



# Foundation Fieldbus

H1/High Speed Ethernet

Over-Molded Cordsets | Receptacles | Field Wireables | Accessories

UL File #:  
**E149111**

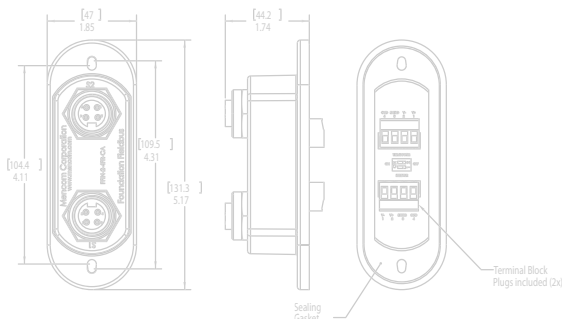
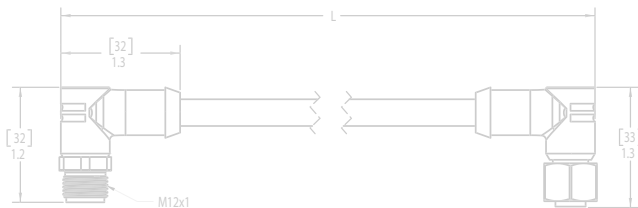


The Foundation Fieldbus architecture provides a communications protocol for control and instrumentation systems. Each device has its own "intelligence" and communicates via a two-way communications system. Cables are made to the architecture standards, but the connectivity is based on standard M12 and 7/8"-16UN connectors which utilize stainless steel coupling nuts.



## H1

H1 generally connects to field devices. It provides communication and power over standard twisted-pair wiring. H1 is currently the most common implementation.



Foundation Fieldbus Series

M

# Foundation Fieldbus

H1/High Speed Ethernet



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# Foundation Fieldbus Series Cordsets

## Foundation Fieldbus Cordset Part Number Matrix



Not all options available with all cordsets, please consult factory.

FF  - 4  -  -  - SS

### Cordset Type

- IN = 7/8"-16UN Cordset
- DC = M12 Cordset

### R/A or Straight

- Blank = Straight
- R = Right Angle\*\*

\*\* If single ended cable, right angle connector to flying leads  
If double ended cable, right angle on both connectors

### Connector Configuration

- MPX = Male Plug - 18awg
- FPX = Female Plug - 18awg
- MFPX = Male / Female Extension - 18awg

### Length in Meters

- 1M
- 2M
- 4M
- 5M
- 6M
- 10M
- 15M

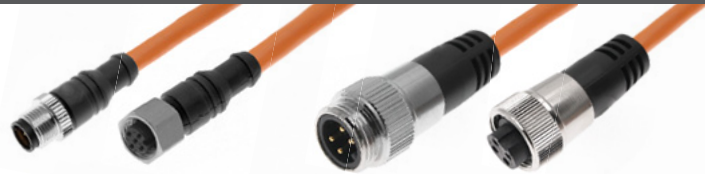
Other lengths are available by request.

# Foundation Fieldbus Series Cordsets

4 Conductor Foundation Fieldbus Cordsets, 18AWG



Straight Cordsets | 300 Volt, 10 amps | 300 Volt, 4 amps | IP69 Rating



Foundation Fieldbus Series

**M**

7/8"-16UN Cordsets					
Connector Body Style	Part Number	Cables	Features	Color Code	Faceview
	FFIN-4MPX-**-SS	Orange PVC ITC-ER With Foil Shield <b>2 X 18 AWG</b> 300V, 10A -40°C to +105°C 7.2mm OD	Crush Proof Industry Standard PVC Stainless Steel Coupling Nut Foil Shield	1. Blue(-) 2. Orange(+) 3. Shield 4. N/C	<p>7/8"-16UN2</p>
	FFDC-4MPX-**-SS	Orange PVC ITC-ER With Foil Shield <b>2 X 18 AWG</b> <b>1 x 22 AWG (Drain)</b> 300V, 10A -40°C to +105°C 7.2mm OD	Crush Proof Industry Standard PVC Stainless Steel Coupling Nut Foil Shield	1. Blue(-) 2. Orange(+) 3. Shield 4. N/C	<p>7/8"-16UN2</p>
M12 Cordsets					
Connector Body Style	Part Number	Cables	Features	Color Code	Faceview
	FFIN-4FPX-**-SS	Orange PVC ITC-ER With Foil Shield <b>2 X 18 AWG</b> <b>1 x 22 AWG (Drain)</b> 300V, 4A -40°C to +105°C 7.2mm OD	Crush Proof Industry Standard PVC Stainless Steel Coupling Nut Foil Shield	1. Blue(-) 2. Orange(+) 3. Shield 4. N/C	<p>M12 x 1</p>
	FFDC-4FPX-**-SS	Orange PVC ITC-ER With Foil Shield <b>2 X 18 AWG</b> <b>1 x 22 AWG (Drain)</b> 300V, 4A -40°C to +105°C 7.2mm OD	Crush Proof Industry Standard PVC Stainless Steel Coupling Nut Foil Shield	1. Blue(-) 2. Orange(+) 3. Shield 4. N/C	<p>M12 x 1</p>

