

Ferrules



Panduit® Pan-Term® Ferrule end sleeves terminate stranded wire into terminal blocks with superior termination performance. A wide assortment of ferrule styles and tool designs provide a proven way to make reliable connections, especially for limited space applications. Insulation flare allows for ease of wire insertion and eliminates loose strands of wire. Encapsulated crimp contains loose wires to eliminate stray wire breakage.



- **Ferrules are UL 486F (1/0-20 AWG) listed and CSA certified**
- **Ideal for control panel and terminal block applications**
- **Insulated single wire range of #26 – 300 kcmil sizes meets DIN color code standards**
- **Insulated twin wire end sleeve range of #22 – 6 AWG, sizes meets DIN color code standard**
- **Non-insulated wire range of #24 – 500 kcmil**
- **Insulated ferrules single wire range #20 – 14 AWG, available in strips of 50 for use with the semiautomatic ferrule crimping tool, CT-1000, for improved reliability and productivity**
- **Wide assortment of controlled cycle, crimping tools for reliable connections at the lowest installed cost**

Panduit continually provides new designs to meet the application challenges encountered by our customers. Panduit offers a wide assortment of Pan-Term® termination products to meet customer needs at the lowest installed cost.

A. System Overview
B1. Cable Ties
B2. Cable Accessories
B3. Stainless Steel Cable Ties & Accessories
C1. Wiring Duct
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C3. Cable Management
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E1. Labeling Systems
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E3. Pre-Printed & Write-On Markers
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Features and Benefits – Pan-Term® Ferrules

Panduit® ferrules are available for wiring applications from #26 – 500 kcmil. Offerings include insulated and non-insulated ferrules, in single-wire or double-wire configurations. Insulated ferrules are color-coded to DIN standards. Crimped on the metal barrel these ferrules provide improved performance for terminal block and panel building applications. All Panduit ferrules are CSA Certified. Panduit 1/0 to 20 AWG ferrules are UL listed per UL486F Standard.

Insulated Ferrules — Single Wire
Type FSD

Labels for FSD: Seamless tubular barrel provides consistent quality crimps, Tin-plated copper, Maximum insulation temperature 221°F (105°C), Din Color-coded polypropylene identifies wire range

Insulated Ferrules — Twin Wire
Type FTD

Labels for FTD: Oversized seamless tubular barrel provides consistent, high performance quality crimps for two wire applications, Tin-plated copper, Maximum insulation temperature 221°F (105°C), Din Color-coded polypropylene identifies wire range


Non-Insulated Ferrules
Type F

Labels for Type F: Seamless tubular barrel provides consistent quality crimps, Tin-plated copper, Internally beveled barrel for quick easy wire insertion



Panduit designs and manufactures a full line of labeling products, software, and printers to assist you with your labeling requirements. See pages E1.1 – E2.27.

Selection Guide – Pan-Term® Ferrules



Material	Style	Feature	Type	Page Number
Polypropylene	Ferrules, Single Wire	DIN Color Code	FSD	D1.56
	Ferrules, Single Wire	On Strips	FSD	D1.59
	Ferrules, Twin Wire	DIN Color Code	FTD	D1.59
Non-Insulated	Ferrules	Seamless Tube	F	D1.60, D1.61

Part Number System for Pan-Term® Ferrules

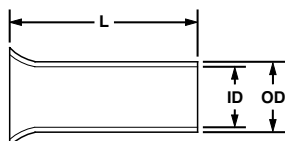
F	S	D	72	—	8
Type	Wire Type	Color Code	Wire Size		PIN Length
F = Ferrule	S = Single T = Twin Blank = Non-Insulated	D = DIN			



Ferrules, Non-Insulated

Type F

- Designed with a seamless barrel to contain loose wire strands for superior terminations
- Eases insertion of wire into terminal block
- Meets DIN standards for wire containment
- Suitable for limited space panel applications
- Multiple pin lengths available for a variety of terminal blocks



