

# Microphone and Musical Instrument Cable

## Overview



### Flexible Microphone Cables

Belden® microphone cable is used for connecting low level microphones or musical instruments. Key properties of microphone (MIC) cable are ruggedness, flexibility, flex life and interference immunity.

MIC cable constructions utilize either 1-, 2-, 3- or 4-conductor configurations. Cable selection depends on whether the MIC or instrument is of a high- or low-impedance design. High-impedance MICs require unbalanced single conductor (coaxial) cables while low-impedance MICs utilize balanced 2-, 3-, or 4-conductor (quad) designs. Quad MIC cables are connected by attaching the two white conductors to one pin and two blue conductors to the other pin in a balanced-line XLR type connector. Besides the common-mode rejection of a standard balanced line, this gives common-mode rejection at each pin, greatly reducing noise and interference.

### High-conductivity Copper

All Belden microphone cables with bare copper conductors utilize only high-conductivity copper produced by a process called Electrolytic Tough Pitch (ETP). This refining process produces a copper conductor that is 99.95% pure copper resulting in high-conductivity per ASTM B115. The high purity obtained from ETP copper results in microphone cable performance that is comparable to that of oxygen-free copper cables.

- **Plastic cables recommended for:**  
Lower capacitance, lower loss, greater ozone and oil resistance, lighter weight, smaller diameter.
- **Rubber cables recommended for:**  
Greater abrasion and impact resistance and extra limpness so the cable will lie flat on stage or on studio floors.

### Four-Conductor Star Quad Low-Impedance Cables

**Quad connection scheme:** The two blue wires (or wires directly opposite one another) are connected together to form one conductor, and similarly the two white wires (or remaining wires) are connected together to form the second conductor.

Conductors joined in this manner lower the possibility of induced noise.

## Microphone and Musical Instrument Cable

Single-Conductor, High-Impedance Cables  
High-Conductivity Copper



Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Cond.	Color Code	Standard Lengths		Standard Unit Weight		Insulation Thickness		Jacket Thickness		Nominal OD		Nominal Capacitance			
					Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Inch	mm	* pF/ Ft.	* pF/ m	** pF/ Ft.	** pF/ m

**25 AWG** Stranded (7x33) Composite Copper Conductor • (3) Strands TC, (4) Strands TCCS • TC Spiral Shield (90% Coverage)

### PVC Insulation • Matte Gray PVC Jacket

1000 VDC, 60°C      **9396**      —      1      N/A      250      76.2      2.8      1.3      .018      .46      .017      .43      .100      2.54      —      —      75      246



**25 AWG** Stranded (7x33) Composite Copper Conductor† • Rayon Braid + TC Braid Shield (80% Coverage) • Cotton Serve

### EPDM Rubber Insulation • Cotton Serve • Black EPDM Rubber Jacket

3000 VDC, 60°C      **8410**      —      1      N/A      500      152.4      18.5      8.4      .058      1.47      .024      .61      .245      6.22      —      —      33      108



**20 AWG** Stranded (27x34) High-conductivity TC Conductor • Conductive Textile (100%) plus TC Spiral Shields (95% Coverage) • Paper Tape

### EPDM Rubber Insulation • Black Neoprene Jacket

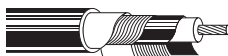
60°C      **9394**      —      1      N/A      1000      304.8      26.0      11.8      .030      .76      .033      .84      .190      4.83      —      —      55      180



**20 AWG** Stranded (26x34) High-conductivity TC Conductor • Conductive Textile (100%) plus TC Spiral Shields (75% Coverage) • Paper Tape

### EPDM Rubber Insulation • Black Neoprene Jacket

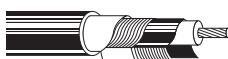
60°C      **9778**      —      1      N/A      1000      304.8      39.0      17.7      .040      1.02      .050      1.27      .235      5.97      —      —      45      148



**18 AWG** Stranded (41x34) High-conductivity TC Conductor • Conductive Textile (100%) plus TC Spiral Shields (68% Coverage) • Paper Tape

### EPDM Rubber Insulation • Black Neoprene Jacket

600V RMS, 60°C      **9395**      —      1      N/A      1000      304.8      38.0      17.2      .045      1.14      .034      .86      .235      5.97      —      —      55      180



EPDM = Ethylene Propylene Diene Monomer • TC = Tinned Copper • TCCS = Tinned Copper-covered Steel

\*Capacitance between conductors.

