

High-Temperature

Unshielded

Control and Instrumentation Cables

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	
					Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Inch	mm

20 AWG Stranded (7x28) Tinned Copper Conductors • Conductors Cabled**Tefzel® Insulation • Clear Tefzel Jacket**

300V RMS 150°C VW-1	85220	—	2	Black, Red	100 1000 [†]	30.5 304.8	3.8 23.0	1.7 10.4	.015 .38	.020 .51	.185 4.70			
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**16 AWG** Stranded (19x29) Tinned Copper Conductors • Conductors Cabled**Tefzel Insulation • Clear Tefzel Jacket**

300V RMS 150°C VW-1	85221	—	2	Black, Red	500 [†] 1000 [†]	152.4 304.8	15.0 34.0	6.8 15.4	.015 .38	.019 .48	.211 5.36			
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85102	—	2	See Chart 2 (Tech Info Section)	500 [†] 1000 [†]	152.4 304.8	14.0 32.0	6.4 14.5	.015 .38	.019 .48	.211 5.36				
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85103	—	3	See Chart 2 (Tech Info Section)	500 [†] 1000 [†]	152.4 304.8	20.0 43.0	9.1 19.5	.015 .38	.019 .48	.223 5.66				
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85105	—	5	See Chart 2 (Tech Info Section)	500 [†] 1000 [†]	152.4 304.8	35.0 68.0	15.9 30.9	.015 .38	.019 .48	.268 6.81				
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85107	—	7	See Chart 2 (Tech Info Section)	100 1000 [†]	30.5 304.8	11.5 105.0	5.2 47.7	.015 .38	.024 .61	.303 7.70				
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85109	—	9	See Chart 2 (Tech Info Section)	500 [†] 1000 [†]	152.4 304.8	59.0 119.0	26.8 54.0	.015 .38	.024 .61	.354 8.99				
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[†] Spools are one piece, but length may vary ±10% from length shown.

Tefzel insulated and jacketed cables are particularly well suited for harsh environments due to outstanding mechanical toughness of the material, as well as its high-temperature and radiation resistant characteristics.

Tefzel cables are used extensively in chemical plants, nuclear plants, and fossil fuel power plants. Typical applications are data recording, communication, telemetry, and monitoring pressure or material flow.

Tefzel is a DuPont trademark.

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

High-Temperature

Overall Beldfoil® Shield

Control and Instrumentation Cables

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

22 AWG Stranded (7x30) TC Conductors • Conductors Cabled • Special Beldfoil Shield (100% Coverage) • 22 AWG (7x30) Stranded TC Drain Wire**FEP Insulation • Red Silicone Rubber Jacket • Noise Reducing Tape**

Jacket working voltage 2000V DC, shield to ground VW-1	83394	AWM 4516	2	Black, White	100 500 [†]	30.5 152.4	3.6 14.5	1.6 6.6	.015 500 [†]	.38 152.4	.030 13.0	.76 5.9	.199	5.05	22	72	40	131
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70°C (min.) to 150°C (max.) operating temperature.

Jacket working voltage 2000V DC, shield to ground VW-1	83395	AWM 4516	3	Black, Red, White	100 500 [†]	30.5 152.4	3.9 14.0	1.8 6.4	.015 500 [†]	.38 152.4	.031 14.0	.79 6.4	.208	5.28	22	72	40	131
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70°C (min.) to 150°C (max.) operating temperature.

	83396	AWM 4516	4	Black, White, Red, Green	100 500 [†]	30.5 152.4	3.9 16.0	1.8 7.3	.015 500 [†]	.38 152.4	.030 16.0	.76 7.3	.217	5.51	22	72	40	131
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20 AWG Stranded (7x28) TC Conductors • Twisted Pair • Special Beldfoil Shield (100% Coverage) • 20 AWG (7x28) Stranded TC Drain Wire**FEP Insulation • Yellow Silicone Rubber Jacket • Noise Reducing Tape**

Jacket working voltage 2000V DC, shield to ground VW-1	83393	AWM 4516	2	Black, Red	100 ^{††} 500 [†]	30.5 152.4	4.2 18.5	1.9 8.4	.020 500 [†]	.51 152.4	.030 17.0	.76 7.8	.242	6.15	22	72	40	131
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70°C (min.) to 150°C (max.) operating temperature.