Part Number	Wire Size		Figure Dimensions						Wire Strip Length		Recommended Installation Tool	Std. Pkg. Qty.
			L		ID		OD					
	AWG	mm²	In.	mm	In.	mm	In.	mm	In.	mm		
F73-5-M*	24 AWG	0.25	0.20	5.0	0.03	0.80	0.04	1.1	7/32	5.0	CT-1002, CT-1123	1000
F73-7-M*			0.28	7.0	0.03	0.80	0.04	1.1	9/32	7.0		1000
F74-5-M*	24 – 22 AWG	0.34	0.20	5.0	0.04	0.90	0.05	1.2	7/32	5.0		1000
F74-7-M*			0.28	7.0	0.04	0.90	0.05	1.2	9/32	7.0		1000
F75-6-M+	22 – 20 AWG	0.50	0.24	6.0	0.04	1.0	0.05	1.3	1/4	6.0	CT-1002, CT-1003, CT-1123	1000
F75-8-M+			0.31	8.0	0.04	1.0	0.05	1.3	5/16	8.0		1000
F75-10-M+			0.39	10.0	0.04	1.0	0.05	1.3	13/32	10.0		1000
F76-6-M	18 AWG	0.75	0.24	6.0	0.05	1.2	0.06	1.5	1/4	6.0		1000
F76-8-M			0.31	8.0	0.05	1.2	0.06	1.5	5/16	8.0		1000
F76-10-M			0.39	10.0	0.05	1.2	0.06	1.5	13/32	10.0		1000
F76-12-M			0.47	12.0	0.05	1.2	0.06	1.5	15/32	12.0		1000
F77-6-M	16 AWG	1.0	0.24	6.0	0.06	1.4	0.07	1.7	1/4	6.0	CT-1002, CT-1003, CT-1123	1000
F77-7-M			0.28	7.0	0.06	1.4	0.07	1.7	9/32	7.0		1000
F77-8-M			0.31	8.0	0.06	1.4	0.07	1.7	5/16	8.0		1000
F77-10-M			0.39	10.0	0.06	1.4	0.07	1.7	13/32	10.0		1000
F77-12-M			0.47	12.0	0.06	1.4	0.07	1.7	15/32	12.0		1000
F78-7-M	16 AWG	1.5	0.28	7.0	0.07	1.7	0.08	2.0	9/32	7.0	CT-1002, CT-1003, CT-1123	1000
F78-8-M			0.31	8.0	0.07	1.7	0.08	2.0	5/16	8.0		1000
F78-10-M			0.39	10.0	0.07	1.7	0.08	2.0	13/32	10.0		1000
F78-12-M			0.47	12.0	0.07	1.7	0.08	2.0	15/32	12.0		1000
F78-15-M			0.59	15.0	0.07	1.7	0.08	2.0	19/32	15.0		1000
F78-18-M			0.71	18.0	0.07	1.7	0.08	2.0	23/32	18.0		1000
F78-20-M			0.79	20.0	0.07	1.7	0.08	2.0	25/32	20.0		1000
F80-7-M	14 AWG	2.5	0.28	7.0	0.09	2.2	0.10	2.5	9/32	7.0	CT-1002, CT-1003, CT-1123	1000
F80-8-M			0.31	8.0	0.09	2.2	0.10	2.5	5/16	8.0		1000
F80-10-M			0.39	10.0	0.09	2.2	0.10	2.5	13/32	10.0		1000
F80-12-M			0.47	12.0	0.09	2.2	0.10	2.5	15/32	12.0		1000
F80-15-M			0.59	15.0	0.09	2.2	0.10	2.5	19/32	15.0		1000
F80-18-M			0.71	18.0	0.09	2.2	0.10	2.5	23/32	18.0		1000
F80-20-M			0.79	20.0	0.09	2.2	0.10	2.5	25/32	20.0		1000
F81-9-M	12 AWG	4.0	0.35	9.0	0.11	2.8	0.13	3.2	11/32	8.0	CT-1002, CT-1003, CT-1123	1000
F81-10-M			0.39	10.0	0.11	2.8	0.13	3.2	13/32	10.0		1000
F81-12-M			0.47	12.0	0.11	2.8	0.13	3.2	15/32	12.0		1000
F81-15-M			0.59	15.0	0.11	2.8	0.13	3.2	19/32	15.0		1000
F81-18-M			0.71	18.0	0.11	2.8	0.13	3.2	23/32	18.0		1000
F81-20-M			0.79	20.0	0.11	2.8	0.13	3.2	25/32	20.0		1000
F82-10-M‡	10 AWG	6.0	0.39	10.0	0.14	3.5	0.15	3.9	13/32	10.0	CT-1002, ‡CT-1003, CT-1123	1000
F82-12-M‡			0.47	12.0	0.14	3.5	0.15	3.9	15/32	12.0		1000
F82-15-M‡			0.59	15.0	0.14	3.5	0.15	3.9	19/32	15.0		1000
F82-18-M‡			0.71	18.0	0.14	3.5	0.15	3.9	23/32	18.0		1000
F82-20-M‡			0.79	20.0	0.14	3.5	0.15	3.9	25/32	20.0		1000

*Not UL listed, UL 486F scope is 20 - 1/0 AWG only

+UL listed with 20 AWG only

‡Tool/Part is not a UL listed Combination. For crimping tool information see www.panduit.com/tools.

