

Ferrules with Sleeves for Short Circuit Protection

specifications

Ferrules with sleeves for short circuit protection shall be designed with a seamless barrel and with a wider inside diameter sleeve. This wider inside diameter sleeve shall provide a significant air gap between the wire and the outside material to prevent an electrical arc in terminal block and panel building applications. Ferrules with sleeves for short circuit protection shall meet UL 486F, CSA-C22.2 No. 291-14 and DIN 46228 requirements for color and single wire containment. Ferrules with sleeves for short circuit protection shall be available in wire sizes #16 – 6 AWG and be suitable for wires with very thick insulation. Ferrules with sleeves for short circuit protection shall be installed with controlled cycle tools for consistent, reliable, high quality terminations.



technical information

Industry standards: Meets UL 486F, CSA-C22.2 No. 291-14 and DIN 46228 standards*

Maximum insulation temperature: 221°F (105°C)

* UL 486F for 1/0-20AWG

key features and benefits

Wider polypropylene sleeve	Delivers a much wider inside diameter to provide a significant air gap between the wire and the outside of the sleeve; to prevent an electrical arc to adjacent material
Flanged wire entry	Polypropylene sleeve forms a guide for easy insertion of wire strands into the crimp barrel to enhance the installation process and improve productivity
Colored sleeves	Allows visual color designation of wire size to aid in identification and quality inspection
Seamless barrel design	A tin-plated copper barrel provides a crimp barrel without any weak points for a consistent and reliable installation
Meets UL 486F, CSA-C22.2 No. 291-14 and DIN 46228 standards*	Ensures ferrules meet dimensional expectations and performance requirements for improved safety and product compatibility

applications

Ferrules with sleeves for short circuit protection meets UL 486F, CSA -C22.2 No. 291-14 and DIN 46228 standards. Featuring a seamless barrel and a wider inside diameter sleeve, these ferrules ensure superior performance in terminal block and panel building applications requiring the use of wires with very thick insulation.

Ferrules with sleeves for short circuit protection prevent electrical arcs in terminal block and panel building applications, to provide a safe, high quality termination solution that contributes to the overall reliability and productivity of the physical infrastructure.

Related Products

Ferrules with Expanded Sleeves (FSDX)

Sleeve color standard:	DIN
Wire range:	20 – 6 AWG (0.5 – 16.0mm ²)
Pin length (varies):	0.31" – 0.47" (8.0 – 12.0mm)

Ferrules with Sleeves (FSD)

Sleeve color standard:	DIN and French
Wire range:	26 AWG – 300 kcmil (0.14 – 150.0mm ²)
Pin length (varies):	0.24" – 1.26" (6.0 – 32.0mm)

Ferrules with Sleeves for Twin Wires (FTD)

Sleeve color standard:	DIN
Wire range:	22 – 6 AWG (0.5 – 16.0mm ²)
Pin length (varies):	0.31" – 0.63" (8.0 – 16.0mm)

Ferrules without Sleeves (F)

Sleeve color standard:	N/A
Wire range:	22 AWG – 500 kcmil (0.25 – 240.0mm ²)
Pin length (varies):	0.20" – 1.57" (5.0 – 40.0mm)

Ferrules with Sleeves on Strips (FSD)

Sleeve color standard:	DIN
Wire range:	22 – 14 AWG (0.5 – 2.5mm ²)
Pin length:	0.31" (8.0mm)

Ferrules with Sleeves on Reels (FSD)

Sleeve color standard:	DIN
Wire range:	24 – 14 AWG (0.25 – 2.5mm ²)
Pin length:	0.31" (8.0mm)

