



## Introducing M8/M12 Connector System

TE Connectivity's M8/M12 Connector System for machine industrial automation and control applications provides a solution that safely and reliably ensures the communication in industrial environments. Designed to IEC-61076-2-101, this connector system also finds applications outside of its traditional industries where a compact, reliable connection system with environmental protection is required. TE's solution includes an extensive connector range of receptacles, cable assemblies and IO boxes, and provides users with an interface that supports higher bandwidth needs meeting the requirements of up to 10 Gb/s.

TE's broad product portfolio provides customers with shielded and unshielded cable assembly options in both Cat5e and Cat6A cable types. For re-wiring on site, a range of field serviceable connectors are provided that include male and female versions in 3, 4, 5, 8 and 12 positions and Y connectors. Additional styles are available on request including alternative mounting arrangements for panel mount connectors and double ended cable assemblies.

## KEY FEATURES

- X-coded connectors support higher bandwidth needs of up to 10 Gb/s
- Easily installable connector system
- Environment protection IP67 and IP68
- Connector ranges include male and female connectors in 3, 4, 5, 8 and 12 positions and Y Connectors
- Alternative mount arrangements for solder cup or PCB
- Panel Mount and distribution version available
- Shield reliable
- Quick and secure connection
- Backwards compatible

## BENEFITS

- M8/M12 Connector System provides full industry standard solution including quick turn, prototype cable assemblies
- Reliable communication with reduced downtime in industrial and harsh environments.

## APPLICATIONS

- Industrial Automation
- Automobile Manufacturing
- Machine Tools
- Semiconductor Manufacturing
- Factory Automation Machines
- Manufacturing of Solenoid and Sensor valves

### TE Technical Support Center

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## TE'S INDUSTRIAL ETHERNET PRODUCTS PLAY A VITAL ROLE IN FACTORY AUTOMATION

TE's Industrial Ethernet products are widespread throughout today's networked factories, and play a critical role in driving the efficiency of many manufacturing processes. Used extensively in material handling equipment, our industrial communications solutions are also found throughout the automotive, food and beverage industries, as well as in the many manufacturing applications of industrial robots. With the development of smaller industrial Ethernet products, TE's solutions are ideal for vision systems, common in security equipment and mail sortation devices.

## CONNECTORS



TE's M8/M12 connectors continue to fill the ongoing needs for sensor connection in Industrial Machinery and Factory Automation. A connection standard for many years, these products also find applications outside of their traditional industries where a compact reliable connection system with environmental protection is required. TE's M8/M12 connector portfolio includes a full range of A, B, C, D, S, T and X-coded (up to 10 Gigabit/s) versions to serve various customer and application needs. The connectors are also available in shielded and unshielded versions, to support Gigabyte Ethernet applications.

## CABLE ASSEMBLIES



TE's M8/M12 cable assemblies are available as single-ended or double-ended and as straight or angled versions. Customized cable assemblies provide a solution for your specific needs in different lengths, temperatures or flexibility and can be used in combination with TE's male/female connectors and I/O Modules.

## I/O MODULES



Complementary to the M8/M12 cable assemblies and connectors, TE offers compact I/O modules for Industrial applications. The I/O modules are well accepted in the Industrial Automation industry and provide reduced cabling and increased ease of installation and maintenance.

## CONNECTORS, M8

| Description                                                                          | Type   | Polarization | Code | Part Number |
|--------------------------------------------------------------------------------------|--------|--------------|------|-------------|
| Connector, straight, field installable, unshielded, screw, 3.5-5 mm cable diameter   | male   | 3            |      | 2120954-1   |
| Connector, 90° angled field installable, unshielded, screw, 3.5-5 mm cable diameter  | male   | 3            |      | 2120955-1   |
| Receptacle, straight, field installable, unshielded, screw, 3.5-5 mm cable diameter  | female | 3            |      | 2120956-1   |
| Receptacle, 90° angled field installable, unshielded, screw, 3.5-5 mm cable diameter | female | 3            |      | 2120957-1   |
| Panel mount connector, Li 200 mm                                                     | male   | 3            |      | 2120958-1   |
| Panel mount receptacle, Li 200 mm                                                    | female | 3            |      | 2120959-1   |
| Connector, straight, field installable, unshielded, screw, 3.5-5 mm cable diameter   | male   | 4            |      | 1-2120954-1 |
| Connector, 90° angled field installable, unshielded, screw, 3.5-5 mm cable diameter  | male   | 4            |      | 1-2120955-1 |
| Receptacle, straight, field installable, unshielded, screw, 3.5-5 mm cable diameter  | female | 4            |      | 1-2120956-1 |
| Receptacle, 90° angled field installable, unshielded, screw, 3.5-5 mm cable diameter | female | 4            |      | 1-2120957-1 |
| Panel mount connector, Li 200 mm                                                     | male   | 4            |      | 1-2120958-1 |
| Panel mount receptacle, Li 200 mm                                                    | female | 4            |      | 1-2120959-1 |

