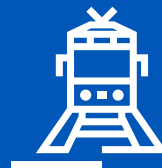


# Industry Applications.



## An overview of the most common design-ins and applications using our products



**Bulgin is widely recognised as a leading manufacturer of environmentally sealed connectors & components.**

**With over 95 years of experience in the industry, Bulgin continues to innovate & develop products and services to cater for its global customer base across a variety of markets.**



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# Industrial.

Industrial environments are often exposed to many harsh elements such as water, vibration, chemicals and extreme temperatures, but with demand growing for automated processes, there is more pressure than ever before on production and motion control systems. To overcome these challenging conditions, our connectivity solutions with metal or plastic housings are used around the world to facilitate secure power, signal and data connections in the harshest of environments.

Our robust range of vandal proof push button switches are also a perfect solution for operating heavy duty tools, metal and wood processing equipment, food and beverage processing systems and packaging machinery.



# Automation.

With an increasing demand for automated machines and systems, secure and reliable connections are vital for industrial automation applications where efficiency and uptime is of the utmost importance. Our waterproof circular connectors are the perfect solution for automation systems such as factory automation, industrial networks and robotics.

From movement signals to manufacturing and material handling processes, our robust sealed connector range for power, signal and data perform excellently in harsh environments where moisture, extreme temperatures and vibration are present. With IP66, IP67, IP68 & IP69K ratings, they are particularly ideal for production lines that are prone to dust & liquid build up.

With IP66, IP67, IP68 & IP69K ratings, they are particularly ideal for production lines that are prone to dust & liquid build up.

- Industrial Robotics
- Pharmaceutical Manufacturing
- Automotive Manufacturing
- Food & Beverage Processing
- Material Handling Equipment

- Packaging Equipment
- Process Control Systems
- Machining & Metal Processing
- Semiconductor Manufacturing
- Factory Automation Machines



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# Products Related To This Industry:

## M5 Series

Circular Automation Connectors



- A-Coding
- Ratings up to 1A, 60V ac/dc
- IP67 protection
- 3 & 4 contacts
- PUR & PVC cable options

## M8 Series

Circular Automation Connectors



- A & B Coding
- Ratings up to 3A, 60V ac/dc
- IP67 protection
- 3, 4 & 5 contacts
- PUR & PVC cable options

## M12 Series

Circular Automation Connectors



- A, B & D Coding
- Max rating 4A, 250V ac/dc
- IP67 protection
- 3, 4, 5, 8 & 12 contacts
- PUR & PVC cable options

## Photoelectric Sensor

Sensors



- Sealed to IP67
- Stainless Steel 316 shell
- Detection distance 1 - 40mm
- Light point diameter 5.0mm at 30mm
- Ambient humidity 35 - 85%

## M23 Series

Circular Automation Connectors



- A-Coding
- Max Rating 8A, 200V ac/dc
- IP67 protection
- 12 & 19 contacts
- Straight & angled options

## Distribution Units

Circular Automation Connectors



- Anodised aluminium housing
- M12 inputs M8 outputs
- Operating Temp Range -25°C / 80°C
- IP67 rated
- 5, 8 & 9 port configurations

## Standard Ethernet

Circular Data Connectors



- Cat5e RJ45 Ethernet Connectors
- Data rates up to 100MHz
- IP66, IP67, IP68 & IP69K protection
- Shielded system
- Noise immunity & EMI protection

## 6000 Series

Circular Power Connectors



- 2 - 22 Contacts
- Plastic or Metal Housing
- IP66, IP67, IP68 & IP69K protection
- Secure, quick mating / release
- cULus, UL, VDE Approvals



# Tools & Machinery.

Industrial environments are exposed to many impeding elements such as water, vibration, chemicals and extreme temperatures. With demand growing for automated processes, there is more pressure than ever before on production and motion control systems.

To overcome these potentially detrimental conditions, our connectivity solutions with metal or plastic housings are used around the world to facilitate secure power, signal and data connections in the harshest of environments. Our robust range of vandal proof push button switches are also a perfect solution for operating heavy duty tools, metal and wood processing equipment, food and beverage processing systems and packaging machinery.

- Industrial Food Slicer
- Vacuum Packaging Machine
- Printed Electronics Machinery
- Heavy Industrial Food Processor
- Industrial Grade Printer
- Industrial Automated Saws
- Industrial Coating Machinery
- Industrial Sand Blaster



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# Products Related To This Industry:

## Standard Series

Circular Power Connectors



- Rating up to 12A, 277V ac/dc
- 2, 3, 4, 6, 7, 9, 12 & 25 contacts
- IP66, IP67, IP68 & IP69K protection
- Plug & receptacle connectors
- CCC, UL, CSA & VDE approvals

## 900 Series

Circular Power Connectors



- 32A, 600V ac/dc max rating
- 2, 3, 4, 5, 7 & 10 contacts
- IP66, IP67, IP68 & IP69K protection
- Single or 3 phase applications
- CCC, UL, CSA & VDE approvals

## Standard Ethernet

Circular Data Connectors



- Cat5e RJ45 Ethernet Connectors
- Data rates up to 100MHz
- IP66, IP67, IP68 & IP69K protection
- Shielded system
- Noise immunity & EMI protection

## 6000 Series

Circular Power Connectors



- 2 - 22 Contacts
- Plastic or Metal Housing
- IP66, IP67, IP68 & IP69K protection
- Secure, quick mating / release
- cULus, UL, VDE Approvals

## Photoelectric Sensor

Sensors



- Sealed to IP67
- Stainless Steel 316 shell
- Detection distance 1 - 40mm
- Light point diameter 5.0mm at 30mm
- Ambient humidity 35 - 85%

## M16 Series

Circular Automation Connectors



- A-Coding
- Max Rating 7A, 250V ac/dc
- IP67 protection
- 3, 4, 5, 6, 8 & 12 contacts
- Metal shells with good shielding

## M23 Series

Circular Automation Connectors



- A-Coding
- Max Rating 8A, 200V ac/dc
- IP67 protection
- 12 & 19 contacts
- Straight & angled options

## Vandal Resistant

Switches



- High corrosion resistance
- Domed, low & prominent profiles
- IP66 & IP68 sealing versions
- Illuminated & non-illuminated
- Front & rear panel mount versions

# Instrumentation & Measurement.

Instrumentation and measurement systems are vital for ensuring productivity, reliability, safety and continuity in the industrial sector. Accurate and consistent measurements allow for process control and automated manufacturing systems to be optimised for maximum efficiency. Reliable electronic components are essential for achieving this.

That's where we come in. From control interfaces to power and data connections, Bulgin has a diverse choice of electronic solutions ideal for systems that measure a variety of parameters including pressure, moisture, flow, temperature and vibration.

