

83335E Multi-Conductor - MIL-W-16878/4 (Type E)

For more Information please call

1-800-Belden1



General 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 Materi	ial
3 20 19x32 SPC - Silver Plated	
Total Number of Conductors:	3
Insulation	
Insulation Material:	
Insulation Trade Name Insulation Material	Wall Thickness (mm)
Teflon® TFE - Tetrafluoroethylene	0.254
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 (mm)
Teflon® TFE - Tetrafluoroethylen	
Overall Cabling Color Code Chart: Number Color 1 White 2 Black 3 Red	
Overall Nominal Diameter:	4.267 mm
Mechanical Characteristics (Overall)	
Operating Temperature Range:	-65°C To +200°C
Bulk Cable Weight:	41.670 Kg/Km
Max. Recommended Pulling Tension:	332.725 N
Min. Bend Radius/Minor Axis:	44.450 mm
Applicable Specifications and Agency	Compliance (Overall)
Applicable Standards & Environmental Pro	
EU Directive 2011/65/EU (ROHS II):	Yes
EU CE Mark:	Yes
EU Directive 2000/53/EC (ELV):	Yes

Detailed Specifications & Technical Data



METRIC MEASUREMENT VERSION

83335E Multi-Conductor - MIL-W-16878/4 (Type E)

