

83320E Multi-Conductor - MIL-W-16878/4 (Type E), 2 Conductors Cabled



Description:

20 AWG stranded (19x32) silver-plated copper conductors, cabled and color-coded, extruded TFE Teflon® insulation, silver-plated copper braid shield (85% coverage), TFE teflon tape-wrapped jacket.

Physical Characteristics (Overall)

Conductor

AWG:

# Conductors	AWG	Stranding	Conductor Material
2	20	19x32	SPC - Silver Plated Copper

Insulation

Insulation Material:

Insulation Trade Name	Insulation Material	Wall Thickness (in.)
Teflon®	TFE - Tetrafluoroethylene	.010

Insulation Resistance: 100,000 Megaohms/1000 ft. @ 500 V DC

Outer Shield

Outer Shield Material:

Type	Outer Shield Material	Coverage (%)
Braid	SPC - Silver Plated Copper	85

Outer Jacket

Outer Jacket Material:

Outer Jacket Trade Name	Outer Jacket Material	Nom. Wall Thickness (in.)
Teflon®	TFE - Tetrafluoroethylene	.011

Overall Cabling

Overall Cabling Lay Length & Direction:

Length (in.)	Twists (ft.)
1.5	8

Overall Cabling Color Code Chart:

Number	Color
1	White
2	Black

Overall Nominal Diameter: 0.159 in.

Mechanical Characteristics (Overall)

Operating Temperature Range: -65°C To +200°C

Bulk Cable Weight: 22 lbs/1000 ft.

Max. Recommended Pulling Tension: 54.800 lbs.

Min. Bend Radius (Install)/Minor Axis: 1.625 in.

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

EU CE Mark: Yes

EU Directive 2000/53/EC (ELV): Yes

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EU Directive 2002/95/EC (RoHS):	Yes
EU RoHS Compliance Date (mm/dd/yyyy):	01/01/2005
EU Directive 2002/96/EC (WEEE):	Yes
EU Directive 2003/11/EC (BFR):	Yes
CA Prop 65 (CJ for Wire & Cable):	Yes
MII Order #39 (China RoHS):	Yes
Military Specification:	MIL-W-16878/4 Type E (except stranding) (insulated conductors)

Flame Test

UL Flame Test:	UL1685 UL Loading, VW-1
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Plenum/Non-Plenum

Plenum (Y/N):	No
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Electrical Characteristics (Overall)

Nom. Inductance:

Inductance (µH/ft)

.11

Nom. Capacitance Conductor to Conductor:

Capacitance (pF/ft)

31.7

Nom. Capacitance Cond. to Other Conductor & Shield:

Capacitance (pF/ft)

51.0

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)

8.9

Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)

6.3

Max. Operating Voltage - UL:

Voltage

600 V RMS

Max. Recommended Current:

Current

6.5 Amps per conductor @ 25°C

Notes (Overall)

Notes: Teflon® is a registered trademark of E. I. duPont de Nemours and Co. used under license by Belden, Inc.

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
83320E 009100	100 FT	2.800 LB	WHITE	E	2 #20 TFE BRD TFE TAPE
83320E 0091000	1,000 FT	22.000 LB	WHITE	E	2 #20 TFE BRD TFE TAPE
83320E 009500	500 FT	11.500 LB	WHITE	E	2 #20 TFE BRD TFE TAPE

Notes:

E = MAY CONTAIN MORE THAN 1 PIECE. MINIMUM LENGTH OF ANY ONE PIECE IS 25'

High-Temperature

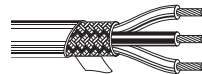
Overall Braid Shield — Control and Instrumentation Cables

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)

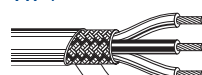
Extruded TFE Teflon® Insulation • White TFE Teflon Tape-wrapped Jacket

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

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)

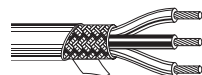
Extruded TFE Teflon Insulation • White TFE Teflon Tape-wrapped Jacket

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 [†] 500 ^{††} 1000 [▲]	30.5 304.8	3.2 15.0 29.0	1.5 6.8 13.2	.011 .28	.011 .28	.179 4.55	31 102	52.8 173		
	83336E	—	3	White, Black, Red	100 [†] 500 ^{††} 1000 [▲]	30.5 304.8	4.2 20.0 39.0	1.9 9.1 17.7	.011 .28	.011 .28	.189 4.80	31 102	52.8 173		
	83351E	—	4	White, Black, Red, Green	100 [†] 500 ^{††} 1000 [▲]	30.5 304.8	5.2 25.0 51.0	2.4 11.3 23.1	.011 .28	.011 .28	.207 5.26	31 102	52.8 173		

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

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.