- Handheld Moisture Detectors
- Wireless Data Logger
- Flow Meters & Industrial Scales
- Solar Water Pump Controller
- Terrain Monitoring
- Handheld Radiation Detection
- Pipe Inspection System
- Pressure Transmitter
- Wireless Load Sensors
- Moisture Meters



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# Products Related To This Industry:

## Standard Series

Circular Power Connectors



- Rating up to 12A, 277V ac/dc
- 2, 3, 4, 6, 7, 9, 12 & 25 contacts
- IP66, IP67, IP68 & IP69K protection
- Plug & receptacle connectors
- CCC, UL, CSA & VDE approvals

## Photoelectric Sensor

Sensors



- Sealed to IP67
- Stainless Steel 316 shell
- Detection distance 1 - 40mm
- Light point diameter 5.0mm at 30mm
- Ambient humidity 35 - 85%

## Standard Ethernet

Circular Data Connectors



- Cat5e RJ45 Ethernet Connectors
- Data rates up to 100MHz
- IP66, IP67, IP68 & IP69K protection
- Shielded system
- Noise immunity & EMI protection

## 6000 Series

Circular Power Connectors



- 2 - 22 Contacts
- Plastic or Metal Housing
- IP66, IP67, IP68 & IP69K protection
- Secure, quick mating / release
- cULus, UL, VDE Approvals

## Vandal Resistant

Switches



- High corrosion resistance
- Domed, low & prominent profiles
- IP66 & IP68 sealing versions
- Illuminated & non-illuminated
- Front & rear panel mount versions

## Battery Holders

Battery Holders



- AAA, AA, C, D & PP3 battery sizes
- Accommodating 1, 2, 3 or 4 cells
- IP67 sealed versions
- Suitable for PCB mounting
- Panel mounting versions

## M16 Series

Circular Automation Connectors



- A-Coding
- Max Rating 7A, 250V ac/dc
- IP67 protection
- 3, 4, 5, 6, 8 & 12 contacts
- Metal shells with good shielding

## 400 Series SMB

Circular Data Connectors



- 50Ω impedance SMB antenna
- Frequency range 0 - 4GHz
- IP66, IP67, IP68 & IP69K protection
- Rewireable & pre-wired options
- RG-174 cables

# Oil & Gas.

With demand for the world's natural resources increasing, so too are the challenges facing the Oil and Gas industry. Harsh conditions such as pressure, extreme temperatures, vibrations, and shock explosions are some of the most common factors impacting this sector. Bulgin has a variety of solutions to deal with such challenging environments.

For instance, our Atex Zone 2 and IP rated connectors are perfectly suited to withstand the challenges of explosive and hazardous environments which constantly affect topside systems. We also have the knowledge and in-house expertise to provide you with bespoke custom solutions for the most challenging of subsea applications – typified by our deep sea ROV tether connector.





# Topside.

With demand for the world's natural resources increasing, so too are the challenges facing the Oil and Gas industry. Harsh conditions such as pressure, extreme temperatures, vibrations and shock explosions are some of the common impediments impacting this sector. In an industry with such high-stakes whereby downtime or accidents can have the most catastrophic of consequences, high performance and extremely reliable solutions are fundamental to prevent this from occurring in both topside and subsea applications.

Bulgin has a variety of solutions to deal with these challenging environments. For instance our Atex Zone 2 and IP rated connectors are perfectly suited to withstand the challenges of explosive and hazardous environments which constantly affect topside systems. We also have the knowledge and in house expertise to provide you with bespoke custom solutions for the most challenging of subsea applications – typified by our deep sea ROV tether connector.

- ⬡ Pump Motors
- ⬡ Pipe Inspection System
- ⬡ Industrial Sand Blasters
- ⬡ Security Video Monitoring
- ⬡ Oil Rig Surveillance Control



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# Products Related To This Industry:

## Piezo Switches

Switches



- Dust, dirt, chemicals & water resistant
- Sealed to IP68 & IP69K
- 16, 19 or 22mm diameter
- Millions of cycles/actuations
- Illuminated & non-illuminated options

## Vandal Resistant

Switches



- High corrosion resistance
- Domed, low & prominent profiles
- IP66 & IP68 sealing versions
- Illuminated & non-illuminated
- Front & rear panel mount versions

## EXPlora Series

Circular Power Connectors



- Ratings up to 12A, 277V ac/dc
- 2, 3, 4, 6, 7, 9, 12 & 25 contacts
- IP67 & IP68 protection
- Plug & receptacle connectors
- CCC, UL, CSA & VDE approvals

## 6000 Series

Circular Power Connectors



- 2 - 22 Contacts
- Plastic or Metal Housing
- IP66, IP67, IP68 & IP69K protection
- Secure, quick mating / release
- cULus, UL, VDE Approvals



# Subsea.

## 1. The Challenge

In environments where connectors and cables are exposed to high pressures and submerged in water for extended periods, secure and waterproof electrical connections are vital for ensuring that installations can be easily assembled, modified and maintained.

As pioneers in environmentally sealed connectors, Bulgin was approached by the largest manufacturer of subsea ROVs to develop a connector which combined quick and convenient connectivity with long-term corrosion-resistance.

## 2. The Solution

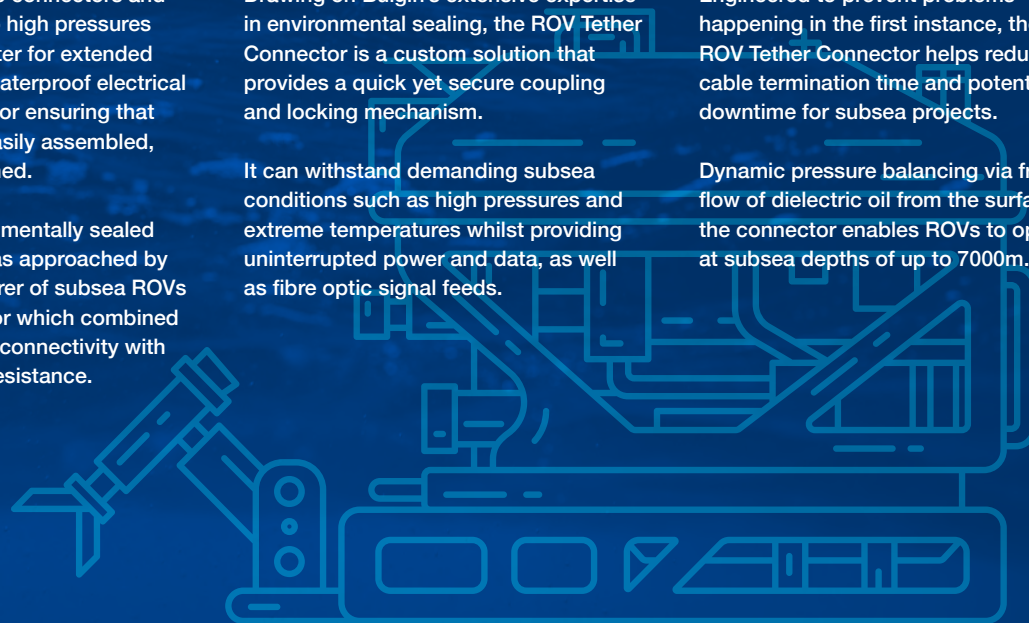
Drawing on Bulgin's extensive expertise in environmental sealing, the ROV Tether Connector is a custom solution that provides a quick yet secure coupling and locking mechanism.

It can withstand demanding subsea conditions such as high pressures and extreme temperatures whilst providing uninterrupted power and data, as well as fibre optic signal feeds.

