



## M12 FIELDBUS CABLE ASSEMBLY SOLUTIONS

TE now complements its' Sensor/Actuator cable assemblies with Data Communication solutions by introducing the Fieldbus cable assemblies. First developed more than two decades ago, many different field networks still continue to dominate Industrial automation and process control. Fieldbus networks seems to be very practical at the lowest level of the automation pyramid and are critical element of Industry 4.0, IIoT and beyond for end devices that do not require the bandwidth but do need the ability to have power and signal in the same cable.

The new A and B-coded M12 cable assemblies comply with Profibus, DeviceNet and CC-link protocols, offering multiple options for a variety of needs that makes TE an one-stop shop. They have 360-degree shielding against EMI for complete protection for signal and data transmission, and are rated IP67 for resistance to dust and water. The assemblies are overmolded in either PVC or halogen-free polyurethane (PUR) cables, suitable for drag chain applications or torsional stress, depending on customer performance requirements.

Assemblies are produced in many customer-specific plug-and-play configurations to enable design flexibility and quick installation in most industrial environments. Applications for the new assemblies lie in numerous areas of industry, including process control systems, robotics and automation, production equipment, machine tools and material handling.

TE's Fieldbus M12 cable assemblies are available as single-ended or double-ended, in straight and angled versions, all shielded variants. Various cable types are offered depending on the application requirements. The predefined offering in length of 0.5, to 15 meters covers a vast range of customer needs on the market, while customized cable assemblies in different lengths provide a solution for specific needs. All can be used in combination with TE's male/female connectors.

# M12 FIELDBUS CABLE ASSEMBLY SOLUTIONS

## BENEFITS

- Maximum signal transmission
- Reduced noise and interference
- Maximum installation versatility
- Cable types variations for drag chain and torsion applications

## APPLICATIONS

- Industrial Communications
- Industrial Machinery
- Industrial Automation
- Machine tools
- Robotics
- Material Handling
- Process control systems

## KEY FEATURES

- IP67 rated: dust and waterproof
- Overmolded PVC or PUR cable assemblies/ Shielded
- Key options: A, B coded
- M12 Positions: 2, 4, 5 pos
- M12 B-coded 5-pole for Profibus applications
- M12 A-code 5pos for DeviceNet applications
- M12 A-code 4pos for CC-link applications
- Cable length options: 0.5 m, 1 m, 2m, 4m, 6m, 8m, 10m & 15m.

## MECHANICAL

- Durability: 100 cycles
- Degree of protection: IP67
- Temperature Ratings:
  - Profibus PUR:
    - Fixed: -40°C to +80°C
    - Flexible: -40°C to +75°C
- Profibus PUR Torsion:  
Operating temperature -25°C to +75°C
- DeviceNet PUR:  
Operating temperature -20°C to +75°C
- DeviceNet PVC:  
Operating temperature -40°C to +80°C
- CC-Link PVC:  
Operating temperature -30°C to +60°C

## ELECTRICAL

Voltage and Current Rating:

- M12 A code 4 poles: 250V/4A
- M12 A code 5 poles: 60V/4A
- M12 B code 2 poles: 250V/4A

## MATERIALS

- Contact: Brass, Gold Plating
- Nut & Shells: Brass, Nickel plating
- O-ring: Silicon rubber
- Over-molding: TPU/PVC
- Housing: PA
- PROFIBUS® M12 Cable Assy B-code 4-pole 1x2x22AWG PUR Drag Chain
- PROFIBUS® M12 Cable Assy B-code 4-pole 1x2x24AWG PUR Torsion
- DeviceNet™ M12 Cable Assy A-code 5-pole 2x24AWG+2x22AWG Thin Violet PUR
- DeviceNet™ M12 Cable Assy A-code 5-pole 2x24AWG+2x22AWG Thin Gray PVC
- CC-Link® M12 Cable Assy A-code 4pos 3 conductor 20AWG Red PVC

## SPECIFICATIONS


- Product Specification: 108-106140
- Application Specification: 114-137144
- UL Standard: UL2238
- IEC 61076-2-101: Detail specification for M12 connectors with screw-locking
- IEC 60512: Electromechanical Components For Electronic Equipment; Basic Testing Procedure and Measuring Methods
- IEC-60529: Degree of Protection Provided by Enclosures (IP Code)

## M12 FIELDBUS CABLE ASSEMBLY SOLUTIONS



### PRODUCT OFFERINGS - CC-LINK M12 CABLE ASSEMBLIES SINGLE ENDED

Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded	
TAA541B1411-001	M12A4-MS-PVC-0.5M	CC-Link (10Mbps)	A	4	Male / Female Straight	PVC Red 20AWG	Yes	
TAA543B1411-001	M12A4-FS-PVC-0.5M							
TAA544B1411-001	M12A4-FR-PVC-0.5M							Male / Female R/A
TAA542B1411-001	M12A4-MR-PVC-0.5M							

### PRODUCT OFFERINGS - CC-LINK M12 CABLE ASSEMBLIES DOUBLE ENDED


Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded
TAA545B1411-001	M12A4-MS-FS-PVC-0.5M	CC-Link (10Mbps)	A	4	MS-FS	PVC Red 20AWG	Yes
TAA54AB1411-001	M12A4-MR-FS-PVC-0.5M						
TAA546B1411-001	M12A4-MS-FR-PVC-0.5M						

