



## SENSOR/ACTUATOR M8M12 CABLE ASSEMBLIES

M8M12 cable assemblies are designed for applications such as sensors, robotics & production machinery & equipment, where extreme temperatures and harsh environments are likely to be encountered. These cable assemblies are also ideal for non-industrial applications where compact, robust and reliable connections are required to withstand rigorous environmental elements.

TE provides a full solution with shielded and non-shielded cable assembly options that help customers easily connect to advanced industrial networks. The new product line meets the IP67 rating for protection against dust and water ingress; they also provide protection against electromagnetic radiation, chemicals and mechanical stress commonly found in industrial environments.

Designed as industry standard solutions, these quick-turn cable assemblies help to reduce unnecessary downtime and help maintain continuous operations in critical conditions. TE's cross-industry expertise allows it to offer customized solutions through a broad cable assembly portfolio that includes connectivity to many industry standards serving various customer needs.

TE's M8/M12 cable assemblies are available as single-ended or double-ended, in straight and angled versions, with shielded and un-shielded variants. Various cable types are offered depending on the application requirements. Cable sheathing is in PVC or PUR. The predefined offering in length of 0.5, 1, 1.5, 3, 5, 7 and 10 meters covers a vast range of customer needs on the market. Customized cable assemblies in different lengths provide a solution for specific needs. All can be used in combination with TE's male/female connectors and I/O Modules.

### KEY FEATURES

- IP67 rated: dust and waterproof
- Overmolded PVC or PUR cable assemblies/Shielded & non shielded versions
- Key options: A coded
- M12 Positions: 2, 3, 4, 5 & 8 poles
- M8 Positions: 3 & 4 poles
- M8 & M12 single ended cable assemblies
- M8 & M12 double ended cable assemblies
- M8 to M12 cable assemblies
- Cable length options: 0.5 m, 1 m, 1.5 m, 3 m, 5 m, 7 m, and 10 m

### BENEFITS

- M12 Cable Assemblies are IP67 sealed and tested in TE's factory to eliminate the possibility of false wiring & to ensure robust connection
- Reduce downtime in harsh environments with reliable industry standard solution that includes quick turn, prototype cable assemblies.
- Full solution offering including customized and general market cable assemblies enables 1-stopshopping and reduced TCO

### APPLICATIONS

- Industrial Communications
- Industrial Machinery
- Industrial automation
- Robotics
- Machine tools
- Semiconductor manufacturing
- Manufacturing of solenoid and sensor valves
- Process control systems
- Vision systems
- Electronics manufacturing

### MECHANICAL

- Durability: 100 cycles
- Degree of protection: IP67
- Temperature Ratings:
  - PVC:
    - Fixed: -40°C to +80°C
    - Flexible: -25°C to +80°C
  - PUR:
    - Fixed: -10°C to +80°C
    - Flexible: -5°C to +80°C

### ELECTRICAL

- Voltage rating
  - M12:
    - 250V ( $\leq 4$  way)
    - 60V (5 way)
    - 30V ( $> 5$  way)
  - M8:
    - 60V (3 way)
    - 30V (4 & 5 pos)
- Current rating
  - M12 A Coding
    - 2 – 5 ways = 4A
    - 6 – 8 ways = 2 A
  - M8: 3A
- Insulation Resistance: 100M $\Omega$  Min.

### MATERIALS

- Contact: Brass, Gold Flash Plating
- Nut: Brass, Nickel plating
- O-ring: Silicon rubber
- Spring: Stainless steel
- Over-molding: TPU
- Housing: PA
- M12 Cable: 22 AWG, 2/3/4/5 core, with or without Foil, Drain, Braid Shield RoHS; Cable Jacket material: PVC or PUR
- M12 Cable: 24 AWG, 8 core, with or without Foil, Drain, Braid Shield RoHS; Cable Jacket material: PVC or PUR
- M8 Cable: 24 AWG, 3/4 core, with or without Foil, Drain, Braid Shield RoHS; Cable Jacket material: PVC or PUR

### STANDARDS & APPLICATIONS

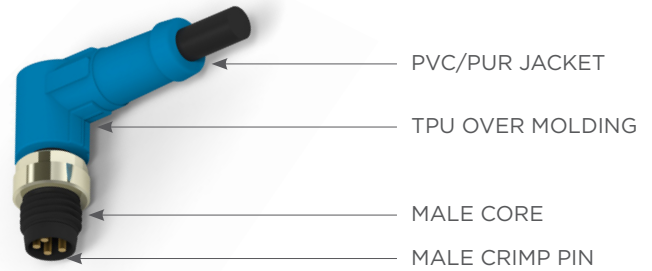
- Product Specification: 108-106140
- Application Specification: 114-137144
- UL Standard: UL2238
- IEC 61076-2-101: Detail specification for M12 connectors with screw-locking
- IEC 61076-2-104: Detail specification with M8 screw-locking or snap-locking
- IEC 60512: Electromechanical components for electronic equipment; basic testing procedure and measuring methods
- IEC-60529: Degree of protection provided by enclosures (IP Code)

## Sensor/Actuator M8M12 Cable Assemblies

### M8 Single Ended Cable Assembly

M8 cable assemblies T405/T406 series

STANDARD: IEC61076-2-104



**T40 S A X W Y O MN -00L**

| S | Application Type - Shield/Unshielded |
|---|--------------------------------------|
| 5 | Unshielded                           |
| 6 | Shield                               |

| A | Single/Double |
|---|---------------|
| 1 | Single end    |
| 2 | Double end    |

| X | Connector Type for Single End |
|---|-------------------------------|
| 1 | M8 Straight, Male             |
| 2 | M8 Right angle, Male          |
| 3 | M8 Straight, Female           |
| 4 | M8 Right angle, Female        |

| W | Cable Material Type |
|---|---------------------|
| 1 | Black PVC           |
| 2 | Gray PUR            |

| MN | Position |
|----|----------|
| 03 | 3P       |
| 04 | 4P       |

| Y | Connector Type for Double End |
|---|-------------------------------|
| 0 | N/A                           |
| 1 | M8 Straight, Male             |
| 2 | M8 Right angle, Male          |
| 3 | M8 Straight, Female           |
| 4 | M8 Right angle, Female        |
| 5 | M12 Straight, Male            |
| 6 | M12 Right angle, Male         |
| 7 | M12 Straight, Female          |
| 8 | M12 Right angle, Female       |

| -00L | Cable Length |
|------|--------------|
| -001 | 0.5M         |
| -002 | 1.0M         |
| -003 | 1.5M         |
| -004 | 3.0M         |
| -005 | 5.0M         |
| -006 | 7.0M         |
| -007 | 10.0M        |

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

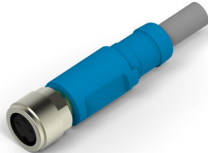
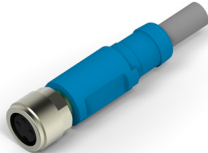
| Wiring Diagram-M8 cable assembly Unshielded* |       |       |        |
|----------------------------------------------|-------|-------|--------|
| From Pin                                     | Poles |       | To Pin |
|                                              | 3     | 4     |        |
| 1                                            | Brown | Brown | 1      |
| 2                                            | -     | White | 2      |
| 3                                            | Blue  | Blue  | 3      |
| 4                                            | Black | Black | 4      |

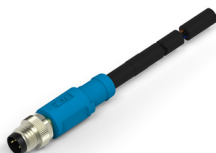
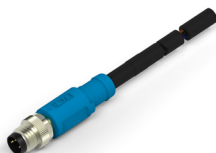
| Wiring Diagram-M8 cable assembly Shielded* |           |           |          |
|--------------------------------------------|-----------|-----------|----------|
| From Pin                                   | Poles     |           | To Pin   |
|                                            | 3         | 4         |          |
| 1                                          | Brown     | Brown     | 1        |
| 2                                          | -         | White     | 2        |
| 3                                          | Blue      | Blue      | 3        |
| 4                                          | Black     | Black     | 4        |
| Shielded                                   | Metal Nut | Metal Nut | Shielded |

\* This wire diagram is applicable to all M8 cable assemblies listed in this flyer.