\*\*Capacitance between center conductor and outer shield.

†(3) Strands TC, (4) Strands TCCS.

**Microphone and Musical Instrument Cable**

Two-Conductor, Low-Impedance Cables

High-Conductivity Copper



Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Cond.	Color Code	Standard Lengths		Standard Unit Weight		Insulation Thickness		Jacket Thickness		Nominal OD		Nominal Capacitance			
					Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Inch	mm	* pF/ Ft.	* pF/ m	** pF/ Ft.	** pF/ m

**24 AWG** Stranded (105x44) High-conductivity Bare Copper Conductors† • Double Bare Copper Spiral Shield (97% Coverage)**PVC Insulation • Matte Black PVC Jacket**

300V RMS 80°C	<b>9397</b>	—	2	White, Green	500	152.4	12.0	5.5	.012	.30	.031	.79	.176	4.47	47	154	86	283
					1000	304.8	24.0	10.9										

**24 AWG** Stranded (45x40) TC Alloy Conductors† • Conductive Textile Wrap (100% Coverage) • TC Braid Shield (56% Coverage) • Cotton Spiral**EPDM Rubber Insulation • Black EPDM Jacket**

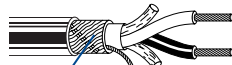
300V RMS 90°C	<b>8413</b>	—	2	White, Black	100	30.5	2.3	1.0	.016	.41	.017	.43	.199	5.05	30	98	55	180
					U-500	U-152.4	13.0	5.9										
					500	152.4	11.5	5.2										

**24 AWG** Stranded (45x40) BC Alloy Conductors† • Conductive Textile Wrap (100% Coverage) • TC Braid Shield (65% Coverage) • Cotton Spiral**EPDM Rubber Insulation • Brown EPDM Jacket**

300V RMS 90°C	<b>9399</b>	—	2	Blue, Red	500	152.4	12.5	5.7	.016	.41	.020	.51	.200	5.08	30	98	55	180
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**24 AWG** Stranded (42x40) High-conductivity BC Conductors† • TC "French Braid" Shield (95% Coverage) • BC Drain Wire**Datalene® Insulation • Matte PVC Jacket** (Available in Red, Yellow, Green, Blue, Gray or Black)

Digital MIC Cable High-Flex	<b>1800F</b>	NEC: CL2R	2	Black, Red	500 <sup>▲</sup>	152.4	12.0	5.5	.017	.43	.037	.94	.211	5.36	12	39	26	85
300V RMS 60°C	110 Ohm AES/EBU				U-1000	U-304.8	26.0	11.8										
					1000 <sup>▲</sup>	304.8	24.0	10.9										

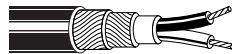


French Braid

\*500 ft. and 1000 ft. put-ups available in Black only.

**24 AWG** Stranded (42x40) High-conductivity BC Conductors† • Double Bare Copper Spiral Shield (95% Coverage)**PVC Insulation • PVC Inner Jacket • Matte PVC Outer Jacket** (Available in Red, Yellow, Green, Blue or Black)

100V RMS 60°C	<b>1812A</b>	—	2	Brown, White	328 <sup>•</sup>	100.0	9.8	4.5	.012	.30	.037	.94	.213	5.41	33	108	54	177
					1000	304.8	31.0	14.1										



\*328 ft. put-up not available in Green.

BC = Bare Copper • EPDM = Ethylene Propylene Diene Monomer • TC = Tinned Copper

\*Capacitance between conductors.

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

†Conductors cabled with fillers.