EU RoHS Compliance Date (mm/dd/yyy): 01/01/2005 EU Directive 2002/96/EC (WEEE): Yes EU Directive 2003/11/EC (BFR): Yes CA Prop 65 (CJ for Wir & Cable): Yes Mill Order #39 (China RoHS): Yes Mill Order #39 (China RoHS): Yes Millery Specification: MIL-W-16878/4 (Type E except stranding) (insulated conductors) Other Specification: NEMA HP3 Plenum/Non-Plenum Plenum (YN): Nom. Inductance: Inductance (RMM) 0.406844 Non. Nom. Capacitance Conductor to Conductor: Capacitance (RMM) 0.406844 Non. Nom. Capacitance Cond. to Other Conductor & Shield: Capacitance (RMM) 0.406844 Non. Nom. Capacitance Cond. to Other Conductor & Shield: Capacitance (RMM) 0.406844 Nom. Nom. Conductor D Resistance: DCR @ 20 (Chinkim) 0.406845 Nom. Nom. Conductor D Resistance: DCR @ 20 (Chinkim) 0.40684 Nom. Nom. Shield D Resistance: 0.40684 Nom. Nomation tor Shield D C Resistance: Max. <th>EU Directive 2002/95/EC (RoHS):</th> <th>Yes</th>	EU Directive 2002/95/EC (RoHS):	Yes			
EU Directive 2003/11/EC (BFR): Yes CA Prop 65 (CJ for Wire & Cable): Yes Mill Order #39 (China RoHS): Yes Millitary Specification: MIL-W-18878/4 (Type E except stranding) (insulated conductors) Other Specification: NEMA HP3 Plenum/Non-Plenum Plenum (/N): Nom. Inductance: Inductance: Inductance (pHim) Nom. Capacitance Conductor to Conductor: Capacitance Conductor to Conductor: Capacitance (pFim) 104.008 Nom. Capacitance Cond. to Other Conductor & Shield: Capacitance (pFim) Nom. Capacitance (pFim) 104.008 Nom. Capacitance (pFim) Nom. Capacitance (pFim) Nom 104.008 Nom. Capacitance (pFim) 104.008 Nom. Capacitance (pFim) <td< th=""><th>EU RoHS Compliance Date (mm/dd/yyyy):</th><th>01/01/2005</th></td<>	EU RoHS Compliance Date (mm/dd/yyyy):	01/01/2005			
CA Prop 65 (CJ for Wire & Cable): Yes Mill Order #39 (China RoHS): Yes Mill Order #39 (China RoHS): Yes Milltary Specification: MIL-W-16878/4 (Type E except stranding) (insulated conductors) Other Specification: NEMA HP3 Plenum/Non-Plenum Plenum (YiN): No Electrical Characteristics (Overall) No Nom. Inductance: Inductance (utim) 0.408844 Nom. Capacitance Conductor to Conductor: Capacitance (off/m) 0.408844 Nom. Capacitance Conductor to Conductor: Capacitance (off/m) 0.40884 Nom. Capacitance Conductor to Conductor & Shield: Capacitance (off/m) 0.40884 Nom. Capacitance Conductor to Conductor & Shield: Capacitance (off/m) 0.40884 Nom. Capacitance Conductor to Conductor & Shield: Capacitance (off/m) 0.40884 Nom. Capacitance Conductor & Shield: Capacitance (off/m) 0.40884 Nom. Capacitance Conductor Notice Conductor & Shield: Capacitance (off/m) 0.4089 Nom. Capacitance Conductor De Resistance: DCR 20°C (Ohm/km) 0.4384 Max. Accommended Current: Nom Capacitance Conductor @ 28°C Nottes (Overall) Notes (Overall)	EU Directive 2002/96/EC (WEEE):	Yes			
Mil Order #39 (China RoHS): Yes Military Specification: MIL-W-16878/4 (Type E except stranding) (insulated conductors) Other Specification: NEMA HP3 Plenum/Non-Plenum Plenum (YiN): No Electrical Characteristics (Overall) Nom. Inductance: Inducance (ultim) 0.466844 Nom. Capacitance Conductor to Conductor: Capacitance (pfm) 104.008 Nom. Capacitance Conductor to Conductor & Shield: Capacitance (pfm) 104.008 Nom. Capacitance Conductor DC Resistance: DCR @ 20°C (Ohmkm) 23.9513 Nomial Outer Shield DC Resistance: DCR @ 20°C (Ohmkm) 14.4364 Max. Coperating Voltage - UL: Vitage goo V RMS Max. Recommended Current: Current (s.f. Amps per conductor @ 25°C Notes (Overall)	EU Directive 2003/11/EC (BFR):	Yes			
Military Specification: MIL-W-18878/4 (Type E except stranding) (insulated conductors) Other Specification: NEMA HP3 Plenum/Non-Plenum Plenum (Y/N): Nom. Inductance: Nom. Inductance (u/m) 0.408844 Nom. Capacitance Conductor to Conductor: Capacitance (u/m) Capacitance (pfm) Nom. Capacitance Conductor to Conductor: Capacitance (pfm) Nom. Capacitance Cond. to Other Conductor & Shield: Capacitance (pfm) Nom. Conductor DC Resistance: DCR @ 20°C (Dhm/km) Z3.9513 Nomainal Outer Shield DC Resistance: DCR @ 20°C (Dhm/km) Max. Operating Voltage - UL: Vidage (00 V FMS) Max. Recommended Current: Current (5.5 Amps per conductor @ 25°C) Notes (Overall) Lote (Coverall)	CA Prop 65 (CJ for Wire & Cable):	Yes			