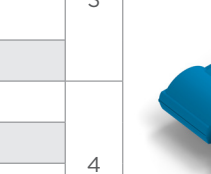
### PRODUCT OFFERINGS - M8 Single Ended Cable Assembly

#### M8 STR SINGLE ENDED CABLE ASSEMBLY

| PN              | Part Description           | Pos | Type                                                                               | Cable Material                                                                     | Shielded/Unshielded |            |
|-----------------|----------------------------|-----|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------|------------|
| T4051320003-001 | M8 FS 3P PUR CABLE 0.5M    | 3   |  | PUR                                                                                | Unshielded          |            |
| T4061320003-001 | M8 FS 3P PUR CABLE 0.5M SH |     |                                                                                    |                                                                                    | Shielded            |            |
| T4051310003-001 | M8 FS 3P PVC CABLE 0.5M    |     |                                                                                    | PVC                                                                                | Unshielded          |            |
| T4061310003-001 | M8 FS 3P PVC CABLE 0.5M SH |     |                                                                                    |                                                                                    | Shielded            |            |
| T4051320004-001 | M8 FS 4P PUR CABLE 0.5M    | 4   |                                                                                    |  | PUR                 | Unshielded |
| T4061320004-001 | M8 FS 4P PUR CABLE 0.5M SH |     |                                                                                    |                                                                                    |                     | Shielded   |
| T4051310004-001 | M8 FS 4P PVC CABLE 0.5M    |     |                                                                                    |                                                                                    | PVC                 | Unshielded |
| T4061310004-001 | M8 FS 4P PVC CABLE 0.5M SH |     |                                                                                    |                                                                                    |                     | Shielded   |

| PN              | Part Description             | Pos | Type                                                                               | Cable Material                                                                     | Shielded/Unshielded |            |
|-----------------|------------------------------|-----|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------|------------|
| T4051120003-001 | M8 MS 3P PUR CABLE 0.5M      | 3   |  | PUR                                                                                | Unshielded          |            |
| T4061120003-001 | M8 MS 3P PUR CABLE 0.5M SH   |     |                                                                                    |                                                                                    | Shielded            |            |
| T4051110003-001 | M8 MS 3P PVC CABLE 0.5M      |     |                                                                                    | PVC                                                                                | Unshielded          |            |
| T4061110003-001 | M8 MS 3P PVC CABLE 0.5M SH   |     |                                                                                    |                                                                                    | Shielded            |            |
| T4051120004-001 | M8 MS 4P PUR CABLE 0.5M      | 4   |                                                                                    |  | PUR                 | Unshielded |
| T4061120004-001 | M8 MS 4P PUR CABLE 0.5M SH   |     |                                                                                    |                                                                                    |                     | Shielded   |
| T4051110004-001 | M8 MS 0.5M 4P PVC CABLE 0.5M |     |                                                                                    |                                                                                    | PVC                 | Unshielded |
| T4061110004-001 | M8 MS 4P PVC CABLE 0.5M SH   |     |                                                                                    |                                                                                    |                     | Shielded   |

#### M8 R/A SINGLE ENDED CABLE ASSEMBLY

| PN              | Part Description           | Pos | Type                                                                                | Cable Material | Shielded/Unshielded |
|-----------------|----------------------------|-----|-------------------------------------------------------------------------------------|----------------|---------------------|
| T4051420003-001 | M8 FR 3P PUR CABLE 0.5M    | 3   |  | PUR            | Unshielded          |
| T4061420003-001 | M8 FR 3P PUR CABLE 0.5M SH |     |                                                                                     |                | Shielded            |
| T4051410003-001 | M8 FR 3P PVC CABLE 0.5M    |     |                                                                                     | PVC            | Unshielded          |
| T4061410003-001 | M8 FR 3P PVC CABLE 0.5M SH |     |                                                                                     |                | Shielded            |
| T4051420004-001 | M8 FR 4P PUR CABLE 0.5M    | 4   |                                                                                     | PUR            | Unshielded          |
| T4061420004-001 | M8 FR 4P PUR CABLE 0.5M SH |     |                                                                                     |                | Shielded            |
| T4051410004-001 | M8 FR 4P PVC CABLE 0.5M    |     |                                                                                     | PVC            | Unshielded          |
| T4061410004-001 | M8 FR 4P PVC CABLE 0.5M SH |     |                                                                                     |                | Shielded            |

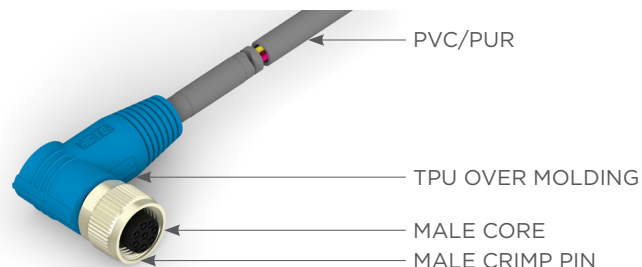
| PN              | Part Description           | Pos | Type                                                                                | Cable Material                                                                      | Shielded/Unshielded |            |
|-----------------|----------------------------|-----|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------|------------|
| T4051220003-001 | M8 MR 3P PUR CABLE 0.5M    | 3   |  | PUR                                                                                 | Unshielded          |            |
| T4061220003-001 | M8 MR 3P PUR CABLE 0.5M SH |     |                                                                                     |                                                                                     | Shielded            |            |
| T4051210003-001 | M8 MR 3P PVC CABLE0.5M     |     |                                                                                     | PVC                                                                                 | Unshielded          |            |
| T4061210003-001 | M8 MR 3P PVC CABLE 0.5M SH |     |                                                                                     |                                                                                     | Shielded            |            |
| T4051220004-001 | M8 MR 4P PUR CABLE 0.5M    | 4   |                                                                                     |  | PUR                 | Unshielded |
| T4061220004-001 | M8 MR 4P PUR CABLE 0.5M SH |     |                                                                                     |                                                                                     |                     | Shielded   |
| T4051210004-001 | M8 MR 4P PVC CABLE 0.5M    |     |                                                                                     |                                                                                     | PVC                 | Unshielded |
| T4061210004-001 | M8 MR 4P PVC CABLE 0.5M SH |     |                                                                                     |                                                                                     |                     | Shielded   |

## Sensor/Actuator M8M12 Cable Assemblies

### M12 Single Ended Cable Assembly

M12 cable assemblies T415/T416 series

STANDARD: IEC61076-2-101



**T41 S A X W Y C MN -00L**

| S | Shield/Unshielded |
|---|-------------------|
| 5 | Unshielded        |
| 6 | Shield            |

| A | Single/Double End |
|---|-------------------|
| 1 | Single end        |
| 2 | Double end        |

| X | Connector Type for Single End |
|---|-------------------------------|
| 1 | M12 Straight, Male            |
| 2 | M12 Right angle, Male         |
| 3 | M12 Straight, Female          |
| 4 | M12 Right angle, Female       |

| W | Cable Material Type |
|---|---------------------|
| 1 | Black PVC           |
| 2 | Gray PUR            |

| MN | Position |
|----|----------|
| 03 | 3P       |
| 04 | 4P       |
| 05 | 5P       |
| 08 | 8P       |

| Y | Connector Type for Double End |
|---|-------------------------------|
| 0 | N/A                           |
| 1 | M12 Straight, Male            |
| 2 | M12 Right angle, Male         |
| 3 | M12 Straight, Female          |
| 4 | M12 Right angle, Female       |

| C | Code   |
|---|--------|
| 0 | A Code |

| -00L | Cable Length |
|------|--------------|
| -001 | 0.5M         |
| -002 | 1.0M         |
| -003 | 1.5M         |
| -004 | 3.0M         |
| -005 | 5.0M         |
| -006 | 7.0M         |
| -007 | 10.0M        |

