

# CONNECTORS FOR THE SURVEILLANCE INDUSTRY





## OVERVIEW

Surveillance equipment is an essential part of modern life, playing a key role in everything from road safety to monitoring potentially illegal activities. However, for surveillance equipment to be effective, users must be able to rely on the technology to work reliably, 24 hours a day and seven days a week.

At Northern Connectors, our comprehensive range of high-quality connectors and wiring systems helps to ensure that surveillance equipment is always ready to perform. Using the very best connector technology from leading manufacturers, our products are designed to minimise downtime and offer robust performance, even in harsh environments.

All of the connectors we provide for surveillance applications have been manufactured and tested to the highest standards to guarantee durability and regulatory compliance. They also offer a high degree of protection against dirt, water and grime, making them suitable for use in motorway and transportation applications.

Our range includes widely-used products from leading manufacturers, such as:



Whatever your needs may be, Northern Connectors can provide you with tailored advice and guidance throughout the buying process. With our technical knowhow, you can be sure of finding the right solution that meets all of your requirements.



# SECTORS AND FIELDS OF APPLICATION

Our connectors are used in a wide variety of surveillance systems and applications, including:



Highway monitoring, including speed enforcement and Automatic Number Plate Recognition (ANPR)



Law enforcement, including assessment of potential terrorist activities



Detection and prevention

As a representative case study, we worked with CA Traffic Ltd, a leading traffic monitoring company to provide connector technology for use across its range of vehicle detection and recognition products.

The company frequently updates its counter/classifier and ANPR systems to stay in line with the latest technology trends and cater for a wide range of environmental conditions. The firm has regularly consulted with Northern Connectors on various projects, allowing us to provide key information and aid their connector selection with our expert guidance.



# OUR CONNECTORS

Northern Connectors supplies a broad selection of durable, high-performance connectors for surveillance applications, including products from some of the industry's leading manufacturers. We explore some of these 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 pin counts 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: **0.25mm<sup>2</sup>**
- Cable Diameter Range: **3.5-5.5mm**
- Voltage: **125V**
- Current: **1-4A**
- Ingress Protection: **IP67**



## Binder M16 IP67 Miniature Connectors (423, 723, 425 Series)

Binders M16 IP67 miniature connector series are a wide range of industrial waterproof circulars with rugged shells and with a variety of pin counts.

The M16 series is historically one of Binders most popular ranges due to its fine balance of cost, durability and versatility.

The M16 IP67 series is one of the widest ranges in the Binder portfolio and there are many options including cable versions with straight or angled orientation, short or longer bodies, shieldable or non-shieldable backshells and with solder, screw or crimp termination.



The series also boasts a variant which is black in colour therefore non-reflective for covert applications and with a higher level of corrosion resistance.

#### Features and Specifications:

- No. of Contacts: 2-24
- Locking Mechanism: **Screw**
- Termination: **Solder Cup, Dip-Solder, Screw, Crimp, Flexi-PCB**
- Wire Gauge Max: **1.5mm<sup>2</sup>**
- Cable Diameter Range: **4-10mm**
- Voltage: **60-250V**
- Current: **1-7A**
- Ingress Protection: **IP67**



## Binder RD24 Power Connectors (692, 693 Series)

Binders RD24 Power Connectors are a series of strong and robust waterproof circulars available with both 4 (3+PE) and 7 (6+PE) way configurations.

The series has an array of choices on both cable connector and panel receptacle with each option having a UL, VDE, SEV alternative for applications where approval markings are necessary.

The RD24 series is often used for both cable to cable setups where users wish to connect a run/extension piece or for the standard cable to panel setup.

Cable connectors are available in both straight and angled with a range of gland entries catering for 6-14mm cable OD and with screw, solder and crimp termination.

#### Features and Specifications:

- No. of Contacts: **4&7**
- Locking Mechanism: **Screw**
- Termination: **Solder Cup, Screw**
- Wire Gauge Max: **2.5mm<sup>2</sup>**
- Cable Diameter Range: **6-14mm**
- Voltage: **250-600V**
- Current: **8-16A**
- Ingress Protection: **IP67**



# HARTING Han® 1A Connectors

Han® 1A, the smallest and latest addition to HARTING's hugely successful portfolio of Han® industrial connectivity.

Increased miniaturisation in the machine/ facility construction sector is ever occurring in harsher industrial environments and compact, robust and versatile connectors are demanded.

