4 304.8	27.5 56.0	12.7 25.4	.048	1.22	.296	7.52	105	467	3.00	76.20





Description	Part No.	No. of Pairs	Color Code	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
16 AWG Pairs Stranded (7x24) Bare Copper Conductors • Twisted Pairs															
Overall Beldfoil Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (See chart below for other options)															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**1118A**	1	E2	10000 †	3048.0	550.0	249.5	.047	1.19	.294	7.47	105	467	3.00	76.20
	3090A	1	E1	2500 †	762.0	150.0	68.0	.047	1.19	.295	7.49	105	467	3.00	76.20
	1069A	2	E1	7500 †	2286.0	712.5	323.2	.047	1.19	.456	11.58	179	796	4.60	116.84
	1527A	3	E1	7500 †	2286.0	1042.5	472.9	.047	1.19	.482	12.24	241	1072	4.80	121.92
	1070A	4	E1	7500 †	2286.0	1357.5	615.8	.063	1.60	.560	14.22	321	1428	5.60	142.24
	1071A	8	E1	7500 †	2286.0	2242.5	1017.2	.063	1.60	.676	17.17	607	2700	6.80	172.72
	1072A	12	E1	5000 †	1524.0	1047.5	475.2	.063	1.60	.812	20.63	893	3972	8.10	205.74
	1073A	16	E1	2500 †	762.0	1442.5	654.3	.085	2.16	.946	24.03	1178	5240	9.30	236.22
	1074A	24	E1	1250 †	381.0	2115.0	959.4	.085	2.16	1.158	29.41	1749	7780	11.60	294.64
	1089A	36	E1	1250 †	381.0	1388.7	629.9	.085	2.16	1.321	33.55	2606	11592	13.20	335.28
	1090A	50	E1	Bulk ††	Bulk	—	—	.085	2.16	1.551	39.40	3606	16040	15.50	393.70
Individually Shielded + Overall Beldfoil Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (Options below)															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**1055A**	2	E1	7500 †	2286.0	885.0	401.8	.047	1.19	.476	12.09	223	992	4.16	105.66
	1037A	3	E1	7500 †	2286.0	1072.5	486.5	.047	1.19	.504	12.80	290	1290	5.00	127.0
	1039A	4	E1	7500 †	2286.0	1472.5	667.9	.063	1.60	.584	14.83	411	1828	5.80	147.32
	1040A	6	E1	5000 †	1524.0	1435.0	650.9	.063	1.60	.682	17.32	428	1904	6.80	172.72
	1041A	8	E1	5000 †	1524.0	1805.0	818.8	.063	1.60	.738	18.75	786	3496	7.40	187.96
	1042A	12	E1	2500 †	762.0	1327.5	602.2	.085	2.16	.935	23.75	1161	5164	9.40	238.76
	1043A	16	E1	2500 †	762.0	1765.0	800.6	.085	2.16	1.035	26.29	1537	6837	10.40	264.16
	1044A	20	E1	2500 †	762.0	2062.5	935.6	.085	2.16	1.146	29.11	1912	8505	11.50	292.10
	1045A	24	E1	1250 †	381.0	1241.3	563.1	.085	2.16	1.272	32.31	2287	10173	12.70	322.58
	1046A	36	E1	Bulk ††	Bulk	—	—	.085	2.16	1.454	36.93	3413	15182	14.50	368.30
	1047A	50	E1	Bulk ††	Bulk	—	—	.120	3.05	1.781	45.24	4726	21022	17.80	452.12





E1, E2 = Refer to Technical Information section for color code.
Alternate color coding available upon request.

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†Final put-up length may vary ±10% from length shown.
††Bulk = Check length available for specific construction.

To Specify:

1234	A	E
Start with Part No.	Add or replace letter code for desired conductor, insulation & jacket	Add for Exposed Run rating if desired

Conductor, Insulation and Jacket Options**

Bare	Tinned	Insulation/Jacket
A	B	PVC-Nylon/PVC
C	D	XLPE/PVC
E	F	FRPO/PVC
G	H	XLPE/TPE
K	L	TPE/TPE
M	N	PVC-Nylon/Oil Res II
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

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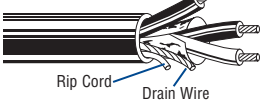
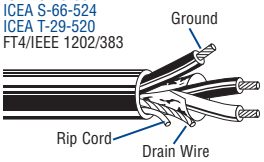
UL Instrumentation Cable

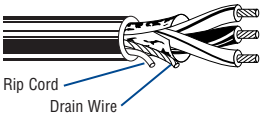
600V Tray Cables

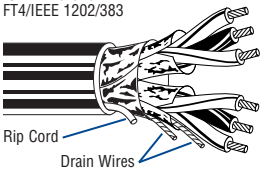
Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	No. of Pairs/ Triads	Color Code	Standard Lengths		Standard Unit Weight		Jacket Thickness		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
16 AWG Pairs Stranded (7x24) Bare Copper Conductors • Twisted Pairs															
Overall Beldfoil Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (Green Ground)															
NEC: TC-ER, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**3090AE**	1	E1	1000 5000 †	304.8 1524.0	65.0 340.0	29.5 154.4	.048	1.22	.390	9.91	130	578	3.90	99.06
Overall Beldfoil Shield (100% Coverage) • XLPE Insulation • Black PVC Jacket (Green Ground)															
NEC: TC-ER, NPLF ICEA S-73-532 ICEA S-66-524 ICEA T-29-520 FT4/IEEE 1202/383	**3090CE**	1	E1	1000 5000 †	3048.0 1524.0	81.0 450.0	39.8 204.3	.048	1.22	.390	9.91	130	578	3.90	99.06
16 AWG Triads Stranded (7x24) Bare Copper Conductors • Twisted Triads															
Overall Beldfoil® Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (See chart below for other options)															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**1119A**	1	E2	500 † 1000 † 10000 †	152.4 304.8 3048.0	35.0 68.0 700.0	15.9 30.9 317.5	.047	1.19	.310	7.87	129	574	3.10	78.74
	3091A	1	E1	10000 †	3048.0	750.0	340.2	.047	1.19	.310	7.87	129	574	3.10	78.74
Individually Shielded + Overall Beldfoil Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (Options below)															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**1097A**	4	E1	5000 †	1524.0	1415.0	641.8	.063	1.60	.640	16.26	554	2464	6.40	162.56
	1098A	8	E1	2500 †	762.0	1350.0	612.4	.085	2.16	.872	22.15	1072	4768	8.70	220.98
	1099A	12	E1	2500 †	762.0	1875.0	850.5	.085	2.16	1.047	26.59	1590	7073	10.50	266.70
	3118A	16	E1	Bulk ††	Bulk	—	—	.084	2.13	1.234	31.34	1771	7878	12.25	311.15
	1100A	24	E1	Bulk ††	Bulk	—	—	.085	2.16	1.434	36.42	3144	13985	14.30	363.22
	3130A	36	E1	Bulk ††	Bulk	—	—	.110	2.79	1.773	45.03	3600	16013	18.00	457.20









E1, E2 = Refer to Technical Information section for color code.
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†Final put-up length may vary ±10% from length shown.
††Bulk = Check length available for specific construction.

To Specify:

1234	A	E
Start with Part No.	Add or replace letter code for desired conductor, insulation & jacket	Add for Exposed Run rating if desired

Conductor, Insulation and Jacket Options

Bare	Tinned	Insulation/Jacket
A	B	PVC-Nylon/PVC
C	D	XLPE/PVC
E	F	FRPO/PVC
G	H	XLPE/TPE
K	L	TPE/TPE
M	N	PVC-Nylon/Oil Res II
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

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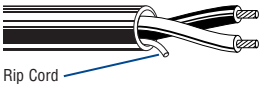
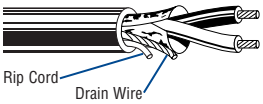
UL Instrumentation Cable

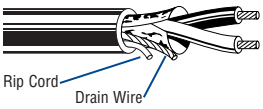
600V Tray Cables

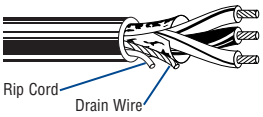
Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	No. of Pairs/ Triads	Color Code	Standard Lengths		Standard Unit Weight		Jacket Thickness		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
14 AWG Pairs Stranded (42x30) Tinned Copper Conductors • Twisted Pairs															
Unshielded • PVC/Nylon Insulation • Black PVC Jacket															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**9488**	1	E2	1000	304.8	77.0	34.9	.048	1.22	.359	9.12	107	476	3.75	95.25
Overall Beldfoil® Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**9343**	1	E2	500 1000	152.4 304.8	42.5 86.0	19.1 39.0	.048	1.22	.358	9.09	160	712	3.75	95.25
14 AWG Pairs Stranded (7x22) Bare Copper Conductors • Twisted Pairs															
Overall Beldfoil Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (See chart below for other options)															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**3080A**	1	E1	Bulk*	Bulk*	—	—	.048	1.22	.342	8.69	160	712	3.50	88.90
14 AWG Triads Stranded (7x22) Bare Copper Conductors • Twisted Triads															
Overall Beldfoil Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (See chart below for other options)															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**3081A**	1	E1	Bulk*	Bulk*	—	—	.048	1.22	.361	9.17	200	890	3.50	88.90









E1, E2 = Refer to Technical Information section for color code.
Alternate color coding available upon request.

*Bulk = Check length available for specific construction.

To Specify:

1234	A	E
Start with Part No.	Add or replace letter code for desired conductor, insulation & jacket	Add for Exposed Run rating if desired

Conductor, Insulation and Jacket Options**

Bare	Tinned	Insulation/Jacket
A	B	PVC-Nylon/PVC
C	D	XLPE/PVC
E	F	FRPO/PVC
G	H	XLPE/TPE
K	L	TPE/TPE
M	N	PVC-Nylon/Oil Res II
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

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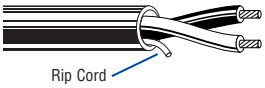
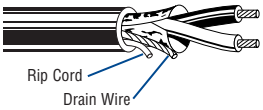
UL Instrumentation Cable

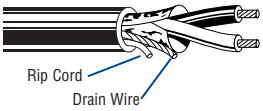
600V Tray Cables

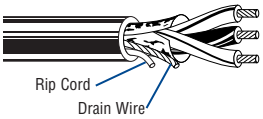
Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	No. of Pairs/ Triads	Color Code	Standard Lengths		Standard Unit Weight		Jacket Thickness		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
12 AWG Pairs Stranded (37x27) Tinned Copper Conductors • Twisted Pairs															
Unshielded • PVC/Nylon Insulation • Black PVC Jacket															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**9489**	1	E2	1000	304.8	88.0	39.9	.045	1.14	.380	9.65	170	756	3.75	95.25
Overall Beldfoil® Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**9344**	1	E2	500 1000	152.4 304.8	54.0 111.0	24.5 50.4	.045	1.14	.384	9.75	253	1125	3.75	95.25
12 AWG Pairs Stranded (7x20) Bare Copper Conductors • Twisted Pairs															
Overall Beldfoil Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (See chart below for other options)															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**3103A**	1	E1	Bulk*	Bulk*	—	—	.048	1.22	.380	9.65	253	1125	3.80	96.52
12 AWG Triads Stranded (7x20) Bare Copper Conductors • Twisted Triads															
Overall Beldfoil Shield (100% Coverage) • PVC/Nylon Insulation • Black PVC Jacket (See chart below for other options)															
NEC: TC, NPLF ICEA S-73-532 ICEA S-61-402 ICEA T-29-520 FT4/IEEE 1202/383	**3104A**	1	E1	Bulk*	Bulk*	—	—	.048	1.22	.401	10.19	315	1401	4.00	101.60









E1, E2 = Refer to Technical Information section for color code.
Alternate color coding available upon request.

*Bulk = Check length available for specific construction.

To Specify:

1234	A	E
Start with Part No.	Add or replace letter code for desired conductor, insulation & jacket	Add for Exposed Run rating if desired

Conductor, Insulation and Jacket Options**

Bare	Tinned	Insulation/Jacket
A	B	PVC-Nylon/PVC
C	D	XLPE/PVC
E	F	FRPO/PVC
G	H	XLPE/TPE
K	L	TPE/TPE
M	N	PVC-Nylon/Oil Res II
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

**For 1000 and 3000 Series cables only.

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UL Control Cable

600V Type TC Cables — Overview

Introduction

Belden offers a wide selection of UL-rated 600V Tray Cable for a variety of control applications.

Multi-conductor versions are available as standards from 18 to 1 AWG. 1/0 through 4/0 are also available as custom made constructions. These are unshielded and shielded versions that come with various insulation and jacket combinations.

These TC cables are installed in cable trays, ducts and conduit and can be used in direct burial applications. They are extensively used in manufacturing facilities, especially in the process industries such as petrochemical, steel, pulp and paper, cement and mining.

These flexible, space efficient cables can be substantially more economical than traditional wiring methods.

Construction

Soft annealed bare or tinned copper conductors, with various insulation and jacketing options as seen in chart below.

Application

These cables are suitable for installation in wet or dry locations. Cable jackets are resistant to sunlight, moisture and vapor penetration. The cables can be used in raceways (supported by messenger wire), outdoor applications and direct burial applications.

Unshielded

Cabled non-shielded conductors provide a minimal O.D. allowing greater tray and conduit fill. Non-shielded control cable may be utilized when recommended by the equipment manufacturer and used in a metallic conduit.

Overall Shield

Recommended for use in control applications where signals are transmitted in excess of 100 millivolts, except in areas where high voltage and current sources create excessive noise interference. The Beldfoil® shield with drain wire provides 100% coverage for maximum shield effectiveness. Copper tape shield available upon request.

Only 2-conductor round constructions can be shielded. Flat constructions cannot be shielded.

Tray Cable Construction Options

UL Listed for MC and TC				
Insulation/Jacket	Max. Temp Rating		Flame Tests	Ratings*
	Wet	Dry		
PVC-Nylon/PVC (THHN or THWN) 14 AWG & larger	75°C	90°C	UL 1685 FT4/IEEE 1202/383 ICEA T-29-520	ICEA S-73-532 ICEA S-95-658 ICEA S-61-402
PVC-Nylon/PVC (TFN or TFFN) 16 & 18 AWG	NA	90°C	UL 1685 FT4/IEEE 1202/383 ICEA T-29-520	ICEA S-73-532 ICEA S-95-658 ICEA S-61-402
XLPE/PVC or CPE (XHHW–2) 14 AWG & larger	90°C	90°C	UL 1685 FT4/IEEE 1202/383 VW-1 rated singles ICEA T-29-520	ICEA S-73-532 ICEA S-95-658 ICEA S-66-524
XLPE/PVC or CPE (RFH–2) 16 & 18 AWG	75°C	75°C	UL 1685 FT4/IEEE 1202/383 VW-1 rated singles ICEA T-29-520	ICEA S-73-532 ICEA S-95-658 ICEA S-66-524
FRPO/PVC 18 AWG & larger	—	75°C	UL 1685	
TPE/TPE	75°C	90°C	UL 1685	
FRPO/PVC	75°C	90°C	UL 1685	
XLPE/Haloarrest® (XHHW-2) 14 AWG & larger	90°C	90°C	UL 1685 FT4/IEEE 1202/383 ICEA T-29-520	TC-LS
XLPE/Haloarrest (RFH-2) 16 & 18 AWG	75°C	75°C	UL 1685 FT4/IEEE 1202/383 ICEA T-29-520	TC-LS
FEP/PVC	90°C	90°C	UL 1685	

CPE = Chlorinated Polyethylene • FEP = Fluorinated Ethylene-propylene • FRPO = Flame-retardant Polyolefin • PVC = Polyvinyl Chloride • TPE = Thermoplastic Elastomer • XLPE = Cross-linked Polyethylene

*Applicable to TC-rated cables only.

Ground Wire

- Non-insulated, bare copper ground wires are included for constructions 8 through 1 AWG. Non-insulated, bare copper, full sized ground wires may be requested on other constructions.
- All shielded PVC-Nylon/PVC constructions include full sized ground (drain) wires.

Color Code

Multi-conductor control cables (10 AWG to 18 AWG) are printed alpha-numerically in addition to being color coded per ICEA Table E2.

8 AWG and larger are black and numbered per ICEA Method 4.

Refer to Technical Information Section for ICEA color code charts.

Specifications

- UL Subject 1277 Type TC
- XLPE/Haloarrest jacketed cables are UL 1277 TC-LS rated
- UL Subject 1424 (per outline for NPLF requirements dated May 3, 1979)
- UL 1685 (UL 1581) Vertical Flame Test comparable to IEEE 383-1974 (70,000 BTU/hr) Flame Test
- Approved for cable tray use in Class 1, Division 2 areas, per NEC Articles 340, 318 and 501, and for Class 1 circuits as permitted in Article 725
- PVC-Nylon/PVC, XLPE/PVC and XLPE/CPE constructed cables meet IEEE 1202/IEEE 383-2003/FT4 (70,000 BTU/hr) Flame Test

TC-ER Rated Cables

As an option, Belden offers all PVC-nylon/PVC, XLPE/PVC and XLPE/CPE jacketed tray cables with a TC-ER (Exposed Run) rating, formerly referred to as Open Wiring.

Per NEC Article 336, a TC-ER rated cable may be installed in an industrial establishment between a cable tray and the utilization equipment or device. A TC-ER rated cable must meet the crush and impact requirements of UL Type MC cable. By eliminating the need for metal conduit and/or armor, using a TC-ER rated cable results in savings in both installation and maintenance.

Standard lengths may be subject to tolerance. Custom lengths may be available upon request. Contact the Belden Electronics Division Customer Service Department for additional information. 1-800-BELDEN-1

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UL Control Cable

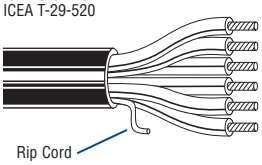
600V Type TC Cables

Industrial Grade Sunlight- and Oil-Resistant Jackets

18 AWG Multi-conductor Stranded (7x26) Bare Copper Conductors

PVC/Nylon Insulation and PVC Jacket Constructions (See chart below for other options)

NEC: TC, NPLF
FT4/IEEE 1202/383
ICEA S-73-532
ICEA S-95-658
ICEA S-61-402
ICEA T-29-520

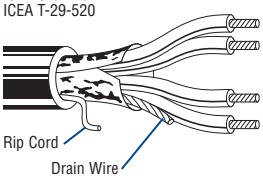


Description	Part No.	No. of Cond.	Color Code	Standard Lengths Ft.	Standard Lengths m	Weight Lbs./1000′	Weight kg/km	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
	27916A†	2	E2	Bulk	Bulk	33.0	49.1	.045	1.14	.180 x .266	4.57 x 6.76	44	195.8	2.7	68.58
	27325A††	2	E2	Bulk	Bulk	34.0	50.6	.045	1.14	.270	6.86	44	195.8	2.7	68.58
	27334A	3	E2	Bulk	Bulk	45.0	67.0	.045	1.14	.280	7.11	66	293.7	2.8	71.12
	27326A	4	E2	Bulk	Bulk	52.0	77.4	.045	1.14	.310	7.87	88	391.6	3.1	78.74
	27335A	5	E2	Bulk	Bulk	62.0	92.3	.045	1.14	.330	8.38	110	489.5	3.3	83.82
	27600A	6	E2	Bulk	Bulk	72.0	107.2	.045	1.14	.350	8.89	132	587.4	3.5	88.90
	27327A	7	E2	Bulk	Bulk	79.0	117.6	.045	1.14	.350	8.89	154	685.3	3.5	88.90
	27601A	8	E2	Bulk	Bulk	89.0	132.5	.045	1.14	.390	9.83	176	783.2	3.8	96.52
	27336A	9	E2	Bulk	Bulk	104.0	154.8	.045	1.14	.410	10.41	198	881.1	4.1	104.14
	27328A	10	E2	Bulk	Bulk	111.0	165.2	.060	1.52	.450	11.43	220	979.0	4.5	114.30
	27602A	11	E2	Bulk	Bulk	—	—	.060	1.52	.450	11.43	242	1076.9	4.5	114.30
	27329A	12	E2	Bulk	Bulk	127.0	189.0	.060	1.52	.450	11.43	264	1174.8	4.5	114.30
	27603A	13	E2	Bulk	Bulk	142.0	211.3	.060	1.52	.470	11.94	286	1272.7	4.7	119.38
	27604A	14	E2	Bulk	Bulk	—	—	.060	1.52	.480	12.19	308	1370.6	4.8	121.92
	27605A	15	E2	Bulk	Bulk	175.0	260.4	.060	1.52	.510	12.95	330	1468.5	5.1	129.54
	27606A	16	E2	Bulk	Bulk	167.0	248.5	.060	1.52	.500	12.70	352	1566.4	5.0	127.00
	27607A	17	E2	Bulk	Bulk	—	—	.060	1.52	.570	14.48	374	1664.3	5.7	144.78
	27608A	18	E2	Bulk	Bulk	196.0	291.7	.060	1.52	.570	14.48	396	1762.2	5.7	144.78
	27609A	19	E2	Bulk	Bulk	202.0	300.6	.060	1.52	.570	14.48	418	1860.1	5.7	144.78
	27610A	20	E2	Bulk	Bulk	214.0	318.5	.060	1.52	.600	15.24	440	1958.0	5.9	149.86
	27611A	25	E2	Bulk	Bulk	258.0	384.0	.060	1.52	.660	16.76	550	2447.5	6.6	167.64
	27612A	30	E2	Bulk	Bulk	300.0	446.5	.060	1.52	.690	17.53	660	2937.0	6.6	167.64
	27613A	37	E2	Bulk	Bulk	360.0	535.8	.080	2.03	.740	18.80	814	3622.3	7.4	187.96
	27614A	50	E2	Bulk	Bulk	511.0	760.5	.080	2.03	.910	23.11	1100	4895.0	9.1	231.14
	27632A	60	E2	Bulk	Bulk	627.0	933.1	.080	2.03	.960	24.38	1320	5874.0	9.6	243.84

18 AWG Multi-conductor Stranded (7x26) Bare Copper Conductors • Overall Beldfoil® Shield (100% Coverage) with Drain Wire

PVC/Nylon Insulation and PVC Jacket Constructions (See chart below for other options)

NEC: TC, NPLF
FT4/IEEE 1202/383
ICEA S-73-532
ICEA S-95-658
ICEA S-61-402
ICEA T-29-520



	27325AS	2	E2	Bulk	Bulk	34.0	50.6	.045	1.14	.270	6.86	67	298	2.70	68.58
	27334AS	3	E2	Bulk	Bulk	45.0	67.0	.045	1.14	.280	7.11	90	400	2.80	71.12
	27326AS	4	E2	Bulk	Bulk	60.0	89.3	.045	1.14	.300	7.62	112	498	3.10	81.28

E2 = Refer to Technical Information section for color code.

