# **Ferrule with Expanded Sleeves**



# specifications

Ferrules with expanded sleeves shall be designed with a seamless tin plated copper barrel and be suitable for wires with thick insulation to provide consistent. reliable terminations in terminal block and panel building applications. Ferrules with expanded sleeves shall meet UL 486F, CSA-C22.2 No. 291-14 and DIN 46228 requirements for color and single wire containment. Ferrules with expanded sleeves shall be available in a range of wire sizes. Ferrules with expanded sleeves shall be installed with controlled cycle tools for quality crimps.



## technical information

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

Fiber compatibility:

## kev features and benefits

221°F (105°C)

Expanded polypropylene sleeve	Provides a wider inside diameter to allow ferrules to fit easily over thick insulated wire, ideal for use in the U.S and for use with flexible wire.
Funnel wire entry	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 crimp barrel design	Provides a consistent and reliable installation
Meets UL 486F, CSA-C22.2 No. 291-14 and DIN 46228 standards*	Ensures ferrules meet both dimensional and performance requirements for improved safety and product compatibility

<sup>\*</sup> UL 486F for 1/0-20AWG

# applications

Ferrules with expanded sleeves are designed to ensure superior performance in panel building and terminal block applications requiring the use of wires with thick insulation. Wires with thick insulation include wires with flexible insulation. Panduit ferrules provide a high quality termination solution that contributes to the overall reliability and productivity of the physical infrastructure.

#### Related Products

### Ferrules with Short Circuit Protection Sleeves (FSDX)

Sleeve color

standard: DIN

Wire range: 16 to 6 AWG

(1.5 to 16.0mm<sup>2</sup>)

Pin length

(varies): 0.31" to 0.47"

(8.0 to 12.0mm)

## Ferrules with Sleeves

Sleeve color

DIN

standard: Wire range:

26 AWG to 300 kcmil

(0.14 to 150.0mm<sup>2</sup>)

Pin length

(varies):

0.24" to 1.26" (6.0 to 32.0mm)

### Ferrules with Sleeves for Twin Wires (FTD)

Sleeve color

DIN

standard: Wire range: 22 to 6 AWG

(0.5 to 16.0 mm<sup>2</sup>)

Pin length

(varies):

0.31" to 0.63" (8.0 to 16.0mm)

## Ferrules without Sleeves (F)

Sleeve color

standard: N/A

22 AWG to 500 kcmil Wire range:

(0.25 to 240.0mm<sup>2</sup>)

Pin length

(varies):

0.20" to 1.57"

(5.0 to 40.0mm)

#### Ferrules with Sleeves on Strips (FSD)

Sleeve color

DIN standard:

Wire range: 22 to 14 AWG

(0.50 to 2.5 mm<sup>2</sup>)

Pin length: 0.31"

(8.0mm)

### Ferrules with Sleeves on Reels (FSD)

Sleeve

color standard:

DIN

Wire range: 24 to 14 AWG

(0.25 to 2.5mm<sup>2</sup>)

0.31" Pin length:

(8.0mm)

<sup>\*</sup> UL 486F for 1/0-20AWG

# Ferrule with Expanded Sleeves

## ordering information

	Wire Size		Color	Max. Wire Insul. Dia		Length		Pin Length		Inside Diameter		Wire Strip Length			Std. Pkg.
Part Number	AWG	mm²	Code	(ln.)	mm	(ln.)	mm	(ln.)	mm	(ln.)	mm	(ln.)	mm	Tool	Qty.
FSDX75-8-D	20 AWG	0.50	White	0.12	3.0	0.53	13.5	0.31	8.0	0.04	1.1	15/32	11.9		500
FSDX76-8-D	20 AWG	0.75	Gray	0.14	3.4	0.55	14.0	0.31	8.0	0.05	1.3	15/32	11.9	CT-1002,	500
FSDX77-8-D	18 AWG	1.00	Red	0.14	3.4	0.57	14.5	0.31	8.0	0.06	1.5	15/32	11.9	CT-1003, CT-1123	500
FSDX78-8-D	16 AWG	1.50	Black	0.15	3.8	0.57	14.5	0.31	8.0	0.07	1.8	15/32	11.9		500
FSDX84-12-C	6 AWG	16.00	Blue	0.37	9.5	0.91	23.0	0.47	12.0	0.24	6.0	7/8	22.2	CT-1004, CT-1104	100

## recommended installation tools





Part Number	Part Description	Std. Pkg. Qty.						
Contour Crimp™ Controlled Cycle Hand Operated Crimping Tool								
CT-1002	Controlled cycle crimp tool with trapezoid profile for #26 – 10 AWG (0.14 – 6.0mm²) insulated and non-insulated single wire ferrules and #22 – 12 AWG (0.50 – 4.0mm²) insulated twin wire ferrules.	1						
CT-1004	Controlled cycle crimp tool with trapezoid profile for #8 – 6 AWG (10.0 – 16.0mm²) insulated and non-insulated ferrules and #10 AWG (6.0mm²) insulated twin wire ferrules.	1						
CT-1104	Controlled cycle crimp tool with square profile for #8 – 6 AWG (10.0 – 16.0mm²) insulated and non-insulated ferrules and #10 AWG (6.0mm²) insulated twin wire ferrules.	1						
CT-1123	Controlled cycle crimp tool with square profile for #26 – 8 AWG (0.14 – 10.0mm²) insulated and non-insulated ferrules and #22 – 12 AWG (0.50 – 4.0mm²) insulated twin wire ferrules.	1						

# other control panel products available



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