## CONNECTORS, M12

| Description                                                  | Type   | Polarization | Code | Part Number |
|--------------------------------------------------------------|--------|--------------|------|-------------|
| Connector, straight, field installable, shielded, S-Code     | male   | 3+PE         | S    | 2120951-1   |
| PCB mounted connector straight                               | male   | 4            | A    | 3-2271140-2 |
| Panel Mounted Connector with wires                           | male   | 4            | A    | 3-2271134-2 |
| Connector, straight, field installable, unshielded, 6-8 mm   | male   | 4            | A    | 3-2271110-2 |
| Connector, straight, field installable, unshielded, 4-6 mm   | male   | 4            | A    | 3-2271110-1 |
| Connector, straight, field installable, shielded, 5-8 mm     | male   | 4            | A    | 3-2271113-2 |
| Connector, 90° angled field installable, unshielded, 4-6 mm  | male   | 4            | A    | 3-2271122-1 |
| Connector, 90° angled field installable, unshielded, 6-8 mm  | male   | 4            | A    | 3-2271122-2 |
| Connector, 90° angled field installable, shielded, 5-8 mm    | male   | 4            | A    | 3-2271123-2 |
| PCB mounted connector straight                               | male   | 4            | D    | 3-2271142-2 |
| Panel Mounted Connector with wires                           | male   | 4            | D    | 3-2271136-2 |
| Connector, straight, field installable, shielded, 5-8 mm     | male   | 4            | D    | 3-2271115-2 |
| Connector, 90° angled field installable, shielded, 6-8 mm    | male   | 4            | D    | 3-2271127-2 |
| Panel Mount Connector, POWER, T-code, M20 x 1,5              | male   | 4            | T    | 2120947-1   |
| Connector, straight, field installable, shielded, T-code     | male   | 4            | T    | 2120949-1   |
| PCB mounted connector straight                               | male   | 5            | A    | 4-2271140-2 |
| Panel Mounted Connector with wires                           | male   | 5            | A    | 4-2271134-2 |
| Connector, straight, field installable, unshielded, 4-6 mm   | male   | 5            | A    | 4-2271110-1 |
| Connector, straight, field installable, unshielded 6-8 mm    | male   | 5            | A    | 4-2271110-2 |
| Connector, straight, field installable, shielded, 5-8 mm     | male   | 5            | A    | 4-2271113-2 |
| Connector, 90° angled field installable, unshielded, 4-6 mm  | male   | 5            | A    | 4-2271122-1 |
| Connector, 90° angled field installable, unshielded, 6-8 mm  | male   | 5            | A    | 4-2271122-2 |
| Connector, 90° angled field installable, shielded, 5-8 mm    | male   | 5            | A    | 4-2271123-2 |
| PCB mounted connector straight                               | male   | 5            | B    | 4-2271141-2 |
| Panel Mounted Connector with wires                           | male   | 5            | B    | 4-2271135-2 |
| Connector, straight, field installable, unshielded, 4-6 mm   | male   | 5            | B    | 4-2271112-1 |
| Connector, straight, field installable, unshielded, 6-8 mm   | male   | 5            | B    | 4-2271112-2 |
| Connector, straight, field installable, shielded, 5-8 mm     | male   | 5            | B    | 4-2271113-2 |
| Connector, 90° angled field installable, unshielded, 4-6 mm  | male   | 5            | B    | 4-2271124-1 |
| Connector, 90° angled field installable, unshielded, 6-8 mm  | male   | 5            | B    | 4-2271124-2 |
| Connector, 90° angled field installable, shielded, 5-8 mm    | male   | 5            | B    | 4-2271125-2 |
| connector field installable                                  | male   | 8            | X    | 2120952-1   |
| Receptacle, straight, field installable, shielded, S-Code    | female | 3+PE         | S    | 2120950-1   |
| Receptacle, straight, field installable, shielded, 6-8 mm    | female | 4            | A    | 3-2271117-2 |
| Receptacle, straight, field installable, unshielded, 4-6 mm  | female | 4            | A    | 3-2271116-1 |
| Receptacle, straight, field installable, unshielded, 6-8 mm  | female | 4            | A    | 3-2271116-2 |
| Receptacle, 90° angled field installable, unshielded, 4-6 mm | female | 4            | A    | 3-2271128-1 |
| Receptacle, 90° angled field installable, unshielded, 6-8 mm | female | 4            | A    | 3-2271128-2 |
| Receptacle, 90° angled field installable, shielded, 5-8 mm   | female | 4            | A    | 3-2271129-2 |
| PCB mounted receptacle straight                              | female | 4            | A    | 3-2271143-2 |
| Panel Mounted Receptacle with wires                          | female | 4            | A    | 3-2271137-2 |
| Receptacle, straight, field installable, shielded, 5-8 mm    | female | 4            | D    | 3-2271121-2 |