† Flat construction; overall shield not available.
†† Twisted Conductors.

Bulk = 5000 ft. or 10,000 ft. put-up one piece, ±10%. Check length available for specific construction.

To Specify:

12345	A	S
Start with core Part No.	add Conductor, Insulation, Jacket type	add "S" for optional Beldfoil Shield

Note: To specify TC-ER (Exposed Run) rated control cable, simply replace the second digit of the part number from a 7 to an 8. For example: 27080A with TC-ER rating becomes 28080A.

Conductor, Insulation and Jacket Options

Bare	Tinned	Insulation/Jacket
A	B	PVC-Nylon/PVC
C	D	XLPE/PVC
E	F	FRPO/PVC
G	H	XLPE/TPE
K	L	TPE/TPE
M	N	PVC-Nylon/Oil Res II
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

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UL Control Cable

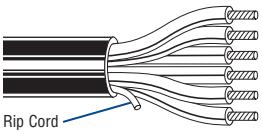
600V Type TC Cables

Industrial Grade Sunlight- and Oil-Resistant Jackets

16 AWG Multi-conductor Stranded (7x24) Bare Copper Conductors

PVC/Nylon Insulation and PVC Jacket Constructions (See chart below for other options)

NEC: TC, NPLF
FT4/IEEE 1202/383
ICEA S-73-532
ICEA S-95-658
ICEA S-61-402
ICEA T-29-520

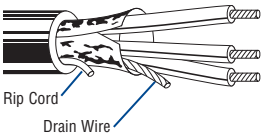


Description	Part No.	No. of Cond.	Color Code	Standard Lengths Ft.	Standard Lengths m	Weight Lbs./1000′	Weight kg/km	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
	27917A†	2	E2	Bulk	Bulk	42.0	62.5	.045	1.14	.190 x .290	4.83 x 7.37	70	312	2.9	73.66
	27337A††	2	E2	Bulk	Bulk	45.0	67.0	.045	1.14	.299	7.60	70	312	2.9	73.66
	27331A	3	E2	Bulk	Bulk	55.0	81.9	.045	1.14	.307	7.80	105	467	3.1	78.74
	27338A	4	E2	Bulk	Bulk	69.0	102.7	.045	1.14	.332	8.18	140	623	3.3	83.82
	27339A	5	E2	Bulk	Bulk	83.0	123.5	.045	1.14	.360	9.14	175	779	3.6	91.44
	27615A	6	E2	Bulk	Bulk	96.0	142.9	.045	1.14	.390	9.91	210	935	3.9	99.06
	27323A	7	E2	Bulk	Bulk	106.0	157.7	.045	1.14	.390	9.91	245	1090	3.9	99.06
	27616A	8	E2	Bulk	Bulk	122.0	181.6	.045	1.14	.420	10.67	280	1246	4.2	106.68
	27340A	9	E2	Bulk	Bulk	138.0	200.4	.045	1.14	.450	11.43	315	1402	4.5	114.30
	27617A	10	E2	Bulk	Bulk	149.0	221.7	.045	1.14	.490	12.45	350	1558	4.9	124.46
	27618A	11	E2	Bulk	Bulk	161.0	239.6	.045	1.14	.490	12.45	385	1713	4.9	124.46
	27341A	12	E2	Bulk	Bulk	174.0	258.9	.045	1.14	.500	12.70	420	1869	5.0	127.00
	27619A	13	E2	Bulk	Bulk	203.0	302.1	.045	1.14	.570	14.48	455	2025	5.7	144.78
	27620A	14	E2	Bulk	Bulk	223.0	331.8	.045	1.14	.570	14.48	490	2181	5.7	144.78
	27621A	15	E2	Bulk	Bulk	229.0	340.8	.060	1.52	.590	14.99	525	2336	5.9	149.86
	27330A	16	E2	Bulk	Bulk	241.0	358.7	.045	1.14	.600	15.24	560	2492	6.0	152.40
	27622A	17	E2	Bulk	Bulk	267.0	397.3	.060	1.52	.630	16.00	595	2648	6.3	160.02
	27623A	18	E2	Bulk	Bulk	—	—	.060	1.52	.630	16.00	630	2804	6.3	160.02
	27624A	19	E2	Bulk	Bulk	287.0	427.1	.060	1.52	.630	16.00	665	2959	6.3	160.02
	27625A	20	E2	Bulk	Bulk	304.0	452.4	.060	1.52	.660	16.76	700	3115	6.6	167.64
	27324A	25	E2	Bulk	Bulk	367.0	546.1	.080	2.03	.730	18.54	875	3894	7.3	185.42
	27626A	30	E2	Bulk	Bulk	428.0	636.9	.080	2.03	.770	19.56	1050	4673	7.7	195.58
	27627A	37	E2	Bulk	Bulk	514.0	764.8	.080	2.03	.830	21.08	1295	5763	8.3	210.82
	27628A	50	E2	Bulk	Bulk	723.0	1075.8	.080	2.03	1.000	25.40	1750	7788	10.0	254.00
	27633A	60	E2	Bulk	Bulk	844.0	1255.9	.080	2.03	1.100	27.94	2100	9345	11.0	279.40

16 AWG Multi-conductor Stranded (7x24) Bare Copper Conductors • Overall Beldfoil® Shield (100% Coverage) with Drain Wire

PVC/Nylon Insulation and PVC Jacket Constructions (See chart below for other options)

NEC: TC, NPLF
FT4/IEEE 1202/383
ICEA S-73-532
ICEA S-95-658
ICEA S-61-402
ICEA T-29-520



	27337AS	2	E2	Bulk	Bulk	45.0	67.0	.045	1.14	.302	7.67	94	418	3.00	76.20
	27331AS	3	E2	Bulk	Bulk	55.0	81.8	.045	1.14	.320	8.13	130	578	3.20	81.28

E2 = Refer to Technical Information section for color code.

† Flat construction; overall shield not available.

†† Twisted Conductors.

Bulk = 5000 ft. or 10,000 ft. put-up one piece, ±10%. Check length available for specific construction.

To Specify:		
12345	**A**	**S**
Start with core Part No.	add Conductor, Insulation, Jacket type	add "S" for optional Beldfoil Shield

Note: To specify TC-ER (Exposed Run) rated control cable, simply replace the second digit of the part number from a 7 to an 8. For example: 27080A with TC-ER rating becomes 28080A.

Conductor, Insulation and Jacket Options

Bare	Tinned	Insulation/Jacket
A	B	PVC-Nylon/PVC
C	D	XLPE/PVC
E	F	FRPO/PVC
G	H	XLPE/TPE
K	L	TPE/TPE
M	N	PVC-Nylon/Oil Res II
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

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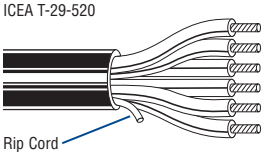
UL Control Cable

600V Type TC Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

14 AWG Multi-conductor Stranded (7x22) Bare Copper Conductors

PVC/Nylon Insulation and PVC Jacket Constructions (See chart below for other options)

NEC: TC, NPLF
FT4/IEEE 1202/383
ICEA S-73-532
ICEA S-95-658
ICEA S-61-402
ICEA T-29-520

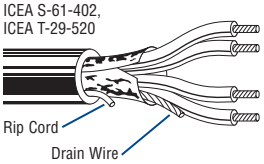


Description	Part No.	No. of Cond.	Color Code	Standard Lengths Ft.	Standard Lengths m	Weight Lbs./1000′	Weight kg/km	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
	27080A†	2	E2	1000 Bulk	304.8 Bulk	61.0 61.0	27.7 27.7	.045	1.14	.210 x .320	5.33 x 8.13	108	481	3.5	88.90
	27636A††	2	E2	Bulk	Bulk	62.0	92.3	.045	1.14	.320	8.13	108	481	3.2	81.28
	27081A	3	E2	1000 Bulk	304.8 Bulk	86.0 86.0	39.0 39.0	.045	1.14	.340	8.64	162	721	3.4	86.36
	27082A	4	E2	1000 Bulk	304.8 Bulk	110.0 110.0	49.9 49.9	.045	1.14	.360	9.14	216	961	3.6	91.44
	27083A	5	E2	Bulk	Bulk	118.0	175.6	.045	1.14	.400	10.16	270	1202	3.9	99.06
	27084A	6	E2	Bulk	Bulk	140.0	208.3	.045	1.14	.434	11.02	324	1442	4.3	109.22
	27085A	7	E2	Bulk	Bulk	153.0	227.7	.045	1.14	.433	11.00	378	1682	4.3	109.22
	27086A	8	E2	Bulk	Bulk	173.0	257.5	.045	1.14	.480	12.19	432	1922	4.7	119.38
	27087A	9	E2	Bulk	Bulk	196.0	291.7	.045	1.14	.510	12.95	486	2163	5.1	129.54
	27088A	10	E2	Bulk	Bulk	230.0	342.3	.060	1.52	.588	14.94	540	2403	5.7	144.78
	27089A	11	E2	Bulk	Bulk	251.0	373.6	.060	1.52	.595	15.11	594	2643	5.9	149.86
	27090A	12	E2	Bulk	Bulk	270.0	401.8	.060	1.52	.595	15.11	648	2884	5.9	149.86
	27091A	13	E2	Bulk	Bulk	—	—	.060	1.52	.640	16.26	702	3124	6.3	160.02
	27092A	14	E2	Bulk	Bulk	308.0	458.3	.060	1.52	.640	16.26	756	3364	6.3	160.02
	27093A	15	E2	Bulk	Bulk	330.0	491.1	.060	1.52	.670	17.02	810	3605	6.7	170.18
	27094A	16	E2	Bulk	Bulk	343.0	510.5	.060	1.52	.671	17.04	864	3845	6.6	167.64
	27095A	17	E2	Bulk	Bulk	—	—	.060	1.52	.700	17.78	918	4085	7.0	177.80
	27096A	18	E2	Bulk	Bulk	—	—	.060	1.52	.700	17.78	972	4325	7.0	177.80
	27097A	19	E2	Bulk	Bulk	396.0	589.3	.060	1.52	.705	17.91	1026	4566	7.0	177.80
	27098A	20	E2	Bulk	Bulk	425.0	632.5	.060	1.52	.735	18.67	1080	4806	7.4	187.96
	27099A	21	E2	Bulk	Bulk	438.0	651.7	.060	1.52	.740	18.80	1134	5046	7.4	187.96
	27100A	22	E2	Bulk	Bulk	—	—	.060	1.52	.760	19.30	1188	5287	7.6	193.04
	27101A	23	E2	Bulk	Bulk	—	—	.060	1.52	.760	19.30	1242	5527	7.6	193.04
	27102A	24	E2	Bulk	Bulk	495.0	736.7	.060	1.52	.810	20.57	1296	5767	8.1	205.74
	27103A	25	E2	Bulk	Bulk	560.0	833.4	.060	1.52	.810	20.57	1350	6008	8.1	205.74
	27104A	26	E2	Bulk	Bulk	—	—	.060	1.52	.810	20.57	1404	6248	8.1	205.74
	27105A	27	E2	Bulk	Bulk	587.0	873.5	.080	2.03	.870	22.10	1458	6488	8.7	220.98
	27106A	28	E2	Bulk	Bulk	—	—	.080	2.03	.910	23.11	1512	6728	9.1	231.14
	27107A	29	E2	Bulk	Bulk	680.0	1012.0	.080	2.03	.910	23.11	1566	6969	9.1	231.14
	27108A	30	E2	Bulk	Bulk	639.0	950.8	.080	2.03	.902	22.91	1620	7209	9.0	228.60
	27629A	37	E2	Bulk	Bulk	768.0	1142.9	.080	2.03	.975	24.77	1998	8891	9.7	246.38
	27912A	50	E2	Bulk	Bulk	1080.0	1607.3	.080	2.03	1.138	28.91	2700	12015	11.3	287.02

14 AWG Multi-conductor Stranded (7x22) Bare Copper Conductors • Overall Beldfoil® Shield (100% Coverage) with Drain Wire

PVC/Nylon Insulation and PVC Jacket Constructions (See chart below for other options)

NEC: TC, NPLF
FT4/IEEE 1202/383
ICEA S-73-532, ICEA S-95-658
ICEA S-61-402,
ICEA T-29-520



	27081AS	3	E2	Bulk	Bulk	80.0	119.1	.045	1.14	.340	8.64	99	440	3.4	86.36
	27082AS	4	E2	Bulk	Bulk	105.0	156.3	.045	1.14	.391	9.93	273	1214	3.9	99.06

E2 = Refer to Technical Information section for color code.

† Flat construction; overall shield not available.
†† Twisted Conductors.

Bulk = 5000 ft. or 10,000 ft. put-up one piece, ±10%. Check length available for specific construction.

To Specify:

12345	A	S
Start with core Part No.	add Conductor, Insulation, Jacket type	add "S" for optional Beldfoil Shield

Note: To specify TC-ER (Exposed Run) rated control cable, simply replace the second digit of the part number from a 7 to an 8. For example: 27080A with TC-ER rating becomes 28080A.

Conductor, Insulation and Jacket Options

Bare	Tinned	Insulation/Jacket
A	B	PVC-Nylon/PVC
C	D	XLPE/PVC
E	F	FRPO/PVC
G	H	XLPE/TPE
K	L	TPE/TPE
M	N	PVC-Nylon/Oil Res II
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

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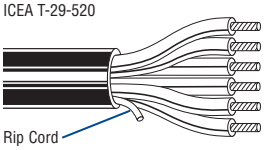
UL Control Cable

600V Type TC Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

NEC: TC, NPLF
FT4/IEEE 1202/383
ICEA S-73-532
ICEA S-95-658
ICEA S-61-402
ICEA T-29-520



Description	Part No.	No. of Cond.	Color Code	Standard Lengths Ft.	Standard Lengths m	Weight Lbs./1000'	Weight kg/km	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
12 AWG Multi-conductor Stranded (7x20) Bare Copper Conductors															
PVC/Nylon Insulation and PVC Jacket Constructions (See chart below for other options)															
	27109A†	2	E2	1000 Bulk	304.8 Bulk	74.0 74.0	110.0 110.0	.045	1.14	.220 x .350	5.59 x 8.89	172	765	3.5	88.90
	27641A††	2	E2	Bulk	Bulk	86.0	128.0	.045	1.14	.360	9.14	172	765	3.6	91.44
	27110A	3	E2	1000 Bulk	304.8 Bulk	110.0 110.0	163.7 163.7	.045	1.14	.374	9.50	258	1148	3.7	93.98
	27111A	4	E2	1000 Bulk	304.8 Bulk	134.0 134.0	199.0 199.0	.045	1.14	.410	10.41	344	1531	4.1	104.14
	27112A	5	E2	Bulk	Bulk	165.0	245.6	.045	1.14	.450	11.43	430	1914	4.5	114.30
	27113A	6	E2	Bulk	Bulk	197.0	293.2	.045	1.14	.480	12.19	516	2296	4.8	121.92
	27114A	7	E2	Bulk	Bulk	216.0	321.5	.045	1.14	.480	12.19	602	2679	4.8	121.92
	27115A	8	E2	Bulk	Bulk	263.0	391.4	.060	1.52	.560	14.22	688	3062	5.6	142.24
	27116A	9	E2	Bulk	Bulk	297.0	442.0	.060	1.52	.600	15.24	774	3444	6.0	152.40
	27117A	10	E2	Bulk	Bulk	324.0	482.2	.060	1.52	.660	16.76	860	3827	6.6	167.64
	27118A	11	E2	Bulk	Bulk	—	—	.060	1.52	.670	17.02	946	4210	6.7	170.18
	27119A	12	E2	Bulk	Bulk	378.0	562.5	.060	1.52	.670	17.02	1032	4592	6.7	170.18
	27120A	13	E2	Bulk	Bulk	—	—	.060	1.52	.700	17.78	1118	4975	7.0	177.80
	27121A	14	E2	Bulk	Bulk	—	—	.060	1.52	.700	17.78	1204	5358	7.0	177.80
	27122A	15	E2	Bulk	Bulk	468.0	696.5	.060	1.52	.740	18.80	1290	5741	7.4	187.96
	27123A	16	E2	Bulk	Bulk	490.0	729.2	.060	1.52	.750	19.05	1376	6123	7.5	190.50
	27124A	17	E2	Bulk	Bulk	—	—	.060	1.52	.770	19.56	1462	6506	7.7	195.58
	27125A	18	E2	Bulk	Bulk	—	—	.060	1.52	.770	19.56	1548	6889	7.7	195.58
	27126A	19	E2	Bulk	Bulk	568.0	845.3	.060	1.52	.790	20.07	1634	7271	7.9	200.66
	27127A	20	E2	Bulk	Bulk	640.0	952.4	.080	2.03	.870	22.10	1720	7654	8.7	220.98
	27128A	21	E2	Bulk	Bulk	—	—	.080	2.03	.870	22.10	1806	8037	8.7	220.98
	27129A	22	E2	Bulk	Bulk	—	—	.080	2.03	.890	22.61	1892	8419	8.9	226.06
	27130A	23	E2	Bulk	Bulk	—	—	.080	2.03	.890	22.61	1978	8802	8.9	226.06
	27131A	24	E2	Bulk	Bulk	—	—	.080	2.03	.940	23.88	2064	9185	9.4	238.76
	27132A	25	E2	Bulk	Bulk	775.0	1153.4	.080	2.03	.960	24.38	2150	9568	9.6	243.84
	27133A	26	E2	Bulk	Bulk	—	—	.080	2.03	.960	24.38	2236	9950	9.6	243.84
	27134A	27	E2	Bulk	Bulk	828.0	1232.2	.080	2.03	.960	24.38	2322	10333	9.6	243.84
	27135A	28	E2	Bulk	Bulk	—	—	.080	2.03	.990	25.15	2408	10716	9.9	251.46
	27136A	29	E2	Bulk	Bulk	—	—	.080	2.03	.990	25.15	2494	11098	9.9	251.46
	27137A	30	E2	Bulk	Bulk	910.0	1354.3	.080	2.03	1.020	25.91	2580	11481	10.2	259.08
	27630A	37	E2	Bulk	Bulk	1100.0	1637.0	.080	2.03	1.090	27.69	3182	14160	10.9	276.86
	27634A	50	E2	Bulk	Bulk	1450.0	2157.9	.080	2.03	1.300	33.02	4300	19135	13.0	330.20

E2 = Refer to Technical Information section for color code.

† Flat construction; overall shield not available.
†† Twisted Conductors.

Bulk = 5000 ft. or 10,000 ft. put-up one piece, ±10%. Check length available for specific construction.

To Specify:		
12345	**A**	**S**
Start with core Part No.	add Conductor, Insulation, Jacket type	add "S" for optional Beldfoil® Shield

Note: To specify TC-ER (Exposed Run) rated control cable, simply replace the second digit of the part number from a 7 to an 8. For example: 27080A with TC-ER rating becomes 28080A.

Conductor, Insulation and Jacket Options

Bare	Tinned	Insulation/Jacket
A	B	PVC-Nylon/PVC
C	D	XLPE/PVC
E	F	FRPO/PVC
G	H	XLPE/TPE
K	L	TPE/TPE
M	N	PVC-Nylon/Oil Res II
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

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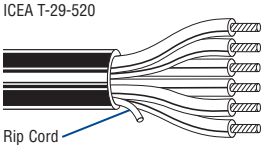
UL Control Cable

600V Type TC Cables

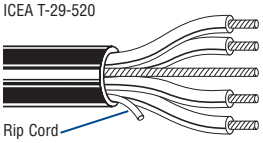
Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	No. of Cond.	Color Code	Standard Lengths Ft.	Standard Lengths m	Weight Lbs./1000′	Weight kg/km	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
10 AWG Multi-conductor Stranded (7x18) Bare Copper Conductors															
PVC/Nylon Insulation and PVC Jacket Constructions (See chart below for other options)															
NEC: TC, NPLF FT4/IEEE 1202/383 ICEA S-73-532 ICEA S-95-658 ICEA S-61-402 ICEA T-29-520	**27138A**†	2	E2	Bulk	Bulk	83.0	123.5	.045	1.14	.260 x .420	6.60 x 10.67	296	1317	4.2	106.68
	27643A††	2	E2	Bulk	Bulk	131.0	195.0	.045	1.14	.420	10.67	296	1317	4.2	106.68
	27139A	3	E2	1000 Bulk	304.8 Bulk	164.0 164.0	244.0 244.0	.045	1.14	.450	11.43	444	1976	4.5	114.30
	27140A	4	E2	1000 Bulk	304.8 Bulk	216.0 216.0	321.0 321.0	.045	1.14	.490	12.45	592	2634	4.9	124.46
	27141A	5	E2	Bulk	Bulk	276.0	410.7	.060	1.52	.570	14.48	740	3293	5.7	144.78
	27142A	6	E2	Bulk	Bulk	329.0	489.6	.060	1.52	.620	15.75	888	3952	6.2	157.48
	27143A	7	E2	Bulk	Bulk	361.0	537.2	.060	1.52	.620	15.75	1036	4610	6.2	157.48
	27144A	8	E2	Bulk	Bulk	411.0	611.7	.060	1.52	.680	17.27	1184	5269	6.8	172.72
	27145A	9	E2	Bulk	Bulk	465.0	692.0	.060	1.52	.720	18.29	1332	5927	7.2	182.88
	27146A	10	E2	Bulk	Bulk	542.0	806.6	.060	1.52	.790	20.07	1480	6586	7.9	200.66
	27147A	11	E2	Bulk	Bulk	582.0	866.0	.060	1.52	.790	20.07	1628	7245	7.9	200.66
	27148A	12	E2	Bulk	Bulk	620.0	922.7	.080	2.03	.820	20.83	1776	7903	8.2	208.28



8 AWG Multi-conductor Stranded (7x16) Bare Copper Conductors • 10 AWG Bare Copper Ground Wire

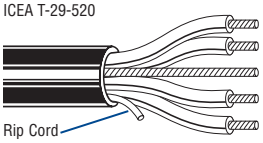
Description	Part No.	No. of Cond.	Color Code	Standard Lengths Ft.	Standard Lengths m	Weight Lbs./1000′	Weight kg/km	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
PVC/Nylon Insulation and PVC Jacket Constructions (See chart below for other options)															
NEC: TC, NPLF FT4/IEEE 1202/383 ICEA S-73-532 ICEA S-95-658 ICEA S-61-402 ICEA T-29-520	**27149A**	2	**	Bulk	Bulk	220.0	327.4	.060	1.52	.560	14.22	384	1709	5.6	142.24
	27150A	3	**	1000 Bulk	304.8 Bulk	354.0 354.0	527.0 527.0	.060	1.52	.590	14.99	576	2563	5.9	149.86
	27151A	4	**	Bulk	Bulk	394.0	327.4	.060	1.52	.650	16.51	768	3418	6.5	165.10



**ICEA Method 4 Color Code

6 AWG Multi-conductor Stranded (7x14) Bare Copper Conductors • 8 AWG Bare Copper Ground Wire

Description	Part No.	No. of Cond.	Color Code	Standard Lengths Ft.	Standard Lengths m	Weight Lbs./1000′	Weight kg/km	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
PVC/Nylon Insulation and PVC Jacket Constructions (See chart below for other options)															
NEC: TC, NPLF FT4/IEEE 1202/383 ICEA S-73-532 ICEA S-95-658 ICEA S-61-402 ICEA T-29-520	**27152A**	2	**	Bulk	Bulk	316.0	434.6	.060	1.52	.630	16.00	610	2715	6.3	160.02
	27153A	3	**	1000 Bulk	304.8 Bulk	477.0 477.0	710.0 710.0	.060	1.52	.670	17.02	915	4072	6.7	170.18
	27154A	4	**	Bulk	Bulk	519.0	759.0	.060	1.52	.730	18.54	1220	5429	7.3	185.42



**ICEA Method 4 Color Code

E2 = Refer to Technical Information section for color code.