The Han® 1A offers space savings of up to 30% compared to the also compact Han® 3A and caters for data, signal & power.

Han 1A is compact, robust, economical and modular and lends itself well to controllers, small drives and control cabinets.

The Han® 1A is a rectangular alternative to circular connectors and is robust and easy to install. It is ideally suited for connecting devices on the periphery of production facilities, as well as for supplying tools and smaller machine modules. Its Snap-in technology eliminates the need for a time-consuming screw connection.

## Features and Specifications:

- No. of Contacts: **3-12**
- Locking Mechanism: **Latch, Lever**
- Termination: **Crimp, Screw**
- Wire Gauge Max: **4mm²**
- Cable Diameter Range: **5.7-10mm**
- Voltage: **48-400V**
- Current: **0.5-16A**
- Ingress Protection: **IP20, IP65**



# HARTING Har-Port Ethernet & USB Service Interfaces

Utilising an industry standard M22.5mm panel cut-out the HARTING har-port product range offers customers a selection of connectivity solutions.

With the panel cut out requirements being in line with that used by many other major switch and indicator suppliers, ease of manufacturing of any metal work is guaranteed. Connection to the internal electronics can be achieved by either the use of an individual HARTING patch lead or by the selection of the har-port variant with an integral pre-terminated cable.

The standard product is IP20 rated but with the addition of a protection cover (available in two styles) IP65/67 can be achieved. A sealing cover for dust protection and a label holder are also available to complete the range of accessories on offer for the HARTING har-port product family.

## Features and Specifications:

- Type: **USB (2.0 A&B, 3.0 A), RJ45**
- Locking Mechanism: **Latch**
- Panel Cut-Out Standard: **22mm**
- Panel Thickness: **1-5mm**
- Standard Cable Lengths: **0.2-10m**
- Ingress Protection: **IP20, IP65, IP67**



# Hirschmann CA Series

The Hirschmann CA series is a range of circular cable and panel connectors in 4 and 7 pin variants which can be used in tough environments.

The CA series offers users a low cost but robust system that can withstand the elements present in an industrial environment.

The connectors when mated seal to IP67 and therefore have a high degree of resistance to external influences such as water and industrial fluids.

Panel receptacles are available in both male and female gender with optional protection cap to remain sealed in unmated state.

Cable connectors are available in male and female gender and in straight or angled orientation and can be coupled with either a panel receptacle or another cable connector of the opposite gender to provide an in-line connection.

## Features and Specifications:

- No. of Contacts: **4&7**
- Locking Mechanism: **Screw**
- Termination: **Screw, Solder Cup**
- Wire Gauge Max: **2.5mm<sup>2</sup>**
- Cable Diameter Range: **6-12mm**
- Voltage: **250-400V**
- Current: **10-16A**
- Ingress Protection: **IP67**
- Moulded Cable Opt.: **No**



# Hirschmann ST Series

The Hirschmann ST Series, with its robust and compact power features, is eminently suitable for power supply and signal transmission in industrial installations and mechanical engineering.

The ST series has become the de-facto market standard for the motors that operate blinds and awnings and is also frequently used in power supplies for moulding machines, medical applications and industrial lighting systems.

The series is available in 3, 4, 5 and 6 way with screw termination cavities for a swift installation. A crimp variant is also available for areas that require even further resistance to the effects of vibration.

The lever which locks a mating pair together guarantees a secure and robust connection and one that can be disengaged simply and efficiently.





#### Features and Specifications:

- No. of Contacts: **3-6**
- Locking Mechanism: **Lever**
- Termination: **Screw, Crimp**
- Wire Gauge Max: **1.5mm<sup>2</sup>**
- Cable Diameter Range: **4-10mm**
- Voltage: **250-400V**
- Current: **6-16A**
- Ingress Protection: **IP54**
- Moulded Cable Opt.: **Yes**

## Hummel M23 Connectors - Signal

The Hummel M23 signal connector range offers IP67/IP69K ingress protection and an industry-standard M23x1 screw locking mechanism, making them ideal for harsh or challenging environments.

A variety of solutions are presented in the M23 portfolio, with cable connectors offered in both straight and angled orientation, with EMC protection and positioning and with pin-counts ranging from six to 19 that provide a current carrying capacity of up to 20A.

Inserts, shells and contacts all have their own individual part numbers allowing users to adjust the setup according to their specific needs, keeping inventory levels to a minimum.

