

CONNECTORS FOR THE AUTOMATION INDUSTRY





OVERVIEW

Manufacturers and industrial facilities all over the world are increasingly reliant on automation to unlock ever-greater degrees of productivity, reduced labour times, lower energy consumption and improvements in accuracy and precision. However, the reliability of this technology is highly dependent on the quality of the components and connectors used to assemble them.

At Northern Connectors, we support customers looking to invest in automation with a comprehensive range of high-quality connectors and wiring systems from leading manufacturers. Using the very best connector technology delivers performance benefits and an assurance that their system can run reliably for prolonged periods, without the need for human oversight or extended periods of downtime.

As such, all of the connectors we provide for factory automation and robotics applications are created with high-quality materials, such as stainless steel and

special plastics, and have been manufactured and tested to the highest standards to guarantee durability and regulatory compliance.

Our range includes widely-used products from leading manufacturers including:



Whatever your needs may be, Northern Connectors can provide you with tailored advice and guidance throughout the buying process, helping to ensure you find a solution that perfectly meets your requirements.

SECTORS AND FIELDS OF APPLICATION

The automation industry utilises our connectors for a wide range of applications, including:



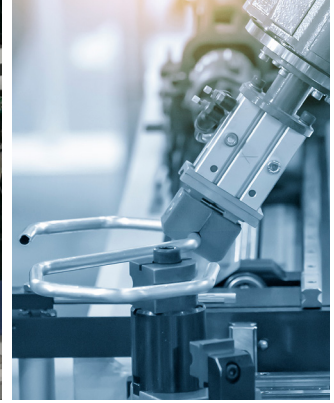
Automotive Assembly



Grinding and Milling
Equipment



Pick-and-Place Machinery



Material Handling Tools

Moreover, the connectors and wiring systems in our product range have been tried and tested by all of the world's leading manufacturers of factory automation products and robots, including international brands such as:



BOSCH

Kawasaki

SIEMENS



OUR CONNECTORS

At Northern Connectors we supply a wide range of durable, high-performance solutions for the automation sector from many of the industry's leading manufacturers. We explore some of these connector technologies below:

Binder M9 IP67 Subminiature Connectors (712, 702 Series)

The Binder M9 IP67 subminiature circular connector series is a compact yet robust market leader that has been setting the standard for affordable high-specification solutions for many years.

The M9 is available in pole configurations from two to eight, and has a current carrying capacity of 1-4A per pin. In addition to the large variety of field wireable cable plugs, the series also boasts both standard and 360°-shielded pre-terminated plugs in both straight and angled orientation.

Corresponding panel connectors are available with front and rear fastening and with a variety of termination technologies.

Features and Specifications:

- No. of Contacts: **2-8**
- Locking Mechanism: **Screw**
- Termination: **Solder Cup, Dip Solder, Flexi-PCB**
- Wire Gauge Max: **0.25mm²**
- Cable Diameter Range: **3.5-5.5mm**
- Voltage: **125V**
- Current: **1-4A**
- Ingress Protection: **IP67**



Binder M12-D & M12-X Coded Sensor & Automation Connectors (825, 876 Series)

The Binder M12 D-coded and X-coded series have been specifically designed for use in automation and industrial networking applications where transmission speeds and signal integrity are critical factors.

Both the Binder M12-D and M12-X coded products have been developed specifically for use within Profinet and Ethernet networks and conform to CAT6A and CAT7 standards. They are capable of transmission speeds of up to 10 Gbps, even in the most challenging of environments.



Both series are available in self-wire configurations or with pre-terminated cables, and offer a wide range of termination technologies and mounting options on the receptacles. As a market leader in the evolution of X-coded connector technology, Binder has also recently introduced X-coded solutions into their M8 and M16 connector portfolios.

Features and Specifications:

- No. of Contacts: 4 & 8
- Locking Mechanism: **Screw**
- Termination: **Solder Cup, Dip Solder, Screw, Crimp, IDT, SMT**
- Wire Gauge Max: **0.75mm²**
- Cable Diameter Range: **5-8mm**
- Voltage: **250V**
- Current: **4A**
- Ingress Protection: **IP67**



Harting Han-Modular®

The Harting Han-Modular® series is a range of robust metal-shelled rectangular connectors with lever locking mechanisms, designed to support a vast array of unique modular inserts, including Power, Signal, Ethernet, Coax and Pneumatic configurations.