20 AWG Stranded (7x28) TC Conductors • Conductors Cabled • Overall Beldfoil Shield (100% Coverage) • Drain Wire**Tefzel® Insulation • Clear Tefzel Jacket**

300V RMS 150°C VW-1	85230	—	2	Black, Red	500 [†] 1000 [†]	152.4 304.8	12.5 29.0	5.7 13.2	.015 1000 [†]	.38 304.8	.020 29.0	.51 13.2	.182	4.62	31	102	59	194
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300V RMS 150°C VW-1	85240	—	3	Black, Red, Green	100 1000 [†]	30.5 304.8	4.6 30.0	2.1 13.6	.015 1000 [†]	.38 304.8	.020 30.0	.51 13.6	.193	4.90	27	87	48	157
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**16 AWG** Stranded (19x29) TC Conductors • Conductors Cabled • Overall Beldfoil Shield (100% Coverage) • Drain Wire**Tefzel Insulation • Clear Tefzel Jacket**

300V RMS 150°C VW-1	85231	—	2	Black, Red	100 500 [†] 1000 [†]	30.5 152.4 304.8	5.6 17.0 38.0	2.5 7.8 17.3	.020 500 [†] 1000 [†]	.51 152.4 304.8	.020 17.0 38.0	.51 7.8 17.3	.210	5.33	44	144	79	259
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300V RMS 150°C VW-1	85241	—	3	Black, Red, Green	500 [†] 1000 [†]	152.4 304.8	22.5 49.0	10.3 22.3	.020 1000 [†]	.51 304.8	.020 49.0	.51 22.3	.223	5.66	34	112	61	201
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TC = Tinned Copper

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

†Spools and/or UnReel® cartons are one piece, but length may vary ±10% for spools and ±5% for UnReel from length shown.

††100 ft. put-up one piece, exact length.

Tefzel and Kapton are DuPont trademarks.

High-Temperature

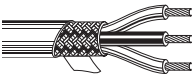
Overall Braid Shield — Control and Instrumentation Cables

MIL-W-16878/4 (Type E) — Individual Conductors

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

26 AWG Stranded (7x34) Silver-plated Copper Conductors • Cabled and Color-coded • Silver-plated Copper Braid Shield (85% Coverage)

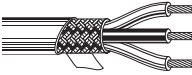
Extruded TFE Teflon® Insulation • White TFE Teflon Tape-wrapped Jacket

600V RMS -65°C to 200°C VW-1 	83303E	—	1	White	500 ^{††} 1000 [▲]	152.4 304.8	3.5 6.0	1.6 2.7	.010	.25	.010	.25	.076	1.93	—	—	44.6	146
	83317E	—	2	White, Black	100 [†] 500 ^{††} 1000 [▲]	30.5 152.4 304.8	1.4 6.5 14.0	0.6 3.0 6.4	.010	.25	.011	.28	.121	3.07	20.8	68	35.5	116
	83332E	—	3	White, Black, Red	100 [†] 1000 [▲]	30.5 304.8	1.7 17.0	0.8 7.7	.010	.25	.011	.28	.127	3.23	18.8	62	31.4	103
	83347E	—	4	White, Black, Red, Green	100 [†] 500 ^{††} 1000 [▲]	30.5 152.4 304.8	1.9 10.0 19.0	0.9 4.5 8.6	.010	.25	.011	.28	.137	3.48	18.5	61	30.5	100

MIL-Spec MIL-W-16878/4 (Type E).