Other Specification: NEMA HP3 Plenum/Non-Plenum No Plenum (YiN): No Electrical Characteristics (Overall) Nom. Inductance: Inductance (µ/m) 0.400844 0.400844 Nom. Capacitance Conductor to Conductor: Capacitance Conductor to Conductor: Capacitance (pf/m) 104.008 Nom. Capacitance Conductor to Conductor & Shield: Capacitance (pf/m) Nom: Capacitance (pf/m) 167.331 Nom. Conductor DC Resistance: DCR @ 20°C (Ohm/km) 23.9513 Nominal Outer Shield DC Resistance: DCR @ 20°C (Ohm/km) 14.4364 Max. Operating Voltage - UL: Voltage 000 V FMS Max. Recommended Current: Current 0.5 Amps per conductor @ 25°C Notes (Overall)	MII Order #39 (China RoHS):	Yes			
Plenum/Yon-Plenum Plenum (Y/N): No Electrical Characteristics (Overall) Nom. Inductance: Inductance (ul/m) 0.408844 Nom. Capacitance Conductor to Conductor: Capacitance Conductor to Conductor & Shield: Capacitance (ul/m) 104.008 Nom. Capacitance Cond. to Other Conductor & Shield: Capacitance (ul/m) 107.301 Nom. Conductor DC Resistance: DCR @ 20°C (Ohm/km) 23.9513 Nominal Outer Shield DC Resistance: DCR @ 20°C (Ohm/km) 14.4364 Max. Operating Voltage - UL: Voltage 00 V PMIS Max. Recommended Current: Current 0.5 Amps per conductor @ 25°C	Military Specification:	MIL-W-16878/4 (Type E except stranding) (insulated conductors)			
Plenum (Y/N): No Electrical Characteristics (Overall) Nom. Inductance: Inductance (pH/m) 0.406844 Nom. Capacitance Conductor to Conductor: Capacitance (pF/m) 104.008 Nom. Capacitance Cond. to Other Conductor & Shield: Capacitance (pF/m) 167.331 Nom. Conductor D Resistance: DCR@ 20°C (Ohm/km) 23.9513 Nominal Outer Shield DC Resistance: DCR@ 20°C (Ohm/km) 14.4364 Max. Operating Voltage - UL: Voltage GOV Y RMS Max. Recommended Current: Current Got Y RMS Max. Recommended Current: Notes (Overall)	Other Specification:	NEMA HP3			
Electrical Characteristics (Overall) Nom. Inductance: Inductance (µHm) 0.406844 Nom. Capacitance Conductor to Conductor: Capacitance (pF/m) 104.008 Nom. Capacitance Cond. to Other Conductor & Shield: Capacitance (pF/m) 167.031 Nom. Conductor DC Resistance: DCR @ 20°C (Ohm/km) 23.9513 Nominal Outer Shield DC Resistance: DCR @ 20°C (Ohm/km) 14.43d Max. Operating Voltage - UL: Voltage 600 V RMS Max. Recommended Current: Current 6.5 Amps per conductor @ 25°C Notes (Overall)	Plenum/Non-Plenum				
Nom. Inductance: Inductance (µH/m) 0.406844 Nom. Capacitance Conductor to Conductor: Capacitance (pF/m) 104.008 Nom. Capacitance Cond. to Other Conductor & Shield: Capacitance (pF/m) 167.331 Nom. Conductor DC Resistance: DCR @ 20°C (Ohm/km) 23.9513 Nominal Outer Shield DC Resistance: DCR @ 20°C (Ohm/km) 14.4364 Max. Operating Voltage - UL: Voltage 600 V RMS Max. Recommended Current: Current 6.5 Amps per conductor @ 25°C	Plenum (Y/N):	No			
Nom. Inductance: Inductance (µH/m) 0.406844 Nom. Capacitance Conductor to Conductor: Capacitance (pF/m) 104.008 Nom. Capacitance Cond. to Other Conductor & Shield: Capacitance (pF/m) 167.331 Nom. Conductor DC Resistance: DCR @ 20°C (Ohm/km) 23.9513 Nominal Outer Shield DC Resistance: DCR @ 20°C (Ohm/km) 14.4364 Max. Operating Voltage - UL: Voltage 600 V RMS Max. Recommended Current: Current 6.5 Amps per conductor @ 25°C	Electrical Characteristics (Overall)				
0.406844 Nom. Capacitance Conductor to Conductor: Capacitance (pF/m) 104.008 Nom. Capacitance Cond. to Other Conductor & Shield: Capacitance (pF/m) 167.331 Nom. Conductor DC Resistance: DCR @ 20°C (Ohm/km) 23.9513 Nominal Outer Shield DC Resistance: DCR @ 20°C (Ohm/km) 14.4364 Max. Operating Voltage - UL: Voltage 800 V RMS Max. Recommended Current: Current 6.5 Amps per conductor @ 25°C					