These connectors utilise standard metal Han® shells, but with individual modular inserts rather than solid multiway versions, allowing various frames to be slotted into the standard connector hoods and housings. Various signal and power connections can be incorporated into a single connector assembly, including electrical, optical and gaseous setups.



The individual contacts used in this system all come from established ranges, and combinations of one to 12 modules can be achieved. Harting Han-Modular® setups are easy to assemble and can be arranged to meet your specific needs, while minimising the amount of stock required.

Features and Specifications:

- No. of Contacts: **1-300**
- Locking Mechanism: **Lever, Toggles, Screws**
- Termination: **Crimp, Quick-Lock, Axial Screw, Cage Clamp**
- Wire Gauge Max: **70mm²**
- Cable Diameter Range: **5-38mm**
- Voltage: **50-5,000V**
- Current: **4-200A**
- Ingress Protection: **IP44, IP65, IP67, IP68, IP69K**

Harting Han-Eco®

The Harting Han-Eco® range offers robust high-performance plastic-shelled rectangular connectors with lever locking mechanisms, with high resistance to environmental impact in both indoor and outdoor applications.

Providing weight and cost advantages over the standard metal Han® product, Han-Eco® comes in a number of variations, including the slim and easy-to-use Han-Eco® A series, the larger-scale Han-Eco® B series and the Han-Eco® Modular range of customisable modules.

All of these connectors are designed to provide users with all of the same performance as standard Han® products, while offering economical benefits of their own.

Features and Specifications:

- No. of Contacts: **2-175**
- Locking Mechanism: **Lever**
- Termination: **Crimp, Quick-Lock, Axial Screw, Cage Clamp**
- Wire Gauge Max: **38mm²**
- Cable Diameter Range: **13-28mm**
- Voltage: **50-5,000V**
- Current: **4-100A**
- Ingress Protection: **IP65**



Hummel M16 Connectors - Signal & Power

Hummel's M16 connectors are optimised for use in the harshest of environments, with extremely robust waterproof properties a constant, ruggedised connection, sealed to IP67 and IP69K standard in mated condition.

M16 connectors are available in either straight or angled orientation, with a variety of pin counts also offered, ranging from three to 18, with a current capacity of up to 20A. A number of cable clamping ranges can also be purchased.

In order to reduce inventory levels and enable users to tailor their setups to their needs, individual part numbers are included on shells, inserts and contacts, while panel connections feature both front and rear mount options.

Features and Specifications:

- No. of Contacts: **3-18**
- Locking Mechanism: **Screw**
- Termination: **Crimp, Dip Solder**
- Wire Gauge Max: **2.5mm²**
- Cable Diameter Range: **2-11mm**
- Voltage: **24-630V**
- Current: **3-20A**
- Ingress Protection: **IP67, IP69K**



Hummel M23 Connectors - Power (& Hybrid)

Hummel's waterproof circular M23 Power connector series is ideal for use in tough environments, offering a robust performance and a range of different configurations for varied applications.

Sealed to IP67 and IP69K in mated condition, the M23 system provides a ruggedised sealed connection at all times, with pin counts available from six to 12 and a current carrying capacity of 28A.

A number of cable clamping ranges are available, while cable connectors come in both straight and angled orientation. Both rear and front mount options are available for the panel connectors, and inserts, contacts and shells contain their own individual part numbers to help reduce and optimise inventory levels.

Features and Specifications:

- No. of Contacts: **6-12**
- Locking Mechanism: **Screw**
- Termination: **Crimp**
- Wire Gauge Max: **4mm²**
- Cable Diameter Range: **7-17mm**
- Voltage: **160-630V**
- Current: **8-28A**
- Ingress Protection: **IP67, IP69K**



Lumberg Automation M8 Connectors

The Lumberg Automation M8 series is a range of miniature circular sensor and automation connectors with screw-lock coupling, sealed to IP67 standards in mated condition to ensure they are optimised for the harshest environments.

A favourite among engineers, the M8 balances a neat and compact shell with a wide range of practical, application-friendly options, including configurations that are ideal for use in sensor and automation technology.