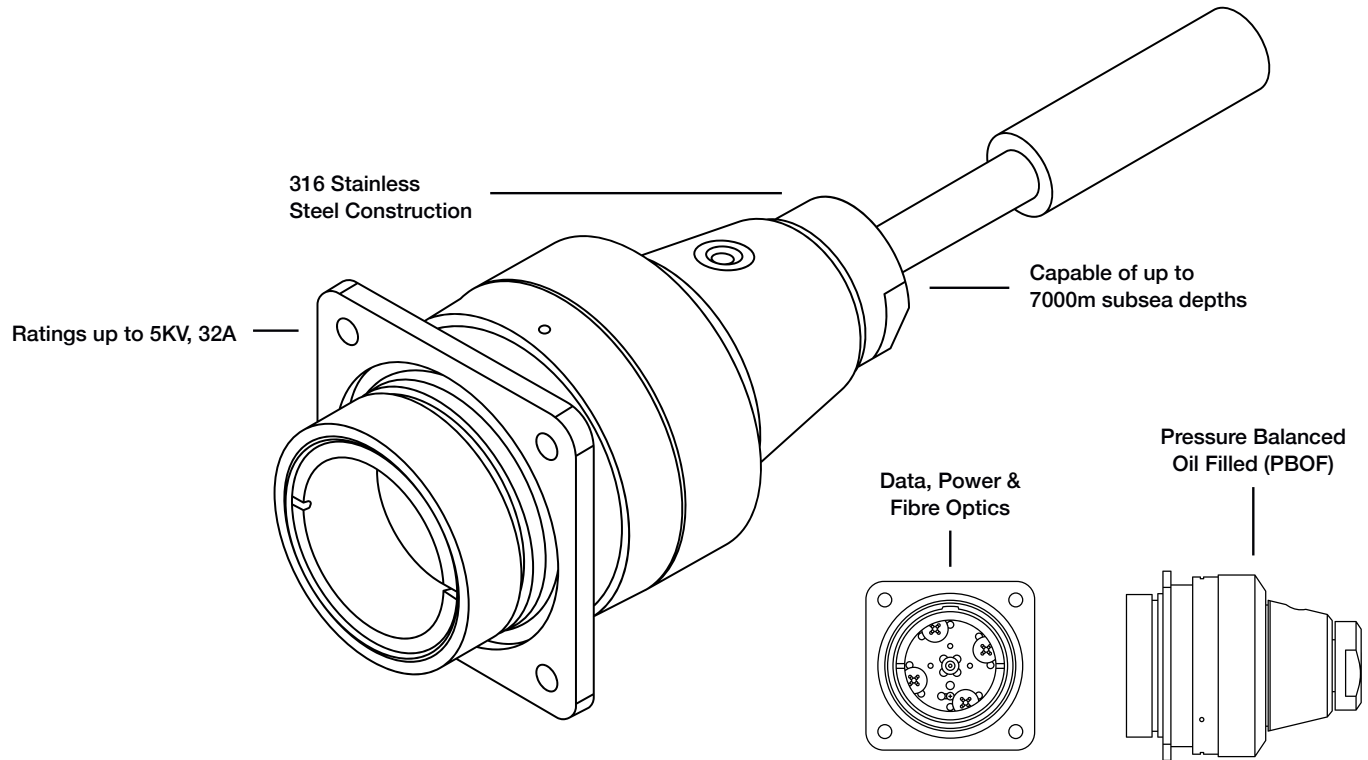
## 3. The Result

Engineered to prevent problems happening in the first instance, the ROV Tether Connector helps reduce cable termination time and potential downtime for subsea projects.

Dynamic pressure balancing via free flow of dielectric oil from the surface to the connector enables ROVs to operate at subsea depths of up to 7000m.



# ROV Tether Connector Specifications:



# Marine.



Marine applications such as ship deck systems, marina facilities and boating equipment are constantly exposed to the harshest of conditions. With high corrosion and water ingress posing a constant threat to connectivity solutions, sealed and robust components are a must for applications in this market.

Originally designed for leisure yachts, our Buccaneer connector range is perfectly suited to meet the challenging requirements of marine applications both above and below water level.



# Above Water.

Surface marine applications such as ship deck systems, marina facilities and boating equipment are constantly exposed to the harshest of conditions. With high corrosion and water ingress posing a constant threat to connectivity solutions, sealed and robust components are a must for applications in this market. Originally designed for leisure yachts, our Buccaneer connector range is perfectly suited to meet the challenging requirements of marine applications both above and below water level.

With a wide portfolio of IP rated power, signal and data connectors, along with years of experience in designing and manufacturing sealed interconnect solutions, we are sure to have the right solution for your marine connectivity needs. If our existing product range doesn't meet your specifications then our experienced engineering teams have the knowledge and expertise needed to create a custom solution specific to your unique requirements.

- Boat & Yacht Lighting
- Water Quality Systems
- GPS Marine Equipment
- Container Ship Communication
- LED Marine Lanterns
- Unmanned Surface Vehicles (USV)
- Water Flow Data Loggers
- Marina Energy Distribution Units
- Sailboats



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# Products Related To This Industry:

## 6000 Series

Circular Power Connectors



- 2 - 22 Contacts
- Plastic or Metal Housing
- IP66, IP67, IP68 & IP69K protection
- Secure, quick mating / release
- cULus, UL, VDE Approvals

## 400 Series

Circular Power Connectors



- Ratings up to 8A, 250V ac/dc
- 2, 3, 4, 6, 8, 10 & 12 contacts
- IP66, IP67, IP68 & IP69K protection
- Pin or socket, screw thread locking
- CE, UL, CSA & VDE approvals

## Standard Series USB

Circular Data Connectors



- USB V2.0 performance
- IP66, IP67, IP68 & IP69K protection
- USB type 'A' or 'B' configurations
- Single & double ended cable / panel mount options

## 400 Series Mini USB

Circular Data Connectors



- Sealed Mini-USB cable connectors
- Data rates up to 480Mbps
- IP66, IP67, IP68 & IP69K protection
- USB V2.0 performance
- Front + rear & PCB panel mount options

## Standard Ethernet

Circular Data Connectors



- Cat5e RJ45 Ethernet Connectors
- Data rates up to 100MHz
- IP66, IP67, IP68 & IP69K protection
- Shielded system
- Noise immunity & EMI protection

## Vandal Resistant

Switches



- High corrosion resistance
- Domed, low & prominent profiles
- IP66 & IP68 sealing versions
- Illuminated & non-illuminated
- Front & rear panel mount versions

## Standard Series

Circular Power Connectors



- Rating up to 12A, 277V ac/dc
- 2, 3, 4, 6, 7, 9, 12 & 25 contacts
- IP66, IP67, IP68 & IP69K protection
- Plug & receptacle connectors
- CCC, UL, CSA & VDE approvals

## 400 Series SMB

Circular Data Connectors



- 50Ω impedance SMB antenna
- Frequency range 0 - 4GHz
- IP66, IP67, IP68 & IP69K protection
- Rewireable & pre-wired options
- RG-174 cables



# Underwater.

Operating underwater requires the most rugged and reliable of connectivity components. Pressure, extreme temperatures and salt water all pose complex challenges for underwater marine applications. With more companies seeking to go deeper for longer in such hostile conditions due to production and exploratory reasons, increasing the life cycles of submersible connectors and simplifying product maintenance processes is more important than ever before.

With a high risk of corrosion affecting the integrity of power, signal and data connections, sealed connector solutions are a must for high performance underwater marine equipment. Bulgin's expertise in producing environmentally sealed connectors makes us one of the world's interconnect leaders for marine application solutions where immersion is required in low and high pressure underwater environments.