#### Features and Specifications:

- No. of Contacts: **6-19**
- Locking Mechanism: **Screw**
- Termination: **Crimp, Solder Cup, Dip-Solder**
- Wire Gauge Max: **2.5mm<sup>2</sup>**
- Cable Diameter Range: **3-17mm**
- Voltage: **100-300V**
- Current: **8-20A**
- Ingress Protection: **IP67, IP69K**





# Hummel M23 RJ45 Connectors

Robust circular connector shells allowing the housing of RJ45 Ethernet connectivity in harsh environments.

The Hummel RJ45 system uses circular screw locking shells with an M23x1 thread type for a rugged and secure connection.

The metal shells are constructed from brass Alloy, Die cast with Nickel Plating and offer IP67 and IP69K ingress protection in mated state.

A wide range of shell variants are available giving the user numerous options on both the panel and cable to meet their specific needs.



## Features and Specifications:

- No. of Contacts: **4-8**
- Locking Mechanism: **Screw**
- Housing: **Brass Alloy, Die Cast**
- Housing Surface: **Nickel Plated**
- Cable Diameter Range: **3-17mm**
- Ingress Protection: **IP67, IP69K**

# Hummel Special Application Cable Glands (HSK-SPECIAL)

Hummel's range of special-application cable glands are designed for specific environments and uses, including glands optimised for hygienic areas, a variety of multi-entry inserts for single wires, and 90°-angled options for confined spaces.

Offering options not seen elsewhere, this product range encompasses a selection of variable clamping ranges, thread length and thread types, plus different sealing materials and temperature ranges. These products can be globally certified for use in specific challenging environments.

Hummel is also able to develop customer-specific solutions on request, meaning you can contact us with the criteria of your particular application to receive a cable gland that has been tailor-made for your needs.

## Features and Specifications:

- Housing Material: **Stainless Steel, Polyamide, Nickel Plated Brass**
- Temperature Rating: **-40°C to +200°C**
- Thread Types: **Metric, PG, NPT**
- Cable Diameter Range: **2-90mm**
- Ingress Protection: **IP65, IP66, IP68, IP69K**



## Souriau UTL Series

Souriau UTL series is a range of circular connectors for use in harsh environments, using a unique latching mechanism to provide the user with a simple but secure connection.

The connectors are made using high-quality plastics and offer IP68/IP69K protection in mated condition as standard, or with the use of a dust cap. An IP68 sealed unmated option is also available, and can be achieved when the standard version is coupled with sealed contacts.

The shape of the UTL's shell allows for blind mating, ideal for areas with restricted access or dark conditions, while the latching mechanism uses an audible click to alert the user that the connection is secure.

This product range series uses Souriau size 16 contacts in the 3+Ground and 5-way layouts, whereas a mixture of both size 16 and the smaller size 20 signal contacts are used in the 6 and 8-way versions developed for DMX lighting applications.

### Features and Specifications:



- No. of Contacts: **4,5,6 & 8**
- Locking Mechanism: **Latch**
- Termination: **Crimp, Solder Cup, Dip-Solder, Screw**
- Wire Gauge Max: **2.5mm<sup>2</sup>**
- Cable Diameter Range: **N/A**
- Voltage: **UL, CSA, IEC Ratings Available on Request**
- Current: **UL, CSA, IEC Ratings Available on Request**
- Ingress Protection: **IP67, IP68, IP69K**

## Souriau UTS Series

The Souriau UTS series is a range of circular connectors optimised for harsh environments, made of high quality plastics. As standard, they offer IP68/IP69K protection in mated condition or with the use of a dust cap.

These connectors predominantly use crimp termination, with options for solder cup, screw termination (12-4 & 14-7 layout) and dip solder for PCB use also available. A bayonet locking system offers significant security, while flexibility is afforded by a choice of five shell sizes, with a total of 36 different pin configurations/layouts.

Souriau UTS also offers a Hi-Seal variant, with solder bucket contacts pre-loaded. This allows the unit to be sealed in the manufacturing process, therefore offering IP68/IP69K environmental protection in both mated and unmated state.

Northern Connectors can assemble the majority of the UTS series' crimp variants in-house from stocked piece parts, avoiding lengthy lead times and minimum order quantities.



#### Features and Specifications:

- No. of Contacts: **2-32**
- Locking Mechanism: **Bayonet**
- Termination: **Crimp, Solder Cup, Dip-Solder**
- Wire Gauge Max: **10mm<sup>2</sup>**
- 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: **10mm<sup>2</sup>**
- 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 surveillance 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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