† Flat construction; overall shield not available.
†† Twisted Conductors.

Bulk = 5000 ft. or 10,000 ft. put-up one piece, ±10%. Check length available for specific construction.

To Specify:		
12345	**A**	**S**
Start with core Part No.	add Conductor, Insulation, Jacket type	add "S" for optional Beldfoil® Shield

Note: To specify TC-ER (Exposed Run) rated control cable, simply replace the second digit of the part number from a 7 to an 8. For example: 27080A with TC-ER rating becomes 28080A.

Conductor, Insulation and Jacket Options

Bare	Tinned	Insulation/Jacket
A	B	PVC-Nylon/PVC
C	D	XLPE/PVC
E	F	FRPO/PVC
G	H	XLPE/TPE
K	L	TPE/TPE
M	N	PVC-Nylon/Oil Res II
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

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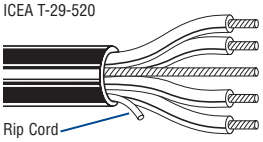
UL Control Cable

600V Type TC Cables

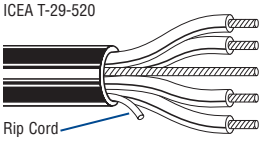
Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part No.	No. of Cond.	Color Code	Standard Lengths		Weight		Jacket Thickness		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
				Ft.	m	Lbs./1000'	kg/km	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
4 AWG Multi-conductor Stranded (7x12) Bare Copper Conductors • 8 AWG Bare Copper Ground Wire															
PVC/Nylon Insulation and PVC Jacket Constructions (See chart below for other options)															
NEC: TC, NPLF FT4/IEEE 1202/383 ICEA S-73-532 ICEA S-95-658 ICEA S-61-402 ICEA T-29-520	**27155A**	2	**	Bulk	Bulk	455.0	677.1	.060	1.52	.770	19.56	970	4317	7.7	195.58
	27156A	3	**	Bulk	Bulk	630.0	937.6	.080	2.03	.820	20.83	1455	6475	8.2	208.28
	27157A	4	**	Bulk	Bulk	850.0	1265.0	.080	2.03	.950	24.13	1940	8633	9.5	241.30



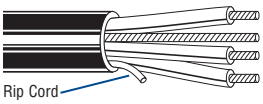
**ICEA Method 4 Color Code

2 AWG Multi-conductor Stranded (7x10) Bare Copper Conductors • 6 AWG Bare Copper Ground Wire															
PVC/Nylon Insulation and PVC Jacket Constructions (See chart below for other options)															
NEC: TC, NPLF FT4/IEEE 1202/383 ICEA S-73-532 ICEA S-95-658 ICEA S-61-402 ICEA T-29-520	**27158A**	2	**	Bulk	Bulk	716.0	1065.6	.080	2.03	.970	24.64	1544	6871	9.7	246.38
	27159A	3	**	Bulk	Bulk	960.0	1428.7	.080	2.03	.990	25.15	2316	10306	9.9	251.46
	27160A	4	**	Bulk	Bulk	1213.0	1805.2	.080	2.03	1.090	27.69	3088	13742	10.9	276.86



**ICEA Method 4 Color Code

1 AWG Multi-conductor Stranded (19x14) Bare Copper Conductors • 6 AWG Bare Copper Ground Wire															
PVC/Nylon Insulation and PVC Jacket Constructions (See chart below for other options)															
NEC: TC, NPLF FT4/IEEE 1202/383 ICEA S-73-532 ICEA S-95-658 ICEA S-61-402 ICEA T-29-520	**27161A**	3	**	Bulk	Bulk	—	—	.080	2.03	1.120	28.45	2919	12990	11.2	284.48



**ICEA Method 4 Color Code

Bulk = 5000 ft. or 10,000 ft. put-up one piece, ±10%. Check length available for specific construction.

To Specify:		
12345	A	S
Start with core Part No.	add Conductor, Insulation, Jacket type	add "S" for optional Beldfoil® Shield

Note: To specify TC-ER (Exposed Run) rated control cable, simply replace the second digit of the part number from a 7 to an 8. For example: 27080A with TC-ER rating becomes 28080A.

Conductor, Insulation and Jacket Options

Bare	Tinned	Insulation/Jacket
A	B	PVC-Nylon/PVC
C	D	XLPE/PVC
E	F	FRPO/PVC
G	H	XLPE/TPE
K	L	TPE/TPE
M	N	PVC-Nylon/Oil Res II
Q	R	XLPE/CPE
S	T	XLPE/Haloarrest®

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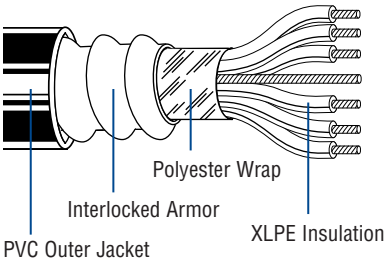
케이블 콘(주) 기술지원팀 :: 콘넥터 문의 0707-434-7701 케이블 문의 0707-434-7702

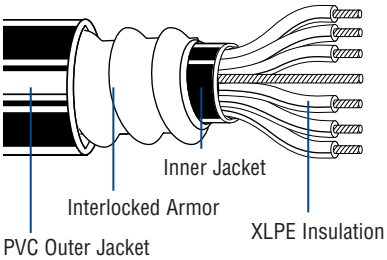
UL Control Cable

600V Type MC Metal Clad and Teck-Style® Cables — Overview

Metal Clad



Teck-Style



Introduction

Belden® Metal Clad (MC) and Teck-Style cables are designed to meet demanding industrial needs by combining rugged durability and corrosion resistance with flexibility and easy handling.

MC and Teck-Style cables are available in a wide range of constructions to meet the needs of pulp and paper, chemical, petroleum and other demanding industrial and resource industry environments. They are ideal for use in wet or dry areas; ventilated, non-ventilated or ladder-type cable troughs; ventilated flexible cableways; and for direct burial. Custom cables are available to meet exacting requirements.

Belden Type MC Cable is marked sunlight-resistant for cable tray use in direct burial designations, and cable constructions are listed to NEC Type MC.

Teck-Style cables are price-competitive, high-performance, UL and CSA dual-rated cables with a flame-retardant XHHW insulated conductor and an inner PVC jacket for mechanical moisture and corrosion protection.

Construction

Class B stranded bare copper conductors, cross-linked polyethylene insulation, bare copper ground wire, standard aluminum or optional galvanized steel interlocking armor, PVC outer jacket.

- Thermoset insulation — XHHW-2 conductors
- NEC conductor temperature 90°C dry and 90°C wet

Voltage Rating

14 AWG — 2 AWG: 600 Volt

Application

Type MC Cable is a general-purpose cable used in the pulp and paper, mining, petroleum and chemical industries as well as in commercial buildings.

MC Cable may be used under the following conditions:

- Exposed or concealed wiring in dry or wet conditions
- In ventilated, non-ventilated or ladder-type cable trays in dry or wet conditions
- On walls or beams
- Directly buried
- Class I and II Div. 2 and Class III Div. 1 and 2 hazardous locations

Minimum Bending Radius

12 times the overall cable diameter

Pulling Tensions

The combined use of Kellems grips and pulling eyes is recommended.

Design Advantages

Insulation Properties

- High tensile strength
- Impact- and crush-resistant
- Heat-resistant
- Excellent elongation
- Moisture-resistant
- Good low temperature properties
- 90°C dry and 90°C wet

Electrical Properties

- High insulation resistance
- Low dielectric loss
- High dielectric strength

Other Features

- Corrosion-resistant
- Versatile and flexible
- Provides cost savings as conduit and ducts are not required

Specifications

- UL 44
- UL 1569
- UL 1685 (UL 1581) Vertical Tray Flame Test (70,000 BTU/hr)

Tech-Style CSA Specifications

- CSA C22.2 #131
- FT4 Flame Test
- HAZ LOC
- CSA C22.2 #0.3 Clause 4.31 Low Acid Gas

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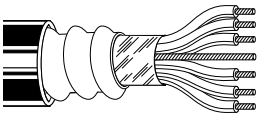
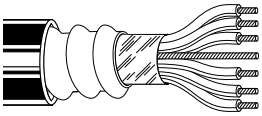
UL Control Cable

600V Type MC Metal Clad Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part Number		No. of Cond.	Insulation Thickness		Outer Jacket Thickness		Armor OD		Nominal OD		Minimum Bend Radius	
	Aluminum Armor	Steel Armor		Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm
14 AWG Stranded (7x22) Bare Copper Conductors • 14 AWG Bare Copper Ground Wire													
Aluminum or Steel Interlocked Armor • Cross-linked Polyethylene Insulation • PVC Jacket													
NEC: MC 	**27243**	**28243**	2	.030	.76	.050	1.27	.48	12.19	.58	14.73	7.3	185.42
	27244	**28244**	3	.030	.76	.050	1.27	.50	12.70	.61	15.49	7.6	193.04
	27245	**28245**	4	.030	.76	.050	1.27	.54	13.72	.64	16.26	7.9	200.66
	27246	**28246**	5	.030	.76	.050	1.27	.57	14.48	.68	17.27	8.4	213.36
	27247	**28247**	6	.030	.76	.050	1.27	.62	15.75	.72	18.29	8.9	226.06
	27248	**28248**	7	.030	.76	.050	1.27	.62	15.75	.72	18.29	8.9	226.06
	27269	**28269**	8	.030	.76	.050	1.27	.69	17.53	.80	20.32	9.4	238.76
	27535	**28535**	9	.030	.76	.050	1.27	.70	17.78	.80	20.32	10.0	254.00
	27249	**28249**	10	.030	.76	.050	1.27	.75	19.05	.85	21.59	10.5	266.70
	27250	**28250**	12	.030	.76	.050	1.27	.77	19.56	.87	22.10	10.8	274.32
	27251	**28251**	15	.030	.76	.050	1.27	.87	22.10	.98	24.89	11.6	294.64
	27969	**28969**	19	.030	.76	.050	1.27	1.00	25.40	1.11	28.19	12.1	307.34
	27252	**28252**	20	.030	.76	.050	1.27	1.03	26.16	1.14	28.96	13.3	337.82
	27270	**28270**	25	.030	.76	.050	1.27	1.10	27.94	1.21	30.73	14.4	365.76
	27253	**28253**	30	.030	.76	.050	1.27	1.18	29.97	1.29	32.77	15.1	383.54
	27292	**28292**	37	.030	.76	.050	1.27	1.14	28.96	1.24	31.50	16.1	408.94
	27433	**28433**	40	.030	.76	.050	1.27	1.28	32.51	1.40	35.56	16.7	424.18
	27434	**28434**	50	.030	.76	.050	1.27	1.40	35.56	1.52	38.61	18.4	467.36
12 AWG Stranded (7x20) Bare Copper Conductors • 12 AWG Bare Copper Ground Wire													
Aluminum or Steel Interlocked Armor • Cross-linked Polyethylene Insulation • PVC Jacket													
NEC: MC 	**27254**	**28254**	2	.030	.76	.050	1.27	.52	13.21	.62	15.75	7.8	198.12
	27255	**28255**	3	.030	.76	.050	1.27	.54	13.72	.64	16.26	8.0	203.20
	27256	**28256**	4	.030	.76	.050	1.27	.58	14.73	.68	17.22	8.5	215.90
	27271	**28271**	5	.030	.76	.050	1.27	.62	15.75	.72	18.29	9.1	231.14
	27272	**28272**	6	.030	.76	.050	1.27	.67	17.02	.77	19.56	9.6	243.84
	27273	**28273**	7	.030	.76	.050	1.27	.67	17.02	.77	19.56	9.6	243.84
	27274	**28274**	8	.030	.76	.050	1.27	.77	19.56	.88	22.35	10.2	259.08
	27538	**28538**	9	.030	.76	.050	1.27	.76	19.30	.86	21.84	10.8	274.32
	27275	**28275**	10	.030	.76	.050	1.27	.80	20.32	.91	23.11	11.5	292.10
	27276	**28276**	12	.030	.76	.050	1.27	.84	21.34	.94	23.88	11.7	297.18
	27277	**28277**	15	.030	.76	.050	1.27	.94	23.88	1.05	26.67	13.4	340.36
	27539	**28539**	19	.030	.76	.055	1.40	1.05	26.67	1.16	29.46	14.0	355.60
	27278	**28278**	20	.030	.76	.055	1.40	1.16	29.46	1.27	32.26	14.6	370.84
	27279	**28279**	25	.030	.76	.055	1.40	1.26	32.00	1.37	34.80	15.8	401.32
	27280	**28280**	30	.030	.76	.055	1.40	1.29	32.77	1.40	35.56	16.8	426.72
	27540	**28540**	37	.030	.76	.055	1.40	1.44	36.58	1.55	39.37	17.8	452.12
	27432	**28432**	40	.030	.76	.055	1.40	1.50	38.10	1.63	41.40	18.4	467.36

Color Code: Use ICEA Table E2 with printed numbers.

Non-stocked items. Check length available for specific construction. Minimum order may apply.

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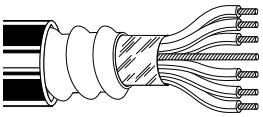
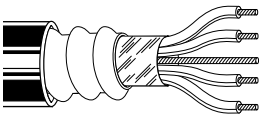
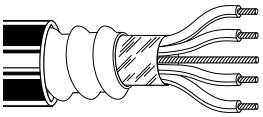
케이블 콘(주) 기술지원팀 :: 콘넥터 문의 0707-434-7701 케이블 문의 0707-434-7702

UL Control Cable

600V Type MC Metal Clad Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

Description	Part Number		No. of Cond.	Insulation Thickness		Outer Jacket Thickness		Armor OD		Nominal OD		Minimum Bend Radius	
	Aluminum Armor	Steel Armor		Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm
10 AWG Stranded (7x18) Bare Copper Conductors • 10 AWG Bare Copper Ground Wire													
Aluminum or Steel Interlocked Armor • Cross-linked Polyethylene Insulation • PVC Jacket													
NEC: MC 	**27257**	**28257**	2	.030	.76	.050	1.27	.56	14.22	.67	17.02	8.4	213.36
	27258	**28258**	3	.030	.76	.050	1.27	.58	14.73	.69	17.53	8.6	218.44
	27259	**28259**	4	.030	.76	.050	1.27	.62	15.75	.74	18.80	9.2	233.68
	27281	**28281**	5	.030	.76	.050	1.27	.68	17.27	.79	20.07	12.8	325.12
	27282	**28282**	6	.030	.76	.050	1.27	.74	18.80	.84	21.34	10.4	264.16
	27283	**28283**	7	.030	.76	.050	1.27	.74	18.80	.84	21.34	10.4	264.16
	27284	**28284**	8	.030	.76	.050	1.27	.81	20.57	.92	23.37	11.2	284.48
	27541	**28541**	9	.030	.76	.050	1.27	.87	22.10	.98	24.89	11.8	299.72
	27285	**28285**	10	.030	.76	.050	1.27	.89	22.61	1.03	26.16	13.3	337.82
	27286	**28286**	12	.030	.76	.050	1.27	1.01	25.65	1.12	28.45	13.7	347.98
	27287	**28287**	15	.030	.76	.050	1.27	1.09	27.69	1.22	30.99	14.8	375.92
	27288	**28288**	20	.030	.76	.055	1.40	1.22	30.99	1.35	34.29	16.2	411.48
	27289	**28289**	25	.030	.76	.055	1.40	1.32	33.53	1.47	37.34	17.8	452.12
	27290	**28290**	30	.030	.76	.055	1.40	1.42	36.07	1.55	39.37	18.6	472.44
8 AWG Stranded (7x16) Bare Copper Conductors • 10 AWG Bare Copper Ground Wire													
Aluminum or Steel Interlocked Armor • Cross-linked Polyethylene Insulation • PVC Jacket													
NEC: MC 	**27291**	**28291**	2	.045	1.14	.050	1.27	.70	17.78	.81	20.57	9.8	248.92
	27260	**28260**	3	.045	1.14	.050	1.27	.72	18.29	.82	20.83	10.2	259.08
	27261	**28261**	4	.045	1.14	.050	1.27	.78	19.81	.88	22.35	10.9	276.86
6 AWG Stranded (7x14) Bare Copper Conductors • 8 AWG Bare Copper Ground Wire													
Aluminum or Steel Interlocked Armor • Cross-linked Polyethylene Insulation • PVC Jacket													
NEC: MC 	**27293**	**28293**	2	.045	1.14	.050	1.27	.76	19.30	.87	22.10	10.7	271.78
	27262	**28262**	3	.045	1.14	.050	1.27	.80	20.32	.90	22.86	11.2	284.48
	27263	**28263**	4	.045	1.14	.050	1.27	.87	22.10	.97	24.64	12.1	307.34

Color Code: For sizes 14, 12, 10, use ICEA Table E2 with printed numbers.
For sizes 8 and larger, use ICEA Method 4 with printed numbers.

Non-stocked items. Check length available for specific construction. Minimum order may apply.

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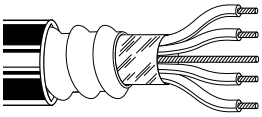
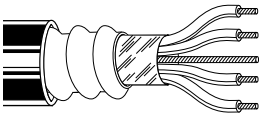
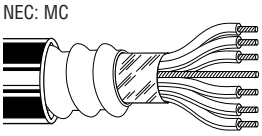
UL Control Cable

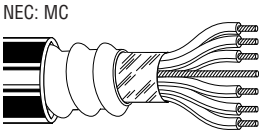
600V Type MC Metal Clad Cables
Industrial Grade Sunlight- and Oil-Resistant Jackets

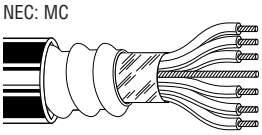
Description	Part Number		No. of Cond.	Insulation Thickness		Outer Jacket Thickness		Armor OD		Nominal OD		Minimum Bend Radius	
	Aluminum Armor	Steel Armor		Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm
4 AWG Stranded (7x12) Bare Copper Conductors • 8 AWG Bare Copper Ground Wire													
Aluminum or Steel Interlocked Armor • Cross-linked Polyethylene Insulation • PVC Jacket													
NEC: MC	**27264**	**28264**	3	.045	1.14	.050	1.27	.90	22.86	1.00	25.40	13.1	332.74
	27265	**28265**	4	.045	1.14	.050	1.27	1.97	50.04	1.08	27.43	14.2	360.68
2 AWG Stranded (7x10) Bare Copper Conductors • 6 AWG Bare Copper Ground Wire													
Aluminum or Steel Interlocked Armor • Cross-linked Polyethylene Insulation • PVC Jacket													
NEC: MC	**27267**	**28267**	3	.045	1.14	.050	1.27	1.02	25.91	1.13	28.70	14.7	373.38
	27268	**28268**	4	.045	1.14	.050	1.27	1.11	28.19	1.22	30.99	16.0	406.40
Composite 14 AWG (7x22) **and 12 AWG** (7x20) Stranded Bare Copper Conductors • 12 AWG Bare Copper Ground Wire													
Aluminum or Steel Interlocked Armor • Cross-linked Polyethylene Insulation • PVC Jacket													
NEC: MC	**27428**	**28428**	3c/14 3c/12	.030 .030	.76 .76	.050	1.27	.70	17.78	.81	20.57	9.7	246.38
Composite 14 AWG (7x22) **and 10 AWG** (7x18) Stranded Bare Copper Conductors • 10 AWG Bare Copper Ground Wire													
Aluminum or Steel Interlocked Armor • Cross-linked Polyethylene Insulation • PVC Jacket													
NEC: MC	**27429**	**28429**	3c/14 3c/10	.030 .030	.76 .76	.050	1.27	.74	18.80	.85	21.59	10.2	259.08
Composite 14 AWG (7x22) **and 8 AWG** (7x16) Stranded Bare Copper Conductors • 10 AWG Bare Copper Ground Wire													
Aluminum or Steel Interlocked Armor • Cross-linked Polyethylene Insulation • PVC Jacket													
NEC: MC	**27430**	**28430**	3c/14 3c/8	.030 .045	.76 1.14	.050	1.27	.83	21.08	.94	23.88	11.2	284.48
Composite 14 AWG (7x22) **and 6 AWG** (7x14) Stranded Bare Copper Conductors • 8 AWG Bare Copper Ground Wire													
Aluminum or Steel Interlocked Armor • Cross-linked Polyethylene Insulation • PVC Jacket													
NEC: MC	**27431**	**28431**	3c/14 3c/6	.030 .045	.76 1.14	.050	1.27	.89	22.61	1.01	25.65	12.0	304.80

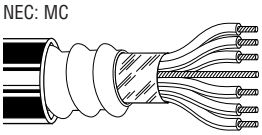












Color Code: For sizes 14, 12, 10, use ICEA Table E2 with printed numbers.
For sizes 8 and larger, use ICEA Method 4 with printed numbers.