⬡ Sealed Diving Cameras  
⬡ Diver Communications

⬡ Depth Loggers  
⬡ Subsea ROV



# Products Related To This Industry:

## 4000 Micro USB

Circular Data Connectors



- Data rates up to 480Mbps
- USB V2.0 performance
- IP66, IP67, IP68 & IP69K protection
- EN60068-2-52 Test Kb Salt Mist (Cyclic) Marine Severity Level 1

## 6000 Series

Circular Power Connectors



- 2 - 22 Contacts
- Plastic or Metal Housing
- IP66, IP67, IP68 & IP69K protection
- Secure, quick mating / release
- cULus, UL, VDE Approvals

## 400 Series

Circular Power Connectors



- Ratings up to 8A, 250V ac/dc
- 2, 3, 4, 6, 8, 10 & 12 contacts
- IP66, IP67, IP68 & IP69K protection
- Pin or socket, screw thread locking
- CE, UL, CSA & VDE approvals

## 400 Series Mini USB

Circular Data Connectors



- Sealed Mini-USB cable connectors
- Data rates up to 480Mbps
- IP66, IP67, IP68 & IP69K protection
- USB V2.0 performance
- Front + rear & PCB panel mount options

## 400 Series SMB

Circular Data Connectors



- 50Ω impedance SMB antenna
- Frequency range 0 - 4GHz
- IP66, IP67, IP68 & IP69K protection
- Rewireable & pre-wired options
- RG-174 cables

## 7000 Series

Circular Power Connectors



- Ratings up to 25A, 600V
- 2, 3, 6, 10 & 32 contacts
- IP66, IP67 IP68 and IP69K rated
- Plastic Shells
- cULus, UL & VDE approvals

## Standard Ethernet

Circular Data Connectors



- Cat5e RJ45 Ethernet Connectors
- Data rates up to 100MHz
- IP66, IP67, IP68 & IP69K protection
- Shielded system
- Noise immunity & EMI protection

## ROV Tether Connector

Circular Power / Data Connectors



- 316 Stainless Steel Construction
- Pressure Balanced Oil Filled (PBOF)
- Data, Power & Fibre Optics
- Ratings up to 5KV, 32A
- Capable of up to 7000m subsea depths



# Transport & Infrastructure.

With ambient and environmental conditions such as water, moisture and extreme temperatures posing a constant threat to transport and infrastructure applications, reliable and robust solutions are vitally important in this sector.

From outdoor lighting and industrial meters to HVAC systems and surveillance cameras, rest assured that our industry leading solutions are built for maximum reliability and performance to support the challenging needs of various indoor, outdoor and industrial applications.



# Lighting.

Bulgin is an industry leader in manufacturing reliable electronic solutions for lighting applications around the world. With ambient and environmental conditions such as water, moisture and extreme temperatures posing a constant threat to the performance of outdoor lighting equipment, secure and robust solutions are of paramount importance. For years we have supported the lighting needs of various infrastructure applications with our industry-leading solutions being used in various indoor, outdoor and industrial applications, from portable lighting for construction to airport flood lights.

Our IP rated circular connectors for power, signal and data are particularly suited to providing the high levels of performance needed for such demanding environments. Capable of being submerged in water and able to withstand high levels of UV exposure, they are specifically designed to reduce installation time and excel in challenging environmental conditions. If you require reliable waterproof connectors and cable assemblies suited to outdoor and architectural lighting applications, then Bulgin is the perfect choice to meet your unique lighting requirements.

- Roadside LED Lighting
- Commercial Lighting
- External Building LED Lighting
- Portable Maintenance LED Lighting
- Airport Flood Lighting
- Sport Venue LED Lighting



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# Products Related To This Industry:

## 400 Series

Circular Power Connectors



- Ratings up to 8A, 250V ac/dc
- 2, 3, 4, 6, 8, 10 & 12 contacts
- IP66, IP67, IP68 & IP69K protection
- Pin or socket, screw thread locking
- CE, UL, CSA & VDE approvals

## 400 Series Mini USB

Circular Data Connectors



- Sealed Mini-USB cable connectors
- Data rates up to 480Mbps
- IP66, IP67, IP68 & IP69K protection
- USB V2.0 performance
- Front + rear & PCB panel mount options

## 4000 Series

Circular Power Connectors



- Ratings up to 13A, 600V ac/dc
- 2, 3, 4, 6, 8, 10 & 12 Contacts
- IP66, IP67, IP68 & IP69K protection
- Pin or socket, bayonet locking
- UL, CSA & VDE approvals

## 6000 Series

Circular Power Connectors



- 2 - 22 Contacts
- Plastic or Metal Housing
- IP66, IP67, IP68 & IP69K protection
- Secure, quick mating / release
- cULus, UL, VDE Approvals

## Standard Series

Circular Power Connectors



- Rating up to 12A, 277V ac/dc
- 2, 3, 4, 6, 7, 9, 12 & 25 contacts
- IP66, IP67, IP68 & IP69K protection
- Plug & receptacle connectors
- CCC, UL, CSA & VDE approvals

## Fuse Holders

Fuse Holders



- In-line, panel, PCB & base mounting
- Screw or snap fit variants
- PC1, PC2 & PC3 shock protection
- IP66, IP67 & IP68 sealed versions
- Ideal for 5x20mm & 6.3x32mm fuse sizes

# Security & Surveillance.

Security systems are at the heart of all transport and infrastructure. With applications such as surveillance cameras constantly operating in some of the world's most challenging outdoor environments, reliable data and power transmissions are vital for ensuring that they can operate 24/7 in harsh ambient conditions. To resolve this issue, we have created a wide variety of standardised rugged, lightweight and sealed connectivity solutions including field installable connectors and overmolded cable assemblies that can also be customised for your specific design and development needs.

Whether you require secure and reliable connectors for camera systems or robust anti vandal switches for door entry keypads, we are sure to have the right solution for your security application. We thrive on providing secure and reliable solutions that prevent downtime and minimise maintenance work for applications where security and surveillance are a priority to your operations.

- Traffic Cameras
- ANPR Cameras and Sensors
- Parking Control Camera
- Security Door Switch
- Door Entry Keypads
- Aerial Surveillance & Mapping
- Security Video Monitoring
- Portable Alarm Systems
- Unmanned Surface Vehicle
- CCTV Cameras



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# Products Related To This Industry:

## Standard Series

Circular Power Connectors



- Rating up to 12A, 277V ac/dc
- 2, 3, 4, 6, 7, 9, 12 & 25 contacts
- IP66, IP67, IP68 & IP69K protection
- Plug & receptacle connectors
- CCC, UL, CSA & VDE approvals

## 900 Series

Circular Power Connectors



- 32A, 600V ac/dc max rating
- 2, 3, 4, 5, 7 & 10 contacts
- IP66, IP67, IP68 & IP69K protection
- Single or 3 phase applications
- CCC, UL, CSA & VDE approvals

## 4000 Series Fiber

Circular Data Connectors



- Sealed to IP66 IP68 and IP69K
- Secure quick twist (30°) bayonet
- Durable mechanical mating
- Cable range from 5 to 450M
- Flame Retardant moulding material (Polyamide UL94-V0)

## 400 Series Mini USB

Circular Data Connectors



- Sealed Mini-USB cable connectors
- Data rates up to 480Mbps
- IP66, IP67, IP68 & IP69K protection
- USB V2.0 performance
- Front + rear & PCB panel mount options

## 6000 Series

Circular Power Connectors



- 2 - 22 Contacts
- Plastic or Metal Housing
- IP66, IP67, IP68 & IP69K protection
- Secure, quick mating / release
- cULus, UL, VDE Approvals

## 4000 Micro USB

Circular Data Connectors



- Data rates up to 480Mbps
- USB V2.0 performance
- IP66, IP67, IP68 & IP69K protection
- EN60068-2-52 Test Kb Salt Mist (Cyclic) Marine Severity Level 1

## Vandal Resistant

Switches



- High corrosion resistance
- Domed, low & prominent profiles
- IP66 & IP68 sealing versions
- Illuminated & non-illuminated
- Front & rear panel mount versions

## 400 Series SMB

Circular Data Connectors



- 50Ω impedance SMB antenna
- Frequency range 0 - 4GHz
- IP66, IP67, IP68 & IP69K protection
- Rewireable & pre-wired options
- RG-174 cables



# Buildings & Construction.

Heavy duty machinery used for construction & building maintenance require components that are equally as rugged as the environments that they operate in. From outdoor lighting and industrial meters to indoor HVAC systems, rest assured that our wide range of switches, indicators and waterproof connectors are built for maximum reliability and performance.