24 AWG Stranded (19x36) Silver-plated Copper Conductors • Cabled and Color-coded • Silver-plated Copper Braid Shield (85% Coverage)

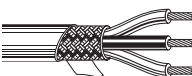
Extruded TFE Teflon Insulation • White TFE Teflon Tape-wrapped Jacket

600V RMS -65°C to 200°C VW-1 	83304E	—	1	White	500 ^{††} 1000 [▲]	152.4 304.8	4.5 8.0	2.0 3.6	.010	.25	.010	.25	.085	2.16	—	—	46	151
	83318E	—	2	White, Black	100 [†] 500 ^{††} 1000 [▲]	30.5 152.4 304.8	1.6 7.5 16.0	0.7 3.4 7.3	.010	.25	.011	.28	.131	3.33	26.5	87	42.4	139
	83333E	—	3	White, Black, Red	100 [†] 500 ^{††} 1000 [▲]	30.5 304.8 304.8	1.9 10.0 19.0	0.9 4.5 8.6	.010	.25	.011	.28	.137	3.48	21.9	72	36.8	121
	83348E	—	4	White, Black, Red, Green	100 [†] 500 ^{††} 1000 [▲]	30.5 152.4 304.8	2.3 12.0 23.0	1.0 5.4 10.4	.010	.25	.011	.28	.149	3.79	21.9	72	36.8	121

Complies with MIL-W-16878/4 (Type E) except stranding.

22 AWG Stranded (19x34) Silver-plated Copper Conductors • Cabled and Color-coded • Silver-plated Copper Braid Shield (85% Coverage)

Extruded TFE Teflon Insulation • White TFE Teflon Tape-wrapped Jacket

600V RMS -65°C to 200°C VW-1 	83305E	—	1	White	100 [†] 500 ^{††} 1000 [▲]	30.5 152.4 304.8	1.1 5.0 9.0	0.5 2.3 4.1	.010	.25	.010	.25	.091	2.31	—	—	57.9	190
	83319E	—	2	White, Black	100 [†] 500 ^{††} 1000 [▲]	30.5 152.4 304.8	1.9 10.0 19.0	0.9 4.5 8.6	.010	.25	.011	.28	.143	3.63	29.9	98	49.2	161
	83334E	—	3	White, Black, Red	100 [†] 500 ^{††} 1000 [▲]	30.5 152.4 304.8	2.7 12.5 24.0	1.2 5.7 10.9	.010	.25	.011	.28	.150	3.81	27.4	90	45.7	150
	83349E	—	4	White, Black, Red, Green	100 [†] 500 ^{††} 1000 [▲]	30.5 152.4 304.8	3.1 14.5 28.0	1.4 6.6 12.7	.010	.25	.011	.28	.163	4.14	27.4	90	45.7	150

Complies with MIL-W-16878/4 (Type E) except stranding.

*Capacitance between conductors.

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

[†] 100 ft. put-up one piece, exact length.

^{††} 500 ft. put-up exact, but may contain up to 3 pieces. Minimum length of any one piece is 25 ft.

[▲] Spools may contain more than one piece. Length may vary ±10% from length shown.

Teflon is a DuPont trademark.

High-Temperature

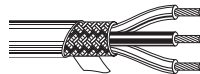
Overall Braid Shield — Control and Instrumentation Cables

MIL-W-16878/4 (Type E) — Individual Conductors

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

20 AWG Stranded (19x32) Silver-plated Copper Conductors • Cabled and Color-coded • Silver-plated Copper Braid Shield (85% Coverage)

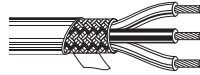
Extruded TFE Teflon® Insulation • White TFE Teflon Tape-wrapped Jacket