## CONNECTORS, M12, continued

| Description                                                  | Type          | Polarization | Code     | Part Number      |
|--------------------------------------------------------------|---------------|--------------|----------|------------------|
| Receptacle, 90° angled field installable, shielded, 5-8 mm   | female        | 4            | D        | 3-2271133-2      |
| PCB mounted receptacle straight                              | female        | 4            | D        | 3-2271145-2      |
| Panel Mounted Receptacle with wires                          | female        | 4            | D        | 3-2271139-2      |
| Receptacle, straight, field installable, shielded, T-code    | female        | 4            | T        | 2120948-1        |
| Panel Mounted Receptacle, POWER, T-Code, M20 x 1,5           | female        | 4            | T        | 2120946-1        |
| Receptacle, straight, field installable, shielded, 6-8 mm    | female        | 5            | A        | 4-2271117-2      |
| Receptacle, straight, field installable, unshielded, 4-6 mm  | female        | 5            | A        | 4-2271116-1      |
| Receptacle, straight, field installable, unshielded, 6-8 mm  | female        | 5            | A        | 4-2271116-2      |
| Receptacle, 90° angled field installable, unshielded, 4-6 mm | female        | 5            | A        | 4-2271128-1      |
| Receptacle, 90° angled field installable, unshielded, 6-8 mm | female        | 5            | A        | 4-2271128-2      |
| Receptacle, 90° angled field installable, shielded, 5-8 mm   | female        | 5            | A        | 4-2271129-2      |
| PCB mounted receptacle straight                              | female        | 5            | A        | 4-2271143-2      |
| Panel Mounted Receptacle with wires                          | female        | 5            | A        | 4-2271137-2      |
| Receptacle, straight, field installable, unshielded          | female        | 5            | B        | 4-2271118-1      |
| Receptacle, straight, field installable, unshielded          | female        | 5            | B        | 4-2271118-2      |
| Receptacle, straight, field installable, shielded            | female        | 5            | B        | 4-2271119-2      |
| Receptacle, 90° angled field installable, unshielded, 4-6 mm | female        | 5            | B        | 4-2271130-1      |
| Receptacle, 90° angled field installable, unshielded, 6-8 mm | female        | 5            | B        | 4-2271130-2      |
| Receptacle, 90° angled field installable, shielded, 6-8 mm   | female        | 5            | B        | 4-2271131-2      |
| PCB mounted receptacle straight                              | female        | 5            | B        | 4-2271144-2      |
| Panel Mounted Receptacle with wires                          | female        | 5            | B        | 4-2271138-2      |
| <b>Rear Panel Mount Wire Connector M12 X-code</b>            | <b>female</b> | <b>8</b>     | <b>X</b> | <b>2271195-1</b> |
| <b>Rear Panel Mount PCB connector M12 X-code</b>             | <b>female</b> | <b>8</b>     | <b>X</b> | <b>2232331-1</b> |