- Air Compressor
- Cherry Pickers
- Wireless Load Sensors
- Terrain / Mud Monitoring Systems
- Smart Metering
- Security Door Switch Panels
- Moisture Meters
- Heating Systems
- Air Cleaning Systems
- Disabled Refuge Systems



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portugal@ermec.com



# Products Related To This Industry:

## Standard Series

Circular Power Connectors



- Rating up to 12A, 277V ac/dc
- 2, 3, 4, 6, 7, 9, 12 & 25 contacts
- IP66, IP67, IP68 & IP69K protection
- Plug & receptacle connectors
- CCC, UL, CSA & VDE approvals

## 6000 Series USB

Circular Data Connectors



- Secure 30° twist locking mechanism
- Plug & play capability
- IP66, IP67, IP68 & IP69K protection
- Single & double ended PUR cables
- USB V2.0 performance

## Indicators

Indicators



- LED, Neon & Filament options
- Panel sealed IP66 & IP67 versions
- Wide choice of bezel sizes & styles
- Multiple termination types
- Rugged stainless steel variants

## 400 Series Mini USB

Circular Data Connectors



- Sealed Mini-USB cable connectors
- Data rates up to 480Mbps
- IP66, IP67, IP68 & IP69K protection
- USB V2.0 performance
- Front + rear & PCB panel mount options

## Rocker Switches

Switches



- Ratings from 10A, 250Vac - 20A, 277Vac
- Push-on, solder & PCB terminals
- Splash resistant & antimicrobial options
- Illuminated & Non-Illuminated options
- Large selection of sizes & styles

## Vandal Resistant

Switches



- High corrosion resistance
- Domed, low & prominent profiles
- IP66 & IP68 sealing versions
- Illuminated & non-illuminated
- Front & rear panel mount versions

## Toggle Switches

Switches



- Nylon / Metal & Lever options
- Ratings up to 20A, 250Vac - 277Vac
- IP67 panel seal versions
- Quick Connect, Solder, Screw & PCB termination options

## 400 Series SMB

Circular Data Connectors



- 50Ω impedance SMB antenna
- Frequency range 0 - 4GHz
- IP66, IP67, IP68 & IP69K protection
- Rewireable & pre-wired options
- RG-174 cables



# Transportation.

The world is constantly changing and we help to keep it moving with our connectivity solutions. With more transport links and vehicles needed than ever before to meet the challenging needs of a growing population, we help to future proof your investment by providing cost effective and high performance solutions that last.

Experts in manufacturing sealed electrical connectors, we've provided connectivity solutions to transport and infrastructure applications for years. Particularly suited to provide power, signal & data connections in harsh environments, our reliable connector range makes sure that people and goods successfully get to their destination by land, sea or air.

- Lorry / Truck LED Lighting
- Road Management Maintenance
- Speed Check Signage
- Illuminated Taxi Sign
- Transport Refrigeration
- Noise Monitoring Terminal
- Container Cooling Units
- Surface Friction Test Equipment
- Noise Monitoring Terminal
- Traffic Lights



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# Products Related To This Industry:

## 900 Series

Circular Power Connectors



- 32A, 600V ac/dc max rating
- 2, 3, 4, 5, 7 & 10 contacts
- IP66, IP67, IP68 & IP69K protection
- Single or 3 phase applications
- CCC, UL, CSA & VDE approvals

## 400 Series

Circular Power Connectors



- Ratings up to 8A, 250V ac/dc
- 2, 3, 4, 6, 8, 10 & 12 contacts
- IP66, IP67, IP68 & IP69K protection
- Pin or socket, screw thread locking
- CE, UL, CSA & VDE approvals

## 4000 Series

Circular Power Connectors



- Ratings up to 13A, 600V ac/dc
- 2, 3, 4, 6, 8, 10 & 12 Contacts
- IP66, IP67, IP68 & IP69K protection
- Pin or socket, bayonet locking
- UL, CSA & VDE approvals

## 6000 Series

Circular Power Connectors



- 2 - 22 Contacts
- Plastic or Metal Housing
- IP66, IP67, IP68 & IP69K protection
- Secure, quick mating / release
- cULus, UL, VDE Approvals

## Standard Ethernet

Circular Data Connectors



- Cat5e RJ45 Ethernet Connectors
- Data rates up to 100MHz
- IP66, IP67, IP68 & IP69K protection
- Shielded system
- Noise immunity & EMI protection

## Toggle Switches

Switches



- Nylon / Metal / Lever options
- Ratings up to 20A, 250Vac - 277Vac
- IP67 panel seal versions
- Quick Connect, Solder, Screw & PCB termination options

## 4000 Series Fiber

Circular Data Connectors



- Sealed to IP66 IP68 and IP69K
- Secure quick twist (30°) bayonet
- Durable mechanical mating
- Cable range from 5 to 450M
- Flame Retardant moulding material (Polyamide UL94-V0)

## Photoelectric Sensor

Sensors



- Sealed to IP67
- Stainless Steel 316 shell
- Detection distance 1 - 40mm
- Light point diameter 5.0mm at 30mm
- Ambient humidity 35 - 85%

# Automotive.

An ever growing population calls for more vehicles to fulfil transportation needs. The rise of autonomous cars and increasingly connected vehicles also means that reliable and high performance components have never been more important in the automotive industry. Luckily we have a wide range of solutions perfectly suited to the demanding challenges of this industry.





# Automotive.

An ever growing population calls for more vehicles to fulfil transportation needs. The rise of autonomous cars and increasingly connected vehicles also means that reliable and high performance components have never been more important in the automotive industry. Luckily we have a wide range of solutions perfectly suited to the demanding challenges of this industry.

From automotive manufacturing and testing equipment to truck lighting and control panels for agricultural vehicles, our products are involved at every stage of a motor vehicles life cycle. With a wide variety of products on offer including sealed connectors for power, signal and data, we can also produce bespoke custom solutions that combine switches, enclosures, PCB's and cable assemblies to meet the needs of demanding automotive applications.