Non-stocked items. Check length available for specific construction. Minimum order may apply.

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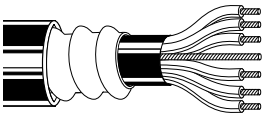
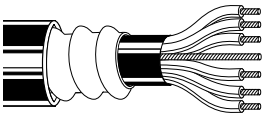
UL Control Cable

600V Teck-Style® Cables
Dual-Rated Type MC/Teck 90

Description	Part Number		No. of Cond.	Insulation Thickness		Inner Jacket OD		Armor OD		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
	Aluminum Armor	Steel Armor		Inch	mm	Inch	mm	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
14 AWG Stranded (7x22) Bare Copper Conductors • 14 AWG Bare Copper Ground Wire															
Aluminum or Steel Armor • Cross-linked Polyethylene Insulation • PVC Inner Jacket • PVC Outer Jacket															
NEC: MC	**27840**	**28840**	2	.030	.76	.37	9.40	.56	14.22	.67	17.02	66	294	8.0	203
	**27841**	**28841**	3	.030	.76	.39	9.91	.58	14.73	.69	17.53	98	436	8.3	211
	27842	**28842**	4	.030	.76	.43	10.92	.62	15.75	.73	18.54	131	583	8.7	221
	27843	**28843**	5	.030	.76	.47	11.94	.66	16.76	.77	19.56	164	730	9.2	234
	27844	**28844**	6	.030	.76	.51	12.95	.70	17.78	.81	20.57	191	850	9.7	246
	27845	**28845**	7	.030	.76	.51	12.95	.70	17.78	.81	20.57	225	1001	9.7	246
	27846	**28846**	8	.030	.76	.58	14.73	.77	19.56	.88	22.35	260	1157	10.5	267
	27847	**28847**	10	.030	.76	.67	17.02	.93	23.62	1.04	26.42	321	1428	12.5	318
	27848	**28848**	12	.030	.76	.69	17.53	.95	24.13	1.06	26.92	388	1726	10.9	277
	27849	**28849**	15	.030	.76	.77	19.56	1.03	26.16	1.14	28.96	481	2140	13.7	348
	27850	**28850**	20	.030	.76	.86	21.84	1.12	28.45	1.23	31.24	649	2887	15.3	389
	27851	**28851**	25	.030	.76	.92	23.37	1.18	29.97	1.30	33.02	810	3603	16.3	414
	27852	**28852**	30	.030	.76	.98	24.89	1.24	31.50	1.36	34.54	975	4337	17.0	432
CSA C22.2 #131 FT4 Flame Test, HAZ LOC	**27885**	**28885**	40	.030	.76	1.09	27.69	1.35	34.29	1.47	37.34	1301	5787	18.5	470
CSA C22.2 #0.3 Clause 4.31 Low Acid Gas	**27886**	**28886**	50	.030	.76	1.19	30.23	1.45	36.83	1.57	39.88	1630	7251	19.8	503
12 AWG Stranded (7x20) Bare Copper Conductors • 12 AWG Bare Copper Ground Wire															
Aluminum or Steel Armor • Cross-linked Polyethylene Insulation • PVC Inner Jacket • PVC Outer Jacket															
NEC: MC	**27853**	**28853**	2	.030	.76	.41	10.41	.60	15.24	.71	18.03	104	463	8.5	216
	**27854**	**28854**	3	.030	.76	.43	10.92	.62	15.75	.73	18.54	156	694	8.8	224
	27855	**28855**	4	.030	.76	.47	11.94	.66	16.76	.77	19.56	207	921	9.2	234
	27856	**28856**	5	.030	.76	.52	13.21	.71	18.03	.82	20.83	260	1157	9.8	249
	27857	**28857**	6	.030	.76	.59	14.99	.78	19.81	.89	22.61	310	1379	10.7	272
	27858	**28858**	7	.030	.76	.59	14.99	.78	19.81	.89	22.61	361	1606	10.7	272
	27859	**28859**	8	.030	.76	.64	16.26	.83	21.08	.94	23.88	415	1846	11.3	287
	27860	**28860**	10	.030	.76	.75	19.05	1.01	25.65	1.12	28.45	520	2313	13.4	340
	27861	**28861**	12	.030	.76	.77	19.56	1.03	26.16	1.14	28.96	619	2753	13.7	348
	27862	**28862**	15	.030	.76	.87	22.10	1.13	28.70	1.25	31.75	718	3194	15.0	381
	27863	**28863**	20	.030	.76	.96	24.38	1.22	30.99	1.33	33.78	1040	4626	15.9	404
	27864	**28864**	25	.030	.76	1.04	26.42	1.30	33.02	1.42	36.07	1301	5787	17.0	432
CSA C22.2 #131 FT4 Flame Test, HAZ LOC	**27865**	**28865**	30	.030	.76	1.15	29.21	1.41	35.81	1.53	38.86	1560	6939	18.3	465
CSA C22.2 #0.3 Clause 4.31 Low Acid Gas	**27887**	**28887**	40	.030	.76	1.20	30.48	1.54	39.12	1.67	42.42	2020	8985	20.0	508

Color Code: Use ICEA Table E2 with printed numbers.

Non-stocked items. Check length available for specific construction. Minimum order may apply.

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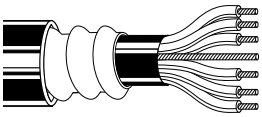
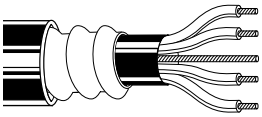
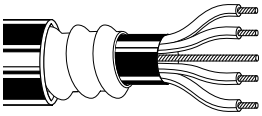
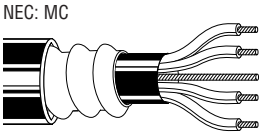
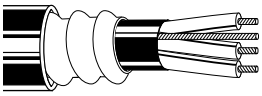
UL Control Cable

600V Teck-Style® Cables
Dual-Rated Type MC/Teck 90

Description	Part Number		No. of Cond.	Insulation Thickness		Inner Jacket OD		Armor OD		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
	Aluminum Armor	Steel Armor		Inch	mm	Inch	mm	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
10 AWG Stranded (7x18) Bare Copper Conductors • 10 AWG Bare Copper Ground Wire															
Aluminum or Steel Armor • Cross-linked Polyethylene Insulation • PVC Inner Jacket • PVC Outer Jacket															
NEC: MC 	**27866**	**28866**	2	.030	.76	.46	11.68	.65	16.51	.74	18.80	166	738	9.1	231
	27867	**28867**	3	.030	.76	.48	12.19	.67	17.02	.77	19.56	249	1108	9.4	239
	27868	**28868**	4	.030	.76	.56	14.22	.75	19.05	.84	21.34	330	1468	10.3	262
	27869	**28869**	5	.030	.76	.67	17.02	.86	21.84	.96	24.38	415	1846	11.6	295
	27870	**28870**	6	.030	.76	.67	17.02	.86	21.84	.96	24.38	491	2184	11.6	295
	27877	**28877**	7	.030	.76	.70	17.78	.90	22.86	1.00	25.40	560	2491	12.1	307
	27878	**28878**	8	.030	.76	.75	19.05	.95	24.13	1.05	26.67	640	2847	12.7	323
	27879	**28879**	10	.030	.76	.78	19.81	1.04	26.42	1.15	29.21	801	3563	13.8	351
	27880	**28880**	12	.030	.76	.89	22.61	1.15	29.21	1.26	32.00	960	4270	15.1	384
	27881	**28881**	15	.030	.76	.93	23.62	1.19	30.23	1.30	33.02	1195	5316	15.6	396
	27882	**28882**	20	.030	.76	1.06	26.92	1.32	33.53	1.44	36.58	1600	7117	17.3	439
CSA C22.2 #131 FT4 Flame Test, HAZ LOC	**27883**	**28883**	25	.030	.76	1.12	28.45	1.44	36.58	1.58	40.13	1990	8852	19.0	483
CSA C22.2 #0.3 Clause 4.31 Low Acid Gas	**27884**	**28884**	30	.030	.76	1.28	32.51	1.54	39.12	1.67	42.42	2355	10476	20.0	508
8 AWG Stranded (7x16) Bare Copper Conductors • 10 AWG Bare Copper Ground Wire															
Aluminum or Steel Armor • Cross-linked Polyethylene Insulation • PVC Inner Jacket • PVC Outer Jacket															
NEC: MC 	**27871**	**28871**	2	.045	1.14	.59	14.99	.78	19.81	.89	22.61	264	1174	10.7	272
	27872	**28872**	3	.045	1.14	.62	15.75	.81	20.57	.91	23.11	396	1762	10.9	277
	27873	**28873**	4	.045	1.14	.68	17.27	.94	23.88	1.05	26.67	528	2349	12.6	320
CSA C22.2 #131, FT4 Flame Test, HAZ LOC, CSA C22.2 #0.3 Clause 4.31 Low Acid Gas															
6 AWG Stranded (7x14) Bare Copper Conductors • 8 AWG Bare Copper Ground Wire															
Aluminum or Steel Armor • Cross-linked Polyethylene Insulation • PVC Inner Jacket • PVC Outer Jacket															
NEC: MC 	**27874**	**28874**	2	.060	1.52	.71	18.03	.97	24.64	1.08	27.43	420	1868	13.0	330
	27875	**28875**	3	.060	1.52	.76	19.30	1.02	25.91	1.13	28.70	630	2802	13.5	343
	27876	**28876**	4	.060	1.52	.88	22.35	1.14	28.96	1.25	31.75	840	3737	15.0	381
CSA C22.2 #131, FT4 Flame Test, HAZ LOC, CSA C22.2 #0.3 Clause 4.31 Low Acid Gas															
4 AWG Stranded (7x12) Bare Copper Conductors • 8 AWG Bare Copper Ground Wire															
Aluminum or Steel Armor • Cross-linked Polyethylene Insulation • PVC Inner Jacket • PVC Outer Jacket															
NEC: MC 	**27894**	**28894**	3	.060	1.52	.91	23.11	1.17	29.72	1.29	32.77	1002	4457	15.5	394
	27895	**28895**	4	.060	1.52	.99	25.15	1.25	31.75	1.37	34.80	1335	5938	16.4	417
CSA C22.2 #131, FT4 Flame Test, HAZ LOC, CSA C22.2 #0.3 Clause 4.31 Low Acid Gas															
3 AWG Stranded (7x11) Bare Copper Conductors • 6 AWG Bare Copper Ground Wire															
Aluminum or Steel Armor • Cross-linked Polyethylene Insulation • PVC Inner Jacket • PVC Outer Jacket															
NEC: MC 	**27896**	**28896**	3	.060	1.52	.96	24.38	1.22	30.99	1.33	33.78	1263	5618	16.0	406
CSA C22.2 #131, FT4 Flame Test, HAZ LOC, CSA C22.2 #0.3 Clause 4.31 Low Acid Gas															

Color Code: For sizes 14, 12, 10, use ICEA Table E2 with printed numbers.
For sizes 8 and larger, use ICEA Method 4 with printed numbers.

Non-stocked items. Check length available for specific construction. Minimum order may apply.

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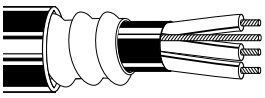
UL Control Cable

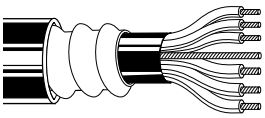
600V Teck-Style® Cables
Dual-Rated Type MC/Teck 90

Description	Part Number		No. of Cond.	Insulation Thickness		Inner Jacket OD		Armor OD		Nominal OD		Maximum Pull Tension		Minimum Bend Radius	
	Aluminum Armor	Steel Armor		Inch	mm	Inch	mm	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
2 AWG Stranded (7x10) Bare Copper Conductors • 6 AWG Bare Copper Ground Wire															
Aluminum or Steel Armor • Cross-linked Polyethylene Insulation • PVC Inner Jacket • PVC Outer Jacket															
NEC: MC	**27888**	**28888**	3	.060	1.52	1.08	27.43	1.28	32.51	1.40	35.56	1593	7086	16.8	427
	27889	**28889**	4	.060	1.52	1.12	28.45	1.38	35.05	1.50	38.10	2124	9448	18.0	457



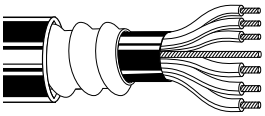
CSA C22.2 #131, FT4 Flame Test, HAZ LOC, CSA C22.2 #0.3 Clause 4.31 Low Acid Gas

Composite 14 AWG (7x22) **and 12 AWG** (7x20) Bare Copper Conductors • 12 AWG Bare Copper Ground Wire															
Aluminum or Steel Armor • Cross-linked Polyethylene Insulation • PVC Inner Jacket • PVC Outer Jacket															
NEC: MC	**27890**	**28890**	3c/14	.030	.76	.56	14.22	.75	19.05	.86	21.84	202	899	10.3	262
			3c/12	.030	.76										



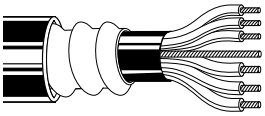
CSA C22.2 #131, FT4 Flame Test, HAZ LOC, CSA C22.2 #0.3 Clause 4.31 Low Acid Gas

Composite 14 AWG (7x22) **and 10 AWG** (7x18) Bare Copper Conductors • 10 AWG Bare Copper Ground Wire															
Aluminum or Steel Armor • Cross-linked Polyethylene Insulation • PVC Inner Jacket • PVC Outer Jacket															
NEC: MC	**27891**	**28891**	3c/14	.030	.76	.61	15.49	.80	20.32	.91	23.11	305	1357	10.9	277
			3c/10	.030	.76										



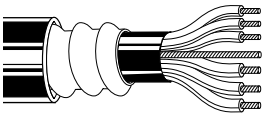
CSA C22.2 #131, FT4 Flame Test, HAZ LOC, CSA C22.2 #0.3 Clause 4.31 Low Acid Gas

Composite 14 AWG (7x22) **and 8 AWG** (7x16) Bare Copper Conductors • 10 AWG Bare Copper Ground Wire															
Aluminum or Steel Armor • Cross-linked Polyethylene Insulation • PVC Inner Jacket • PVC Outer Jacket															
NEC: MC	**27892**	**28892**	3c/14	.045	1.14	.70	17.78	.96	24.38	1.07	27.18	435	1935	12.8	325
			3c/8	.030	.76										



CSA C22.2 #131, FT4 Flame Test, HAZ LOC, CSA C22.2 #0.3 Clause 4.31 Low Acid Gas

Composite 14 AWG (7x22) **and 6 AWG** (7x14) Bare Copper Conductors • 8 AWG Bare Copper Ground Wire															
Aluminum or Steel Armor • Cross-linked Polyethylene Insulation • PVC Inner Jacket • PVC Outer Jacket															
NEC: MC	**27893**	**28893**	3c/14	.060	1.52	.90	22.86	1.15	29.21	1.26	32.00	655	2914	15.1	384
			3c/6	.030	.76										



CSA C22.2 #131, FT4 Flame Test, HAZ LOC, CSA C22.2 #0.3 Clause 4.31 Low Acid Gas

Color Code: For sizes 14, 12, 10, use ICEA Table E2 with printed numbers.
For sizes 8 and larger, use ICEA Method 4 with printed numbers.

Non-stocked items. Check length available for specific construction. Minimum order may apply.

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CSA Instrumentation & Thermocouple Tray Cable

300V TC/CIC

Paired and Triad Constructions

Cable Specifications

- CSA C22.2 #239 Control and Instrumentation
- CSA C22.2 #230 Type TC
- CSA FT4 70,000 BTU Flame Test
- PVC Insulation 90°C Dry & 75°C Wet
- XLPE Insulation Optional 90°C Dry and Wet
- -40°C Cold Bend, -25°C Cold Impact
- -25°C Installation temp
- Per CEC Part 1, Suitable for use in hazardous locations:
  Class 1 – Zone 2
  Class 2 – Division 2
- Sun Res/UV resistant
- Direct Burial

To Create a Part Number

Add suffixes for Conductor, Insulation and Jacket Type and Shielding as shown below:

A = Bare Copper Conductor or Thermocouple alloy, PVC insulation, PVC Jacket

B = Tinned Copper Conductor, PVC Insulation, PVC Jacket

C = Bare Copper Conductor or Thermocouple alloy, XLPE Insulation, PVC Jacket

D = Tinned Copper Conductor, XLPE Insulation, PVC Jacket

1 = Overall Foil Shield + Drain Wire

2 = Individual and Overall Foil Shield + Drain Wire

Sample Part Number:

22001B2 = 300V, 2-Pair 20 AWG Tinned Copper Conductor cable with PVC Insulation, PVC Jacket, with Individual and Overall Foil Shields plus Drain Wire

No. of Pairs	Part Numbers				
	7 Strand Copper	Solid EX Chromel/ Constantan	Solid JX Iron/ Constantan	Solid KX Chromel/ Alumel	Solid TX Copper/ Constantan
20 AWG					
1	22000	21100	21114	21128	21142
2	22001	21101	21115	21129	21143
4	22002	21102	21116	21130	21144
6	22003	21103	21117	21131	21145
8	22004	21104	21118	21132	21146
10	22005	21105	21119	21133	21147
12	22006	21106	21120	21134	21148
16	22007	21107	21121	21135	21149
20	22008	21108	21122	21136	21150
24	22009	21109	21123	21137	21151
30	22010	21110	21124	21138	21152
36	22011	21111	21125	21139	21153
40	22012	21112	21126	21140	21154
50	22013	21113	21127	21141	21155
18 AWG					
1	22027	21156	21170	21184	21198
2	22028	21157	21171	21185	21199
4	22029	21158	21172	21186	21200
6	22030	21159	21173	21187	21201
8	22031	21160	21174	21188	21202
10	22032	21161	21175	21189	21203
12	22033	21162	21176	21190	21204
16	22034	21163	21177	21191	21205
20	22035	21164	21178	21192	21206
24	22036	21165	21179	21193	21207
30	22037	21166	21180	21194	21208
36	22038	21167	21181	21195	21209
40	22039	21168	21182	21196	21210
50	22040	21169	21183	21197	21211
16 AWG					
1	22054	21212	21226	21240	21254
2	22055	21213	21227	21241	21255
4	22056	21214	21228	21242	21256
6	22057	21215	21229	21243	21257
8	22058	21216	21230	21244	21258
10	22059	21217	21231	21245	21259
12	22060	21218	21232	21246	21260
16	22061	21219	21233	21247	21261
20	22062	21220	21234	21248	21262
24	22063	21221	21235	21249	21263
30	22064	21222	21236	21250	21264
36	22065	21223	21237	21251	21265
40	22066	21224	21238	21252	21266
50	22067	21225	21239	21253	21267

Thermocouple Color Codes

ANSI Symbol	Jacket Color	Insulation Color Code	
		Positive (+)	Negative (-)
EX	Purple	Purple	Red
JX	Black	White	Red
KX	Yellow	Yellow	Red
TX	Blue	Blue	Red

Copper Color Codes

Pairs/Triads	Color Combination
Pairs	Black & White
Triads	Black, White & Red

Triad Constructions, Copper Conductor

No. of Triads	Part Numbers		
	20 AWG (7 Strand)	18 AWG (7 Strand)	16 AWG (7 Strand)
1	22014	22041	22068
2	22015	22042	22069
4	22016	22043	22070
6	22017	22044	22071
8	22018	22045	22072
10	22019	22046	22073
12	22020	22047	22074
16	22021	22048	22075
20	22022	22049	22076
24	22023	22050	22077
30	22024	22051	22078
36	22025	22052	22079

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케이블 콘(주) 기술지원팀 :: 콘넥터 문의 0707-434-7701 케이블 문의 0707-434-7702

CSA Instrumentation Cable

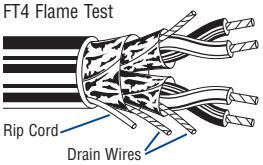
300V CIC

Belden offers a complete line of high performance and high quality CSA certified instrumentation cables (300V/600V and CIC/ACIC). These cables are designed to minimize noise and signal interference to deliver clean signals in harsh petrochemical, pulp and paper and process industry environments, as well as for use in general manufacturing operations.