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Datalene insulation features include a low dielectric constant and a low dissipation factor for high-speed, low-distortion data handling. Physical properties include good crush resistance and light weight.

**Microphone and Musical Instrument Cable**Two-Conductor, Low-Impedance Cables  
High-Conductivity Copper

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Cond.	Color Code	Standard Lengths		Standard Unit Weight		Insulation Thickness		Jacket Thickness		Nominal OD		Nominal Capacitance							
					Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Inch	mm	* pF/ Ft.	* pF/ m	** pF/ Ft.	** pF/ m				
<b>24 AWG Stranded (19x36) HC TC Conductors • Twisted Pair • Noise Reducing Tape • Beldfoil® Shield (100% Coverage) • TC Drain Wire</b>																						
<b>High-density Polyethylene Insulation • Black PVC Jacket</b>																						
 Shorting Fold	9452	—	2	Black, Red	U-500	U-152.4	6.5	3.0	.008	.20	.020	.51	.135	3.43	30	98	58	190				
					500	152.4	6.0	2.7														
					U-1000	U-304.8	12.0	5.5														
					1000	304.8	12.0	5.5														

<b>24 AWG Stranded (27x38) High-conductivity Bare Copper Conductors • Bare Copper Spiral Shield (92% Coverage)</b>																		
<b>PVC Insulation • Black Matte PVC Jacket</b>																		
	1813A	—	2	Red, Blue	328	100.0	10.2	4.6	.017	.43	.055	1.40	.236	5.99	33	108	61	200
					1000	304.8	31.0	14.1										

<b>22 AWG Stranded (16x34) High-conductivity Tinned Copper Conductors • Cotton Braid • Double TC Braid Shield (85% Coverage)</b>																					
<b>Polyethylene Insulation • Chrome PVC Jacket</b>																					
	8422	—	2	Clear, Black	500	152.4	15.0	6.8	.021	.53	.022	.56	.231	5.87	18	59	32	105			
					U-1000	U-304.8	31.0	14.1													
					1000	304.8	33.0	15.0													

<b>20 AWG Stranded (26x34) High-conductivity TC Conductors • Rayon Braid • TC Braid Shield (85% Coverage) • Cotton Wrap</b>																						
<b>EPDM Rubber Insulation • EPDM Jacket (Available in Black, Red, Yellow or Blue)*</b>																						
	8412	—	2	White, Black	100	30.5	5.2	2.4	.023	.58	.035	.89	.262	6.65	30	98	55	180				
					250	76.2	12.0	5.5														
					U-500	U-152.4	24.0	10.9														
					500	152.4	22.0	10.0														
					U-1000	U-304.8	46.0	20.9														
	1000	304.8	47.0	21.4																		

\*Red, Yellow or Blue available in 1000 ft. put-up only.

<b>EPDM Rubber Insulation • Brown Hypalon® Jacket</b>																		
	8402	—	2	White, Black	500	152.4	25.0	11.3	.023	.58	.035	.89	.263	6.68	30	98	55	180
					U-1000	U-304.8	52.0	23.6										

<b>18 AWG Stranded (41x34) High-conductivity TC Conductors • Rayon Braid • TC Braid Shield (85% Coverage) • Cotton Wrap</b>																					
<b>EPDM Rubber Insulation • Black Neoprene Jacket</b>																					
	8428	—	2	White, Black	100	30.5	6.3	2.8	.023	.58	.030	.76	.290	7.37	35	115	60	197			
					U-500	U-152.4	29.0	13.2													
					500	152.4	28.0	12.7													
	1000	304.8	59.0	26.8																	

<b>16 AWG Stranded (65x34) High-conductivity TC Conductors • Rayon Braid • Paper Wrap • TC Braid Shield (85% Coverage) • Cotton Wrap</b>																		
<b>EPDM Rubber Insulation • Brown Hypalon® Heavy-duty Jacket</b>																		
	8408	—	2	Black, White	500	152.4	50.0	22.7	.037	.94	.040	1.02	.380	9.65	30	98	55	180
					VW-1													

BC = Bare Copper • EPDM = Ethylene Propylene Diene Monomer • HC = High-conductivity • TC = Tinned Copper

Hypalon is a DuPont trademark.