600V RMS -65°C to 200°C VW-1 	83306E	—	1	White	100 [†]	30.5	1.4	0.6	.010	.25	.010	.25	.099	2.52	—	—	69	226
					1000 [▲]	304.8	14.0	6.4										
	83320E	—	2	White, Black	100 [†]	30.5	2.6	1.2	.010	.25	.011	.28	.159	4.04	31.7	104	51	167
					500 ^{††}	152.4	12.0	5.4										
					1000 [▲]	304.8	23.0	10.4										
	83335E	—	3	White, Black, Red	100 [†]	30.5	3.3	1.5	.010	.25	.011	.28	.168	4.27	31.7	104	51	167
					500 ^{††}	152.4	15.5	7.0										
					1000 [▲]	304.8	30.0	13.6										
	83350E	—	4	White, Black, Red, Green	100 [†]	30.5	4.0	1.8	.010	.25	.011	.28	.183	4.65	31.7	104	51	167
					500 ^{††}	152.4	19.0	8.6										
					1000 [▲]	304.8	37.0	16.8										

Complies with MIL-W-16878/4 (Type E) except stranding.

18 AWG Stranded (19x30) Silver-plated Copper Conductors • Cabled and Color-coded • Silver-plated Copper Braid Shield (85% Coverage)

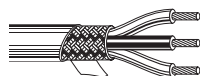
Extruded TFE Teflon Insulation • White TFE Teflon Tape-wrapped Jacket

600V RMS -65°C to 200°C VW-1 	83307E	—	1	White	1000 [▲]	304.8	17.0	7.7	.011	.28	.010	.25	.109	2.77	—	—	71.5	235
	83321E	—	2	White, Black	100 [†]	30.5	3.2	1.5	.011	.28	.011	.28	.179	4.55	31	102	52.8	173
					500 ^{††}	152.4	15.0	6.8										
					1000 [▲]	304.8	29.0	13.2										
	83336E	—	3	White, Black, Red	100 [†]	30.5	4.2	1.9	.011	.28	.011	.28	.189	4.80	31	102	52.8	173
					500 ^{††}	152.4	20.0	9.1										
					1000 [▲]	304.8	39.0	17.7										
	83351E	—	4	White, Black, Red, Green	100 [†]	30.5	5.2	2.4	.011	.28	.011	.28	.207	5.26	31	102	52.8	173
					500 ^{††}	152.4	25.0	11.3										
					1000 [▲]	304.8	51.0	23.1										

Complies with MIL-W-16878/4 (Type E) except stranding.

16 AWG Stranded (19x29) Silver-plated Copper Conductors • Cabled and Color-coded • Silver-plated Copper Braid Shield (85% Coverage)

Extruded TFE Teflon Insulation • White TFE Teflon Tape-wrapped Jacket

600V RMS -65°C to 200°C VW-1 	83308E	—	1	White	500 ^{††}	152.4	9.5	4.3	.012	.31	.011	.28	.120	3.05	—	—	72.5	238
					1000 [▲]	304.8	20.0	9.1										
	83322E	—	2	White, Black	100 [†]	30.5	3.8	1.7	.012	.31	.011	.28	.197	5.00	36	118	60	197
					500 ^{††}	152.4	18.0	8.2										
					1000 [▲]	304.8	35.0	15.9										
	83337E	—	3	White, Black, Red	100 [†]	30.5	5.0	2.3	.012	.31	.011	.28	.209	5.31	30.7	101	53	174
					500 ^{††}	152.4	24.5	11.1										
					1000 [▲]	304.8	49.0	22.2										
	83352E	—	4	White, Black, Red, Green	100 [†]	30.5	6.2	2.8	.012	.31	.011	.28	.229	5.82	30.2	99	50.8	167
					500 ^{††}	152.4	30.5	13.8										
					1000 [▲]	304.8	61.0	27.7										

Complies with MIL-W-16878/4 (Type E) except stranding.

*Capacitance between conductors.

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

[†]100 ft. put-up one piece, exact length.

^{††}500 ft. put-up exact, but may contain up to 2 pieces. Minimum length of any one piece is 25 ft.

[▲]1000 ft. put-up exact, but may contain up to 6 pieces. Minimum length of any one piece is 25 ft.

Teflon is a DuPont trademark.