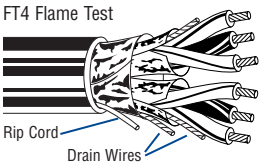
Contact Belden Customer Service for other options:

- 150V
- XLPE insulation (add D suffix to part number)
- Thermocouple alloy conductors
- Overall foil shield only
- Other pair and triad counts

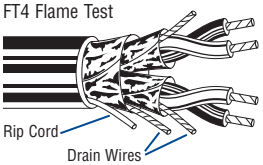
Description	Part Number	No. of Pairs or Triads	Cable Weight		Jacket Thickness		Nominal OD	
			Lbs./1000 Ft.	kg/km	Inch	mm	Inch	mm
20 AWG Pairs Stranded (7x28) TC Conductors • Individual Beldfoil® + Polyester Isolation Tape • Overall Beldfoil Shield (100% Coverage)								
PVC Insulation • Black PVC Jacket (Color Code: Black and White with Numbers)								
CSA C22.2#239, Type CIC CSA C22.2 #0.3 Clause 4.31 Low Acid Gas FT4 Flame Test	**22671***	1	71	106	.045	1.14	.260	6.60
	22638	2	143	213	.045	1.14	.400	10.16
	22639	4	217	323	.045	1.14	.460	11.68
	22640	6	320	476	.045	1.14	.570	14.48
	22641	8	405	603	.060	1.52	.610	15.49
	22676	12	573	853	.060	1.52	.730	18.54
	22643	16	722	1076	.060	1.52	.810	20.57
	22647	24	1103	1641	.080	2.03	1.040	26.42
-25°C Installed -40°C to +105°C (Dry) (75°C Wet)	**22670**	36	1548	2304	.080	2.03	1.190	30.23



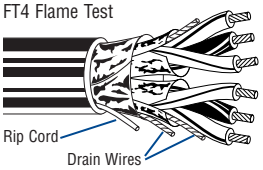
20 AWG Triads Stranded (7x28) TC Conductors • Individual Beldfoil + Polyester Isolation Tape • Overall Beldfoil Shield (100% Coverage)								
PVC Insulation • Black PVC Jacket (Color Code: Black, White and Red with Numbers)								
CSA C22.2#239, Type CIC CSA C22.2 #0.3 Clause 4.31 Low Acid Gas FT4 Flame Test	**22660***	1	89	132	.045	1.14	.270	6.86
	22662	2	177	263	.045	1.14	.420	10.67
	22663	4	277	412	.045	1.14	.490	12.45
	22672	8	521	775	.060	1.52	.650	16.51
	22673	16	1000	1488	.080	2.03	.910	23.11
	22674	24	1414	2104	.080	2.03	1.110	28.19
-25°C Installed • -40°C to +105°C (Dry) (75°C Wet)								



18 AWG Pairs Stranded (7x26) TC Conductors • Individual Beldfoil + Polyester Isolation Tape • Overall Beldfoil Shield (100% Coverage)								
PVC Insulation • Black PVC Jacket (Color Code: Black and White with Numbers)								
CSA C22.2#239, Type CIC CSA C22.2 #0.3 Clause 4.31 Low Acid Gas FT4 Flame Test	**22645***	1	97	144	.045	1.14	.300	7.62
	22633	2	196	292	.045	1.14	.480	12.19
	22648	4	338	503	.045	1.14	.580	14.73
	22634	6	473	704	.060	1.52	.670	17.02
	22635	8	570	848	.060	1.52	.730	18.54
	22636	12	869	1293	.060	1.52	.920	23.37
	22654	16	1095	1630	.080	2.03	1.020	25.91
	22637	24	1552	2310	.080	2.03	1.260	32.00
-25°C Installed • -40°C to +105°C (Dry) (75°C Wet)								



18 AWG Triads Stranded (7x26) TC Conductors • Individual Beldfoil + Polyester Isolation Tape • Overall Beldfoil Shield (100% Coverage)								
PVC Insulation • Black PVC Jacket (Color Code: Black, White and Red with Numbers)								
CSA C22.2#239, Type CIC CSA C22.2 #0.3 Clause 4.31 Low Acid Gas FT4 Flame Test	**22677***	1	121	180	.045	1.14	.303	7.70
	22678	2	256	381	.045	1.14	.480	12.19
	22679	4	427	636	.060	1.52	.620	15.75
	22680	8	597	888	.060	1.52	.710	18.03
	22681	16	740	1101	.060	1.52	.770	19.56
	22682	24	1130	1682	.080	2.03	.980	24.89
	22683	16	1436	2137	.080	2.03	1.090	27.69
	22684	24	2049	3049	.080	2.03	1.340	34.04
-25°C Installed • -40°C to +105°C (Dry) (75°C Wet)								



*One pair/triad cables have one shield and drain wire

TC = Tinned Copper

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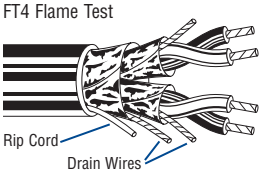
CSA Instrumentation Cable

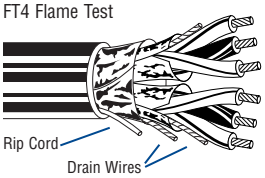
300V CIC

Description	Part Number	No. of Pairs or Triads	Cable Weight		Jacket Thickness		Nominal OD	
			Lbs./1000 Ft.	kg/km	Inch	mm	Inch	mm
16 AWG Pairs Stranded (7x24) TC Conductors • Individual Beldfoil® + Polyester Isolation Tape • Overall Beldfoil Shield (100% Coverage)								
PVC Insulation • Black PVC Jacket (Color Code: Black and White with Numbers)								
CSA C22.2#239, Type CIC CSA C22.2 #0.3 Clause 4.31 Low Acid Gas FT4 Flame Test	**22646***	1	122	182	.045	1.14	.320	8.13
	22628	2	262	390	.045	1.14	.520	13.21
	22629	4	438	652	.060	1.52	.628	15.95
	22630	6	603	897	.060	1.52	.740	18.80
	22631	8	752	1119	.060	1.52	.800	20.32
	22632	12	1148	1708	.080	2.03	1.010	25.65
	22685	16	1461	2174	.080	2.03	1.120	28.45
	22686	24	2091	3112	.080	2.03	1.380	35.05



-25°C Installed
-40°C to +105°C (Dry) (75°C Wet)

Description	Part Number	No. of Pairs or Triads	Cable Weight Lbs./1000 Ft.	Cable Weight kg/km	Jacket Thickness Inch	Jacket Thickness mm	Nominal OD Inch	Nominal OD mm
16 AWG Triads Stranded (7x24) TC Conductors • Individual Beldfoil + Polyester Isolation Tape • Overall Beldfoil Shield (100% Coverage)								
PVC Insulation • Black PVC Jacket (Color Code: Black, White and Red with Numbers)								
CSA C22.2#239, Type CIC CSA C22.2 #0.3 Clause 4.31 Low Acid Gas FT4 Flame Test	**22603***	1	152	226	.045	1.14	.329	8.36
	22687	2	344	512	.045	1.14	.580	14.73
	22675	4	564	839	.060	1.52	.670	17.02
	22688	6	819	1219	.060	1.52	.780	19.81
	22689	8	1063	1582	.080	2.03	.940	23.88
	22690	12	1524	2268	.080	2.03	1.080	27.43



-25°C Installed
-40°C to +105°C (Dry) (75°C Wet)

TC = Tinned Copper

*One pair/triad cables have one shield and drain wire

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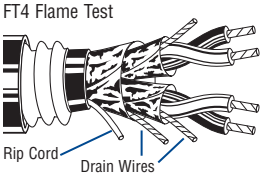
CSA Instrumentation Cable

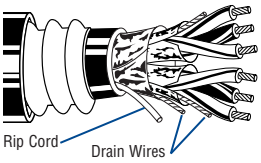
300V ACIC Armored Cables

Description	Part No.		No. of Pairs/ Triads	Cable Weight Aluminum Armor		Cable Weight Steel Armor		Insulation Thickness		Nominal OD Inner Jacket		Nominal OD Outer Jacket	
	Aluminum Armor	Steel Armor		Lbs./ 1000 Ft.	kg/km	Lbs./ 1000 Ft.	kg/km	Inch	mm	Inch	mm	Inch	mm
20 AWG Pairs Stranded (7x28) TC Cond. • Individual Beldfoil® + Polyester Isolation Tape • Overall Beldfoil Shield (100% Coverage) • Drain Wires													
Interlocked Armor • PVC Insulation* • PVC Inner Jacket • Chrome PVC Outer Jacket													
CSA C22.2#239, Type ACIC CSA C22.2#174, HLABCD CSA C22.2#0.3, Clause 4.31 Low Acid Gas FT4 Flame Test	**23543****	**26530****	1	140	208	230	342	.020	.51	.26	6.6	.56	14.2
	23534	**26531**	2	206	307	325	484	.020	.51	.40	10.2	.70	17.8
	23514	**26532**	4	255	379	390	580	.020	.51	.46	11.7	.76	19.3
	23513	**26533**	6	297	442	494	735	.020	.51	.57	14.5	.88	22.4
	23503	**26534**	8	361	537	563	840	.020	.51	.63	16.0	.92	23.4
	23521	**26535**	12	480	714	694	1033	.020	.51	.75	19.1	1.06	26.9
	23532	**26536**	16	600	893	900	1339	.020	.51	.79	20.1	1.16	29.5
	23506	**26537**	24	800	1191	1175	1749	.020	.51	1.05	26.7	1.42	36.1
	23544	**26538**	36	1050	1563	1500	2232	.020	.51	1.14	29.0	1.57	39.9
	23575	**26546**	50	1468	2185	2010	2991	.020	.51	1.37	34.8	1.75	44.5



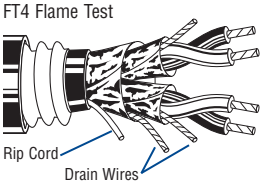
-25°C Installed
-40°C to +105°C (Dry) (75°C Wet)

20 AWG Triads Stranded (7x28) TC Cond. • Individual Beldfoil + Polyester Isolation Tape • Overall Beldfoil Shield (100% Coverage) • Drain Wires													
Interlocked Armor • PVC Insulation* • PVC Inner Jacket • Chrome PVC Outer Jacket													
CSA C22.2#239, Type ACIC CSA C22.2#174, HLBCD CSA C22.2#0.3, Clause 4.31 Low Acid Gas, FT4 Flame Test	**23545****	**26539****	1	139	207	235	350	.020	.51	.27	6.9	.57	14.5
	23546	**26540**	2	210	313	345	513	.020	.51	.43	10.9	.73	18.5
	23547	**26541**	4	270	402	425	632	.020	.51	.50	12.7	.80	20.3
	23548	**26542**	8	444	661	650	967	.020	.51	.69	17.5	1.00	25.4
	23571	**26553**	12	632	941	970	1444	.020	.51	.82	20.8	1.24	31.5
	23549	**26543**	16	740	1101	1090	1622	.020	.51	.91	23.1	1.28	32.5
	23550	**26544**	24	990	1473	1360	2024	.020	.51	1.11	28.2	1.48	37.6



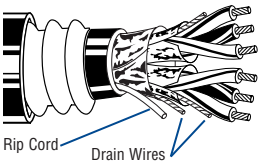
-25°C Installed • -40°C to +105°C (Dry) (75°C Wet)

18 AWG Pairs Stranded (7x26) TC Cond. • Individual Beldfoil + Polyester Isolation Tape • Overall Beldfoil Shield (100% Coverage) • Drain Wires													
Interlocked Armor • PVC Insulation* • PVC Inner Jacket • Chrome PVC Outer Jacket													
CSA C22.2#239, Type ACIC CSA C22.2#174, HLABCD CSA C22.2#0.3, Clause 4.31 Low Acid Gas FT4 Flame Test	**23533****	**26514****	1	160	238	258	384	.025	.64	.30	7.6	.60	15.2
	23511	**26515**	2	247	368	384	572	.025	.64	.48	12.2	.78	19.8
	23530	**26516**	4	340	506	500	744	.025	.64	.58	14.7	.88	22.4
	23528	**26517**	6	420	625	644	958	.025	.64	.67	17.0	.98	24.9
	23531	**26518**	8	543	808	827	1230	.025	.64	.73	18.5	1.03	26.2
	23524	**26519**	12	725	1079	1045	1555	.025	.64	.90	22.9	1.28	32.5
	23519	**26520**	16	850	1265	1210	1801	.025	.64	.99	25.1	1.37	34.8
	23542	**26521**	24	1100	1637	1510	2247	.025	.64	1.24	31.5	1.63	41.4
	23554	**26555**	36	1465	2180	1960	2917	.025	.64	1.41	35.8	1.80	45.7



-25°C Installed • -40°C to +105°C (Dry) (75°C Wet)

18 AWG Triads Stranded (7x26) TC Cond. • Individual Beldfoil + Polyester Isolation Tape • Overall Beldfoil Shield (100% Coverage) • Drain Wires													
Interlocked Armor • PVC Insulation* • PVC Inner Jacket • Chrome PVC Outer Jacket													
CSA C22.2#239, Type ACIC CSA C22.2#174, HLBCD CSA C22.2#0.3, Clause 4.31 Low Acid Gas, FT4 Flame Test	**23505****	**26522****	1	175	260	275	409	.025	.64	.33	8.4	.61	15.5
	23516	**26523**	2	275	409	417	621	.025	.64	.51	13.0	.81	20.6
	23515	**26524**	4	385	573	555	826	.025	.64	.62	15.7	.93	23.6
	23508	**26525**	6	535	796	780	1161	.025	.64	.75	19.1	1.11	28.2
	23523	**26526**	8	680	1012	995	1481	.025	.64	.81	20.6	1.18	30.0
	23512	**26527**	12	916	1363	1215	1808	.025	.64	1.03	26.2	1.40	35.6
	23537	**26528**	16	1020	1518	1400	2083	.025	.64	1.13	28.7	1.50	38.1
	23536	**26529**	24	1335	1987	1775	2642	.025	.64	1.37	34.8	1.80	45.7



-25°C Installed • -40°C to +105°C (Dry) (75°C Wet)

Color Code: Pairs — Black and White with Numbers.
Triads — Black, White and Red with Numbers.

TC = Tinned Copper

*Note: Add D suffix for XLPE insulation. Example: 23543D.
**One pair/triad cables have one foil shield and drain wire

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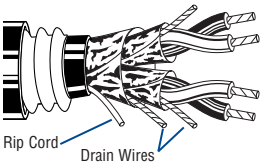
CSA Instrumentation Cable

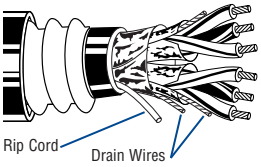
300V ACIC Armored Cables

Description	Part No. Aluminum Armor	Part No. Steel Armor	No. of Pairs/ Triads	Cable Weight Aluminum Armor Lbs./ 1000 Ft.	Cable Weight Aluminum Armor kg/km	Cable Weight Steel Armor Lbs./ 1000 Ft.	Cable Weight Steel Armor kg/km	Insulation Thickness Inch	Insulation Thickness mm	Nominal OD Inner Jacket Inch	Nominal OD Inner Jacket mm	Nominal OD Outer Jacket Inch	Nominal OD Outer Jacket mm
16 AWG Pairs Stranded (7x24) TC Conductors • Individual Beldfoil® + Polyester Isolation Tape • Overall Beldfoil Shield (100% Coverage)													
Interlocked Armor • PVC Insulation* • PVC Inner Jacket • Chrome PVC Outer Jacket													
CSA C22.2#239, Type ACIC CSA C22.2#174, HLABCD CSA C22.2#0.3, Clause 4.31 Low Acid Gas FT4 Flame Test	**23501****	**26500****	1	175	260	280	417	.025	.64	.33	8.4	.62	15.8
	23527	**26501**	2	280	417	425	635	.025	.64	.52	13.2	.81	20.6
	23509	**26503**	4	395	588	570	848	.025	.64	.63	16.0	.93	23.6
	23500	**26504**	6	510	759	715	1064	.025	.64	.73	18.5	1.03	26.2
	23510	**26505**	8	625	930	910	1354	.025	.64	.79	20.1	1.16	29.5
	23525	**26506**	12	875	1302	1230	1831	.025	.64	1.00	25.4	1.37	34.8
	23539	**26507**	16	1054	1569	1445	2151	.025	.64	1.12	28.2	1.48	37.6
	23538	**26508**	24	1397	2079	1840	2738	.025	.64	1.36	34.5	1.75	44.5
	23568	**26551**	36	1920	2857	2460	3661	.025	.64	1.60	40.6	1.97	50.0



-25°C Installed • -40°C to +105°C (Dry) (75°C Wet)

16 AWG Triads Stranded (7x24) TC Conductors • Individual Beldfoil + Polyester Isolation Tape • Overall Beldfoil Shield (100% Coverage)													
Interlocked Armor • PVC Insulation* • PVC Inner Jacket • Chrome PVC Outer Jacket													
CSA C22.2#239, Type ACIC CSA C22.2#174, HLBCD CSA C22.2#0.3, Clause 4.31 Low Acid Gas FT4 Flame Test	**23507****	**26502****	1	190	282	295	439	.025	.64	.35	8.9	.63	16.0
	23522	**26509**	2	342	508	500	744	.025	.64	.58	14.7	.90	22.9
	23520	**26510**	4	450	670	640	953	.025	.64	.68	17.3	.95	24.1
	23529	**26511**	6	650	967	928	1381	.025	.64	.78	19.8	1.19	30.2
	23526	**26512**	8	825	1228	1130	1682	.025	.64	.93	23.6	1.30	33.0
	23541	**26513**	12	1082	1610	1511	2249	.025	.64	1.13	28.7	1.50	38.1
	23567	**26545**	16	1285	1912	1705	2537	.025	.64	1.25	31.8	1.64	41.7
	23578	**26547**	24	1725	2567	2200	3274	.025	.64	1.58	40.1	1.95	49.5



-25°C Installed • -40°C to +105°C (Dry) (75°C Wet)

TC = Tinned Copper

*Note: Add D suffix for XLPE insulation. Example: 23501D.
**One pair/triad cables have one foil shield and drain wire

Color Code: Pairs — Black and White with Numbers.
Triads — Black, White and Red with Numbers.

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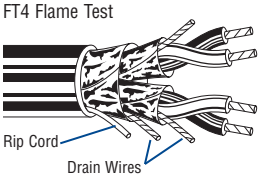
CSA Instrumentation Cable

600V CIC

Description	Part Number	No. of Pairs or Triads	Cable Weight		Jacket Thickness		Nominal OD	
			Lbs./ 1000 Ft.	kg/km	Inch	mm	Inch	mm
18 AWG Pairs Stranded (7x26) TC Conductors • Individual Beldfoil® + Polyester Isolation Tape • Overall Beldfoil Shield (100% Coverage)								
PVC Insulation • Black PVC Jacket (Color Code: Black and White with Numbers)								
CSA C22.2#239, Type CIC CSA C22.2#0.3, Clause 4.31 Low Acid Gas FT4 Flame Test	**22417***	1	109	162	.045	1.14	.32	8.13
	22405	2	229	341	.045	1.14	.51	12.95
	22404	4	374	557	.060	1.52	.63	16.00
	22418	8	632	941	.060	1.52	.79	20.07
	22421	12	970	1444	.080	2.03	1.00	25.40
	22419	24	1741	2591	.080	2.03	1.36	34.54



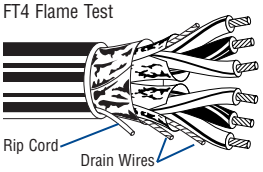
-25°C Installed
-40°C to +105°C (Dry) (75°C Wet)

18 AWG Triads Stranded (7x26) TC Conductors • Individual Beldfoil + Polyester Isolation Tape • Overall Beldfoil Shield (100% Coverage)

PVC Insulation • Black PVC Jacket (Color Code: Black, White and Red with Numbers)

CSA C22.2#239, Type CIC
CSA C22.2#0.3, Clause 4.31 Low Acid Gas
FT4 Flame Test

22442*	1	131	195	.045	1.14	.34	8.64
22443	2	299	445	.060	1.52	.58	14.73
22444	4	476	708	.060	1.52	.68	17.27
22445	8	893	1329	.080	2.03	.88	22.35



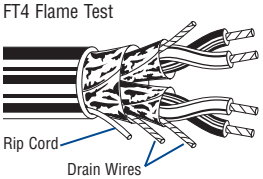
-25°C Installed
-40°C to +105°C (Dry) (75°C Wet)

16 AWG Pairs Stranded (7x24) TC Conductors • Individual Beldfoil + Polyester Isolation Tape • Overall Beldfoil Shield (100% Coverage)

PVC Insulation • Black PVC Jacket (Color Code: Black and White with Numbers)

CSA C22.2#239, Type CIC
CSA C22.2#0.3, Clause 4.31 Low Acid Gas
FT4 Flame Test

22416*	1	129	192	.045	1.14	.34	8.64
22409	2	229	341	.045	1.14	.59	14.99
22410	4	469	698	.060	1.52	.68	17.27
22446	6	667	993	.060	1.52	.79	20.07
22411	8	841	1252	.080	2.03	.90	22.86
22412	12	1235	1838	.080	2.03	1.09	27.69
22447	24	2250	3349	.080	2.03	1.49	37.85



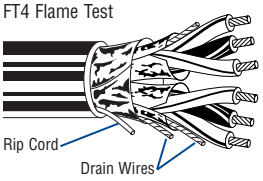
-25°C Installed
-40°C to +105°C (Dry) (75°C Wet)

16 AWG Triads Stranded (7x24) TC Conductors • Individual Beldfoil + Polyester Isolation Tape • Overall Beldfoil Shield (100% Coverage)

PVC Insulation • Black PVC Jacket (Color Code: Black, White and Red with Numbers)

CSA C22.2#239, Type CIC
CSA C22.2#0.3, Clause 4.31 Low Acid Gas
FT4 Flame Test

22413*	1	167	249	.045	1.14	.36	9.14
22448	2	372	554	.045	1.14	.62	15.88
22414	4	606	902	.060	1.52	.72	18.29
22415	8	1144	1703	.080	2.03	.96	24.38



-25°C Installed
-40°C to +105°C (Dry) (75°C Wet)

TC = Tinned Copper

*One pair/triad cables have one foil shield and drain wire

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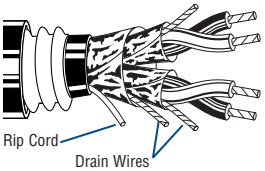
CSA Instrumentation Cable