- Power Diagnostics
- Wheel Diagnostic Equipment
- Military Vehicle Datacoms
- Off Road Vehicles
- Cherry Pickers
- Automotive Manufacturing
- Illuminated Taxi Sign
- Glove Compartment Light
- RV Heating / Cooling Systems
- Lorry / Truck LED Lighting



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# Products Related To This Industry:

## Switches

Switches



- Vandal Resistant, Rocker & Toggle
- IP66, IP67 & IP68 sealed versions
- Illuminated & Non-Illuminated options
- Front & rear panel mounted versions
- Large selection of sizes & styles

## Standard Series

Circular Power Connectors



- Rating up to 12A, 277V ac/dc
- 2, 3, 4, 6, 7, 9, 12 & 25 contacts
- IP66, IP67, IP68 & IP69K protection
- Plug & receptacle connectors
- CCC, UL, CSA & VDE approvals

## 900 Series

Circular Power Connectors



- 32A, 600V ac/dc max rating
- 2, 3, 4, 5, 7 & 10 contacts
- IP66, IP67, IP68 & IP69K protection
- Single or 3 phase applications
- CCC, UL, CSA & VDE approvals

## 400 Series Mini USB

Circular Data Connectors



- Sealed Mini-USB cable connectors
- Data rates up to 480Mbps
- IP66, IP67, IP68 & IP69K protection
- USB V2.0 performance
- Front + rear & PCB panel mount options

## 4000 Series

Circular Power Connectors



- Ratings up to 13A, 600V ac/dc
- 2, 3, 4, 6, 8, 10 & 12 Contacts
- IP66, IP67, IP68 & IP69K protection
- Pin or socket, bayonet locking
- UL, CSA & VDE approvals

## 6000 Series Ethernet

Circular Data Connectors



- Cat5e RJ45 Ethernet Connectors
- Data rates up to 100MHz
- IP66, IP67, IP68 & IP69K protection
- Shielded system
- Quick 30° turn locking mechanism

## Battery Holders

Battery Holders



- AAA, AA, C, D & PP3 battery sizes
- Accommodating 1, 2, 3 or 4 cells
- IP67 sealed versions
- Suitable for PCB mounting
- Panel mounting versions

## Enclosures

Enclosures



- IP67 rated - Dust & Waterproof
- ABS or Flame Retardant Polycarbonate
- Mounting posts & slots for PCB
- M20 thread cable glands & wall mounting brackets



# Medical.

High performance and dependability are crucially important in medical technologies. This is why Bulgin's reliable and robust components are used in all areas of the medical industry from the production of pharmaceutical drugs to therapeutic, imaging, diagnostics and patient monitoring devices.







# Medical.

High performance and dependability are crucially important in medical technologies. This is why Bulgin's reliable and robust components are used in all areas of the medical industry from the production of pharmaceutical drugs to therapeutic, imaging, diagnostics and patient monitoring devices.

With a broad range of interconnect solutions for power or data and specialised antimicrobial switches perfectly suited for medical equipment, medical device OEMs can be confident in our ability to provide ideal solutions for the unique requirements of medical systems and environments.



- Medical Ventilation Device
- Pharmaceutical Machinery
- MRI Equipment
- Washdown Scales
- Dental X-Ray Equipment
- Lullaby Warmer
- Nebuliser
- Cryogen-free Refrigerators
- Dosing Pumps
- Ultrasonic Equipment

# Products Related To This Industry:

## 6000 Series

Circular Power Connectors



- 2 - 22 Contacts
- Plastic or Metal Housing
- IP66, IP67, IP68 & IP69K protection
- Secure, quick mating / release
- cULus, UL, VDE Approvals

## Standard Series USB

Circular Data Connectors



- USB V2.0 performance
- IP66, IP67, IP68 & IP69K protection
- USB type 'A' or 'B' configurations
- Single & double ended cable / panel mount options

## IEC Connectors

IEC Connectors



- IEC Connectors, Inlets & Outlets
- EC & EN 60320 Standards
- UL, CSA, VDE & CE approved
- C13, C14, C15, C16, C18, C19 & C20 as well as Sheet E, F, H, I & J types

## Rocker Switches

Switches



- Ratings from 10A, 250Vac - 20A, 277Vac
- Push-on, solder & PCB terminals
- Splash resistant & antimicrobial options
- Illuminated & Non-Illuminated options
- Large selection of sizes & styles

## 400 Series

Circular Power Connectors



- Ratings up to 8A, 250V ac/dc
- 2, 3, 4, 6, 8, 10 & 12 contacts
- IP66, IP67, IP68 & IP69K protection
- Pin or socket, screw thread locking
- CE, UL, CSA & VDE approvals

## 400 Series Mini USB

Circular Data Connectors



- Sealed Mini-USB cable connectors
- Data rates up to 480Mbps
- IP66, IP67, IP68 & IP69K protection
- USB V2.0 performance
- Front + rear & PCB panel mount options

## Power Entry Modules

Power Entry Modules



- Vertical & horizontal arrangement
- Single or double pole variants
- Combinations of IEC inlets/outlets, filtered inlets, switches, fuse holders, voltage selectors & indicators available

## EMI Filters

EMI Mains Filters



- High performance IEC filtered inlets
- Current ratings from 1 to 10 amps
- Flange, snap to panel or base / bulkhead mounting options

# Renewable Energy.

Renewable energy technologies operate in some of the harshest environments on the planet. Extreme temperatures, UV exposure, vibrations and water all pose complex challenges in establishing and keeping renewable energy systems operational. With more moving parts than other renewable energy systems, wind turbines in particular require extremely robust connectors to cope with such extreme conditions.



# Renewable Energy.

Thoroughly tested and designed specifically to operate reliably in harsh conditions, Bulgin's rugged power and data connectors are the ideal solutions for green and renewable energy applications including wind and solar energy systems.

- Solar Power Inverters
- Wind Turbine Vibration
- Monitoring System
- Solar Lighting Panels
- Solar Water Pump Controller
- Solar Battery Enclosures
- Solar PV Combiner Boxes



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# Products Related To This Industry:

## Standard Series

Circular Power Connectors



- Rating up to 12A, 277V ac/dc
- 2, 3, 4, 6, 7, 9, 12 & 25 contacts
- IP66, IP67, IP68 & IP69K protection
- Plug & receptacle connectors
- CCC, UL, CSA & VDE approvals

## Standard Ethernet

Circular Data Connectors



- Cat5e RJ45 Ethernet Connectors
- Data rates up to 100MHz
- IP66, IP67, IP68 & IP69K protection
- Shielded system
- Noise immunity & EMI protection

## 400 Series

Circular Power Connectors



- Ratings up to 8A, 250V ac/dc
- 2, 3, 4, 6, 8, 10 & 12 contacts
- IP66, IP67, IP68 & IP69K protection
- Pin or socket, screw thread locking
- CE, UL, CSA & VDE approvals

## 4000 Series

Circular Power Connectors



- Ratings up to 13A, 600V ac/dc
- 2, 3, 4, 6, 8, 10 & 12 Contacts
- IP66, IP67, IP68 & IP69K protection
- Pin or socket, bayonet locking
- UL, CSA & VDE approvals

## 900 Series

Circular Power Connectors



- 32A, 600V ac/dc max rating
- 2, 3, 4, 5, 7 & 10 contacts
- IP66, IP67, IP68 & IP69K protection
- Single or 3 phase applications
- CCC, UL, CSA & VDE approvals

## 6000 Series

Circular Power Connectors



- 2 - 22 Contacts
- Plastic or Metal Housing
- IP66, IP67, IP68 & IP69K protection
- Secure, quick mating / release
- cULus, UL, VDE Approvals



# Data & Telecoms.

With the rise of big data, the Internet of Things (IoT), Industry 4.0 and the race for superfast broadband in recent years, the demand for electronic components is higher than ever before. Despite an increasing shift towards wireless technologies, the core equipment that enables these systems to operate are still heavily reliant on physical components such as electrical connectors, battery holders & switches.





# Data & Telecoms.

In an increasingly connected world, we have the necessary solutions to fulfil the ongoing needs of data centres and telecom networks across the globe. From power distribution to high speed data transmissions and user interface components, we have the solutions that you need to manage the stringent data demands of the future.