Ferrules with Sleeves for Short Circuit Protection

ordering information

Part Number	Wire Size		Color Code	Max. Wire Insul. Dia.		Length		Pin Length		Inside Diameter		Wire Strip Length		Tool	Std. Pkg. Qty.
	AWG	mm ²		In.	mm	In.	mm	In.	mm	In.	mm	In.	mm		
FSDXL78-8-C	16 AWG	1.5	Black	0.27	6.9	0.69	17.5	0.31	8.0	0.07	1.8	15/32	11.9	CT-1002 CT-1123	100
FSDXL78-10-C	16 AWG	1.5	Black	0.27	6.9	0.77	19.5	0.39	10.0	0.07	1.8	17/32	13.5		100
FSDXL80-8-C	14 AWG	2.5	Blue	0.31	7.8	0.69	17.5	0.31	8.0	0.09	2.3	15/32	11.9		100
FSDXL80-12-C	14 AWG	2.5	Blue	0.31	7.8	0.85	21.5	0.47	12.0	0.09	2.3	5/8	15.9		100
FSDXL81-10-C	12 AWG	4.0	Gray	0.31	7.8	0.77	19.5	0.39	10.0	0.11	2.9	17/32	13.5		100
FSDXL82-12-C	10 AWG	6.0	Yellow	0.33	8.3	0.91	23.0	0.47	12.0	0.14	3.6	5/8	15.9		100
FSDXL83-12-C	8 AWG	10.0	Red	0.39	9.8	0.94	24.0	0.47	12.0	0.18	4.6	5/8	15.9	CT-1004 CT-1104 CT-1123	100
FSDXL84-12-C	6 AWG	16.0	Blue	0.47	12.0	1.00	25.5	0.47	12.0	0.24	6.0	5/8	15.9	CT-1004 CT-1104	100

recommended installation tools



CT-1002



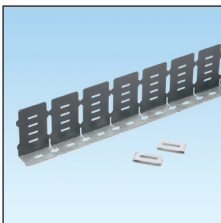
CT-1123

Part Number	Part Description	Std. Pkg. Qty.
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Contour Crimp™ Controlled Cycle Hand Operated Crimping Tool

CT-1002	Controlled cycle crimp tool with trapezoid profile for #26 – 10 AWG (0.14 – 6.0mm ²) and #22 – 2 AWG (0.5 – 4.0mm ²) insulated twin wire ferrules.	1
CT-1004	Controlled cycle crimp tool with trapezoid profile for #8 – 6 AWG (10.0 – 16.0mm ²) and #12 – 10 AWG (4.0 – 6.0mm ²) insulated twin wire ferrules.	1
CT-1104	Controlled cycle crimp tool with square profile for #8 – 6 AWG (10.0 – 16.0mm ²) insulated and non-insulated ferrules and #12 – 10 AWG (4.0 – 6.0mm ²) insulated twin wire ferrules.	1
CT-1123	Controlled cycle crimp tool with square profile for #26 – 8 AWG (0.14 – 10.0mm ²) insulated and non-insulated ferrules and #22 – 12 AWG (0.5 – 4.0mm ²) insulated twin wire ferrules.	1

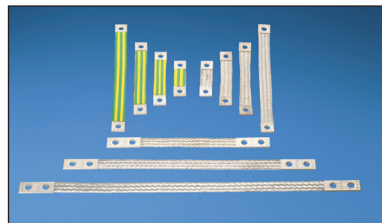
other control panel products available



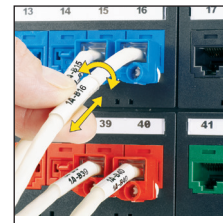
Panduit® PanelMax™ Noise Shield:
Reduces electromagnetic interference (EMI) while saving valuable space.



Plenum Rated Hook and Loop Cable Ties:
Deliver reliability by protecting against over-tensioning high performance cables.



Braided Bonding Straps: Reduce the effects of electromagnetic interference (EMI) and promote better electro-mechanical compatibility (EMC).



Turn-Tell® Labels:
Improve the flexibility of labeling with labels that can be rotated on cable after installation.



Mini-Com® DIN Rail Mount Adapter: Provides terminal block housing for all Mini-Com® Modules to allow for superior wire management of network cables in control panels.

WORLDWIDE SUBSIDIARIES AND SALES OFFICES

PANDUIT CANADA
Markham, Ontario
cs-cdn@panduit.com
Phone: 800.777.3300

PANDUIT EUROPE LTD.
London, UK
cs-emea@panduit.com
Phone: 44.20.8601.7200

PANDUIT SINGAPORE PTE. LTD.
Republic of Singapore
cs-ap@panduit.com
Phone: 65.6305.7575

PANDUIT JAPAN
Tokyo, Japan
cs-japan@panduit.com
Phone: 81.3.6863.6000

PANDUIT LATIN AMERICA
Guadalajara, Mexico
cs-la@panduit.com
Phone: 52.33.3777.6000

PANDUIT AUSTRALIA PTY. LTD.
Victoria, Australia
cs-aus@panduit.com
Phone: 61.3.9794.9020

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