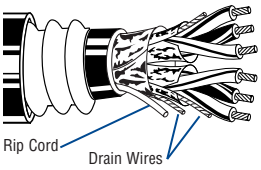
600V ACIC Armored Cables

Description	Part No. Aluminum Armor	Part No. Steel Armor	No. of Pairs/ Triads	Cable Weight Aluminum Armor Lbs./ 1000 Ft.	Cable Weight Aluminum Armor kg/km	Cable Weight Steel Armor Lbs./ 1000 Ft.	Cable Weight Steel Armor kg/km	Insulation Thickness Inch	Insulation Thickness mm	Nominal OD Inner Jacket Inch	Nominal OD Inner Jacket mm	Nominal OD Outer Jacket Inch	Nominal OD Outer Jacket mm
18 AWG Pairs Stranded (7x26) TC Cond. • Individual Beldfoil® + Polyester Isolation Tape • Overall Beldfoil Shield (100% Coverage)													
Interlocked Armor • PVC Insulation* • PVC Inner Jacket • Chrome PVC Outer Jacket													
CSA C22.2#239, Type ACIC CSA C22.2#174, HLABCD CSA C22.2#0.3, Clause 4.31 Low Acid Gas, FT4 Flame Test	**24511****	**25506****	1	154	229	257	382	.030	.76	.32	8.13	.61	15.49
	24512	**25514**	2	238	354	387	575	.030	.76	.51	12.95	.82	20.83
	24513	**25503**	4	335	499	504	750	.030	.76	.63	16.00	.93	23.62
	24514	**25505**	8	536	798	829	1233	.030	.76	.79	20.27	1.15	29.21
	24515	**25501**	12	739	1100	1092	1624	.030	.76	1.00	25.40	1.36	34.54
	24520	**25517**	24	1169	1740	1674	2490	.030	.76	1.36	34.54	1.75	44.45



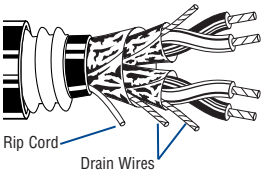
-25°C Installed • -40°C to +105°C (Dry) (75°C Wet)

18 AWG Triads Stranded (7x26) TC Conductors • Individual Beldfoil + Polyester Isolation Tape • Overall Beldfoil Shield (100% Coverage)													
Interlocked Armor • PVC Insulation* • PVC Inner Jacket • Chrome PVC Outer Jacket													
CSA C22.2#239, Type ACIC CSA C22.2#174, HLBCD CSA C22.2#0.3, Clause 4.31 Low Acid Gas, FT4 Flame Test	**24516****	**25500****	1	166	247	276	411	.030	.76	.34	8.64	.63	16.00
	24517	**25522**	2	293	436	455	677	.030	.76	.58	14.73	.89	22.61
	24518	**25520**	4	391	582	572	851	.030	.76	.66	16.76	.99	25.15
	24519	**25523**	8	673	1002	988	1470	.030	.76	.88	22.35	1.29	32.77



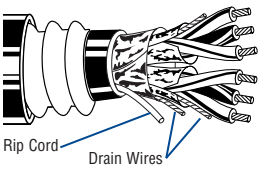
-25°C Installed • -40°C to +105°C (Dry) (75°C Wet)

16 AWG Pairs Stranded (7x24) TC Cond. • Individual Beldfoil + Polyester Isolation Tape • Overall Beldfoil Shield (100% Coverage)													
Interlocked Armor • PVC Insulation* • PVC Inner Jacket • Chrome PVC Outer Jacket													
CSA C22.2#239, Type ACIC CSA C22.2#174, HLABCD CSA C22.2#0.3, Clause 4.31 Low Acid Gas, FT4 Flame Test	**24500****	**25504****	1	171	254	279	415	.030	.76	.34	8.64	.64	16.26
	24505	**25510**	2	299	445	455	677	.030	.76	.59	14.99	.89	22.61
	24502	**25511**	4	450	670	583	868	.030	.76	.68	17.27	.98	24.89
	24506	**25512**	6	576	857	880	1310	.030	.76	.79	20.07	1.16	29.46
	24503	**25513**	8	679	1010	1005	1496	.030	.76	.90	22.86	1.27	32.26
	24504	**25518**	12	908	1351	1280	1905	.030	.76	1.09	27.69	1.46	37.08
	24510	**25519**	24	1502	2235	2030	3021	.030	.76	1.49	37.85	1.88	47.75



-25°C Installed • -40°C to +105°C (Dry) (75°C Wet)

16 AWG Triads Stranded (7x24) TC Conductors • Individual Beldfoil + Polyester Isolation Tape • Overall Beldfoil Shield (100% Coverage)													
Interlocked Armor • PVC Insulation* • PVC Inner Jacket • Chrome PVC Outer Jacket													
CSA C22.2#239, Type ACIC CSA C22.2#174, HLBCD CSA C22.2#0.3, Clause 4.31 Low Acid Gas, FT4 Flame Test	**24501****	**25502****	1	195	290	309	460	.030	.76	.36	9.14	.66	16.76
	24507	**25507**	2	339	505	465	692	.030	.76	.62	15.75	.94	23.88
	24508	**25509**	4	464	691	793	1180	.030	.76	.72	18.29	1.05	26.67
	24509	**25508**	8	807	1201	1250	1860	.030	.76	.96	24.38	1.33	33.78



-25°C Installed • -40°C to +105°C (Dry) (75°C Wet)

Color Code: Pairs — Black and White with Numbers.
Triads — Black, White and Red with Numbers.

TC = Tinned Copper

*Note: Add D suffix for XLPE insulation. Example: 24511D.
**One pair/triad cables have one foil shield and drain wire

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CSA Control and Power Cable

600V and 1000V TC/CIC Multi-conductor Cables

Cable Specifications

- CSA C22.2 #230 Type TC
- CSA C22.2 #239 Control and Instrumentation (600V only)
- CSA C22.2 #38 Type TC (1000V only)
- CSA FT4 70,000 BTU Flame Test
- 90°C Dry & Wet
- -40°C Cold Bend, -25°C Cold Impact
- -25°C Installation temp
- Per CEC Part 1, Suitable for use in hazardous locations:
  Class 1 — Zone 2
  Class 2 — Division 2
- Sunlight Resistant/UV Resistant
- Direct Burial

To Create a Part Number

Add suffix "S" for Overall Foil Shielding

Sample Part Number:

21500S = 600V CSA Tray Control Cable 2-conductor, 14 AWG Bare Copper Conductor with XLPE Insulation, PVC Jacket, and Overall Foil Shield

Color Codes

No. of Conductors	Color Combination
2	Black & White
3	Black, Red & Blue
4	Black, Red, Blue & White
5 or more	Black & Number Coded

No. of Conductors	Part Numbers					
	14 AWG (7 Strand)		12 AWG (7 Strand)		10 AWG (7 Strand)	
	600V	1000V	600V	1000V	600V	1000V
2	21500	21300	21550	21350	21600	21400
3	21501	21301	21551	21351	21601	21401
4	21502	21302	21552	21352	21602	21402
5	21503	21303	21553	21353	21603	21403
6	21504	21304	21554	21354	21604	21404
7	21505	21305	21555	21355	21605	21405
8	21506	21306	21556	21356	21606	21406
9	21507	21307	21557	21357	21607	21407
10	21508	21308	21558	21358	21608	21408
11	21509	21309	21559	21359	21609	21409
12	21510	21310	21560	21360	21610	21410
13	21511	21311	21561	21361	21611	21411
14	21512	21312	21562	21362	21612	21412
15	21513	21313	21563	21363	21613	21413
16	21514	21314	21564	21364	21614	21414
17	21515	21315	21565	21365	21615	21415
18	21516	21316	21566	21366	21616	21416
19	21517	21317	21567	21367	21617	21417
20	21518	21318	21568	21368	21618	21418
21	21519	21319	21569	21369	21619	21419
22	21520	21320	21570	21370	21620	21420
23	21521	21321	21571	21371	21621	21421
24	21522	21322	21572	21372	21622	21422
25	21523	21323	21573	21373	21623	21423
26	21524	21324	21574	21374	21624	21424
27	21525	21325	21575	21375	21625	21425
28	21526	21326	21576	21376	21626	21426
29	21527	21327	21577	21377	21627	21427
30	21528	21328	21578	21378	21628	21428
31	21529	21329	21579	21379	21629	21429
32	21530	21330	21580	21380	21630	21430
33	21531	21331	21581	21381	21631	21431
34	21532	21332	21582	21382	21632	21432
35	21533	21333	21583	21383	21633	21433
36	21534	21334	21584	21384	21634	21434
37	21535	21335	21585	21385	21635	21435
38	21536	21336	21586	21386	21636	21436
39	21537	21337	21587	21387	21637	21437
40	21538	21338	21588	21388	21638	21438
41	21539	21339	21589	21389	21639	21439
42	21540	21340	21590	21390	21640	21440
43	21541	21341	21591	21391	21641	21441
44	21542	21342	21592	21392	21642	21442
45	21543	21343	21593	21393	21643	21443
46	21544	21344	21594	21394	21644	21444
47	21545	21345	21595	21395	21645	21445
48	21546	21346	21596	21396	21646	21446
49	21547	21347	21597	21397	21647	21447
50	21548	21348	21598	21398	21648	21448

No. of Cond.	Part Numbers									
	8 AWG (7 Strand)		6 AWG (7 Strand)		4 AWG (7 Strand)		3 AWG (7 Strand)		2 AWG (7 Strand)	
	600V	1000V	600V	1000V	600V	1000V	600V	1000V	600V	1000V
2	21650	21450	21653	21453	21656	21456	21659	21459	21662	21462
3	21651	21451	21654	21454	21657	21457	21660	21460	21663	21463
4	21652	21452	21655	21455	21658	21458	21661	21461	21664	21464

No. of Cond.	Part Numbers									
	1 AWG (19 Strand)		1/0 AWG (19 Strand)		2/0 AWG (19 Strand)		3/0 AWG (19 Strand)		4/0 AWG (19 Strand)	
	600V	1000V	600V	1000V	600V	1000V	600V	1000V	600V	1000V
2	21665	21465	21668	21468	21671	21471	21674	21474	21677	21477
3	21666	21466	21669	21469	21672	21472	21675	21475	21678	21478
4	21667	21467	21670	21470	21673	21473	21676	21476	21679	21479

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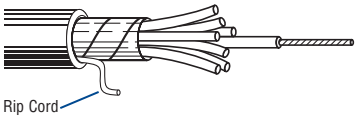
CSA Control Cable

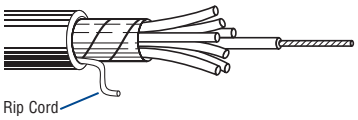
600V CIC Multi-conductor Cables

Description	Part Number	No. of Cond.	Cable Weight		Insulation Thickness		Jacket Thickness		Nominal OD	
			Lbs./ 1000 Ft.	kg/km	Inch	mm	Inch	mm	Inch	mm
14 AWG Stranded (7x22) Bare Copper Conductors										
Cross-linked Polyethylene Insulation • Black PVC Jacket (Color Code: Black and Numbered)										
CSA C22.2#131, Type CIC CSA C22.2#0.3, Clause 4.31 Low Acid Gas FT4 Flame Test	**22100**	2	62	92	.030	.76	.045	1.14	.367	9.32
	22101	3	81	121	.030	.76	.045	1.14	.388	9.86
	22102	4	101	150	.030	.76	.045	1.14	.423	10.74
	22103	5	122	182	.030	.76	.045	1.14	.462	11.74
	22104	6	143	213	.030	.76	.045	1.14	.504	12.80
	22105	7	160	238	.030	.76	.045	1.14	.504	12.80
	22106	8	197	293	.030	.76	.060	1.52	.576	14.63
	22107	9	220	327	.030	.76	.060	1.52	.618	15.70
	22108	10	226	336	.030	.76	.060	1.52	.669	17.00
	22110	12	279	415	.030	.76	.060	1.52	.689	17.50
	22114	16	357	531	.030	.76	.060	1.52	.764	19.41
-25°C Installed -40°C to +90°C (Dry) (75°C Wet)	**22118**	20	467	695	.030	.76	.080	2.03	.886	22.50



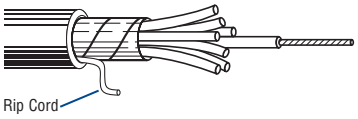
12 AWG Stranded (7x20) Bare Copper Conductors

Cross-linked Polyethylene Insulation • Black PVC Jacket (Color Code: Black and Numbered)										
CSA C22.2#131, Type CIC CSA C22.2#0.3, Clause 4.31 Low Acid Gas FT4 Flame Test	**22120**	2	82	122	.030	.76	.045	1.14	.405	10.29
	22121	3	109	162	.030	.76	.045	1.14	.429	10.90
	22122	4	140	208	.030	.76	.045	1.14	.469	11.91
	22123	5	170	253	.030	.76	.045	1.14	.515	13.08
	22124	6	214	319	.030	.76	.060	1.52	.591	15.01
	22125	7	240	357	.030	.76	.060	1.52	.591	15.01
	22126	8	270	402	.030	.76	.060	1.52	.639	16.23
	22127	9	302	449	.030	.76	.060	1.52	.687	17.45
	22128	10	336	500	.030	.76	.060	1.52	.745	18.92
	22130	12	390	580	.030	.76	.060	1.52	.768	19.51
	22134	16	584	869	.030	.76	.080	2.03	.893	22.68
-25°C Installed -40°C to +90°C (Dry) (75°C Wet)	**22138**	20	655	975	.030	.76	.080	2.03	.992	25.20



10 AWG Stranded (7x18) Bare Copper Conductors

Cross-linked Polyethylene Insulation • Black PVC Jacket (Color Code: Black and Numbered)										
CSA C22.2#131, Type CIC CSA C22.2#0.3, Clause 4.31 Low Acid Gas FT4 Flame Test	**22140**	2	148	220	.030	.76	.045	1.14	.736	18.69
	22141	3	189	281	.030	.76	.045	1.14	.763	19.38
	22142	4	248	369	.030	.76	.060	1.52	.839	21.31
	22143	5	293	436	.030	.76	.060	1.52	.891	22.63
	22144	6	338	503	.030	.76	.060	1.52	.944	23.98
	22145	7	378	563	.030	.76	.060	1.52	.944	23.98
	22146	8	424	631	.030	.76	.060	1.52	.999	25.38
	22147	9	469	698	.030	.76	.060	1.52	1.074	27.28
	22148	10	548	816	.030	.76	.080	2.03	1.182	30.02
	22150	12	631	939	.030	.76	.080	2.03	1.209	30.71
	22152	14	717	1067	.030	.76	.080	2.03	1.255	31.88
-25°C Installed -40°C to +90°C (Dry) (75°C Wet)	**22154**	16	805	1198	.030	.76	.080	2.03	1.307	33.20



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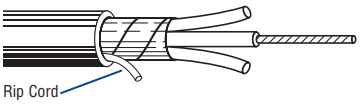
케이블 콘(주) 기술지원팀 :: 콘넥터 문의 0707-434-7701 케이블 문의 0707-434-7702

CSA Control Cable

600V CIC Multi-conductor Cables

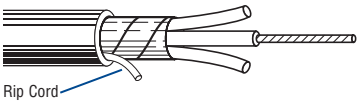
Description	Part Number	No. of Cond.	Cable Weight		Insulation Thickness		Jacket Thickness		Nominal OD	
			Lbs./ 1000 Ft.	kg/km	Inch	mm	Inch	mm	Inch	mm
8 AWG Stranded (7x16) Bare Copper Conductors										
Cross-linked Polyethylene Insulation • Black PVC Jacket (Color Code: Black and Numbered)										
CSA C22.2#131, Type CIC CSA C22.2#0.3, Clause 4.31 Low Acid Gas FT4 Flame Test	**22160**	2	240	357	.045	1.14	.060	1.52	.863	21.92
	22161	3	308	458	.045	1.14	.060	1.52	.898	22.81
	22162	4	379	564	.045	1.14	.060	1.52	.957	24.31



-25°C Installed
-40°C to +90°C (Dry) (75°C Wet)

6 AWG Stranded (7x14) Bare Copper Conductors

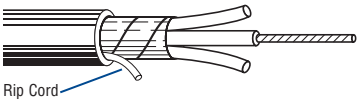
Cross-linked Polyethylene Insulation • Black PVC Jacket (Color Code: Black and Numbered)										
CSA C22.2#131, Type CIC CSA C22.2#0.3, Clause 4.31 Low Acid Gas FT4 Flame Test	**22170**	2	279	415	.060	1.52	.060	1.52	.711	18.06
	22171	3	383	570	.060	1.52	.060	1.52	.756	19.20



-25°C Installed
-40°C to +90°C (Dry) (75°C Wet)

4 AWG Stranded (7x12) Bare Copper Conductors

Cross-linked Polyethylene Insulation • Black PVC Jacket (Color Code: Black and Numbered)										
CSA C22.2#131, Type CIC CSA C22.2#0.3, Clause 4.31 Low Acid Gas FT4 Flame Test	**22180**	2	390	580	.060	1.52	.060	1.52	.800	20.32
	22181	3	580	863	.060	1.52	.080	2.03	.891	22.63



-25°C Installed
-40°C to +90°C (Dry) (75°C Wet)

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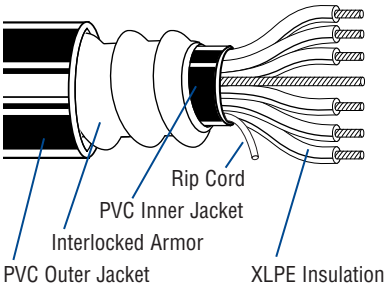
CSA Control Cable

600V ACIC and Teck90 Cables — Overview



Introduction

Belden® Teck90 and ACIC cables are designed to meet demanding industrial needs by combining rugged durability and corrosion resistance with flexibility and easy handling.

Teck90 and ACIC Cables are available in a wide range of in-stock and custom constructions to meet the needs of pulp and paper, chemical, petroleum and other demanding industrial and resource industry environments. They are ideal for use in wet or dry areas; ventilated, non-ventilated or ladder-type cable troughs; ventilated flexible cableways; and for direct burial.

Belden Teck90 Cable is marked with “FT4,” “HL” designations, and cable constructions are certified to CSA Standard C22.2#131 and C22.2#174 for use in a wide range of hazardous locations. Both inner and outer jackets meet the acid gas evolution requirement of 14% maximum required by CSA Standard C22.2#0.3 Clause 4.31.

Custom cables are available upon request.

Construction

Class B stranded bare copper conductors, cross-link polyethylene insulation, bare copper ground wire, PVC inner jacket, aluminum steel interlocking armor, PVC outer jacket.

- Galvanized steel interlocking armor available as an option.

Voltage Rating

18 to 16 AWG — 600V ACIC

14 to 8 AWG — 600 Volts

14 to 4/0 AWG — 1000 Volts

Temperature Rating

-40°C to 90°C (Dry/Wet)

-25°C installed

Application

Teck90 and ACIC are general-purpose cables used in the pulp and paper, mining, petroleum and chemical industries as well as in commercial buildings.

Teck90 and ACIC may be used under the following conditions:

- Exposed or concealed wiring in dry or wet conditions
- In ventilated, non-ventilated or ladder-type cable trays in dry or wet conditions
- On walls or beams
- Directly buried
- CEC Class I, Division I locations

Minimum Bending Radius

12 times the overall cable diameter

Pulling Tensions

The combined use of Kellems grips and pulling eyes is recommended.

Design Advantages

Insulation Properties

- High tensile strength
- Impact- and crush-resistant
- Heat-resistant
- Excellent elongation
- Moisture-resistant
- Good low temperature properties

Electrical Properties

- High insulation resistance
- Low dielectric loss
- High dielectric strength

Other Features

- Corrosion-resistant
- Versatile and flexible
- Provides cost savings as conduit and ducts are not required
- ACIC has a blue jacket
- Rip cord for inner jacket

Specifications

- CSA Standard C22.2#131
- CSA Standard C22.2#174 “Cables and Cable Glands for Use in Hazardous Locations”
- CSA Standard C22.2#0.3 Clause 4.31 “Low Acid Gas”
- CSA Standard C22.2#0.3 Clause 4.11.4 “Cables with FT4 Marking”

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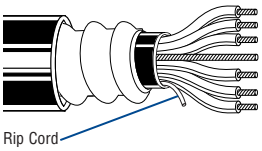
CSA Control Cable

600V ACIC Cables

18 AWG Stranded (7x26) Bare Copper Conductors • 18 AWG Bare Copper Ground Wire

Aluminum Interlocked Armor • .030″ (.76mm) XLPE Insulation • PVC Inner Jacket • Blue PVC Outer Jacket

CSA C22.2#239
FT4 Flame Test



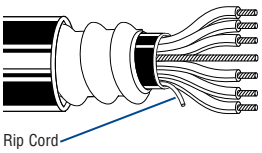
HAZ LOC
CSA C22.2#0.3 Clause 4.31 Low Acid Gas

Description	Part No.	No. of Cond.	Cable Weight Lbs./1000 Ft.	Cable Weight kg/km	Inner Jacket OD Inch	Inner Jacket OD mm	Armor OD Inch	Armor OD mm	Outer Jacket Inch	Outer Jacket mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
	29030	2	163	243	.32	8.13	.52	13.21	.62	15.75	44	196	7.4	187.96
	29031	3	177	263	.34	8.64	.54	13.72	.64	16.26	66	294	7.6	193.04
	29032	4	195	290	.37	9.40	.57	14.48	.67	17.02	88	392	8.0	203.20
	29033	5	219	326	.41	10.41	.61	15.49	.71	18.03	110	490	8.5	215.90
	29034	6	239	356	.45	11.43	.65	16.51	.75	19.05	132	587	9.0	228.60
	29035	7	245	365	.45	11.43	.65	16.51	.75	19.05	154	685	9.0	228.60
	29036	8	266	396	.48	12.19	.68	17.27	.78	19.81	176	783	9.3	236.22
	29038	10	331	493	.56	14.22	.76	19.30	.87	22.10	220	979	10.6	269.24
	29040	12	353	525	.62	15.75	.82	20.83	.93	23.62	264	1175	11.1	281.94
	29043	15	401	597	.65	16.51	.85	21.59	.96	24.38	330	1469	11.5	292.10
	29048	20	466	694	.73	18.54	.93	23.62	1.04	26.42	440	1958	12.4	314.96
	29053	25	589	877	.79	20.07	1.05	26.67	1.16	29.46	550	2448	13.9	353.06
	29058	30	698	1039	.88	22.35	1.14	28.96	1.25	31.75	660	2937	15.0	381.00
	29068	40	827	1231	.97	24.64	1.23	31.24	1.35	34.29	880	3916	16.2	411.48
	29078	50	965	1436	1.09	27.69	1.35	34.29	1.47	37.34	1100	4895	17.6	447.04

16 AWG Stranded (7x24) Bare Copper Conductors • 16 AWG Bare Copper Ground Wire

Aluminum Interlocked Armor • .030″ (.76mm) XLPE Insulation • PVC Inner Jacket • Blue PVC Outer Jacket

CSA C22.2#239
FT4 Flame Test



HAZ LOC
CSA C22.2#0.3 Clause 4.31 Low Acid Gas

Description	Part No.	No. of Cond.	Cable Weight Lbs./1000 Ft.	Cable Weight kg/km	Inner Jacket OD Inch	Inner Jacket OD mm	Armor OD Inch	Armor OD mm	Outer Jacket Inch	Outer Jacket mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
	29017	2	202	301	.34	8.64	.54	13.72	.65	16.51	70	312	7.7	195.58
	29004	3	221	329	.36	9.14	.56	14.22	.66	16.76	105	467	7.9	200.66
	29018	4	242	360	.39	9.91	.59	14.99	.70	17.78	140	623	8.3	210.82
	29019	5	264	393	.42	10.67	.62	15.75	.73	18.54	175	779	8.6	218.44
	29005	6	292	435	.46	11.68	.66	16.76	.77	19.56	210	935	9.1	231.14
	29020	7	314	467	.47	11.94	.67	17.02	.77	19.56	245	1090	9.2	233.68
	29021	8	364	542	.50	12.70	.70	17.78	.80	20.32	280	1246	9.6	243.84
	29022	10	412	613	.61	15.49	.81	20.57	.92	23.37	350	1558	10.9	276.86
	29006	12	441	656	.63	16.00	.83	21.08	.94	23.88	420	1869	11.2	284.48
	29023	15	502	748	.68	17.27	.88	22.35	1.00	25.40	525	2336	11.9	302.26
	29007	20	636	947	.77	19.56	1.03	26.16	1.13	28.70	700	3115	13.7	347.98
	29024	25	845	1258	.89	22.61	1.15	29.21	1.26	32.00	875	3894	15.1	383.54
	29008	30	922	1372	.94	23.88	1.20	30.48	1.30	33.02	1050	4673	15.8	401.32
	29009	40	1109	1650	1.06	26.92	1.32	33.53	1.41	35.81	1400	6230	17.3	439.42
	29016	50	1306	1944	1.19	30.23	1.45	36.83	1.54	39.12	1750	7788	18.8	477.52
	29025	60	1390	2070	1.27	32.26	1.53	38.86	1.66	42.16	2100	9345	19.9	505.46

XLPE = Cross-linked Polyethylene

Color Code: #1 conductor is white; remaining conductors are black with number coding. Other color codes available upon request.