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

**BELDEN**For more information, contact **Belden Technical Support: 1-800-BELDEN-1 • www.belden.com****Belden114@CableCon.kr / 0707-434-7704 / Fax. 02-744-0909 / www.CableCon.co.kr**

**Microphone and Musical Instrument Cable**

Three-Conductor, Low-Impedance Cables  
High-Conductivity Copper



Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Cond.	Color Code	Standard Lengths		Standard Unit Weight		Insulation Thickness		Jacket Thickness		Nominal OD		Nominal Capacitance			
					Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Inch	mm	* pF/ Ft.	* pF/ m	** pF/ Ft.	** pF/ m

**24 AWG** Stranded (105x44) High-conductivity Bare Copper Conductors • Double Bare Copper Spiral Shield (97% Coverage)

**PVC Insulation • Matte Black PVC Jacket**

300V RMS 80°C **9398** — 3 White, 1000 304.8 25.0 11.4 .012 .30 .030 .76 .185 4.70 40 131 110 361



Green,  
Brown

**24 AWG** Stranded (45x40) TC Alloy Conductors • Conductive Textile Wrap (100% Coverage) • TC Braid Shield (60% Coverage)

**EPDM Rubber Insulation • Black EPDM Rubber Jacket**

300V 90°C **8406** — 3 Black, 100 30.5 3.0 1.4 .016 .41 .025 .64 .223 5.66 30 98 55 180



Red,  
White

**24 AWG** Stranded (19x32) High-conductivity Tinned Copper Conductors • Rayon Braid • TC Braid Shield (89% Coverage)

**Polyethylene Insulation • Chrome PVC Jacket**

600V RMS 80°C **8403** — 3 Clear, 500 152.4 20.5 9.3 .016 .41 .033 .84 .244 6.20 25 82 45 148

VW-1

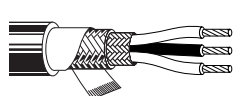


Black,  
Red

**20 AWG** Stranded (26x34) High-conductivity TC Conductors • Rayon Braid • TC Braid Shield (85% Coverage) • Cotton Wrap

**EPDM Rubber Insulation • Black EPDM Jacket**

600V RMS 90°C **8423** — 3 White, 100 30.5 6.0 2.7 .023 .58 .040 1.02 .272 6.91 30 98 55 180



Black,  
Red

EPDM = Ethylene Propylene Diene Monomer • TC = Tinned Copper

\*Capacitance between conductors.

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

Not RoHS compliant at time of printing. Please check with Belden Technical Support for current compliance information at 1-800-BELDEN-1.

**Microphone and Musical Instrument Cable**Four-Conductor Star Quad, Low-Impedance Cables†  
High-Conductivity Copper

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Cond.	Color Code	Standard Lengths		Standard Unit Weight		Insulation Thickness		Jacket Thickness		Nominal OD		Nominal Capacitance			
					Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Inch	mm	* pF/ Ft.	* pF/ m	** pF/ Ft.	** pF/ m

**28 AWG** Stranded (19x40) High-conductivity Silver-plated Copper Alloy Conductors • Tinned Copper Braid Shield (78% Coverage)**Polypropylene Insulation • Matte PVC Jacket** (Available in Red, Yellow, Blue, Beige or Black)

<b>Mini Star Quad</b> 100V RMS 60°C 	<b>1804A</b>	—	4	Blue/White, White/Blue	100 ▲	30.5	1.6	0.7	.006	.15	.014	.36	.115	2.92	40	131	60	197
					500 ■	152.4	4.5	2.0										

2/c 25 AWG equivalent DCR when connected to a 3-pin XLR.

▲100 ft. put-up available in Black only.

■May contain more than one piece. Min. length of any one piece is 50 ft.

One Blue conductor and one White conductor are striped for use in MIDI and other four conductor applications.