\*\* Lengths in meters. Standard cable lengths are 1, 2, 4, 5, 6, 10 & 15 meters. Consult factory for other lengths.



# Foundation Fieldbus Series Cordsets

4 Conductor Foundation Fieldbus Cordsets, 18AWG

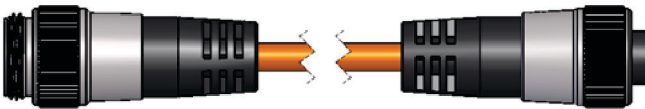


Double Ended Cordsets | 300 Volt, 10 amps | 300 Volt, 4 amps | IP69 Rating

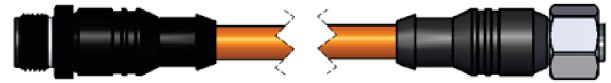


7/8"-16UN Male to Female Extension					
Male Faceview	Part Number	Cables	Features	Color Code	Female Faceview
<p>7/8"-16UN2</p>	FFIN-4MFPX-**-SS	Orange PVC ITC-ER With Foil Shield <b>2 X 18 AWG</b> <b>1 x 22 AWG (Drain)</b> 300V, 10A -40°C to +105°C 7.2mm OD	Crush Proof Industry Standard PVC Stainless Steel Coupling Nut Foil Shield	1. Blue(-) 2. Orange(+) 3. Shield 4. N/C	<p>7/8"-16UN2</p>
M12 Male to Female Extension					
<p>M12 x 1</p>	FFDC-4MFPX-**-SS	Orange PVC ITC-ER With Foil Shield <b>2 X 18 AWG</b> <b>1 x 22 AWG (Drain)</b> 300V, 10A -40°C to +105°C 7.2mm OD	Crush Proof Industry Standard PVC Stainless Steel Coupling Nut Foil Shield	1. Blue(-) 2. Orange(+) 3. Shield 4. N/C	<p>M12 x 1</p>

\*\* Lengths in meters. Standard cable lengths are 1, 2, 4, 5, 6, 10 & 15 meters. Consult factory for other lengths.



7/8"-16UN Male - Female Extension



M12 Male to Female Extension

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# Foundation Fieldbus Series Field Wireable Plugs

4 Conductor Foundation Fieldbus Field Wireable Plugs

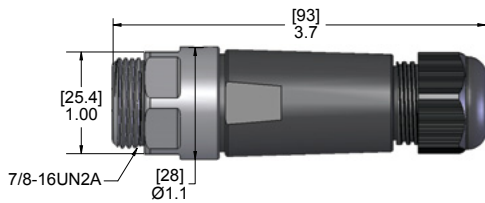


Straight Field Wireable Plugs | 600V, 15A Max | 250V, 4A Max | IP67 Rating

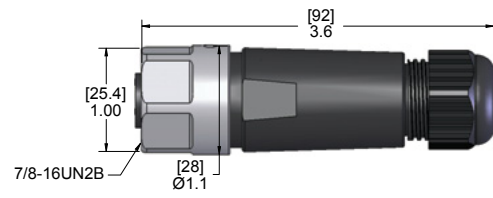


7/8" 16UN Field Wireable Plugs						
# of Poles	Male Faceview	Rating	Wire AWG	Cable O.D. Range	Part Number	
					Male Plugs	Female Plugs
4	 7/8"-16UN2	600V 15A MAX	14-22 AWG	5-13 mm	FFIN-4MPM-FW-SS	FFIN-4FP-FW-SS
				8-17 mm	FFIN-4MPM-FWX-SS	FFIN-4FP-FWX-SS

Connection via screw terminal. Voltage and amperage ratings are cable dependent and are based on 600V, 14 AWG cable. Cables with lower voltage ratings or smaller wire gauge will lower these ratings.