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

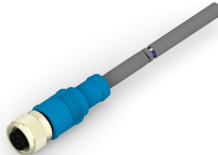
| Wiring Diagram-M12 cable assembly Unshielded* |       |       |       |       |        |        |
|-----------------------------------------------|-------|-------|-------|-------|--------|--------|
| From Pin                                      | Poles |       |       |       |        | To Pin |
|                                               | 2     | 3     | 4     | 5     | 8      |        |
| 1                                             | Brown | Brown | Brown | Brown | White  | 1      |
| 2                                             | -     | -     | White | White | Brown  | 2      |
| 3                                             | Blue  | Blue  | Blue  | Blue  | Green  | 3      |
| 4                                             | -     | Black | Black | Black | Yellow | 4      |
| 5                                             | -     | -     | -     | Gray  | Gray   | 5      |
| 6                                             | -     | -     | -     | -     | Pink   | 6      |
| 7                                             | -     | -     | -     | -     | Blue   | 7      |
| 8                                             | -     | -     | -     | -     | Red    | 8      |

| Wiring Diagram-M12 cable assembly Shielded* |           |           |           |           |           |          |
|---------------------------------------------|-----------|-----------|-----------|-----------|-----------|----------|
| From Pin                                    | Poles     |           |           |           |           | To Pin   |
|                                             | 2         | 3         | 4         | 5         | 8         |          |
| 1                                           | Brown     | Brown     | Brown     | Brown     | White     | 1        |
| 2                                           | -         | -         | White     | White     | Brown     | 2        |
| 3                                           | Blue      | Blue      | Blue      | Blue      | Green     | 3        |
| 4                                           | -         | Black     | Black     | Black     | Yellow    | 4        |
| 5                                           | -         | -         | -         | Gray      | Gray      | 5        |
| 6                                           | -         | -         | -         | -         | Pink      | 6        |
| 7                                           | -         | -         | -         | -         | Blue      | 7        |
| 8                                           | -         | -         | -         | -         | Red       | 8        |
| Shielded                                    | Metal Nut | Metal Nut | Metal Nut | Metal Nut | Metal Nut | Shielded |

\* This wire diagram is applicable to all M12 cable assemblies listed in this flyer.

## PRODUCT OFFERINGS - M12 A-Code Single Ended Cable Assembly

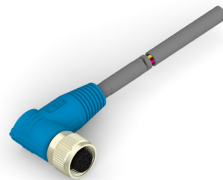
### M12 A-CODE STR SINGLE ENDED CABLE ASSEMBLY

| PN              | Part Description            | Code | Pos | Type                                                                                                          | Cable Materials | Shield/Unshielded |
|-----------------|-----------------------------|------|-----|---------------------------------------------------------------------------------------------------------------|-----------------|-------------------|
| T4151320002-001 | M12 FS 2P PUR CABLE 0.5M    | A    | 2   | <div>Female Straight</div>  | PUR             | Unshielded        |
| T4161320002-001 | M12 FS 2P PUR CABLE 0.5M SH |      |     |                                                                                                               | Shielded        |                   |
| T4151310002-001 | M12 FS 2P PVC CABLE 0.5M    |      |     |                                                                                                               | PVC             | Unshielded        |
| T4161310002-001 | M12 FS 2P PVC CABLE 0.5M SH |      |     |                                                                                                               |                 | Shielded          |
| T4151320003-001 | M12 FS 3P PUR CABLE 0.5M    |      | 3   |                                                                                                               | PUR             | Unshielded        |
| T4161320003-001 | M12 FS 3P PUR CABLE 0.5M SH |      |     |                                                                                                               | Shielded        |                   |
| T4151310003-001 | M12 FS 3P PVC CABLE 0.5M    |      |     |                                                                                                               | PVC             | Unshielded        |
| T4161310003-001 | M12 FS 3P PVC CABLE 0.5M SH |      |     |                                                                                                               |                 | Shielded          |
| T4151320004-001 | M12 FS 4P PUR CABLE 0.5M    |      | 4   |                                                                                                               | PUR             | Unshielded        |
| T4161320004-001 | M12 FS 4P PUR CABLE 0.5M SH |      |     |                                                                                                               | Shielded        |                   |
| T4151310004-001 | M12 FS 4P PVC CABLE 0.5M    |      |     |                                                                                                               | PVC             | Unshielded        |
| T4161310004-001 | M12 FS 4P PVC CABLE 0.5M SH |      |     |                                                                                                               |                 | Shielded          |
| T4151320005-001 | M12 FS 5P PUR CABLE 0.5M    |      | 5   |                                                                                                               | PUR             | Unshielded        |
| T4161320005-001 | M12 FS 5P PUR CABLE 0.5M SH |      |     |                                                                                                               | Shielded        |                   |
| T4151310005-001 | M12 FS 5P PVC CABLE 0.5M    |      |     |                                                                                                               | PVC             | Unshielded        |
| T4161310005-001 | M12 FS 5P PVC CABLE 0.5M SH |      |     |                                                                                                               |                 | Shielded          |
| T4151320008-001 | M12 FS 8P PUR CABLE 0.5M    |      | 8   |                                                                                                               | PUR             | Unshielded        |
| T4161320008-001 | M12 FS 8P PUR CABLE 0.5M SH |      |     |                                                                                                               |                 | Shielded          |
| T4151310008-001 | M12 FS 8P PVC CABLE 0.5M    |      |     |                                                                                                               | PVC             | Unshielded        |
| T4161310008-001 | M12 FS 8P PVC CABLE 0.5M SH |      |     |                                                                                                               |                 | Shielded          |

| PN              | Part Description            | Code | Pos | Type                                                                                                          | Cable Materials | Shield/Unshielded |
|-----------------|-----------------------------|------|-----|---------------------------------------------------------------------------------------------------------------|-----------------|-------------------|
| T4151120002-001 | M12 MS 2P PUR CABLE 0.5M    | A    | 2   | <div>Male Straight</div>  | PUR             | Unshielded        |
| T4161120002-001 | M12 MS 2P PUR CABLE 0.5M SH |      |     |                                                                                                               |                 | Shielded          |
| T4151110002-001 | M12 MS 2P PVC CABLE 0.5M    |      |     |                                                                                                               | PVC             | Unshielded        |
| T4161110002-001 | M12 MS 2P PVC CABLE 0.5M SH |      |     |                                                                                                               |                 | Shielded          |
| T4151120003-001 | M12 MS 3P PUR CABLE 0.5M    |      | 3   |                                                                                                               | PUR             | Unshielded        |
| T4161120003-001 | M12 MS 3P PUR CABLE 0.5M SH |      |     |                                                                                                               |                 | Shielded          |
| T4151110003-001 | M12 MS 3P PVC CABLE 0.5M    |      |     |                                                                                                               | PVC             | Unshielded        |
| T4161110003-001 | M12 MS 3P PVC CABLE 0.5M SH |      |     |                                                                                                               |                 | Shielded          |
| T4151120004-001 | M12 MS 4P PUR CABLE 0.5M    |      | 4   |                                                                                                               | PUR             | Unshielded        |
| T4161120004-001 | M12 MS 4P PUR CABLE 0.5M SH |      |     |                                                                                                               |                 | Shielded          |
| T4151110004-001 | M12 MS 4P PVC CABLE 0.5M    |      |     |                                                                                                               | PVC             | Unshielded        |
| T4161110004-001 | M12 MS 4P PVC CABLE 0.5M SH |      |     |                                                                                                               |                 | Shielded          |
| T4151120005-001 | M12 MS 5P PUR CABLE 0.5M    |      | 5   |                                                                                                               | PUR             | Unshielded        |
| T4161120005-001 | M12 MS 5P PUR CABLE 0.5M SH |      |     |                                                                                                               |                 | Shielded          |
| T4151110005-001 | M12 MS 5P PVC CABLE 0.5M    |      |     |                                                                                                               | PVC             | Unshielded        |
| T4161110005-001 | M12 MS 5P PVC CABLE 0.5M SH |      |     |                                                                                                               |                 | Shielded          |
| T4151120008-001 | M12 MS 8P PUR CABLE 0.5M    |      | 8   |                                                                                                               | PUR             | Unshielded        |
| T4161120008-001 | M12 MS 8P PUR CABLE 0.5M SH |      |     |                                                                                                               |                 | Shielded          |
| T4151110008-001 | M12 MS 8P PVC CABLE 0.5M    |      |     |                                                                                                               | PVC             | Unshielded        |
| T4161110008-001 | M12 MS 8P PVC CABLE 0.5M SH |      |     |                                                                                                               |                 | Shield            |