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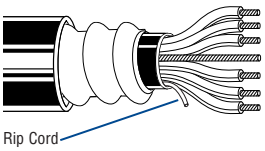
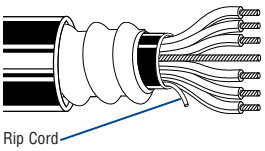
CSA Control Cable

600V Teck90 Cables

Description	Part No.	No. of Cond.	Cable Weight		Inner Jacket OD		Armor OD		Outer Jacket		Maximum Pull Tension		Minimum Bend Radius	
			Lbs./ 1000 Ft.	kg/km	Inch	mm	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
14 AWG Stranded (7x22) Bare Copper Conductors • 14 AWG Bare Copper Ground Wire														
Aluminum Interlocked Armor • .030″ (.76mm) XLPE Insulation • PVC Inner Jacket • Black PVC Outer Jacket														
CSA C22.2#131 FT4 Flame Test	**C5500**	2	198	296	.36	9.14	.56	14.22	.66	16.76	108	481	7.8	198.12
	C5501	3	222	331	.39	9.91	.58	14.73	.66	16.76	162	721	8.2	208.28
	C5502	4	251	375	.42	10.67	.62	15.75	.71	18.03	216	961	8.5	215.90
	C5503	5	284	424	.47	11.94	.66	16.76	.74	18.80	270	1202	9.0	228.60
	C5504	6	317	473	.51	12.95	.70	17.78	.78	19.81	324	1442	9.5	241.30
	C5505	7	331	494	.51	12.95	.70	17.78	.78	19.81	378	1682	9.5	241.30
	C5506	8	414	618	.58	14.73	.77	19.56	.86	21.84	432	1922	10.4	264.16
	C5508	10	510	761	.67	17.02	.93	23.62	.95	24.13	540	2403	12.3	312.42
	C5510	12	551	822	.69	17.53	.95	24.13	.97	24.64	648	2884	12.6	320.04
	C5513	15	636	949	.77	19.56	1.03	26.16	1.11	28.19	810	3605	14.1	358.14
	C5518	20	810	1209	.90	22.86	1.16	29.46	1.24	31.50	1080	4806	15.1	383.54
	C5523	25	948	1415	.90	22.86	1.24	31.50	1.33	33.78	1350	6008	16.1	408.94
	C5528	30	1047	1563	1.05	26.67	1.30	33.02	1.40	35.56	1620	7209	16.8	426.72
	C5529	40	1310	1955	1.20	30.48	1.42	36.07	1.51	38.35	2160	9612	18.3	464.82
HAZ LOC CSA C22.2#0.3 Clause 4.31 Low Acid Gas	**C6064**	50	1620	2418	1.35	34.29	1.60	40.64	1.66	42.16	2700	12015	20.5	520.70



12 AWG Stranded (7x20) Bare Copper Conductors • 14 AWG Bare Copper Ground Wire														
Aluminum Interlocked Armor • .030″ (.76mm) XLPE Insulation • PVC Inner Jacket • Black PVC Outer Jacket														
CSA C22.2#131 FT4 Flame Test	**C5530**	2	225	336	.41	10.41	.60	15.24	.69	17.53	172	765	8.3	210.82
	C5531	3	261	390	.43	10.92	.62	15.75	.70	17.78	258	1148	8.6	218.44
	C5532	4	301	449	.47	11.94	.66	16.76	.73	18.54	344	1531	9.1	231.14
	C5533	5	348	519	.52	13.21	.71	18.03	.78	19.81	430	1914	9.1	231.14
	C5534	6	435	649	.59	14.99	.78	19.81	.86	21.84	516	2296	10.5	266.70
	C5535	7	450	672	.59	14.99	.78	19.81	.86	21.84	602	2679	10.5	266.70
	C5536	8	506	755	.64	16.26	.83	21.08	.92	23.37	688	3062	11.1	281.94
	C5538	10	633	945	.75	19.05	1.01	25.65	1.02	25.91	860	3827	13.3	337.82
	C5540	12	696	1039	.77	19.56	1.03	26.16	1.12	28.45	1032	4592	13.5	342.90
	C5543	15	823	1228	.90	22.86	1.16	29.46	1.24	31.50	1290	5741	15.1	383.54
	C5548	20	1035	1545	.99	25.15	1.25	31.75	1.34	34.04	1720	7654	16.5	419.10
	C5553	25	1230	1836	1.10	27.94	1.36	34.54	1.45	36.83	2150	9568	17.6	447.04
HAZ LOC CSA C22.2#0.3 Clause 4.31 Low Acid Gas	**C5558**	30	1390	2075	1.20	30.48	1.46	37.08	1.51	38.35	2580	11481	17.6	447.04



XLPE = Cross-linked Polyethylene

Color Code: 2 conductors — Black, White (If required, a Red conductor can be used in place of White.)
3 conductors — Black, Red, Blue (If required, a White conductor can be used in place of Blue.)
4 conductors — Black, Red, Blue, White
5 or more conductors — Black and numbered

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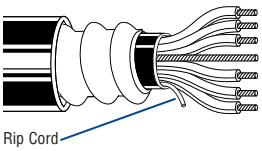
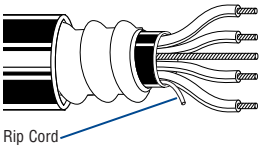
CSA Control Cable

600V Teck90 Cables

Description	Part No.	No. of Cond.	Cable Weight		Inner Jacket OD		Armor OD		Outer Jacket		Maximum Pull Tension		Minimum Bend Radius	
			Lbs./ 1000 Ft.	kg/km	Inch	mm	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
10 AWG Stranded (7x18) Bare Copper Conductors • 12 AWG Bare Copper Ground Wire														
Aluminum Interlocked Armor • .030″ (.76mm) XLPE Insulation • PVC Inner Jacket • Black PVC Outer Jacket														
CSA C22.2#131 FT4 Flame Test	**C5560**	2	278	415	.48	12.19	.66	16.76	.72	18.29	296	1317	8.9	226.06
	C5561	3	327	488	.50	12.70	.70	17.78	.75	19.05	444	1976	9.2	233.68
	C5562	4	405	604	.57	14.48	.77	19.56	.79	20.07	592	2634	10.1	256.64
	C5563	5	487	727	.63	16.00	.83	21.08	.93	23.62	740	3293	11.5	292.10
	C5564	6	556	830	.68	17.27	.88	22.35	.93	23.62	888	3952	11.5	292.10
	C5565	7	627	936	.69	17.53	.89	22.61	.99	25.15	1036	4610	11.8	299.72
	C5566	8	739	1103	.74	18.80	.94	23.88	1.00	25.40	1184	5269	12.4	314.96
	C5568	10	964	1439	.84	21.34	1.10	27.94	1.24	31.50	1480	6586	14.4	365.76
	C5570	12	1067	1593	.93	23.62	1.19	30.23	1.26	32.00	1776	7903	15.6	396.24
	C5573	15	1297	1936	.99	25.15	1.25	31.75	1.37	34.80	2220	9879	16.3	414.02
	C5578	20	1546	2307	1.13	28.70	1.39	35.31	1.47	37.34	2960	13172	16.9	429.26
	C5579	25	1802	2690	1.26	32.00	1.52	38.61	1.60	40.64	3700	16465	19.7	500.38
HAZ LOC CSA C22.2#0.3 Clause 4.31 Low Acid Gas	**C5580**	30	2142	3197	1.34	34.04	1.60	40.64	1.66	42.16	4440	19758	20.6	523.24



8 AWG Stranded (7x16) Bare Copper Conductors • 10 AWG Bare Copper Ground Wire														
Aluminum Interlocked Armor • .045″ (1.14mm) XLPE Insulation • PVC Inner Jacket • Black PVC Outer Jacket														
CSA C22.2#131 FT4 Flame Test	**C5583**	2	407	607	.59	14.99	.78	19.81	.86	21.84	384	1709	10.6	269.24
	C5581	3	471	703	.63	16.00	.83	21.08	.90	22.86	576	2563	10.8	274.32
	C5582	4	606	904	.69	17.53	.89	22.61	.97	24.64	768	3418	12.5	317.50



Dual Rated 600V, 1000V
HAZ LOC
CSA C22.2#0.3 Clause 4.31 Low Acid Gas

XLPE = Cross-linked Polyethylene

Color Code: 2 conductors — Black, White (If required, a Red conductor can be used in place of White.)
3 conductors — Black, Red, Blue (If required, a White conductor can be used in place of Blue.)
4 conductors — Black, Red, Blue, White
5 or more conductors — Black and numbered

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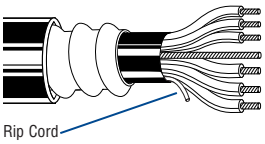
CSA Control Cable

600V Teck90 Cables

Description	Part No.	No. of Cond.	Cable Weight		Inner Jacket OD		Armor OD		Outer Jacket		Maximum Pull Tension		Minimum Bend Radius	
			Lbs./ 1000 Ft.	kg/km	Inch	mm	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
Composite 14 AWG Stranded (7x22) **and 12 AWG** Stranded (7x20) Bare Copper Conductors • 14 AWG Bare Copper Ground Wire														
Aluminum Interlocked Armor • .031″ (.79mm) XLPE Insulation • PVC Inner Jacket • Black PVC Outer Jacket														
CSA C22.2#131 FT4 Flame Test	**6054**	3c/14 3c/12	369	549	.560	14.22	.75	19.05	.89	22.61	424	1886	8.4	213.36

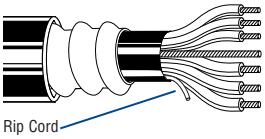


HAZ LOC
CSA C22.2#0.3 Clause 4.31 Low Acid Gas

Composite 14 AWG Stranded (7x22) **and 10 AWG** Stranded (7x18) Bare Copper Conductors • 12 AWG Bare Copper Ground Wire

Aluminum Interlocked Armor • .031″ (.79mm) XLPE Insulation • PVC Inner Jacket • Black PVC Outer Jacket

CSA C22.2#131 FT4 Flame Test	**6051**	3c/14 3c/10	432	643	.600	15.24	.82	20.83	.92	23.37	608	2705	9.0	228.60

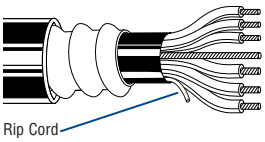


HAZ LOC
CSA C22.2#0.3 Clause 4.31 Low Acid Gas

Composite 14 AWG Stranded (7x22) **and 8 AWG** Stranded (7x16) Bare Copper Conductors • 10 AWG Bare Copper Ground Wire

Aluminum Interlocked Armor • .046″ (1.17mm) XLPE Insulation • PVC Inner Jacket • Black PVC Outer Jacket

CSA C22.2#131 FT4 Flame Test	**6059**	3c/14 3c/8	608	905	.700	17.78	.89	22.51	.98	24.92	1160	5160	9.8	248.92

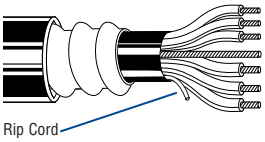


HAZ LOC
CSA C22.2#0.3 Clause 4.31 Low Acid Gas

Composite 14 AWG Stranded (7x22) **and 6 AWG** Stranded (7x14) Bare Copper Conductors • 8 AWG Bare Copper Ground Wire

Aluminum Interlocked Armor • .061″ (1.55mm) XLPE Insulation • PVC Inner Jacket • Black PVC Outer Jacket

CSA C22.2#131 FT4 Flame Test	**6060**	3c/14 3c/6	849	1264	.810	20.57	1.06	27.00	1.16	29.41	1700	7562	11.6	294.64



HAZ LOC
CSA C22.2#0.3 Clause 4.31 Low Acid Gas

XLPE = Cross-linked Polyethylene

Color Code: 2 conductors — Black, White (If required, a Red conductor can be used in place of White.)
3 conductors — Black, Red, Blue (If required, a White conductor can be used in place of Blue.)
4 conductors — Black, Red, Blue, White
5 or more conductors — Black and numbered

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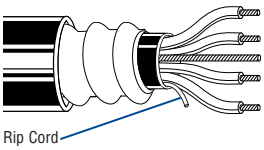
CSA Control Cable

1000V Teck90 Cables

Description	Part No.	No. of Cond.	Cable Weight		Inner Jacket OD		Armor OD		Outer Jacket		Maximum Pull Tension		Minimum Bend Radius	
			Lbs./ 1000 Ft.	kg/km	Inch	mm	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
14 AWG Stranded (7x22) Bare Copper Conductors • 14 AWG Bare Copper Ground Wire														
Aluminum Interlocked Armor • .045″ (1.14mm) XLPE Insulation • PVC Inner Jacket • Black PVC Outer Jacket														
CSA C22.2#131 FT4 Flame Test	**C5701**	3	251	374	.47	11.94	.67	17.02	.73	18.54	162	721	9.2	233.68
	C5702	4	301	448	.51	12.95	.71	18.03	.81	20.57	216	961	9.7	246.38



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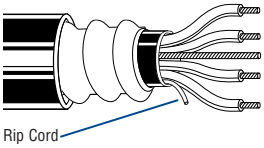
CSA C22.2#0.3 Clause 4.31 Low Acid Gas

12 AWG Stranded (7x20) Bare Copper Conductors • 14 AWG Bare Copper Ground Wire

Description	Part No.	No. of Cond.	Cable Weight Lbs./ 1000 Ft.	Cable Weight kg/km	Inner Jacket OD Inch	Inner Jacket OD mm	Armor OD Inch	Armor OD mm	Outer Jacket Inch	Outer Jacket mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
Aluminum Interlocked Armor • .045″ (1.14mm) XLPE Insulation • PVC Inner Jacket • Black PVC Outer Jacket														
CSA C22.2#131 FT4 Flame Test	**C5730**	2	253	377	.48	12.19	.68	17.27	.74	18.80	172	765	9.3	236.22
	C5731	3	291	433	.51	12.95	.71	18.03	.76	19.30	258	1148	9.7	246.38
	C5732	4	368	548	.59	14.99	.75	19.05	.85	21.59	344	1531	10.8	274.32



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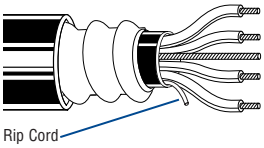
CSA C22.2#0.3 Clause 4.31 Low Acid Gas

10 AWG Stranded (7x18) Bare Copper Conductors • 12 AWG Bare Copper Ground Wire

Description	Part No.	No. of Cond.	Cable Weight Lbs./ 1000 Ft.	Cable Weight kg/km	Inner Jacket OD Inch	Inner Jacket OD mm	Armor OD Inch	Armor OD mm	Outer Jacket Inch	Outer Jacket mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
Aluminum Interlocked Armor • .045″ (1.14mm) XLPE Insulation • PVC Inner Jacket • Black PVC Outer Jacket														
CSA C22.2#131 FT4 Flame Test	**C5760**	2	285	424	.56	14.22	.79	19.99	.70	17.71	296	1317	10.3	261.62
	C5761	3	389	581	.59	14.99	.79	20.07	.85	21.59	444	1976	10.3	261.62
	C5762	4	460	687	.65	16.51	.85	21.59	.90	22.86	592	2634	11.5	292.10



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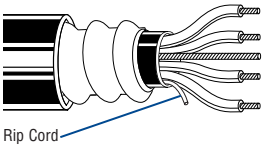
CSA C22.2#0.3 Clause 4.31 Low Acid Gas

8 AWG Stranded (7x16) Bare Copper Conductors • 10 AWG Bare Copper Ground Wire

Description	Part No.	No. of Cond.	Cable Weight Lbs./ 1000 Ft.	Cable Weight kg/km	Inner Jacket OD Inch	Inner Jacket OD mm	Armor OD Inch	Armor OD mm	Outer Jacket Inch	Outer Jacket mm	Maximum Pull Tension Lbs.	Maximum Pull Tension N	Minimum Bend Radius Inch	Minimum Bend Radius mm
Aluminum Interlocked Armor • .045″ (1.14mm) XLPE Insulation • PVC Inner Jacket • Black PVC Outer Jacket														
CSA C22.2#131 FT4 Flame Test	**C5583**	2	407	607	.59	14.99	.78	19.81	.86	21.84	384	1709	10.6	269.24
	C5581	3	471	703	.63	16.00	.83	21.08	.90	22.86	576	2563	10.8	274.32
	C5582	4	606	905	.69	17.53	.89	22.61	.97	24.64	768	3418	12.5	317.50



Dual Rated 600V, 1000V
HAZ LOC
CSA C22.2#0.3 Clause 4.31 Low Acid Gas

XLPE = Cross-linked Polyethylene

Color Code: 2 conductors — Black, White (If required, a Red conductor can be used in place of White.)
3 conductors — Black, Red, Blue (If required, a White conductor can be used in place of Blue.)
4 conductors — Black, Red, Blue, White
5 or more conductors — Black and numbered

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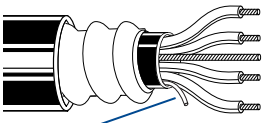
CSA Control Cable

1000V Teck90 Cables

Description	Part No.	No. of Cond.	Cable Weight		Inner Jacket OD		Armor OD		Outer Jacket		Maximum Pull Tension		Minimum Bend Radius	
			Lbs./ 1000 Ft.	kg/km	Inch	mm	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
6 AWG Stranded (7x14) Bare Copper Conductors • 8 AWG Bare Copper Ground Wire														
Aluminum Interlocked Armor • .060″ (1.53mm) XLPE Insulation • PVC Inner Jacket • Black PVC Outer Jacket														
CSA C22.2#131 FT4 Flame Test	**C5590**	2	567	844	.73	18.54	.99	25.15	1.10	27.94	610	2713	12.8	325.12
	C5591	3	685	1019	.78	19.81	1.04	26.42	1.15	29.21	915	4072	13.4	340.36
	C5592	4	927	1380	.89	22.61	1.15	29.21	1.24	31.50	1220	5429	14.9	378.46



Rip Cord

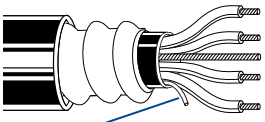
HAZ LOC
CSA C22.2#0.3 Clause 4.31 Low Acid Gas

4 AWG Stranded (7x12) Bare Copper Conductors • 8 AWG Bare Copper Ground Wire

Aluminum Interlocked Armor • .060″ (1.53mm) XLPE Insulation • PVC Inner Jacket • Black PVC Outer Jacket

CSA C22.2#131
FT4 Flame Test

C5601	3	961	1430	.91	23.11	1.17	29.72	1.23	31.24	1455	6475	15.2	386.08
C5602	4	1202	1794	.91	23.11	1.25	31.75	1.33	33.78	1940	8633	16.2	411.48



Rip Cord

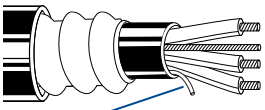
HAZ LOC
CSA C22.2#0.3 Clause 4.31 Low Acid Gas

3 AWG Stranded (7x11) Bare Copper Conductors • 6 AWG Bare Copper Ground Wire

Aluminum Interlocked Armor • .060″ (1.53mm) XLPE Insulation • PVC Inner Jacket • Black PVC Outer Jacket

CSA C22.2#131
FT4 Flame Test

C5611	3	1126	1681	.97	24.64	1.23	31.24	1.30	33.02	1836	8170	15.8	401.32



Rip Cord

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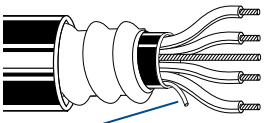
CSA C22.2#0.3 Clause 4.31 Low Acid Gas

2 AWG Stranded (7x10) Bare Copper Conductors • 6 AWG Bare Copper Ground Wire

Aluminum Interlocked Armor • .060″ (1.53mm) XLPE Insulation • PVC Inner Jacket • Black PVC Outer Jacket