Male Straight with Male Threads

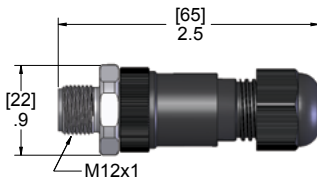


Female Straight with Female Threads

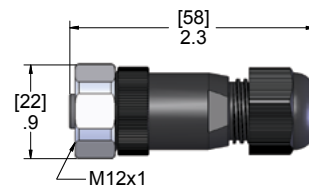
Foundation Fieldbus Series

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M12 Field Wireable Plugs						
# of Poles	Male Faceview	Rating	Wire AWG	Cable O.D. Range	Part Number	
					Male Plugs	Female Plugs
4	 M12 x 1	250V 4A	18-24 AWG	3-6.5 mm	FFDC-4MP-FW07-SS	FFDC-4FP-FW07-SS
				4-8 mm	FFDC-4MP-FW09-SS	FFDC-4FP-FW09-SS
				8-10 mm	FFDC-4MP-FW11-SS	FFDC-4FP-FW11-SS



Male Straight with Male Threads



Female Straight with Female Threads

**Specifications:**

Body:	Polyamide	Insert:	PVC
Contacts:	Copper Alloy with Gold Plating	Connections:	Screw Terminals
Coupling Nut:	Stainless Steel	Temperature:	-40°C to +90°C (-40°F to +194°F)
O-Ring:	NBR		



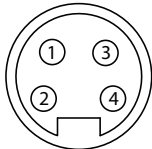
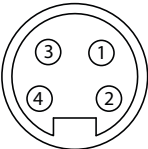
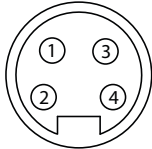
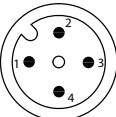
# Foundation Fieldbus Series “T” Connectors

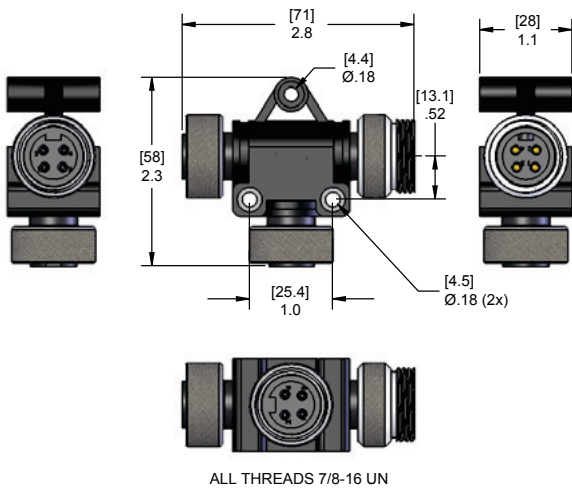
## 4 Conductor Foundation Fieldbus T Connectors



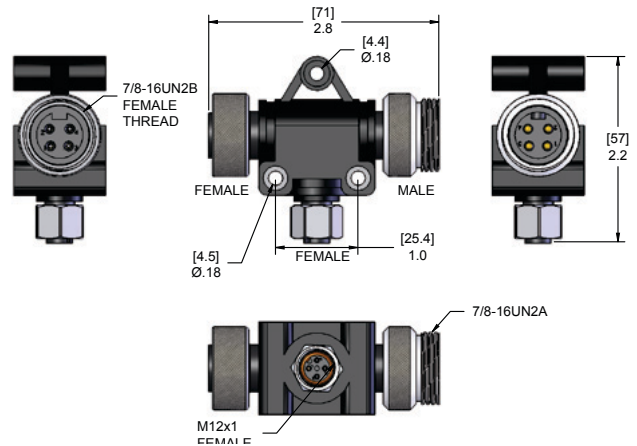
“T” Connectors | 300 Volt, 8 amps | 300 Volt, 4 amps | IP67 Rating



