

M12 connectors are a compact circular connector system typically constructed with an industry standard IEC 61076-2-101 M12 x 1 screw locking interface.











M12 connectors were designed for, and are primarily used in, factory automation applications for actuators, sensors, industrial ethernet, and Fieldbus.

M12 connectors are very versatile and offer options for both cable to panel and cable to cable requirements.

The portfolio of M12 solutions boasts 3, 4, 5, 8, & 12 way layouts with a current carrying capacity of up to 16A per contact and data transmission speeds of up to 10 Gbit per second.

M12 connectors are coded in various ways to avoid mismatching and to fulfil customers demands in terms of international standards. The coding is offered by a variety of notches in the contact bearer which determines the type.

Below we showcase these common connector coding options and their original application.

| Coding | Image | Pin Count | Purpose |
|--------|---|------------------|--|
| A |  | 3, 4, 5, 8 or 12 | Sensor/actuator applications including sensor data transmission |
| B |  | 4 or 5 | Sensors/actuators and PROFIBUS applications |
| C |  | 3, 4 or 5 | Sensor/actuator applications including sensor data transmission (also known as U-coding) |
| D |  | 4 | Industrial ethernet applications (PROFINET, EtherNet/IP, EtherCAT) |
| K |  | 5 | High-power field devices, drives, AC motors, frequency inverters |
| L |  | 5 | |
| S |  | 4 | |
| T |  | 4 | |
| X |  | 8 | High-speed industrial ethernet applications (10 Gbit/s, Cat6) |
| Y |  | 8 | Hybrid/one cable applications in the automation industry |



Find out More

Northern Connectors is a family-owned specialist distributor of Electro-Mechanical Connector Technology for Industrial Environments.

Founded in 1983, we have built up a strong reputation within our industry, becoming a go-to source for industrial connectivity for use in a wide variety of applications.

For over 40 years we have assisted the UK electronics manufacturing supply chain by offering technical sales support to Engineers and purchasing professionals.

At Northern Connectors we pride ourselves on excellent customer service and our dedicated specialists are with you every step of the way throughout the buying process from prototyping to full production volumes.

For more information on any of our products and services or to make a personalised order please contact our friendly dedicated team on +44 (0)1744 815001, email sales@northern-connectors.co.uk or complete the [Contact Form](#) on our website and we will be in touch.