Continues on next page



Ferrules, Non-Insulated (continued)

Type F

Part Number	Wire Size		Figure Dimensions						Wire Strip Length		Recommended Installation Tool	Std. Pkg. Qty.
			L		ID		OD					
	AWG	mm²	In.	mm	In.	mm	In.	mm	In.	mm		
F83-12-D‡	8 AWG	10.0	0.47	12.0	0.18	4.5	0.19	4.9	15/32	12.0	‡CT-1003, ‡CT-1004, CT-1123, CT-1104	500
F83-15-D‡			0.59	15.0	0.18	4.5	0.19	4.9	19/32	15.0		500
F83-18-D‡			0.71	18.0	0.18	4.5	0.19	4.9	23/32	18.0		500
F83-20-D‡			0.79	20.0	0.18	4.5	0.19	4.9	25/32	20.0		500
F83-25-D‡			0.98	25.0	0.18	4.5	0.19	4.9	31/32	25.0		500
F84-12-TL‡	6 AWG	16.0	0.47	12.0	0.23	5.8	0.24	6.2	15/32	12.0	‡CT-1004, CT-1104	250
F84-15-TL‡			0.59	15.0	0.23	5.8	0.24	6.2	19/32	15.0		250
F84-18-TL‡			0.71	18.0	0.23	5.8	0.24	6.2	23/32	18.0		250
F84-20-TL‡			0.79	20.0	0.23	5.8	0.24	6.2	25/32	20.0		250
F84-25-TL‡			0.98	25.0	0.23	5.8	0.24	6.2	31/32	25.0		250
F84-32-TL‡			1.26	32.0	0.23	5.8	0.24	6.2	1 1/4	32.0	250	
F85-12-C	4 AWG	25.0	0.47	12.0	0.29	7.3	0.30	7.7	15/32	12.0	CT-1005	100
F85-15-C			0.59	15.0	0.29	7.3	0.30	7.7	19/32	15.0		100
F85-18-C			0.71	18.0	0.29	7.3	0.30	7.7	23/32	18.0		100
F85-25-C			0.98	25.0	0.29	7.3	0.30	7.7	31/32	25.0		100
F85-32-C			1.26	32.0	0.29	7.3	0.30	7.7	1 1/4	32.0		100
F86-18-C	2 AWG	35.0	0.71	18.0	0.33	8.3	0.34	8.7	23/32	18.0		100
F86-20-C			0.79	20.0	0.33	8.3	0.34	8.7	25/32	20.0		100
F86-25-C			0.98	25.0	0.33	8.3	0.34	8.7	31/32	25.0		100
F86-32-C			1.26	32.0	0.33	8.3	0.34	8.7	1 1/4	32.0		100
F87-18-C	1 AWG-1/0	50.0	0.71	18.0	0.41	10.3	0.43	10.9	23/32	18.0	CT-1006, **CD-2001-F87	100
F87-22-C			0.87	22.0	0.41	10.3	0.43	10.9	7/8	22.0		100
F87-25-C			0.98	25.0	0.41	10.3	0.43	10.9	31/32	25.0		100
F87-32-C			1.26	32.0	0.41	10.3	0.43	10.9	1 1/4	32.0		100
F89-25-L*	2/0	70.0	0.98	25.0	0.49	12.5	0.52	13.3	31/32	25.0	**CD-2001-F89	50
F89-32-L*			1.26	32.0	0.49	12.5	0.52	13.3	1 1/4	32.0		50
F90-25-L*	3/0	95.0	0.98	25.0	0.57	14.5	0.60	15.3	31/32	25.0	**CD-2001-F90	50
F90-30-L*			1.18	30.0	0.57	14.5	0.60	15.3	13/16	30.0		50
F90-32-L*			1.26	32.0	0.57	14.5	0.60	15.3	1 1/4	32.0		50
F91-32-L*	4/0-250 kcmil	120.0	1.26	32.0	0.65	16.5	0.69	16.5	1 1/4	32.0	**CD-2001-F91	50
F91-40-L*			1.57	40.0	0.65	16.5	.069	16.5	1 19/32	40.0		50
F92-32-L*	300 kcmil	150	1.26	32.0	0.73	18.5	0.77	19.5	1 1/4	32.0	**CD-2001-F92	50
F92-38-L*			1.50	38.0	0.73	18.5	0.77	19.5	1 1/2	38.0		50
F93-32-Q*	350 kcmil	185	1.26	32.0	0.79	20.0	0.83	21.2	1 1/4	32.0	**CD-2001-F93	25
F93-40-Q*			1.57	40.0	0.79	20.0	0.83	21.2	1 19/32	40.0		25
F94-40-Q*	500 kcmil	240	1.57	40.0	0.90	22.8	0.94	24.0	1 19/32	40.0	**CD-2001-F94	25

*Not UL listed, UL486F scope is 20 - 1/0 AWG only

+UL listed with 20 AWG only

‡Tool/Part is not a UL listed Combination. For crimping tool information see www.panduit.com/tools.

**Dies used with CT-3001 or CT-3001/E tool

B1.
Cable
Ties

B2.
Cable
Accessories

B3.
Stainless
Steel Cable
Ties &
Accessories

C1.
Wiring
Duct

C2.
Abrasion
Protection

C3.
Cable
Management

D1.
Terminals

D2.
Power
Connectors

D3.
Grounding
Connectors

E1.
Labeling
Systems

E2.
Labels

E3.
Pre-Printed
&
Write-On
Markers

E4.
Permanent
Identification

E5.
Industrial
Safety
Solutions

F.
Keystone
Cabling
Systems

G.
Part
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