## Sensor/Actuator M8M12 Cable Assemblies

### M12 A-CODE R/A SINGLE ENDED CABLE ASSEMBLY

| PN              | Part Description            | Code | Pos | Type                                                                                                 | Cable Materials | Shield/Unshielded |
|-----------------|-----------------------------|------|-----|------------------------------------------------------------------------------------------------------|-----------------|-------------------|
| T4151420002-001 | M12 FR 2P PUR CABLE 0.5M    | A    | 2   | <div>Female</div>  | PUR             | Unshielded        |
| T4161420002-001 | M12 FR 2P PUR CABLE 0.5M SH |      |     |                                                                                                      |                 | Shield            |
| T4151410002-001 | M12 FR 2P PVC CABLE 0.5M    |      | PVC |                                                                                                      | Unshielded      |                   |
| T4161410002-001 | M12 FR 2P PVC CABLE 0.5M SH |      |     |                                                                                                      | Shield          |                   |
| T4151420003-001 | M12 FR 3P PUR CABLE 0.5M    |      | 3   |                                                                                                      | PUR             | Unshielded        |
| T4161420003-001 | M12 FR 3P PUR CABLE 0.5M SH |      |     |                                                                                                      |                 | Shield            |
| T4151410003-001 | M12 FR 3P PVC CABLE 0.5M    |      | PVC |                                                                                                      | Unshielded      |                   |
| T4161410003-001 | M12 FR 3P PVC CABLE 0.5M SH |      |     |                                                                                                      | Shield          |                   |
| T4151420004-001 | M12 FR 4P PUR CABLE 0.5M    |      | 4   |                                                                                                      | PUR             | Unshielded        |
| T4161420004-001 | M12 FR 4P PUR CABLE 0.5M SH |      |     |                                                                                                      |                 | Shield            |
| T4151410004-001 | M12 FR 4P PVC CABLE 0.5M    |      | PVC |                                                                                                      | Unshielded      |                   |
| T4161410004-001 | M12 FR 4P PVC CABLE 0.5M SH |      |     |                                                                                                      | Shield          |                   |
| T4151420005-001 | M12 FR 5P PUR CABLE 0.5M    |      | 5   |                                                                                                      | PUR             | Unshielded        |
| T4161420005-001 | M12 FR 5P PUR CABLE 0.5M SH |      |     |                                                                                                      |                 | Shield            |
| T4151410005-001 | M12 FR 5P PVC CABLE 0.5M    |      | PVC |                                                                                                      | Unshielded      |                   |
| T4161410005-001 | M12 FR 5P PVC CABLE 0.5M SH |      |     |                                                                                                      | Shield          |                   |
| T4151420008-001 | M12 FR 8P PUR CABLE 0.5M    |      | 8   |                                                                                                      | PUR             | Unshielded        |
| T4161420008-001 | M12 FR 8P PUR CABLE 0.5M SH |      |     |                                                                                                      |                 | Shield            |
| T4151410008-001 | M12 FR 8P PVC CABLE 0.5M    |      | PVC |                                                                                                      | Unshielded      |                   |
| T4161410008-001 | M12 FR 8P PVC CABLE 0.5M SH |      |     |                                                                                                      | Shield          |                   |

| PN              | Part Description            | Code | Pos | Type                                                                                                 | Cable Materials | Shield/Unshielded |
|-----------------|-----------------------------|------|-----|------------------------------------------------------------------------------------------------------|-----------------|-------------------|
| T4151220002-001 | M12 MR 2P PUR CABLE 0.5M    | A    | 2   | <div>Male</div>  | PUR             | Unshielded        |
| T4161220002-001 | M12 MR 2P PUR CABLE 0.5M SH |      |     |                                                                                                      |                 | Shield            |
| T4151210002-001 | M12 MR 2P PVC CABLE 0.5M    |      | PVC |                                                                                                      | Unshielded      |                   |
| T4161210002-001 | M12 MR 2P PVC CABLE 0.5M SH |      |     |                                                                                                      | Shield          |                   |
| T4151220003-001 | M12 MR 3P PUR CABLE 0.5M    |      | 3   |                                                                                                      | PUR             | Unshielded        |
| T4161220003-001 | M12 MR 3P PUR CABLE 0.5M SH |      |     |                                                                                                      |                 | Shield            |
| T4151210003-001 | M12 MR 3P PVC CABLE 0.5M    |      | PVC |                                                                                                      | Unshielded      |                   |
| T4161210003-001 | M12 MR 3P PVC CABLE 0.5M SH |      |     |                                                                                                      | Shield          |                   |
| T4151220004-001 | M12 MR 4P PUR CABLE 0.5M    |      | 4   |                                                                                                      | PUR             | Unshielded        |
| T4161220004-001 | M12 MR 4P PUR CABLE 0.5M SH |      |     |                                                                                                      |                 | Shield            |
| T4151210004-001 | M12 MR 4P PVC CABLE 0.5M    |      | PVC |                                                                                                      | Unshielded      |                   |
| T4161210004-001 | M12 MR 4P PVC CABLE 0.5M SH |      |     |                                                                                                      | Shield          |                   |
| T4151220005-001 | M12 MR 5P PUR CABLE 0.5M    |      | 5   |                                                                                                      | PUR             | Unshielded        |
| T4161220005-001 | M12 MR 5P PUR CABLE 0.5M SH |      |     |                                                                                                      |                 | Shield            |
| T4151210005-001 | M12 MR 5P PVC CABLE 0.5M    |      | PVC |                                                                                                      | Unshielded      |                   |
| T4161210005-001 | M12 MR 5P PVC CABLE 0.5M SH |      |     |                                                                                                      | Shield          |                   |
| T4151220008-001 | M12 MR 8P PUR CABLE 0.5M    |      | 8   |                                                                                                      | PUR             | Unshielded        |
| T4161220008-001 | M12 MR 8P PUR CABLE 0.5M SH |      |     |                                                                                                      |                 | Shield            |
| T4151210008-001 | M12 MR 8P PVC CABLE 0.5M    |      | PVC |                                                                                                      | Unshielded      |                   |
| T4161210008-001 | M12 MR 8P PVC CABLE 0.5M SH |      |     |                                                                                                      | Shield          |                   |

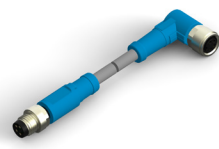
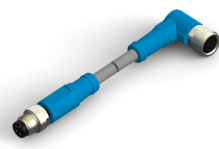
## Sensor/Actuator M8M12 Cable Assemblies

### PRODUCT OFFERINGS - M8 to M8 Double Ended Cable Assembly

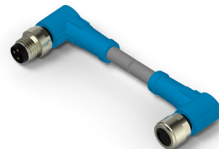
#### M8 MALE STR - FEMALE STR DOUBLE ENDED CABLE ASSEMBLY

| PN              | Part Description                      | Pos | Type                                                                               | Cable Materials                                                                    | Shield/<br>Unshielded |            |
|-----------------|---------------------------------------|-----|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------|------------|
| T4052123003-001 | M8 MS 3P - M8 FS 3P PUR CABLE 0.5M    | 3   |  | PUR                                                                                | Unshielded            |            |
| T4062123003-001 | M8 MS 3P - M8 FS 3P PUR CABLE 0.5M SH |     |                                                                                    |                                                                                    | Shield                |            |
| T4052113003-001 | M8 MS 3P - M8 FS 3P PVC CABLE 0.5M    |     |                                                                                    | PVC                                                                                | Unshielded            |            |
| T4062113003-001 | M8 MS 3P - M8 FS 3P PVC CABLE 0.5M SH |     |                                                                                    |                                                                                    | Shield                |            |
| T4052123004-001 | M8 MS 4P - M8 FS 4P PUR CABLE 0.5M    | 4   |                                                                                    |  | PUR                   | Unshielded |
| T4062123004-001 | M8 MS 4P - M8 FS 4P PUR CABLE 0.5M SH |     |                                                                                    |                                                                                    |                       | Shield     |
| T4052113004-001 | M8 MS 4P - M8 FS 4P PVC CABLE 0.5M    |     |                                                                                    |                                                                                    | PVC                   | Unshielded |
| T4062113004-001 | M8 MS 4P - M8 FS 4P PVC CABLE 0.5M SH |     |                                                                                    |                                                                                    |                       | Shield     |