7/8”-16UN Male to Two 7/8”-16UN Female					
# of Poles	Male Faceview	Rating	Part Number	Wiring	Female Faceview
4	 7/8”-16UN2	300V 8A	FFIN-4MFF-T-SS	1 to 1 to 1 2 to 2 to 2 3 to 3 to 3 4 to 4 to 4	 7/8”-16UN2
7/8”-16UN Male to 7/8”-16UN & M12 Female					
4	 7/8”-16UN2	300V 4A	FFINDC-4MFF-T-SS	1 to 1 to 1 2 to 2 to 2 3 to 3 to 3 4 to 4 to 4	 M12 x 1



7/8”-16UN to 7/8”-16UN “T” Connector



7/8”-16UN to M12 “T” Connector

**Specifications:**

- Body: Oil Resistant Yellow PVC
- Contacts: Copper Alloy with Gold Plating
- Coupling Nut: Stainless Steel
- Temperature: -40°C to +105°C (-40°F to +221°F)

Foundation Fieldbus Series

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# Foundation Fieldbus Series Terminating Plugs

## 4 Conductor Foundation Fieldbus Field Terminating Plugs



Terminating Plugs | IP69 Rating

Wiring: Pin 1 to pin 2 with 1/4 watt 100 Ohm resistor and 1µF capacitor

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7/8" 16UN Terminating Plugs			
# of Poles	Faceview	Housing Style	Part Number
4	 7/8"-16UN2	 7/8-16UN2A	FFIN-4MP-DP1-SS
	 7/8"-16UN2	 7/8-16UN2B FEMALE THREAD	FFIN-4FP-DP1-SS
M12 Terminating Plugs			
4	 M12 x 1	 M12x1 MALE THREADS	FFDC-4MP-DP1-SS
	 M12 x 1	 M12x1 FEMALE THREADS	FFDC-4FP-DP1-SS

**Specifications:**

- Body: Oil Resistant PVC
- Contacts: Copper Alloy with Gold Plating
- Coupling Nut: Stainless Steel
- Temperature: -40°C to +105°C (-40°F to +221°F)





# Foundation Fieldbus Series Receptacles

## Foundation Fieldbus Receptacle Part Number Matrix



Not all options available with all receptacles, please consult factory.

FF  - 4  -  -  - SS

### Receptacles Type

- IN = 7/8"-16UN Receptacle
- DC = M12 x 1 Receptacle

### Connector Configuration

- MR = Male Receptacle
- FR = Female Receptacle

### Length in Meters

### Mounting Style

- Blank = Front Mount 1/2"-14 NPT (7/8"-16UN Only)
- 2 = Front Mount 1/2"-14 NPT (M12 Only)
- PG9 = Front Mount PG 9 Threads
- M20 = Front Mount Metric 20 Threads

*Other thread types are available, please consult the factory.*



# Foundation Fieldbus Series Receptacles

## Foundation Fieldbus Receptacle Index



### Front Mount

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<b>7/8"-16UN, Front Mount, Male, 1/2"-14NPT</b>	<b>7/8"-16UN, Front Mount, Female, 1/2"-14NPT</b>
<p>Page M-11</p>	<p>Page M-11</p>
<b>M12, Front Mount, Male, 1/2"-14NPT</b>	<b>M12, Front Mount, Female, 1/2"-14NPT</b>
<p>Page M-11</p>	<p>Page M-11</p>
<b>M12, Front Mount, Male, PG9</b>	<b>M12, Front Mount, Female, PG9</b>
<p>Page M-12</p>	<p>Page M-12</p>
<b>M12, Front Mount, Male, M20</b>	<b>M12, Front Mount, Female, M20</b>
<p>Page M-12</p>	<p>Page M-12</p>



# Foundation Fieldbus Series Receptacles

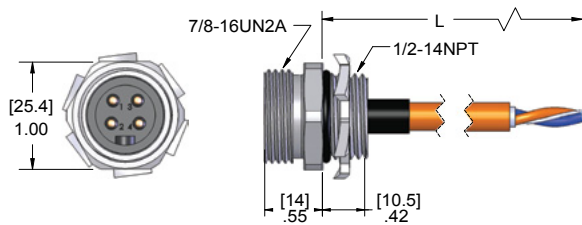
## 4 Conductor Foundation Fieldbus Receptacles, 18AWG