- Small Cell Backhaul Systems
- Uninterruptible Power Supply
- Network Encryption Equipment
- Telecom Towers
- Portable Satellite Equipment
- Data Centre Servers
- Satellite Communication Networks
- Mobile Network Transmitter
- Military Vehicle Datacoms
- Network Server Cabinets



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# Products Related To This Industry:

## Standard Series

Circular Power Connectors



- Rating up to 12A, 277V ac/dc
- 2, 3, 4, 6, 7, 9, 12 & 25 contacts
- IP66, IP67, IP68 & IP69K protection
- Plug & receptacle connectors
- CCC, UL, CSA & VDE approvals

## Standard Ethernet

Circular Data Connectors



- Cat5e RJ45 Ethernet Connectors
- Data rates up to 100MHz
- IP66, IP67, IP68 & IP69K protection
- Shielded system
- Noise immunity & EMI protection

## Mini Series

Circular Power Connectors



- Ratings up to 10A, 380V ac
- 2, 3, 4, 6 or 8 contacts
- IP67 & IP68 protection
- Plug & receptacle connectors
- UL approved, compact design

## 6000 Series Ethernet

Circular Data Connectors



- Cat5e RJ45 Ethernet Connectors
- Data rates up to 100MHz
- IP66, IP67, IP68 & IP69K protection
- Shielded system
- Quick 30° turn locking mechanism

## Battery Holders

Battery Holders



- AAA, AA, C, D & PP3 battery sizes
- Accommodating 1, 2, 3 or 4 cells
- IP67 sealed versions
- Suitable for PCB mounting
- Panel mounting versions

## Toggle Switches

Switches



- Nylon / Metal & Lever options
- Ratings up to 20A, 250Vac - 277Vac
- IP67 panel seal versions
- Quick Connect, Solder, Screw & PCB termination options

## 4000 Series Fiber

Circular Data Connectors



- Sealed to IP66 IP68 and IP69K
- Secure quick twist (30°) bayonet
- Durable mechanical mating
- Cable range from 5 to 450M
- Flame Retardant moulding material (Polyamide UL94-V0)

## Fuse Holders

Fuse Holders



- In-line, panel, PCB & base mounting
- Screw or snap fit variants
- PC1, PC2 & PC3 shock protection
- IP66, IP67 & IP68 sealed versions
- Ideal for 5x20mm & 6.3x32mm fuse sizes

# Recreation & Leisure.

Our robust connectivity solutions power water features in some the world's most renowned hotels and amusement parks. But that's not where our sealed capabilities end. We also have numerous sealed switches and fuse holders in operation worldwide to compliment systems utilising our watertight connectors and provide a truly comprehensive sealed solution.

Whether you require a waterproof power connector for outdoor events and productions or interface components for electrical appliances, we are sure to have the suitable solution for your design and development needs.



# Water Systems.

Whether indoor or outdoor, water systems such as swimming pools and water fountains require highly ruggedized and sealed solutions. Our robust connectivity solutions power water features in some the world's most renowned hotels and amusement parks.

But that's not where our sealed capabilities end. We also have numerous sealed switches and fuse holders in operation worldwide to compliment systems utilising our watertight connectors and provide a truly comprehensive sealed solution.

- Water & Light Show Equipment
- Robot Pool Cleaning Equipment
- Motorised Swimming Pool Cover
- High End Jacuzzi
- Water Quality System
- Hotel Water Fountains
- Filtration Box
- Pool Heating Equipment



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# Products Related To This Industry:

## Rocker Switches

Switches



- Ratings from 10A, 250Vac - 20A, 277Vac
- Push-on, solder & PCB terminals
- Splash resistant & antimicrobial options
- Illuminated & Non-Illuminated options
- Large selection of sizes & styles

## 900 Series

Circular Power Connectors



- 32A, 600V ac/dc max rating
- 2, 3, 4, 5, 7 & 10 contacts
- IP66, IP67, IP68 & IP69K protection
- Single or 3 phase applications
- CCC, UL, CSA & VDE approvals

## Standard Ethernet

Circular Data Connectors



- Cat5e RJ45 Ethernet Connectors
- Data rates up to 100MHz
- IP66, IP67, IP68 & IP69K protection
- Shielded system
- Noise immunity & EMI protection

## 6000 Series

Circular Power Connectors



- 2 - 22 Contacts
- Plastic or Metal Housing
- IP66, IP67, IP68 & IP69K protection
- Secure, quick mating / release
- cULus, UL, VDE Approvals

## Standard Series

Circular Power Connectors



- Rating up to 12A, 277V ac/dc
- 2, 3, 4, 6, 7, 9, 12 & 25 contacts
- IP66, IP67, IP68 & IP69K protection
- Plug & receptacle connectors
- CCC, UL, CSA & VDE approvals

## Fuse Holders

Fuse Holders



- In-line, panel, PCB & base mounting
- Screw or snap fit variants
- PC1, PC2 & PC3 shock protection
- IP66, IP67 & IP68 sealed versions
- Ideal for 5x20mm & 6.3x32mm fuse sizes



# Entertainment & Hospitality.

Power connections and switches are fundamental for activating and controlling a variety of electronic equipment in entertainment and hospitality applications. Whether you require a waterproof power connector for outdoor events and productions or interface components for electrical appliances, we are sure to have the suitable solution for your design and development needs.

- ⬡ Water Show Equipment & Motors
- ⬡ Popcorn Machines
- ⬡ Vending Machines
- ⬡ Roulette Machines
- ⬡ Event and Stage Lighting
- ⬡ Pool Cleaning Robots
- ⬡ Electronic Scoreboards
- ⬡ Champagne Dispensers



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# Products Related To This Industry:

## Rocker Switches

Switches



- Ratings from 10A, 250Vac - 20A, 277Vac
- Push-on, solder & PCB terminals
- Splash resistant & antimicrobial options
- Illuminated & Non-Illuminated options
- Large selection of sizes & styles

## IEC Connectors

IEC Connectors



- IEC Connectors, Inlets & Outlets
- EC & EN 60320 Standards
- UL, CSA, VDE & CE approved
- C13, C14, C15, C16, C18, C19 & C20 as well as Sheet E, F, H, I & J types

## Vandal Resistant

Switches



- High corrosion resistance
- Domed, low & prominent profiles
- IP66 & IP68 sealing versions
- Illuminated & non-illuminated
- Front & rear panel mount versions

## Standard Series

Circular Power Connectors



- Rating up to 12A, 277V ac/dc
- 2, 3, 4, 6, 7, 9, 12 & 25 contacts
- IP66, IP67, IP68 & IP69K protection
- Plug & receptacle connectors
- CCC, UL, CSA & VDE approvals

## 900 Series

Circular Power Connectors



- 32A, 600V ac/dc max rating
- 2, 3, 4, 5, 7 & 10 contacts
- IP66, IP67, IP68 & IP69K protection
- Single or 3 phase applications
- CCC, UL, CSA & VDE approvals

## 400 Series

Circular Power Connectors



- Ratings up to 8A, 250V ac/dc
- 2, 3, 4, 6, 8, 10 & 12 contacts
- IP66, IP67, IP68 & IP69K protection
- Pin or socket, screw thread locking
- CE, UL, CSA & VDE approvals

## 4000 Series

Circular Power Connectors



- Ratings up to 13A, 600V ac/dc
- 2, 3, 4, 6, 8, 10 & 12 Contacts
- IP66, IP67, IP68 & IP69K protection
- Pin or socket, bayonet locking
- UL, CSA & VDE approvals

# Agriculture.

The agricultural market has many diverse applications requiring a whole host of electronic components. From marine fish farming systems to agricultural equipment, applications in this market are exposed to a wide variety of harsh conditions including water, dust, dirt, chemicals and extreme temperatures.