#### M8 MALE STR - FEMALE R/A DOUBLE ENDED CABLE ASSEMBLY

| PN              | Part Description                      | Pos | Type                                                                               | Cable Materials                                                                    | Shield/<br>Unshielded |            |
|-----------------|---------------------------------------|-----|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------|------------|
| T4052124003-001 | M8 MS 3P - M8 FR 3P PUR CABLE 0.5M    | 3   |  | PUR                                                                                | Unshielded            |            |
| T4062124003-001 | M8 MS 3P - M8 FR 3P PUR CABLE 0.5M SH |     |                                                                                    |                                                                                    | Shield                |            |
| T4052114003-001 | M8 MS 3P - M8 FR 3P PVC CABLE 0.5M    |     |                                                                                    | PVC                                                                                | Unshielded            |            |
| T4062114003-001 | M8 MS 3P - M8 FR 3P PVC CABLE 0.5M SH |     |                                                                                    |                                                                                    | Shield                |            |
| T4052124004-001 | M8 MS 4P - M8 FR 4P PUR CABLE 0.5M    | 4   |                                                                                    |  | PUR                   | Unshielded |
| T4062124004-001 | M8 MS 4P - M8 FR 4P PUR CABLE 0.5M SH |     |                                                                                    |                                                                                    |                       | Shield     |
| T4052114004-001 | M8 MS 4P - M8 FR 4P PVC CABLE 0.5M    |     |                                                                                    |                                                                                    | PVC                   | Unshielded |
| T4062114004-001 | M8 MS 4P - M8 FR 4P PVC CABLE 0.5M SH |     |                                                                                    |                                                                                    |                       | Shield     |

#### M8 MALE R/A - FEMALE R/A DOUBLE ENDED CABLE ASSEMBLY

| PN              | Part Description                      | Pos | Type                                                                                 | Cable Materials | Shield/<br>Unshielded |
|-----------------|---------------------------------------|-----|--------------------------------------------------------------------------------------|-----------------|-----------------------|
| T4052224003-001 | M8 MR 3P - M8 FR 3P PUR CABLE 0.5M    | 3   |  | PUR             | Unshielded            |
| T4062224003-001 | M8 MR 3P - M8 FR 3P PUR CABLE 0.5M SH |     |                                                                                      |                 | Shield                |
| T4052214003-001 | M8 MR 3P - M8 FR 3P PVC CABLE 0.5M    |     |                                                                                      | PVC             | Unshielded            |
| T4062214003-001 | M8 MR 3P - M8 FR 3P PVC CABLE 0.5M SH |     |                                                                                      |                 | Shield                |
| T4062224004-001 | M8 MR 4P - M8 FR 3P PUR CABLE 0.5M    | 4   |                                                                                      | PUR             | Unshielded            |
| T4052224004-001 | M8 MR 4P - M8 FR 3P PUR CABLE 0.5M SH |     |                                                                                      |                 | Shield                |
| T4062214004-001 | M8 MR 4P - M8 FR 3P PVC CABLE 0.5M    |     |                                                                                      | PVC             | Unshielded            |
| T4052214004-001 | M8 MR 4P - M8 FR 3P PVC CABLE 0.5M SH |     |                                                                                      |                 | Shield                |

#### M8 MALE R/A - FEMALE STR DOUBLE ENDED CABLE ASSEMBLY

| PN              | Part Description                      | Pos | Type                                                                                 | Cable Materials | Shield/<br>Unshielded |
|-----------------|---------------------------------------|-----|--------------------------------------------------------------------------------------|-----------------|-----------------------|
| T4062223003-001 | M8 MR 3P – M8 FS 3P PUR CABLE 0.5M    | 3   |  | PUR             | Unshield              |
| T4052223003-001 | M8 MR 3P – M8 FS 3P PUR CABLE 0.5M SH |     |                                                                                      |                 | Shielded              |
| T4062213003-001 | M8 MR 3P – M8 FS 3P PVC CABLE 0.5M    |     |                                                                                      | PVC             | Unshield              |
| T4052213003-001 | M8 MR 3P – M8 FS 3P PVC CABLE 0.5M SH |     |                                                                                      |                 | Shielded              |
| T4052223004-001 | M8 MR 4P – M8 FS 3P PUR CABLE 0.5M    | 4   |                                                                                      | PUR             | Unshielded            |
| T4062223004-001 | M8 MR 4P – M8 FS 3P PUR CABLE 0.5M SH |     |                                                                                      |                 | Shield                |
| T4052213004-001 | M8 MR 4P – M8 FS 3P PVC CABLE 0.5M    |     |                                                                                      | PVC             | Unshielded            |
| T4062213004-001 | M8 MR 4P – M8 FS 3P PVC CABLE 0.5M SH |     |                                                                                      |                 | Shield                |

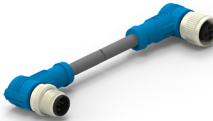


### PRODUCT OFFERINGS - M12 to M12 A-Code Double Ended Cable Assembly

#### M12 A-CODE MALE STR - FEMALE STR DOUBLE ENDED CABLE ASSEMBLY

| PN              | Part Description                        | Pos | Type                                                                                                | Code | Cable Materials | Shield/<br>Unshielded |
|-----------------|-----------------------------------------|-----|-----------------------------------------------------------------------------------------------------|------|-----------------|-----------------------|
| T4152123002-001 | M12 MS 2P - M12 FS 2P PUR CABLE 0.5M    | 2   | <div>MS-FS</div>  | A    | PUR             | Unshielded            |
| T4162123002-001 | M12 MS 2P - M12 FS 2P PUR CABLE 0.5M SH |     |                                                                                                     |      |                 | Shield                |
| T4152113002-001 | M12 MS 2P - M12 FS 2P PVC CABLE 0.5M    |     |                                                                                                     |      | PVC             | Unshielded            |
| T4162113002-001 | M12 MS 2P - M12 FS 2P PVC CABLE 0.5M SH |     |                                                                                                     |      |                 | Shield                |
| T4152123003-001 | M12 MS 3P - M12 FS 3P PUR CABLE 0.5M    | 3   |                                                                                                     |      | PUR             | Unshielded            |
| T4162123003-001 | M12 MS 3P - M12 FS 3P PUR CABLE 0.5M SH |     |                                                                                                     |      |                 | Shield                |
| T4152113003-001 | M12 MS 3P - M12 FS 3P PVC CABLE 0.5M    |     |                                                                                                     |      | PVC             | Unshielded            |
| T4162113003-001 | M12 MS 3P - M12 FS 3P PVC CABLE 0.5M SH |     |                                                                                                     |      |                 | Shield                |
| T4152123004-001 | M12 MS 4P - M12 FS 4P PUR CABLE 0.5M    | 4   |                                                                                                     |      | PUR             | Unshielded            |
| T4162123004-001 | M12 MS 4P - M12 FS 4P PUR CABLE 0.5M SH |     |                                                                                                     |      |                 | Shield                |
| T4152113004-001 | M12 MS 4P - M12 FS 4P PVC CABLE 0.5M    |     |                                                                                                     |      | PVC             | Unshielded            |
| T4162113004-001 | M12 MS 4P - M12 FS 4P PVC CABLE 0.5M SH |     |                                                                                                     |      |                 | Shield                |
| T4152123005-001 | M12 MS 5P - M12 FS 5P PUR CABLE 0.5M    | 5   |                                                                                                     |      | PUR             | Unshielded            |
| T4162123005-001 | M12 MS 5P - M12 FS 5P PUR CABLE 0.5M SH |     |                                                                                                     |      |                 | Shield                |
| T4152113005-001 | M12 MS 5P - M12 FS 5P PVC CABLE 0.5M    |     |                                                                                                     |      | PVC             | Unshielded            |
| T4162113005-001 | M12 MS 5P - M12 FS 5P PVC CABLE 0.5M SH |     |                                                                                                     |      |                 | Shield                |