## CABLE ASSEMBLIES

| Type Polarization                                                                           | Type        | Polarization | Code     | Part Number      |
|---------------------------------------------------------------------------------------------|-------------|--------------|----------|------------------|
| M8 x 1.0 straight socket Pigtail, Length is 10 mtr. PVC Jacket                              | female      | 3            | A        | 1-2273001-4      |
| M8 x 1.0 straight socket Pigtail, Length is 5 mtr. PUR Jacket                               | female      | 3            | A        | 2273001-3        |
| M12 x 1.0 straight socket Pigtail, Length is 5 mtr. PVC Jacket                              | female      | 4            | A        | 1-2273029-3      |
| M12 x 1.0 angled socket Pigtail, Length is 5mtr. PVC Jacket                                 | female      | 4            | A        | 1-2273083-3      |
| M12 x 1.0 angled socket Pigtail, Length is 10mtr. PVC Jacket                                | female      | 4            | A        | 1-2273083-4      |
| M8 x 1.0 straight socket Pigtail, Length is 5 mtr. PVC Jacket                               | female      | 3            | A        | 1-2273001-3      |
| M12 x 1.0 straight socket Pigtail, Length is 10 mtr. PVC Jacket                             | female      | 4            | A        | 1-2273029-4      |
| M8 x 1.0 straight socket Pigtail, Length is 5 mtr. PVC Jacket                               | female      | 4            | A        | 1-2273003-3      |
| M8 x 1.0 straight socket Pigtail, Length is 10 mtr. PUR Jacket                              | female      | 3            | A        | 2273001-4        |
| M8 x 1.0 straight socket Pigtail, Length is 5 mtr. PUR Jacket                               | female      | 4            | A        | 2273003-3        |
| M8 x 1.0 straight socket Pigtail, Length is 10 mtr. PVC Jacket                              | female      | 4            | A        | 1-2273003-4      |
| M8 x 1.0 straight socket Pigtail, Length is 3 mtr. PUR Jacket                               | female      | 3            | A        | 2273001-2        |
| M8 x 1.0 Angled socket Pigtail, Length is 5 mtr. PUR Jacket                                 | female      | 3            | A        | 2273009-3        |
| M8 x 1.0 straight socket Pigtail, Length is 3 mtr. PVC Jacket                               | female      | 3            | A        | 1-2273001-2      |
| M12 x 1.0 straight socket Pigtail, Length is 3 mtr. PVC Jacket                              | female      | 4            | A        | 1-2273029-2      |
| <b>Double ended, Shielded CAT 6A, Pin Connector Cable Assembly, 10Gb, M12 X-coded; 1 m</b>  | <b>male</b> | <b>8</b>     | <b>X</b> | <b>2241021-1</b> |
| <b>Double ended, Shielded CAT 6A, Pin Connector Cable Assembly, 10Gb, M12 X-coded; 3 m</b>  | <b>male</b> | <b>8</b>     | <b>X</b> | <b>2241021-3</b> |
| <b>Double ended, Shielded CAT 6A, Pin Connector Cable Assembly, 10Gb, M12 X-coded; 5 m</b>  | <b>male</b> | <b>8</b>     | <b>X</b> | <b>2241021-5</b> |
| <b>Double ended, Shielded CAT 6A, Pin Connector Cable Assembly, 10Gb, M12 X-coded; 10 m</b> | <b>male</b> | <b>8</b>     | <b>X</b> | <b>2241021-6</b> |

## I/O MODULES

| Description                         | Type | Polarization | Code | Part Number |
|-------------------------------------|------|--------------|------|-------------|
| Distr box M12 5pos 8way PNP scrw    |      |              |      | 2273167-1   |
| Distr box M12 5pos 8way PNP         |      |              |      | 2273162-1   |
| Distr box M12 4pos 8way PNP PUR/PVC |      |              |      | 2273157-2   |
| Distr box M12 5pos 8way PNP PUR/PVC |      |              |      | 2273163-3   |
| Distr box M8 3pos 8way M12/12p conn |      |              |      | 2273146-1   |

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