# Agriculture.

To meet the challenging needs of the agriculture industry, we have developed an extensive range of robust sealed connectors that ensure optimal protection against external influences in harsh environments. We also produce numerous types of switches and indicators that are used around the world on heavy duty farming vehicles and equipment.

- Agricultural Vehicles
- Cattle Feeding Machines
- Land Surveying Equipment
- Heating Systems
- Livestock Process Control Systems
- Fish Feeding Systems
- Vehicle Control Joysticks
- Bioacoustics Monitoring System
- Dairy Analyser
- Washdown Scales



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# Products Related To This Industry:

## 400 Series

Circular Power Connectors



- Ratings up to 8A, 250V ac/dc
- 2, 3, 4, 6, 8, 10 & 12 contacts
- IP66, IP67, IP68 & IP69K protection
- Pin or socket, screw thread locking
- CE, UL, CSA & VDE approvals

## 4000 Series

Circular Power Connectors



- Ratings up to 13A, 600V ac/dc
- 2, 3, 4, 6, 8, 10 & 12 Contacts
- IP66, IP67, IP68 & IP69K protection
- Pin or socket, bayonet locking
- UL, CSA & VDE approvals

## Standard Series

Circular Power Connectors



- Rating up to 12A, 277V ac/dc
- 2, 3, 4, 6, 7, 9, 12 & 25 contacts
- IP66, IP67, IP68 & IP69K protection
- Plug & receptacle connectors
- CCC, UL, CSA & VDE approvals

## Standard Ethernet

Circular Data Connectors



- Cat5e RJ45 Ethernet Connectors
- Data rates up to 100MHz
- IP66, IP67, IP68 & IP69K protection
- Shielded system
- Noise immunity & EMI protection

## Push Button

Switches



- Domed, low & prominent profiles
- IP66, IP67 & IP68 sealed versions
- Illuminated & non-Illuminated options
- Front & rear panel mounted versions
- Miniature, round, rectangular & vandal options available

## Rocker Switches

Switches



- Ratings from 10A, 250Vac - 20A, 277Vac
- Push-on, solder & PCB terminals
- Splash resistant & antimicrobial options
- Illuminated & Non-Illuminated options
- Large selection of sizes & styles

## Toggle Switches

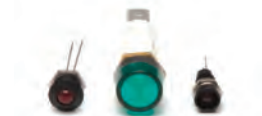
Switches



- Nylon / Metal & Lever options
- Ratings up to 20A, 250Vac - 277Vac
- IP67 panel seal versions
- Quick Connect, Solder, Screw & PCB termination options

## Indicators

Indicators



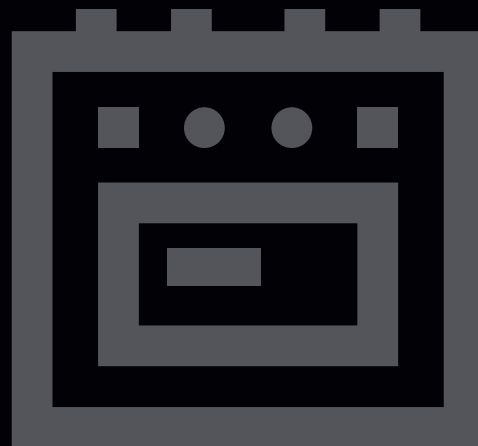
- LED, Neon & Filament options
- Panel sealed IP66 & IP67 versions
- Wide choice of bezel sizes & styles
- Multiple termination types
- Rugged stainless steel variants



# Robust Consumer Electronics.

Operating in a more robust sector of the consumer electronics market, our products provide the user interfaces for power, switching and indicating for a broad array of applications. Our solutions reliably connect both commercial and domestic appliances ranging from commercial popcorn makers, industrial kitchen appliances, hot holds, commercial dishwashers, vacuum cleaner etc.





# Commercial Goods.

From hospitality applications to catering and retail equipment, we have a broad portfolio of connectivity solutions and user interface components to help engineers design new, innovative appliances and goods for commercial use.

- Rotisserie Ovens
- Vending Machines
- Kitchen Climate Control System
- Food & Drink Cleaning Machines
- Air Compressor
- Electric Insect Control Device
- Commercial Coffee Machines
- Champagne Dispensing Machines
- Commercial Freezers
- Commercial Kitchen Grills



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# Products Related To This Industry:

## Rocker Switches

Switches



- Ratings from 10A, 250Vac - 20A, 277Vac
- Push-on, solder & PCB terminals
- Splash resistant & antimicrobial options
- Illuminated & Non-Illuminated options
- Large selection of sizes & styles

## Vandal Resistant

Switches



- High corrosion resistance
- Domed, low & prominent profiles
- IP66 & IP68 sealing versions
- Illuminated & non-illuminated
- Front & rear panel mount versions

## Piezo Switches

Switches



- Dust, dirt, chemicals & water resistant
- Sealed to IP68 & IP69K
- 16, 19 or 22mm diameter
- Millions of cycles/actuations
- Illuminated & non-illuminated options

## IEC Connectors

IEC Connectors



- IEC Connectors, Inlets & Outlets
- EC & EN 60320 Standards
- UL, CSA, VDE & CE approved
- C13, C14, C15, C16, C18, C19 & C20 as well as Sheet E, F, H, I & J types

## Mini Series

Circular Power Connectors



- Ratings up to 10A, 380V ac
- 2, 3, 4, 6 or 8 contacts
- IP67 & IP68 protection
- Plug & receptacle connectors
- UL approved, compact design

## Battery Holders

Battery Holders



- AAA, AA, C, D & PP3 battery sizes
- Accommodating 1, 2, 3 or 4 cells
- IP67 sealed versions
- Suitable for PCB mounting
- Panel mounting versions

## Refrigerator Switches

Switches



- Momentary on & off switching
- Splash resistant variants
- Choice of actuators
- Switch rating from 0.2A, 250Vac up to 5A, 250Vac

# Consumer Goods.

The modern day home is filled with many consumer electronics and devices that require reliable electronic components. With smart homes becoming increasingly connected along with the growth of the consumer electronics market, our range of power connection and switch solutions are perfect for meeting the needs of many small or large domestic appliances including brown and white goods as well as outdoor gardening equipment.

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- Professional Hair Dryer
- Cooker Oven
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- High End Jacuzzi
- Portable Alarm Systems
- Coffee Machines
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- Chest Freezer



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- Domed, low & prominent profiles
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- Illuminated & non-illuminated
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## IEC Connectors

IEC Connectors



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## Push Button

Switches



- Domed, low & prominent profiles
- IP66, IP67 & IP68 sealed versions
- Illuminated & non-Illuminated options
- Front & rear panel mounted versions
- Miniature, round, rectangular & vandal options available

## 400 Series

Circular Power Connectors



- Ratings up to 8A, 250V ac/dc
- 2, 3, 4, 6, 8, 10 & 12 contacts
- IP66, IP67, IP68 & IP69K protection
- Pin or socket, screw thread locking
- CE, UL, CSA & VDE approvals

## Refrigerator Switches

Switches



- Momentary on & off switching
- Splash resistant variants
- Choice of actuators
- Switch rating from 0.2A, 250Vac up to 5A, 250Vac

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