#### M12 A-CODE MALE R/A - FEMALE R/A DOUBLE ENDED CABLE ASSEMBLY

| PN              | Part Description                        | Pos | Type                                                                                       | Code | Cable Materials | Shield/<br>Unshielded |
|-----------------|-----------------------------------------|-----|--------------------------------------------------------------------------------------------|------|-----------------|-----------------------|
| T4152224002-001 | M12 MR 2P - M12 FR 2P PUR CABLE 0.5M    | 2   |  MS-FS | A    | PUR             | Unshielded            |
| T4162224002-001 | M12 MR 2P - M12 FR 2P PUR CABLE 0.5M SH |     |                                                                                            |      |                 | Shield                |
| T4152214002-001 | M12 MR 2P - M12 FR 2P PVC CABLE 0.5M    |     |                                                                                            |      | PVC             | Unshielded            |
| T4162214002-001 | M12 MR 2P - M12 FR 2P PVC CABLE 0.5M SH |     |                                                                                            |      |                 | Shield                |
| T4152224003-001 | M12 MR 3P - M12 FR 3P PUR CABLE 0.5M    | 3   |                                                                                            |      | PUR             | Unshielded            |
| T4162224003-001 | M12 MR 3P - M12 FR 3P PUR CABLE 0.5M SH |     |                                                                                            |      |                 | Shield                |
| T4152214003-001 | M12 MR 3P - M12 FR 3P PVC CABLE 0.5M    |     |                                                                                            |      | PVC             | Unshielded            |
| T4162214003-001 | M12 MR 3P - M12 FR 3P PVC CABLE 0.5M SH |     |                                                                                            |      |                 | Shield                |
| T4152224004-001 | M12 MR 4P - M12 FR 4P PUR CABLE 0.5M    | 4   |                                                                                            |      | PUR             | Unshielded            |
| T4162224004-001 | M12 MR 4P - M12 FR 4P PUR CABLE 0.5M SH |     |                                                                                            |      |                 | Shield                |
| T4152214004-001 | M12 MR 4P - M12 FR 4P PVC CABLE 0.5M    |     |                                                                                            |      | PVC             | Unshielded            |
| T4162214004-001 | M12 MR 4P - M12 FR 4P PVC CABLE 0.5M SH |     |                                                                                            |      |                 | Shield                |
| T4152224005-001 | M12 MR 5P - M12 FR 5P PUR CABLE 0.5M    | 5   |                                                                                            |      | PUR             | Unshielded            |
| T4162224005-001 | M12 MR 5P - M12 FR 5P PUR CABLE 0.5M SH |     |                                                                                            |      |                 | Shield                |
| T4152214005-001 | M12 MR 5P - M12 FR 5P PVC CABLE 0.5M    |     |                                                                                            |      | PVC             | Unshielded            |
| T4162214005-001 | M12 MR 5P - M12 FR 5P PVC CABLE 0.5M SH |     |                                                                                            |      |                 | Shield                |

### PRODUCT OFFERINGS - M12 to M12 A-Code Double Ended Cable Assembly

#### M12 A-CODE MALE STR - FEMALE R/A DOUBLE ENDED CABLE ASSEMBLY

| PN              | Part Description                        | Pos | Type                                                                                                | Code | Cable Materials | Shield/<br>Unshielded |
|-----------------|-----------------------------------------|-----|-----------------------------------------------------------------------------------------------------|------|-----------------|-----------------------|
| T4152124002-001 | M12 MS 2P – M12 FR 2P PUR CABLE 0.5M    | 2   | <div>MS-FR</div>  | A    | PUR             | Unshielded            |
| T4162124002-001 | M12 MS 2P – M12 FR 2P PUR CABLE 0.5M SH |     |                                                                                                     |      |                 | Shield                |
| T4152114002-001 | M12 MS 2P – M12 FR 2P PVC CABLE 0.5M    |     |                                                                                                     |      | PVC             | Unshielded            |
| T4162114002-001 | M12 MS 2P – M12 FR 2P PVC CABLE 0.5M SH |     |                                                                                                     |      |                 | Shield                |
| T4152124003-001 | M12 MS 3P – M12 FR 3P PUR CABLE 0.5M    | 3   |                                                                                                     |      | PUR             | Unshielded            |
| T4162124003-001 | M12 MS 3P – M12 FR 3P PUR CABLE 0.5M SH |     |                                                                                                     |      |                 | Shield                |
| T4152114003-001 | M12 MS 3P – M12 FR 3P PVC CABLE 0.5M    |     |                                                                                                     |      | PVC             | Unshielded            |
| T4162114003-001 | M12 MS 3P – M12 FR 3P PVC CABLE 0.5M SH |     |                                                                                                     |      |                 | Shield                |
| T4152124004-001 | M12 MS 4P – M12 FR 4P PUR CABLE 0.5M    | 4   |                                                                                                     |      | PUR             | Unshielded            |
| T4162124004-001 | M12 MS 4P – M12 FR 4P PUR CABLE 0.5M SH |     |                                                                                                     |      |                 | Shield                |
| T4152114004-001 | M12 MS 4P – M12 FR 4P PVC CABLE 0.5M    |     |                                                                                                     |      | PVC             | Unshielded            |
| T4162114004-001 | M12 MS 4P – M12 FR 4P PVC CABLE 0.5M SH |     |                                                                                                     |      |                 | Shield                |
| T4152124005-001 | M12 MS 5P – M12 FR 5P PUR CABLE 0.5M    | 5   |                                                                                                     |      | PUR             | Unshielded            |
| T4162124005-001 | M12 MS 5P – M12 FR 5P PUR CABLE 0.5M SH |     |                                                                                                     |      |                 | Shield                |
| T4152114005-001 | M12 MS 5P – M12 FR 5P PVC CABLE 0.5M    |     |                                                                                                     |      | PVC             | Unshielded            |
| T4162114005-001 | M12 MS 5P – M12 FR 5P PVC CABLE 0.5M SH |     |                                                                                                     |      |                 | Shield                |

#### M12 A-CODE MALE R/A - FEMALE STR DOUBLE ENDED CABLE ASSEMBLY

| PN              | Part Description                        | Pos | Type                                                                                       | Code | Cable Materials | Shield/<br>Unshielded |
|-----------------|-----------------------------------------|-----|--------------------------------------------------------------------------------------------|------|-----------------|-----------------------|
| T4152223002-001 | M12 MR 2P – M12 FS 2P PUR CABLE 0.5M    | 2   |  MR-FS | A    | PUR             | Unshielded            |
| T4162223002-001 | M12 MR 2P – M12 FS 2P PUR CABLE 0.5M SH |     |                                                                                            |      |                 | Shield                |
| T4152213002-001 | M12 MR 2P – M12 FS 2P PVC CABLE 0.5M    |     |                                                                                            |      | PVC             | Unshielded            |
| T4162213002-001 | M12 MR 2P – M12 FS 2P PVC CABLE 0.5M SH |     |                                                                                            |      |                 | Shield                |
| T4152223003-001 | M12 MR 3P – M12 FS 3P PUR CABLE 0.5M    | 3   |                                                                                            |      | PUR             | Unshielded            |
| T4162223003-001 | M12 MR 3P – M12 FS 3P PUR CABLE 0.5M SH |     |                                                                                            |      |                 | Shield                |
| T4152213003-001 | M12 MR 3P – M12 FS 3P PVC CABLE 0.5M    |     |                                                                                            |      | PVC             | Unshielded            |
| T4162213003-001 | M12 MR 3P – M12 FS 3P PVC CABLE 0.5M SH |     |                                                                                            |      |                 | Shield                |
| T4152223004-001 | M12 MR 4P – M12 FS 4P PUR CABLE 0.5M    | 4   |                                                                                            |      | PUR             | Unshielded            |
| T4162223004-001 | M12 MR 4P – M12 FS 4P PUR CABLE 0.5M SH |     |                                                                                            |      |                 | Shield                |
| T4152213004-001 | M12 MR 4P – M12 FS 4P PVC CABLE 0.5M    |     |                                                                                            |      | PVC             | Unshielded            |
| T4162213004-001 | M12 MR 4P – M12 FS 4P PVC CABLE 0.5M SH |     |                                                                                            |      |                 | Shield                |
| T4152223005-001 | M12 MR 5P – M12 FS 5P PUR CABLE 0.5M    | 5   |                                                                                            |      | PUR             | Unshielded            |
| T4162223005-001 | M12 MR 5P – M12 FS 5P PUR CABLE 0.5M SH |     |                                                                                            |      |                 | Shield                |
| T4152213005-001 | M12 MR 5P – M12 FS 5P PVC CABLE 0.5M    |     |                                                                                            |      | PVC             | Unshielded            |
| T4162213005-001 | M12 MR 5P – M12 FS 5P PVC CABLE 0.5M SH |     |                                                                                            |      |                 | Shield                |