Included in the range are overmoulded cable setups that offer especially good protection from moisture and dirt, as well as field-attachable cable connectors to provide optimum flexibility, and panel receptacles with pre-terminated wires to reduce assembly time.

Features and Specifications:

- No. of Contacts: **3-8**
- Locking Mechanism: **Screw**
- Termination: **Solder Cup, Screw, Dip-Solder, IDC**
- Wire Gauge Max: **0.50mm²**
- Cable Diameter Range: **3.5-5mm**
- Voltage: **30-60V**
- Current: **4A**
- Ingress Protection: **IP67**



Lumberg Automation M12 Connectors

Lumberg Automation's M12 connector range is substantial and is the leading product type in their vast portfolio.

The M12 system was designed for automation technology, and the compact design and versatility of the series has seen it used in a wide variety of applications.

The connectors are renowned for their practicality and boast a compact and neat shell, while they are highly application-friendly due to the variety of options at the user's disposal. They are highly regarded among engineers and can be used in the harshest of environments, with sealing to IP67 in mated conditions.

As with the M8 range, the M12 series offers field-attachable cable connectors to provide improved flexibility and remove the need for expensive tooling, while the various overmoulded cable plug options provide excellent protection from dirt and moisture.

Features and Specifications:

- No. of Contacts: **3-12**
- Locking Mechanism: **Screw**
- Termination: **Screw, Spring, IDC, Solder Cup, Dip-Solder**
- Wire Gauge Max: **0.75mm²**
- Cable Diameter Range: **3-9mm**
- Voltage: **30-240V**
- Current: **2-4A**
- Ingress Protection: **IP67**



Souriau UTS Series

With Souriau's UTS series, users can expect a rugged circular bayonet-locking connector with high-grade waterproofing and environmental protection, suitable for the harshest environments.

These connectors are made of high-quality plastics and as standard offer IP68/IP69K protection in mated condition, or with the use of a dustcap. The series also boasts a Hi-Seal variant with solder bucket contacts pre-loaded, ensuring the unit can be sealed at the manufacturing stage to provide IP68/IP69K protection even when unmated.

The UTS series predominantly uses crimp termination, but there are also options of solder cup, screw termination and dip solder for PCB use. A choice of five shell sizes with a total of 36 different pin configurations/layouts are also available.

At Northern Connectors we can assemble the majority of the crimp variants of the UTS series in-house from stocked piece parts, avoiding lengthy lead times and MOQs.





Features and Specifications:

- No. of Contacts: **2-32**
- Locking Mechanism: **Bayonet**
- Termination: **Crimp, Solder Cup, Dip Solder**
- Wire Gauge Max: **10mm²**
- Cable Diameter Range: **1.5-18mm**
- Voltage: **UL, CSA, IEC Ratings Available on Request**
- Current: **UL, CSA, IEC Ratings Available on Request**
- Ingress Protection: **IP68, IP69K**

Souriau UT0 Series

The Souriau UT0 series is a range of high-quality bayonet-locking circular connectors designed for use in harsh environments, offering IP67, IP68 and IP69K protection in mated condition.

The metal shells of the UT0 series make them very robust, allowing them to be used for applications and environments that other connectors would not be able to withstand, including robotics, construction, instrumentation and mining.

With a range of complementary accessories and a choice of eight shell sizes, with 26 different pin configurations and layouts in total, the UT0 range is flexible and versatile. At Northern Connectors we can assemble the majority of orders in-house from stocked piece parts, helping you avoid lengthy lead times and MOQs.

Features and Specifications:

- No. of Contacts: **3-61**
- Locking Mechanism: **Bayonet**
- Termination: **Crimp, Solder Cup, Dip Solder**
- Wire Gauge Max: **10mm²**
- Cable Diameter Range: **3-30mm**
- Voltage: **UL, CSA, IEC Ratings Available on Request**
- Current: **UL, CSA, IEC Ratings Available on Request**
- Ingress Protection: **IP67, IP68, IP69K**





CONTACT US

If your business operates in the automation sector, we can help you find the right solution for your requirements. Get in touch by calling us on [01744 815 001](tel:01744 815 001), or complete the [online enquiry form](#) to request a call back at your convenience.

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