### PRODUCT OFFERINGS - DEVICENET M12 CABLE ASSEMBLIES SINGLE ENDED PUR



Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded	
TAA751A5501-001	M12A5-MS-PUR-0.5M	DeviceNet (500Kbs)	A	5	Male / Female Straight	PUR Violet 2x24AWG+2x22 AWG	Yes	
TAA753A5501-001	M12A5-FS-PUR-0.5Mv							
TAA754A5501-001	M12A5-FR-PUR-0.5M							Male / Female R/A
TAA752A5501-001	M12A5-MR-PUR-0.5M							

## M12 FIELDBUS CABLE ASSEMBLY SOLUTIONS


### PRODUCT OFFERINGS - DEVICENET M12 CABLE ASSEMBLIES DOUBLE ENDED PUR

Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded
TAA755A5501-001	M12A5-MS-FS-PUR-0.5M	DeviceNet (500Kbs)	A	5	MS-FS	PUR Violet 2x24AWG+2x 22AWG	Yes
TAA75AA5501-001	M12A5-MR-FS-PUR-0.5M				MR-FS / MS-FR		
TAA756A5501-001	M12A5-MS-FR-PUR-0.5M						

### PRODUCT OFFERINGS - DEVICENET M12 CABLE ASSEMBLIES SINGLE ENDED PVC



Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded
TAA751A1611-001	M12A5-MS-PVC-0.5M	DeviceNet (500Kbs)	A	5	Male / Female Straight	PVC Gray 2x24AWG+2x22AWG	Yes
TAA753A1611-001	M12A5-FS-PVC-0.5M						
TAA754A1611-001	M12A5-FR-PVC-0.5M				Male / Female R/A		
TAA752A1611-001	M12A5-MR-PVC-0.5M						

### PRODUCT OFFERINGS - DEVICENET M12 CABLE ASSEMBLIES DOUBLE ENDED PVC


Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded
TAA755A1611-001	M12A5-MS-FS-PVC-0.5M	DeviceNet (500Kbs)	A	5	MS-FS	PVC Gray 2x24AWG+2x22	Yes
TAA75AA1611-001	M12A5-MR-FS-PVC-0.5M				MR-FS / MS-FR		
TAA756A1611-001	M12A5-MS-FR-PVC-0.5M						

## M12 FIELDBUS CABLE ASSEMBLY SOLUTIONS



### PRODUCT OFFERINGS - PROFIBUS M12 CABLE ASSEMBLIES SINGLE ENDED PUR TORSION

Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded
TAB62146501-001	M12B2-MS-PUR TORS-0.5M	Profibus DP (12Mbs)	B	2	Male / Female Straight	PUR Torsion 22AWG Violet	Yes
TAB62346501-001	M12B2-FS-PUR TORS-0.5M						
TAB62446501-001	M12B2-FR-PUR TORS-0.5M				Male / Female R/A		
TAB62246501-001	M12B2-MR-PUR TORS-0.5M						

### PRODUCT OFFERINGS - PROFIBUS M12 CABLE ASSEMBLIES DOUBLE ENDED PUR TORSION

Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded
TAB62546501-001	M12B2-MS-FS-PUR/T-0.5M	Profibus DP (12Mbs)	B	2	MS-FS	PUR Torsion 22AWG Violet	Yes
TAB62A46501-001	M12B2-MR-FS-PUR/T-0.5M				MR-FS / MS-FR		
TAB62646501-001	M12B2-MS-FR-PUR/T-0.5M						

### PRODUCT OFFERINGS - PROFIBUS M12 CABLE ASSEMBLIES SINGLE ENDED PUR FLEX

Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded
TAB62135501-001	M12B2-MS-PUR Flex-0.5M	Profibus DP (12Mbs)	B	2	Male / Female Straight	PUR Flex/Drag Chain 24AWG Violet	Yes
TAB62335501-001	M12B2-FS-PUR Flex-0.5M						
TAB62435501-001	M12B2-FR-PUR Flex-0.5M				Male / Female R/A		
TAB62235501-001	M12B2-MR-PUR Flex-0.5M						

# M12 FIELDBUS CABLE ASSEMBLY SOLUTIONS

## PRODUCT OFFERINGS - PROFIBUS M12 CABLE ASSEMBLIES DOUBLE ENDED PUR FLEX

Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded
TAB62535501-001	M12B2-MS-FS-PURFlex-0.5M	Profibus DP (12Mbs)	B	2	MS-FS	PUR Flex/Drag Chain 24AWG Violet	Yes
TAB62A35501-001	M12B2-MR-FS-PURFlex0.5				MR-FS / MS-FR		
TAB62635501-001	M12B2-MS-FR-PURFlex-0.5M						

OOL	Cable Length
-001	0.5M
-002	1.0M
-020	2M
-040	4.0M
-060	5.0M
-080	8.0M
-007	10.0M
-150	15.0M

-XXX	Customized Cable Length
-XX0	XXM
-XX5	XX.5M

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