## Sensor/Actuator M8M12 Cable Assemblies

### PRODUCT OFFERINGS - M8 to M12 Double Ended Cable Assembly

#### M8 FEMALE STR - M12 MALE STR DOUBLE ENDED CABLE ASSEMBLY

| PN              | Part Description                    | Pos | Type                                                                               | Cable Materials | Shield/Unshielded |
|-----------------|-------------------------------------|-----|------------------------------------------------------------------------------------|-----------------|-------------------|
| T4052325003-001 | M8 3P FS - M12 3P MS PUR CABLE 0.5M | 3   |  | PUR             | Unshielded        |
| T4052315003-001 | M8 3P FS - M12 3P MS PVC CABLE 0.5M |     |                                                                                    | PVC             |                   |
| T4052325004-001 | M8 4P FS - M12 4P MS PUR CABLE 0.5M | 4   |                                                                                    | PUR             |                   |
| T4052315004-001 | M8 4P FS - M12 4P MS PVC CABLE 0.5M |     |                                                                                    | PVC             |                   |

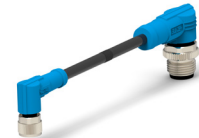
#### M8 FEMALE STR - M12 MALE R/A DOUBLE ENDED CABLE ASSEMBLY

| PN              | Part Description                    | Pos | Type                                                                               | Cable Materials | Shield/Unshielded |
|-----------------|-------------------------------------|-----|------------------------------------------------------------------------------------|-----------------|-------------------|
| T4052326003-001 | M8 3P FS - M12 3P MR PUR CABLE 0.5M | 3   |  | PUR             | Unshielded        |
| T4052316003-001 | M8 3P FS - M12 3P MR PVC CABLE 0.5M |     |                                                                                    | PVC             |                   |
| T4052326004-001 | M8 4P FS - M12 4P MR PUR CABLE 0.5M | 4   |                                                                                    | PUR             |                   |
| T4052316004-001 | M8 4P FS - M12 4P MR PVC CABLE 0.5M |     |                                                                                    | PVC             |                   |

#### M8 FEMALE R/A - M12 MALE STR DOUBLE ENDED CABLE ASSEMBLY

| PN              | Part Description                    | Pos | Type                                                                                 | Cable Materials | Shield/Unshielded |
|-----------------|-------------------------------------|-----|--------------------------------------------------------------------------------------|-----------------|-------------------|
| T4052425003-001 | M8 3P FR - M12 3P MS PUR CABLE 0.5M | 3   |  | PUR             | Unshielded        |
| T4052415003-001 | M8 3P FR - M12 3P MS PVC CABLE 0.5M |     |                                                                                      | PVC             |                   |
| T4052425004-001 | M8 4P FR - M12 4P MS PUR CABLE 0.5M | 4   |                                                                                      | PUR             |                   |
| T4052415004-001 | M8 4P FR - M12 4P MS PVC CABLE 0.5M |     |                                                                                      | PVC             |                   |

#### M8 FEMALE R/A - M12 MALE R/A DOUBLE ENDED CABLE ASSEMBLY

| PN              | Part Description                    | Pos | Type                                                                                 | Cable Materials | Shield/Unshielded |
|-----------------|-------------------------------------|-----|--------------------------------------------------------------------------------------|-----------------|-------------------|
| T4052426003-001 | M8 3P FR - M12 3P MR PUR CABLE 0.5M | 3   |  | PUR             | Unshielded        |
| T4052416003-001 | M8 3P FR - M12 3P MR PVC CABLE 0.5M |     |                                                                                      | PVC             |                   |
| T4052426004-001 | M8 4P FR - M12 4P MR PUR CABLE 0.5M | 4   |                                                                                      | PUR             |                   |
| T4052416004-001 | M8 4P FR - M12 4P MR PVC CABLE 0.5M |     |                                                                                      | PVC             |                   |

## Sensor/Actuator M8M12 Cable Assemblies

### PRODUCT OFFERINGS - M8 to M12 Double Ended Cable Assembly

#### M8 MALE STR - M12 FEMALE STR DOUBLE ENDED CABLE ASSEMBLY

| PN              | Part Description                    | Pos | Type                                                                                             | Cable Materials | Shield/Unshielded |
|-----------------|-------------------------------------|-----|--------------------------------------------------------------------------------------------------|-----------------|-------------------|
| T4052127003-001 | M8 3P MS - M12 3P FS PUR CABLE 0.5M | 3   |  M8 MS -M12 FS | PUR             | Unshielded        |
| T4052117003-001 | M8 3P MS - M12 3P FS PVC CABLE 0.5M |     |                                                                                                  | PVC             |                   |
| T4052127004-001 | M8 4P MS - M12 4P FS PUR CABLE 0.5M | 4   |                                                                                                  | PUR             |                   |
| T4052117004-001 | M8 4P MS - M12 4P FS PVC CABLE 0.5M |     |                                                                                                  | PVC             |                   |

#### M8 MALE STR - M12 FEMALE R/A DOUBLE ENDED CABLE ASSEMBLY

| PN              | Part Description                    | Pos | Type                                                                                             | Cable Materials | Shield/Unshielded |
|-----------------|-------------------------------------|-----|--------------------------------------------------------------------------------------------------|-----------------|-------------------|
| T4052128003-001 | M8 3P MS - M12 3P FR PUR CABLE 0.5M | 3   |  M8 MS -M12 FR | PUR             | Unshielded        |
| T4052118003-001 | M8 3P MS - M12 3P FR PVC CABLE 0.5M |     |                                                                                                  | PVC             |                   |
| T4052128004-001 | M8 4P MS - M12 4P FR PUR CABLE 0.5M | 4   |                                                                                                  | PUR             |                   |
| T4052118004-001 | M8 4P MS - M12 4P FR PVC CABLE 0.5M |     |                                                                                                  | PVC             |                   |

#### M8 MALE R/A - M12 FEMALE STR DOUBLE ENDED CABLE ASSEMBLY

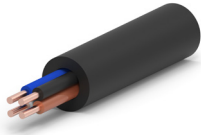
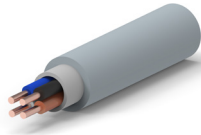
| PN              | Part Description                    | Pos | Type                                                                                 | Cable Materials | Shield/Unshielded |
|-----------------|-------------------------------------|-----|--------------------------------------------------------------------------------------|-----------------|-------------------|
| T4052227003-001 | M8 3P MR – M12 3P FS PUR CABLE 0.5M | 3   |  | PUR             | Unshielded        |
| T4052217003-001 | M8 3P MR – M12 3P FS PVC CABLE 0.5M |     |                                                                                      | PVC             |                   |
| T4052227004-001 | M8 4P MR – M12 4P FS PUR CABLE 0.5M | 4   |                                                                                      | PUR             |                   |
| T4052217004-001 | M8 4P MR – M12 4P FS PVC CABLE 0.5M |     |                                                                                      | PVC             |                   |