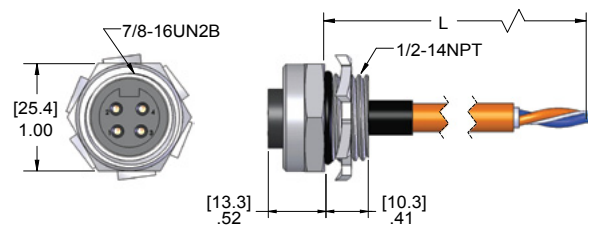
Front Mount Receptacles | 1/2"-14 NPT Threads | 300V, 10A | 300V, 4A | IP69/IP67 Rating



7/8" 16UN Receptacles						
# of Poles	Male Faceview	Color Code	Rating	Wire AWG	Male Receptacles	Female Receptacles
4 IP67	 7/8"-16UN2	1. Blue(-) 2. Orange(+) 3. Shield 4. N/C	300V 10A	18 AWG	FFIN-4MR-**-SS	FFIN-4FR-**-SS



Male Receptacle



Female Receptacle

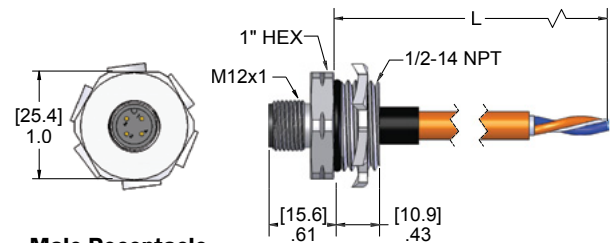
M12 Receptacles						
# of Poles	Male Faceview	Color Code	Rating	Wire AWG	Male Receptacles	Female Receptacles
4 IP69	 M12 x 1	1. Blue(-) 2. Orange(+) 3. Shield 4. N/C	300V 4A	18 AWG	FFDC-4MR-2**-SS	FFDC-4FR-2**-SS

\*\* Lengths in meters.

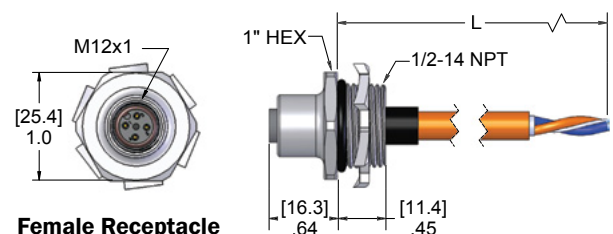
Lock Nut and O-Ring are included.

### Specifications:

- Shell: Stainless Steel
- Insulator: FFIN: Oil Resistant Black PVC  
FFDC: Polyamide
- Cable: Orange PVC, 2x18 AWG Cable with Foil Shield
- Contacts: Copper Alloy with Gold Plating
- O-Ring: NBR
- Lock Nut: Nickel Plated Brass
- Temperature: -40°C to 105°C (-40°F to +221°F)



Male Receptacle



Female Receptacle

Foundation Fieldbus Series

M



# Foundation Fieldbus Series Receptacles

4 Conductor Foundation Fieldbus Receptacles, 18AWG



Front Mount Receptacles | PG9 & M20 Threads | 300 Volt, 4 amps | IP69 Rating



# of Poles	Male Faceview	Color Code	Rating	Wire AWG	Threads	Male Receptacles	Female Receptacles
4		1. Blue(-) 2. Orange(+) 3. Shield 4. N/C	300V 4A	18 AWG	PG9	FFDC-4MR-PG9-**-SS	FFDC-4FR-PG9-**-SS
					M20	FFDC-4MR-M20-**-SS	FFDC-4FR-M20-**-SS

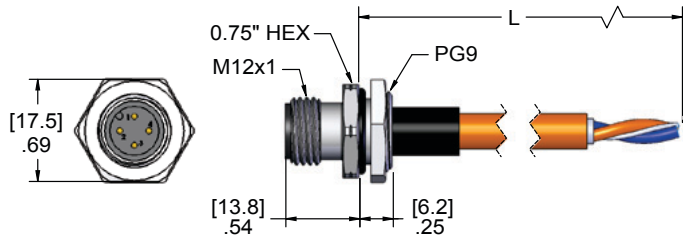
\*\* Lengths in meters.