Capacitance (pF/m) 104.008 Nom. Capacitance Cond. to Other Conductor & Shield: Capacitance (pF/m) 167.331 Nom. Conductor DC Resistance: DCR @ 20°C (Ohm/km) 23.9513 Nominal Outer Shield DC Resistance: DCR @ 20°C (Ohm/km) 14.4364 Max. Operating Voltage - UL: Voltage 600 V RMS Max. Recommended Current: Current 8.5 Amps per conductor @ 25°C					
104.008 Nom. Capacitance Cond. to Other Conductor & Shield: Capacitance (pF/m) 167.331 Nom. Conductor DC Resistance: DCR @ 20°C (Ohm/km) 23.9513 Nominal Outer Shield DC Resistance: DCR @ 20°C (Ohm/km) 14.4364 Max. Operating Voltage - UL: Voltage 600 V RMS Max. Recommended Current: Current 6.5 Amps per conductor @ 25°C	Nom. Capacitance Conductor to Conductor:				
Capacitance (pF/m) 167.331 Nom. Conductor DC Resistance: DCR @ 20°C (Ohm/km) 23.9513 Nominal Outer Shield DC Resistance: DCR @ 20°C (Ohm/km) 14.4364 Max. Operating Voltage - UL: Voltage 600 V RMS Max. Recommended Current: Current 6.5 Amps per conductor @ 25°C					
167.331 Nom. Conductor DC Resistance: DCR @ 20°C (Ohm/km) 23.9513 Nominal Outer Shield DC Resistance: DCR @ 20°C (Ohm/km) 14.4364 Max. Operating Voltage - UL: Voltage 600 V RMS Max. Recommended Current: Current 6.5 Amps per conductor @ 25°C	Nom. Capacitance Cond. to Other Conductor & Shiel	ld:			
DCR @ 20°C (Ohm/km) 23.9513 Nominal Outer Shield DC Resistance: DCR @ 20°C (Ohm/km) 14.4364 Max. Operating Voltage - UL: Voltage 600 V RMS Max. Recommended Current: Current 6.5 Amps per conductor @ 25°C Notes (Overall)					
23.9513 Nominal Outer Shield DC Resistance: DCR @ 20°C (Ohm/km) 14.4364 Max. Operating Voltage - UL: Voltage 600 V RMS Max. Recommended Current: Current 6.5 Amps per conductor @ 25°C	Nom. Conductor DC Resistance:				
DCR @ 20°C (Ohm/km) 14.4364 Max. Operating Voltage - UL: Voltage 600 V RMS Max. Recommended Current: Current 6.5 Amps per conductor @ 25°C Notes (Overall)					
Voltage 600 V RMS Max. Recommended Current: Current 6.5 Amps per conductor @ 25°C Notes (Overall)	DCR @ 20°C (Ohm/km)				
600 V RMS Max. Recommended Current: Current 6.5 Amps per conductor @ 25°C Notes (Overall)	Max. Operating Voltage - UL:				
Current 6.5 Amps per conductor @ 25°C Notes (Overall)	_				
6.5 Amps per conductor @ 25°C Notes (Overall)	Max. Recommended Current:				
	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
83335E 009100	30 MT	1.542 KG	WHITE	E	3 #20 TFE BRD TFE TAPE
83335E 0091000	305 MT	13.154 KG	WHITE	E	3 #20 TFE BRD TFE TAPE
83335E 009500	152 MT	6.804 KG	WHITE	E	3 #20 TFE BRD TFE TAPE

Notes:

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

Revision Number: 4 Revision Date: 08-31-2012

© 2013 Belden, Inc All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described herein are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Detailed Specifications & Technical Data



METRIC MEASUREMENT VERSION

83335E Multi-Conductor - MIL-W-16878/4 (Type E)

Belden provides the information and specifications herein on an "AS IS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale. Belden believes this product to be in compliance with EU RoHS (Directive 2002/95/EC, 27-Jan-2003). Material manufactured prior to the compliance date may be in stock at Belden facilities and in our Distributor's inventory. The information provided in this Product Disclosure, and the identification of materials listed as reportable or restricted within the Product Disclosure, is correct to the best of Belden's knowledge, information, and belief at the date of its publication. The information provided in this Product Disclosure is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. This Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product. Belden declares this product to be in compliance with EU LVD (Low Voltage Directive 73/23/EEC), as amended by directive 93/68/EEC.