#### M8 MALE R/A - M12 FEMALE R/A DOUBLE ENDED CABLE ASSEMBLY

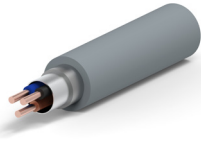
| PN              | Part Description                    | Pos | Type                                                                                 | Cable Materials | Shield/Unshielded |
|-----------------|-------------------------------------|-----|--------------------------------------------------------------------------------------|-----------------|-------------------|
| T4052228003-001 | M8 3P MR – M12 3P FR PUR CABLE 0.5M | 3   |  | PUR             | Unshielded        |
| T4052218003-001 | M8 3P MR – M12 3P FR PVC CABLE 0.5M |     |                                                                                      | PVC             |                   |
| T4052228004-001 | M8 4P MR – M12 4P FR PUR CABLE 0.5M | 4   |                                                                                      | PUR             |                   |
| T4052218004-001 | M8 4P MR – M12 4P FR PVC CABLE 0.5M |     |                                                                                      | PVC             |                   |

### Cable Specifications

#### M8 UNSHIELDED CABLE ASSEMBLIES

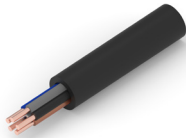
| M8 cable assembly unshielded PVC series |                                                                                   |   | M8 cable assembly unshielded PUR series                                             |   |  |
|-----------------------------------------|-----------------------------------------------------------------------------------|---|-------------------------------------------------------------------------------------|---|--|
| Image                                   | PVC                                                                               |   | PUR                                                                                 |   |  |
|                                         |  |   |  |   |  |
| No. of conductors                       | 3                                                                                 | 4 | 3                                                                                   | 4 |  |
| Jacket material                         | PVC                                                                               |   | PUR                                                                                 |   |  |
| Jacket color                            | Black                                                                             |   | Gray                                                                                |   |  |
| Cross section                           | 24AWG                                                                             |   | 24AWG                                                                               |   |  |
| Construction                            | 32/0.10mm                                                                         |   | 32/0.10mm                                                                           |   |  |
| Temp range-Fixed                        | -10°C-80°C                                                                        |   | -40°C-80°C                                                                          |   |  |
| Temp range-Flexible                     | -5°C-80°C                                                                         |   | -25°C-80°C                                                                          |   |  |
| Features                                | Flame Retardant, Rohs                                                             |   | Flame Retardant, oil resistant, Rohs                                                |   |  |
| Standards                               | UL758, UL1581, UL2464                                                             |   | UL758, UL1581, UL20549                                                              |   |  |

#### M8 SHIELDED CABLE ASSEMBLIES

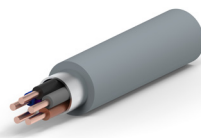
| M8 cable assembly shielded PVC series |                                                                                     |   | M8 cable assembly shielded PUR series                                                 |   |  |
|---------------------------------------|-------------------------------------------------------------------------------------|---|---------------------------------------------------------------------------------------|---|--|
| Image                                 | PVC                                                                                 |   | PUR                                                                                   |   |  |
|                                       |  |   |  |   |  |
| No. of conductors                     | 3                                                                                   | 4 | 3                                                                                     | 4 |  |
| Jacket material                       | PVC                                                                                 |   | PUR                                                                                   |   |  |
| Jacket color                          | Black                                                                               |   | Gray                                                                                  |   |  |
| Cross section                         | 24AWG                                                                               |   | 24AWG                                                                                 |   |  |
| Construction                          | Construction: 32/0.10mm<br>Shield1: AL/Mylar<br>Shield2: Tinned copper braid        |   | Construction: 32/0.10mm<br>Shield1: AL/Mylar<br>Shield2: Tinned copper braid          |   |  |
| Temp range-Fixed                      | -10°C-80°C                                                                          |   | -40°C-80°C                                                                            |   |  |
| Temp range-Flexible                   | -5°C-80°C                                                                           |   | -25°C-80°C                                                                            |   |  |
| Features                              | Flame Retardant, Rohs                                                               |   | Flame Retardant, oil resistant, Rohs                                                  |   |  |
| Standards                             | UL758, UL1581, UL2464                                                               |   | UL758, UL1581, UL20549                                                                |   |  |

## Sensor/Actuator M8M12 Cable Assemblies

### M12 UNSHIELDED CABLE ASSEMBLIES

| M12 PVC cable assembly unshielded series |                                                                                   |           |           |           |           | M12 PUR cable assembly unshielded series                                            |           |           |           |           |
|------------------------------------------|-----------------------------------------------------------------------------------|-----------|-----------|-----------|-----------|-------------------------------------------------------------------------------------|-----------|-----------|-----------|-----------|
| Image                                    | PVC                                                                               |           |           |           |           | PUR                                                                                 |           |           |           |           |
|                                          |  |           |           |           |           |  |           |           |           |           |
| No. of conductors                        | 2                                                                                 | 3         | 4         | 5         | 8         | 2                                                                                   | 3         | 4         | 5         | 8         |
| Jacket material                          | PVC                                                                               |           |           |           |           | PUR                                                                                 |           |           |           |           |
| Jacket color                             | Black                                                                             |           |           |           |           | Gray                                                                                |           |           |           |           |
| Cross section                            | 22AWG                                                                             |           |           |           |           | 22AWG                                                                               | 22AWG     | 22AWG     | 22AWG     | 24AWG     |
| Construction                             | 43/0.10mm                                                                         | 43/0.10mm | 43/0.10mm | 43/0.10mm | 32/0.10mm | 43/0.10mm                                                                           | 43/0.10mm | 43/0.10mm | 43/0.10mm | 32/0.10mm |
| Temp range-Fixed                         | -10°C-80°C                                                                        |           |           |           |           | -40°C-80°C                                                                          |           |           |           |           |
| Temp range-Flexible                      | -5°C-80°C                                                                         |           |           |           |           | -25°C-80°C                                                                          |           |           |           |           |
| Features                                 | Flame Retardant, Rohs                                                             |           |           |           |           | Flame Retardant, oil resistant, Rohs                                                |           |           |           |           |
| Standards                                | UL758, UL1581, UL2464                                                             |           |           |           |           | UL758, UL1581, UL20549                                                              |           |           |           |           |

### M12 SHIELDED CABLE ASSEMBLIES

| M12 cable assembly shielded series |                                                                                     |       |       |       |                                                                              | M12 cable assembly shielded series                                                    |       |       |       |                                                                             |
|------------------------------------|-------------------------------------------------------------------------------------|-------|-------|-------|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------|-------|-------|-----------------------------------------------------------------------------|
| Image                              | PVC                                                                                 |       |       |       |                                                                              | PUR                                                                                   |       |       |       |                                                                             |
|                                    |  |       |       |       |                                                                              |  |       |       |       |                                                                             |
| No. of conductors                  | 2                                                                                   | 3     | 4     | 5     | 8                                                                            | 2                                                                                     | 3     | 4     | 5     | 8                                                                           |
| Jacket material                    | PVC                                                                                 |       |       |       |                                                                              | PUR                                                                                   |       |       |       |                                                                             |
| Jacket color                       | Black                                                                               |       |       |       |                                                                              | Gray                                                                                  |       |       |       |                                                                             |
| Cross section                      | 22AWG                                                                               | 22AWG | 22AWG | 22AWG | 24AWG                                                                        | 22AWG                                                                                 | 22AWG | 22AWG | 22AWG | 24AWG                                                                       |
| Contruction                        | Construction: 43/0.10mm<br>Shield1: AL/Mylar<br>Shield2: Tinned copper braid        |       |       |       | Construction: 32/0.10mm<br>Shield1: AL/Mylar<br>Shield2: Tinned copper braid | Construction: 43/0.10mm<br>Shield1: AL/Mylar<br>Shield2: Tinned copper braid          |       |       |       | Construction: 2/0.10mm<br>Shield1: AL/Mylar<br>Shield2: Tinned copper braid |
| Temp range-Fixed                   | -10°C-80°C                                                                          |       |       |       |                                                                              | -40°C-80°C                                                                            |       |       |       |                                                                             |
| Temp range-Flexible                | -5°C-80°C                                                                           |       |       |       |                                                                              | -25°C-80°C                                                                            |       |       |       |                                                                             |
| Features                           | Flame Retardant, Rohs                                                               |       |       |       |                                                                              | Flame Retardant, oil resistant, Rohs                                                  |       |       |       |                                                                             |
| Standards                          | UL758, UL1581, UL2464                                                               |       |       |       |                                                                              | UL758, UL1581, UL20549                                                                |       |       |       |                                                                             |

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