Jam Nut and O-Ring are included.

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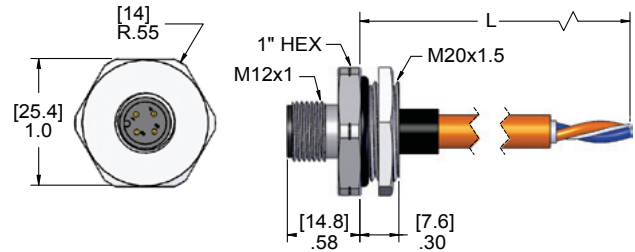
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## PG9 Threads

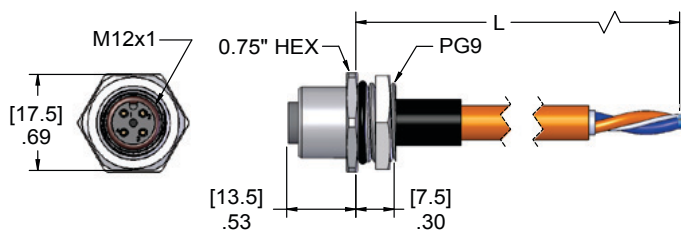


Male Receptacle

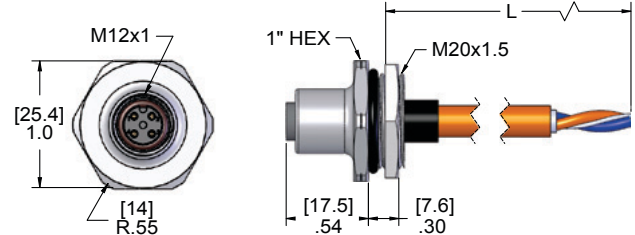
## M20 Threads



Male Receptacle



Female Receptacle



Female Receptacle

### Specifications:

- Shell: Stainless Steel
- Insulator: Polyamide
- Cable: Orange PVC, 2x18 AWG Cable with Foil Shield
- Contacts: Copper Alloy with Gold Plating
- O-Ring: NBR
- Jam Nut: Nickel Plated Brass
- Temperature: -40°C to 105°C (-40°F to +221°F)



# Foundation Fieldbus Series Conduit Adapters

## 4 Conductor Foundation Fieldbus Conduit Adapters



Conduit Adapters | 7/8"-16UN | M12 | 40 Volt, 4 amps | IP67 Rating

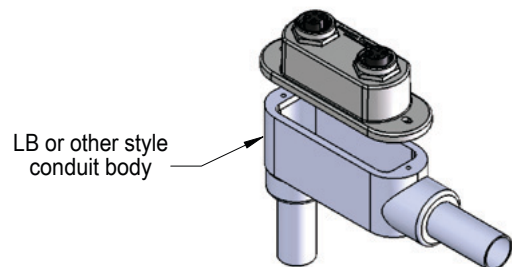
7/8"-16UN Conduit Adapters						
# of Poles	Female Faceview	Rating	# of Ports	Part Number	Body Style	Circuit
4	<p>7/8"-16UN</p> <p>1 = -V 2 = +V 3 = SHIELD 4 = GND</p>	40V 4A	1 Port	FFIN-1-4FR-CA		
	<p>1 = -V 2 = +V 3 = SHIELD 4 = GND</p>		2 Port	FFIN-2-4FR-CA		
M12 Conduit Adapters						
4	<p>M12 x 1</p> <p>1 = -V 2 = +V 3 = SHIELD 4 = GND</p>	40V 4A	1 Port	FFDC-1-4FR-CA		
	<p>1 = -V 2 = +V 3 = SHIELD 4 = GND</p>		2 Port	FFDC-2-4FR-CA		

Foundation Fieldbus Series

M

### Specifications:

- Housing: Glass Filled PBT
- Recp. Shell: Nickel Plated Brass
- Insert: Polyamide
- Contacts: Copper Alloy with Gold Plating
- Gasket: NBR
- Temperature: -40°C to 70°C (-40°F to +158°F)



Remove existing Conduit Body cover and replace with Mencom Conduit Adapter.

Works with all standard 3/4" NPT conduit bodies, including Form 8 and Mark 9 adapters. (screws are included with adapter)



# Mencom Corporation

*no problems, only solutions*



## Notes: