

A. System Overview

## Ferrules, Non-Insulated

B1. Cable Ties

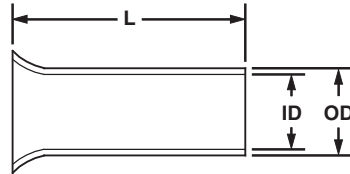
### Type F

B2. Cable Accessories

- 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

B3. Stainless Steel Ties

C1. Wiring Duct



C2. Surface Raceway

C3. Abrasion Protection

C4. 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. Lockout/Tagout & Safety Solutions

F. Index

Part Number	Wire Size		Figure Dimensions						Wire Strip Length		Recommended Installation Tool	Std. Pkg. Qty.
			L		ID		OD					
	AWG	mm <sup>2</sup>	In.	mm	In.	mm	In.	mm	In.	mm		
<b>F73-5-M</b>	24 AWG	0.25	0.20	5.0	0.03	0.80	0.04	1.1	7/32	5.0	CT-1002, CT-1003	1000
<b>F73-7-M</b>			0.28	7.0	0.03	0.80	0.04	1.1	9/32	7.0		1000
<b>F74-5-M</b>		0.34	0.20	5.0	0.04	0.90	0.05	1.2	7/32	5.0		1000
<b>F74-7-M</b>			0.28	7.0	0.04	0.90	0.05	1.2	9/32	7.0		1000
<b>F75-6-M</b>	22 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
<b>F75-8-M</b>			0.31	8.0	0.04	1.0	0.05	1.3	5/16	8.0		1000
<b>F75-10-M</b>	20 AWG	0.75	0.39	10.0	0.04	1.0	0.05	1.3	13/32	10.0	CT-1002, CT-1003, CT-1123	1000
<b>F76-6-M</b>			0.24	6.0	0.05	1.2	0.06	1.5	1/4	6.0		1000
<b>F76-8-M</b>			0.31	8.0	0.05	1.2	0.06	1.5	5/16	8.0		1000
<b>F76-10-M</b>			0.39	10.0	0.05	1.2	0.06	1.5	13/32	10.0		1000
<b>F76-12-M</b>	18 AWG	1.0	0.47	12.0	0.05	1.2	0.06	1.5	15/32	12.0	CT-1002, CT-1003, CT-1123	1000
<b>F77-6-M</b>			0.24	6.0	0.06	1.4	0.07	1.7	1/4	6.0		1000
<b>F77-7-M</b>			0.28	7.0	0.06	1.4	0.07	1.7	9/32	7.0		1000
<b>F77-8-M</b>			0.31	8.0	0.06	1.4	0.07	1.7	5/16	8.0		1000
<b>F77-10-M</b>	16 AWG	1.5	0.39	10.0	0.06	1.4	0.07	1.7	13/32	10.0	CT-1002, CT-1003, CT-1123	1000
<b>F77-12-M</b>			0.47	12.0	0.06	1.4	0.07	1.7	15/32	12.0		1000
<b>F78-7-M</b>			0.28	7.0	0.07	1.7	0.08	2.0	9/32	7.0		1000
<b>F78-8-M</b>			0.31	8.0	0.07	1.7	0.08	2.0	5/16	8.0		1000
<b>F78-10-M</b>	1.5	0.39	10.0	0.07	1.7	0.08	2.0	13/32	10.0	CT-1002, CT-1003, CT-1123	1000	
<b>F78-12-M</b>		0.47	12.0	0.07	1.7	0.08	2.0	15/32	12.0		1000	
<b>F78-15-M</b>		0.59	15.0	0.07	1.7	0.08	2.0	19/32	15.0		1000	
<b>F78-18-M</b>	1.5	0.71	18.0	0.07	1.7	0.08	2.0	23/32	18.0	CT-1002, CT-1003, CT-1123	1000	
<b>F78-20-M</b>		0.79	20.0	0.07	1.7	0.08	2.0	25/32	20.0		1000	

For crimping tool information, see page D1.85.

## Ferrules, Non-Insulated (continued)

### Type F

Part Number	Wire Size		Figure Dimensions						Wire Strip Length		Recommended Installation Tool	Std. Pkg. Qty.
			L		ID		OD					
	In.	mm	In.	mm	In.	mm	In.	mm				
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
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	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	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
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	0.71	18.0			0.33	8.3	0.34	8.7	23/32	18.0	100	
F86-20-C	2 AWG	35.0	0.79	20.0	0.33	8.3	0.34	8.7	25/32	20.0	CT-1006	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	50.0	0.71	18.0	0.41	10.3	0.43	10.9	23/32	18.0	CT-1006	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

For crimping tool information, see page D1.85.

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