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		Standard Unit Weight		Insulation Thickness		Nominal OD	
						Ft.	m	Lbs.	kg	Inch	mm	Inch	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

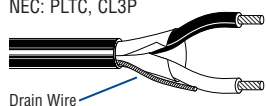
300V 200°C NEC: PLTC, CL3P 	83932	KX	2/c	Yellow, Red	Yellow	500 †	152.4	6.5	3.0	.010	.25	.076	1.93
						1000 †	304.8	12.0	5.4			x .128	x 3.25
	83934	TX	2/c	Blue, Red	Blue	1000 †	304.8	13.0	6.0	.010	.25	.076	1.93
												x .128	x 3.25

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

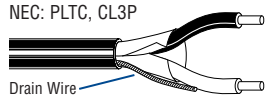
300V 200°C NEC: PLTC, CL3P 	83930	JX	2/c	White, Red	Black	500 †	152.4	7.5	3.4	.010	.25	.082	2.08
						1000 †	304.8	13.0	6.0			x .140	x 3.56

Plenum • Overall Beldfoil® Shield (100% Coverage) • FEP Insulation • FEP Jacket

300V 200°C NEC: PLTC, CL3P 	83955	EX	1 pr.	Purple, Red	Purple	500 †	152.4	9.0	4.1	.010	.25	.145	3.68
						1000 †	304.8	16.0	7.3				
	83950	JX	1 pr.	White, Red	Black	500 †	152.4	9.5	4.3	.010	.25	.145	3.68
						1000 †	304.8	16.0	7.3				
	83952	KX	1 pr.	Yellow, Red	Yellow	500 †	152.4	9.5	4.3	.010	.25	.145	3.68
						1000 †	304.8	16.0	7.3				
	83954	TX	1 pr.	Blue, Red	Blue	500 †	152.4	9.0	4.1	.010	.25	.145	3.68
						1000 †	304.8	17.0	7.7				

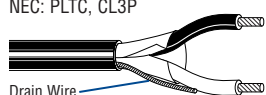
High-Temp Extension Cable • 16 AWG Pairs Solid Conductors • (See chart on page 18.53 for conductor specifications by ANSI Type)

Plenum • Overall Beldfoil Shield (100% Coverage) • FEP Insulation • FEP Jacket

300V 200°C NEC: PLTC, CL3P 	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

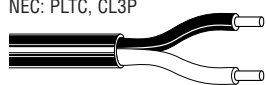
High-Temp Extension Cable • 16 AWG Pairs Stranded (7x24) Conductors • (See chart on page 18.53 for conductor specifications by ANSI Type)

Plenum • Overall Beldfoil Shield (100% Coverage) • FEP Insulation • FEP Jacket

300V 200°C NEC: PLTC, CL3P 	83951	JX	1	White, Red	Black	500 †	152.4	16.0	7.3	.010	.25	.189	4.80
						1000 †	304.8	35.0	15.9				
	83953	KX	1	Yellow, Red	Yellow	500 †	152.4	16.0	7.3	.010	.25	.187	4.75
						1000 †	304.8	32.0	14.5				

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 †	152.4	7.0	3.2	.010	.25	.076	1.93
						1000 †	304.8	13.0	6.0			x .128	x 3.25
	83900	J	2/c	White, Red	Brown	100	30.5	2.1	1.0	.010	.25	.076	1.93
						500 †	152.4	7.0	3.2			x .128	x 3.25
						1000 †	304.8	13.0	6.0				
	83905	K	2/c	Yellow, Red	Brown	100	30.5	2.1	1.0	.010	.25	.076	1.93
						500 †	152.4	7.0	3.2			x .128	x 3.25
						1000 †	304.8	12.0	5.4				
	83910	T	2/c	Blue, Red	Brown	100	30.5	2.1	1.0	.010	.25	.076	1.93
						500 †	152.4	7.0	3.2			x .128	x 3.25
						1000 †	304.8	12.0	5.4				

FEP = Fluorinated Ethylene-propylene

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

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