**26 AWG** Stranded (30x40) High-conductivity BC Conductors • TC “French Braid” Shield (95% Coverage) • BC Drain Wire**Polyethylene Insulation • Matte PVC Jacket** (Available in Red, Green, Yellow, Blue, Gray or Black)

100V RMS 60°C 	<b>1172A</b>	—	4	Blue/White, White/Blue	500 *	152.4	13.5	6.1	.011	.28	.030	.76	.190	4.83	39	128	57	187
					1000	304.8	25.0	11.3										


French Braid

\*500 ft. put-up available in Black only.

One Blue conductor and one White conductor are striped for use in MIDI and other four conductor applications.

2/c 23 AWG equivalent DCR when connected to a 3-pin XLR.

**24 AWG** Stranded (42x40) High-conductivity Bare Copper Conductors • Tinned Copper Braid Shield (95% Coverage)**Polyethylene Insulation • Matte PVC Jacket** (Available in Red, Green, Yellow, Blue, Gray or Black)


100V RMS 75°C 	<b>1192A</b>	—	4	Blue/White, White/Blue	100 ▼	30.5	4.1	1.8	.016	.41	.045	1.14	.245	6.22	39	128	57	187		
					500 ▼	152.4	16.5	7.5												
					1000	304.8	37.0	16.8												

2/c 21 AWG equivalent DCR when connected to a 3-pin XLR.

▼100 ft. put-up available in Black only. 500 ft. put-up available in Blue or Black only.


One Blue conductor and one White conductor are striped for use in MIDI and other four conductor applications.

**20 AWG** Stranded (19x32) High-conductivity Tinned Copper Conductors • Rayon Braid • Tinned Copper Braid Shield (85% Coverage)**Polyethylene Insulation • Chrome PVC Jacket**

UL AWM Style 2094 (300V RMS 60°C) VW-1 	<b>8404</b>	—	4	Clear,	100	30.5	5.4	2.4	.016	.41	.032	.81	.252	6.40	23	75	49	161			
				Black,	500	152.4	23.0	10.4													
				Red,	U-1000	U-304.8	48.0	21.8													
				Green	1000	304.8	49.0	22.3													


2/c 17 AWG equivalent DCR when connected to a 3-pin XLR.

**20 AWG** Stranded (26x34) High-conductivity Tinned Copper Conductors • Rayon Braid • TC Braid Shield (85% Coverage) • Cotton Wrap**EPDM Rubber Insulation • Black EPDM Rubber Jacket**

600V RMS 90°C 	<b>8424</b>	—	4	Black,	100	30.5	6.8	3.1	.023	.58	.036	.91	.294	7.47	47	154	59	194			
				White,	250	76.2	15.3	6.9													
				Red,	U-500	U-152.4	32.0	14.5													
				Green	500	152.4	30.5	13.8													
					1000	304.8	64.0	29.1													

2/c 17 AWG equivalent DCR when connected to a 3-pin XLR.

**16 AWG** Stranded (65x34) High-conductivity Tinned Copper Conductors • Rayon Braid • TC Braid Shield (85% Coverage) • Cotton Wrap**EPDM Rubber Insulation • Black Neoprene Jacket**

600V RMS 60°C VW-1 	<b>8407</b>	—	4	Black,	100	30.5	11.3	5.1	.031	.79	.043	1.09	.416	10.57	30	98	66	216			
				White,	250	76.2	28.3	12.8													
				Red,																	
				Green																	

2/c 13 AWG equivalent DCR when connected to a 3-pin XLR.

BC = Bare Copper • EPDM = Ethylene Propylene Diene Monomer • TC = Tinned Copper

\*Capacitance between conductors. \*\*Nom. capacitance between conductors in a Quad configuration.

†**Quad connection scheme:** The two blue wires (or wires directly opposite one another) are connected together to form one conductor, and similarly the two white wires (or remaining wires) are connected together to form the second conductor.

⚠ Not RoHS compliant at time of printing. Please check with Belden Technical Support for current compliance information at 1-800-BELDEN-1.

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