CSA C22.2#131
FT4 Flame Test

C5621	3	1291	1927	1.02	25.91	1.28	32.51	1.37	34.80	2316	10302	16.5	419.10
C5622	4	1691	2524	1.12	28.45	1.38	35.05	1.48	37.59	3088	13736	17.7	449.58



Rip Cord

HAZ LOC
CSA C22.2#0.3 Clause 4.31 Low Acid Gas

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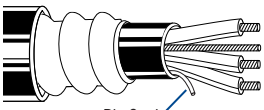
CSA Control Cable

1000V Teck90 Cables

Description	Part No.	No. of Cond.	Cable Weight		Inner Jacket OD		Armor OD		Outer Jacket		Maximum Pull Tension		Minimum Bend Radius	
			Lbs./ 1000 Ft.	kg/km	Inch	mm	Inch	mm	Inch	mm	Lbs.	N	Inch	mm
1 AWG Stranded (19x14) Bare Copper Conductors • 6 AWG Bare Copper Ground Wire														
Aluminum Interlocked Armor • .080″ (2.03mm) XLPE Insulation • PVC Inner Jacket • Black PVC Outer Jacket														
CSA C22.2#131 FT4 Flame Test	**C5625**	3	1620	2411	1.25	31.75	1.51	38.35	1.59	40.39	1980	8807	19.1	485.14
	C5626	4	2173	3234	1.34	34.04	1.57	39.88	1.68	42.67	2680	11921	20.2	513.08
1/0 AWG Stranded (19x12) Bare Copper Conductors • 6 AWG Bare Copper Ground Wire														
Aluminum Interlocked Armor • .080″ (2.03mm) XLPE Insulation • PVC Inner Jacket • Black PVC Outer Jacket														
CSA C22.2#131 FT4 Flame Test	**C5627**	3	1912	2854	1.34	34.04	1.60	40.64	1.67	42.42	3582	15940	20.0	508.0
	6164	4	2514	3742	1.44	36.58	1.67	42.42	1.78	45.21	4700	20906	21.4	543.56
2/0 AWG Stranded (19x11) Bare Copper Conductors • 6 AWG Bare Copper Ground Wire														
Aluminum Interlocked Armor • .080″ (2.03mm) XLPE Insulation • PVC Inner Jacket • Black PVC Outer Jacket														
CSA C22.2#131 FT4 Flame Test	**C5635**	3	2300	3423	1.40	35.56	1.63	41.40	1.74	44.20	4200	12010	20.9	530.86
	6157	4	3039	4523	1.55	39.37	1.84	46.74	1.95	49.53	5500	24465	23.4	594.36
3/0 AWG Stranded (19x10) Bare Copper Conductors • 4 AWG Bare Copper Ground Wire														
Aluminum Interlocked Armor • .080″ (2.03mm) XLPE Insulation • PVC Inner Jacket • Black PVC Outer Jacket														
CSA C22.2#131 FT4 Flame Test	**6163**	3	2905	4324	1.51	38.10	1.80	45.72	1.91	48.26	5020	11121	22.9	579.12
	6179	4	3700	5506	1.67	42.42	1.96	49.78	2.07	52.58	6500	28913	24.8	629.92
4/0 AWG Stranded (19x9.5) Bare Copper Conductors • 4 AWG Bare Copper Ground Wire														
Aluminum Interlocked Armor • .080″ (2.03mm) XLPE Insulation • PVC Inner Jacket • Black PVC Outer Jacket														
CSA C22.2#131 FT4 Flame Test	**6193**	3	3450	5134	1.63	41.40	1.92	48.77	2.03	51.56	6650	29580	24.4	619.76



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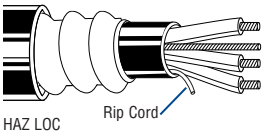
CSA C22.2#0.3 Clause 4.31 Low Acid Gas



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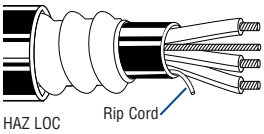

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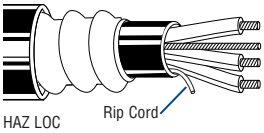

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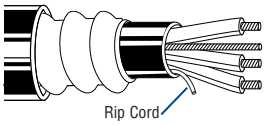

HAZ LOC
CSA C22.2#0.3 Clause 4.31 Low Acid Gas

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4 conductors — Black, Red, Blue, White

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CSA Control Cable

1000V Variable Frequency Drive Cable

Cable Specifications

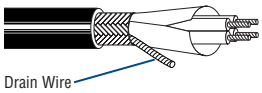
- CSA C22.2 #38 Type TC
- CSA C22.2 #230 Type TC
- CSA FT4 70,000 BTU Flame Test
- 90°C Dry and Wet
- -40°C Cold Bend, -25°C Cold Impact
- -25°C Installation temp
- Per CEC Part 1, Suitable for Use in Hazardous Locations:
  Class 1 — Zone 2
  Class 2 — Division 2
- Sunlight Resistant/UV Resistant
- Direct Burial

14 to 2 AWG with Foil/Braid Shield

Belden's classic line of VFD cables, with foil/braid shield, is offered in 14 to 2 AWG, and continues to be the highest-performing solution in the market. The oversized XLPE insulation provides the lowest capacitance available in a VFD cable. Its highly effective dual shielding provides the lowest resistance to ground path, which improves common mode current containment. Included are a full-size, insulated green ground wire with a yellow stripe, as well as a drain wire for ease of installation and termination. The 85% braid coverage offers optimum EMI low frequency noise protection, while the 100% aluminum/Mylar tape offers RFI high frequency noise protection. Cables are round and smooth for proper sealing of glands and molding applications.

Large AWG (1 to 4/0) with Copper Tape Shield, Symmetrical Design

Belden's symmetrical design combines the benefits of our classic line of VFD cables, with additional features for use on larger, more powerful AC motor drives. Its highly effective shielding provides a low resistance ground path, which improves common mode current containment. The spirally applied dual copper tapes provide improved flexibility and EMI/RFI noise protection. Three symmetrical bare ground wires provide a balanced ground system. This reduces the likelihood of premature motor bearing or motor insulation failure.

Description	Part Number	AWG	Stranding	Shield
14 to 2 AWG (3) Stranded Bare Copper Circuit Conductors + (1) Full-sized PVC Insulated Ground • Overall Beldfoil® (100% Coverage) + TC Braid Shield (85% Coverage) • Full Size TC Drain Wire (ICEA Method 4 Color Code: Black and Numbered, Green/Yellow Ground)				
XLPE Insulation • Black Sunlight- and Oil-resistant PVC Jacket				
1000V CSA TC FT4 RW90 Circuit Conductors  Drain Wire	**29550**	14	7	Beldfoil (100% Coverage) + TC Braid (85% Coverage)
	29551	12	7	
	29552	10	7	
	29553	8	7	
	29554	6	7	
	29555	4	7	
	29556	2	7	
1 to 4/0 AWG (3) Stranded Bare Copper Circuit Conductors + (3) Symmetrical Bare Copper Grounds • (2) Spiral Copper Tape Shields				
XLPE Insulation • Black Sunlight- and Oil-resistant PVC Jacket				
1000V CSA TC FT4 XHHW-2 Circuit Conductors	**29557**	1	19	(2) Spiral Copper Tapes
	29558	1/0	19	
	29559	2/0	19	
	29560	3/0	19	
	29561	4/0	19	

Products listed are subject to minimum order quantities.

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Technical Information

Gland Information for Armored Cables

Thomas and Betts

Part No.	Hub Size NPT	Range Over Jacket			
		Minimum		Maximum	
		Inch	mm	Inch	mm
ST050-462	1/2	.525	13.34	.650	16.51
ST050-464	1/2	.600	15.24	.760	19.30
ST050-465	1/2	.725	18.42	.885	22.48
ST050-466	1/2	.825	20.96	.985	25.02
ST075-467	3/4	.880	22.35	1.065	27.05
ST075-468	3/4	1.025	26.04	1.205	30.61
ST100-469	1	1.187	30.15	1.375	34.93
ST125-470	1-1/4	1.350	34.29	1.625	41.28
ST125-550	1-1/4	1.500	38.10	1.625	41.28
ST125-471	1-1/4	1.600	40.64	1.875	47.63
ST150-472	1-1/2	1.700	43.18	1.965	49.91
ST150-473	1-1/2	1.900	48.26	2.187	55.55
ST200-551	2	1.900	48.26	2.187	55.55
ST200-474	2	2.100	53.34	2.375	60.33
ST200-475	2	2.300	58.42	2.565	65.15
ST200-476	2	2.500	63.50	2.750	69.85
ST250-477	2-1/2	2.380	60.45	2.640	67.06
ST250-478	2-1/2	2.580	65.53	2.840	72.14
ST300-479	3	2.790	70.87	3.060	77.72
ST300-480	3	3.000	76.20	3.270	83.06
ST300-481	3	3.210	81.53	3.480	88.39
ST350-482	3-1/2	3.420	86.67	3.690	93.73
ST350-483	3-1/2	3.610	91.69	3.870	98.30
ST400-484	4	3.810	96.77	4.030	102.36
ST400-485	4	3.965	100.71	4.185	106.30
ST400-486	4	4.120	104.65	4.340	110.24

Crouse Hinds

NPT Thread Size	Armor OD Range (Inch)	Non-Hazardous Part No.	Hazardous Part No.
1/2	.440 to .650	TMC165	TMCX165*
3/4	.600 to .850	TMC285	TMCX285*
1	.800 to 1.120	TMC3112	TMCX3112*
1-1/4	1.100 to 1.400	TMC4140	TMCX4140*
1-1/2	1.330 to 1.610	TMC5161	TMCX5161*
2	1.570 to 2.060	TMC6206	TMCX6206*
2-1/2	1.930 to 2.470	TMC7247	TMCX7247*
3	2.450 to 3.020	TMC8302	TMCX8302
3-1/2	2.950 to 3.520	TMC9352	TMCX9352
4	3.500 to 4.020	TMC10402	TMCX10402

*TMCX Catalog numbers listed are suitable for use with Type TC tray cable in hazardous locations when installed in accordance with NEC Articles 501-5(e) and 502-5. TMCX series is not suitable for use in Class III locations when used with tray cable.

Hawke

Hawke Size Ref.	Standard Seal 1348 Diameter				Alternative Seal 1498 Diameter				NPT Size
	Minimum		Maximum		Minimum		Maximum		
	Inch	mm	Inch	mm	Inch	mm	Inch	mm	
711-A	.590	14.99	.820	20.83	.470	11.94	.610	15.49	1/2
711-B	.790	20.07	.060	26.92	.630	16.00	.840	21.34	3/4
711-C	.930	23.62	1.310	33.27	.830	21.08	1.090	27.69	1
711-C2	1.260	32.00	1.690	42.93	1.100	27.94	1.340	34.04	1-1/4
711-D	1.690	42.93	2.060	52.32	1.300	33.02	1.610	40.89	2
711-E	2.050	52.07	2.560	65.02	1.810	45.97	2.160	54.86	2-1/2
711-F	2.560	65.02	3.070	77.98	2.240	56.90	2.640	67.06	3
711-H	2.990	75.95	3.520	89.41	Special Order				3-1/2
711-J	3.500	88.90	4.110	104.39	Special Order				4

Adalet — PLM

Part No.**	Diameter Over Jacket				Conduit Size
	Minimum		Maximum		
	Inch	mm	Inch	mm	
PS/PSX 45-05	.350	8.89	.450	11.43	1/2
PS/PSX 55-05	.450	11.43	.550	13.97	1/2
PS/PSX 65-05	.550	13.97	.650	16.51	1/2
PS/PSX 75-05	.650	16.51	.750	19.05	1/2
PS/PSX 85-05	.750	19.05	.850	21.59	1/2
PS/PSX 95-05	.850	21.59	.950	24.13	1/2
PS/PSX 99-07	.850	21.59	.990	25.15	3/4
PS/PSX 107-07	.920	23.37	1.070	27.18	3/4
PS/PSX 113-07	.980	24.89	1.130	28.70	3/4
PS/PSX 121-07	1.070	27.18	1.210	30.73	3/4
PS/PSX 112-10	1.000	25.40	1.120	28.45	1
PS/PSX 125-10	1.120	28.45	1.250	31.25	1
PS/PSX 138-10	1.220	30.99	1.380	35.05	1
PS/PSX 138-12	1.280	32.51	1.380	35.05	1-1/4
PS/PSX 156-12	1.380	35.05	1.560	39.62	1-1/4
PS/PSX 174-12	1.560	39.62	1.740	44.20	1-1/4
PS/PSX 188-12	1.740	44.20	1.880	47.75	1-1/4
PS/PSX 174-15	1.600	40.64	1.740	44.20	1-1/2
PS/PSX 188-15	1.740	44.20	1.880	47.75	1-1/2
PS/PSX 200-15	1.880	47.75	2.000	50.80	1-1/2
PS/PSX 218-15	2.000	50.80	2.180	55.37	1-1/2
PS/PSX 219-20	2.050	52.07	2.190	55.63	2
PS/PSX 236-20	2.190	55.63	2.360	59.94	2
PS/PSX 247-20	2.350	59.69	2.470	62.74	2
PS/PSX 261-20	2.470	62.74	2.610	66.29	2
PS/PSX 263-25	2.460	62.48	2.630	66.80	2-1/2
PS/PSX 280-25	2.620	66.55	2.800	71.12	2-1/2
PS/PSX 296-25	2.800	71.12	2.960	75.18	2-1/2
PS/PSX 297-30	2.800	71.12	2.970	75.44	3
PS/PSX 311-30	2.950	74.93	3.110	78.99	3
PS/PSX 327-30	3.100	78.74	3.270	83.06	3
PS/PSX 343-30	3.260	82.80	3.430	87.12	3
PS/PSX 359-30	3.420	86.87	3.590	91.19	3
PS/PSX 375-35	3.520	89.41	3.750	95.25	3-1/2
PS/PSX 392-35	3.750	95.25	3.920	99.57	3-1/2
PS/PSX 412-35	3.900	99.06	4.120	104.65	3-1/2
PS/PSX 423-40	4.050	102.87	4.230	107.44	4
PS/PSX 437-40	4.200	106.68	4.370	111.00	4
PS/PSX 451-40	4.340	110.24	4.510	114.55	4
PS/PSX 462-40	4.430	112.52	4.620	117.35	4

**Use PS for non-hazardous locations and PSX for hazardous locations.

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Technical Information

LSZH Jacketed Cables and Hazardous Locations Reference

Approvals and Standards/Performance Data for Low-Smoke, Zero-Halogen Jacketed Cable

XLPE Insulation	
Physical: (per UL-44)	
Tensile (min)	1500 psi
Elongation (min)	150%
Deformation (max)	3.35
LOI	27

Haloarrest® Jacket	
Physical	
Tensile (min)	1500 psi
Elongation (min)	100%
Tear resistance	74 lbs/inch
LOI	38
Halogen Content	
IEC 754-1	0%
BS6425	0%
MIL-C-24643	<0.2%
NBS Smoke Chamber (.100″ wall)	
Flaming Mode	141 D_m corrected typical
Smoldering Mode	311 D_m corrected typical
Acid Gas	
IEC 754-2	4.3 pH, 28 µS/cm
VDE 0472 Part 813	4.3 pH, 27 µS/cm
Toxicity Index	
NES 713	1

Low-Smoke, Zero-Halogen Jacketed Cable Specifications

600V, 90°C TC-LS
NEC 340/UL 1277 & 1685

Instrumentation

- 18 to 12 AWG, BC or TC
- 90°C XLPE insulation
- UL 44 XHHW-2 — 90°C dry/wet
- Shielded or unshielded
- Haloarrest jacket

Control or Power

- 14 to 4/0 AWG, BC or TC
- 90°C XLPE insulation
- UL 44 XHHW-2 — 90°C dry/wet
- Shielded or unshielded
- Haloarrest jacket

Hazardous Locations Cable Reference

Article 500

Class I Division 1 Hazards

- Locations where flammable gases or vapors may exist under normal operating conditions, under frequent repair or maintenance operations, or where breakdown or faulty operation of process equipment might also cause simultaneous failure of electrical equipment.
- Use conduit or MI cable with approved termination fittings.

Class I Division 2 Hazards

- Locations where flammable gases, vapors or volatile liquids are handled either in a closed system, or confined within suitable enclosures, or where hazardous concentrations are normally prevented by positive mechanical ventilation. Areas adjacent to Division 1 areas belong in Division 2.
- Use PLTC, ITC, TC, MC, MV, MI with approved termination fittings.

Class II Division 1

- Locations where combustible dusts exist under normal conditions.
- Use conduit or MI with approved termination fittings.

Class II Division 2

- Locations where combustible dusts exist under abnormal conditions.
- Use conduit or PLTC, ITC, TC, MC with ventilated channel cable trays.
- Use conduit or MC, MI with approved termination fittings.

Class III Division 1

- Locations where easily ignitible fibers and flyings exist under normal conditions.
- Use conduit or MC, MI with approved termination fittings.

Class III Division 2

- Locations where easily ignitible fibers and flyings exist under abnormal conditions.
- Use conduit or MC, MI with approved termination fittings.

Article 504

Intrinsically Safe

- Equipment and wiring that are incapable of releasing sufficient electrical energy under normal or abnormal conditions to cause ignition of a specific hazardous atmospheric mixture in its most easily ignited concentration.
- Use CL3, CL2, PLTC, TC or CM cable, colored light blue, with approved sealing and separation.

Hazardous Location Cable Reference per Canadian Electrical Code CEC Section 18

All Armored cables printed “HL” per CSA C22.2 #174 are rated for all Hazardous Location Classes and Divisions (ie. Class 1, Div. 1).

All Tray Cables printed “TC” per per CSA C22.2 #230 are rated for all Hazardous Location Classes and Division 2 or lower. (ie. Class 1, Div. 2 or lower).

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Technical Information

UL Approved Insulation/Jacketing Options

UL Listed for MC and TC			
Insulation/Jacket	Max. Temp Rating		Flame Tests
	Wet	Dry	
PVC-Nylon/PVC (THHN or THWN) 14 AWG & larger	75°C	90°C	UL 1685 FT4/ IEEE 1202/383 ICEA T-29-520
PVC-Nylon/PVC (TFN or TFFN) 16 & 18 AWG	NA	90°C	UL 1685 FT4/ IEEE 1202/383 ICEA T-29-520
XLPE/PVC or CPE (XHHW–2) 14 AWG & larger	90°C	90°C	UL 1685 FT4/ IEEE 1202/383 VW-1 rated singles ICEA T-29-520
XLPE/PVC or CPE (RFH–2) 16 & 18 AWG	75°C	75°C	UL 1685 FT4/ IEEE 1202/383 VW-1 rated singles ICEA T-29-520
FRPO/PVC 18 AWG & larger	—	75°C	UL 1685
TPE/TPE	75°C	90°C	UL 1685
FRPO/PVC	75°C	90°C	UL 1685
XLPE/Haloarrest (XHHW-2) 14 AWG & larger	90°C	90°C	UL 1685 FT4/IEEE 1202/383 ICEA T-29-520
XLPE/Haloarrest (RFH-2) 16 & 18 AWG	75°C	75°C	UL 1685 FT4/IEEE 1202/383 ICEA T-29-520
FEP/PVC	90°C	90°C	UL 1685

UL Listed for PLTC	
Insulation/Jacket	Max. Temp Rating
XLPE/PVC	90°C
XLPE/CPE	90°C
PVC/PVC	105°C
PVC/CPE	105°C
PE/PVC	75°C
FPE/PVC	75°C
TPE/TPE	105°C
XLPE/Haloarrest®	90°C
FEP/FEP	200°C

Abbreviations Key

CPE	**Chlorinated Polyethylene**
FEP	**Fluorinated Ethylene-propylene**
FPE	**Foam Polyethylene**
FRPO	**Flame-Retardant Polyolefin**
PE	**Polyethylene**
PVC	**Polyvinyl Chloride** Nylon insulated singles are type THHN or THWN for conductors 14 AWG or larger. Conductor sizes 16 and 18 AWG are Type TFN or TFFN singles.
TPE	**Thermoplastic Elastomer**
XLPE	**Cross-Linked Polyethylene** Cross-Linked Polyethylene (XLPE) insulated singles are type XHHW-2 for conductors 14 AWG or larger. Conductor sizes 16 and 18 AWG are RFH-2.

Vertical Tray Flame Test Comparison

Test	UL-1685 (UL-1581)	FT4/IEEE 1202/ IEEE 383-2003	IEEE 383-1974	IEC 323-3	ICEA T-29-520
Flame Test Chamber	Vertical Tray	Vertical Tray	Vertical Tray	Vertical Tray	Vertical Tray
Burner Type	Ribbon gas burner	Ribbon gas burner	Ribbon gas burner	Ribbon gas burner	Ribbon gas burner
Theoretical Heat Input	70,000 BTU/hr	70,000 BTU/hr	70,000 BTU/hr	70,000 BTU/hr	210,000 BTU/hr
Burner Positioning	horizontal 3″ from samples 18″ from tray base	20° up from horizontal 2.95″ from cable surface 11.8" above floor	horizontal 3″ from samples 18″ above tray bottom	horizontal 2.95″ from cable surface 23.6″ above floor	horizontal 8-1/4″ from cable surface 12-1/4″ above tray base
Tray Dimensions	8′ length 12″ width 3″ side flanges	9.84′ length 11.81″ width 2.85″ side flanges	8′ length 12″ width 3″ side flanges	11.5′ length 19.7″ width none	8′ length 12″ width 3″ side flanges
Sample Spacing	1/2 cable diameter	1/2 cable diameter	1/2 cable diameter	lesser of 1/2 cable diameter and .78″	1/2 cable diameter
Duration of Flame Application	20 minutes	20 minutes	20 minutes	20 minutes	20 minutes
Mode of Failure	Cable blistering or charring has reached the top of the sample after the cable has self-extinguished.	Cable char has exceeded a length of 4.92′.	Cable blistering or charring has reached the top of the sample after the cable has self-extinguished.	Cable charring has reached a height of 98.4″ above the bottom of the burner.	Cable blistering or charring has reached the top of the sample after the cable has self-extinguished.

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