

New product introductions  
from Avnet Abacus: Autumn 2019

Welcome to the NPI brochure from Avnet Abacus, our round up of the latest product and technology innovations to enhance your design. To view full product details and datasheets, click the picture.

## Featured manufacturers



AVNET<sup>®</sup> ABACUS

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## AMPHENOL ICC RJE1R SERIES HIGH PERFORMANCE MODULAR JACKS



[VIEW PRODUCT DETAILS](#) 

The Amphenol ICC broad range of I/O Registered Jacks (RJ) offer solutions to meet the increasing demand for faster speeds and greater bandwidth required by telecom and networking markets for VoIP, Ethernet, WLAN, medical, and industrial applications. All of our connectors are PoE and PoE+ compatible and are RoHS and IEC 60603-7 compliant. Amphenol ICC's high performance line of connectors meet Cat5e, Cat6, and Cat6A specification performance levels per EIA-568-C.2 without external assistance. Amphenol's discerning designs allows for easy upgrade from Cat5e to Cat6 or Cat6A.

### Features and benefits

- Variety of LED options
- Customers can opt for the LED color of their choice
- Standard size
- Optimises the PCB
- Accommodates industry standard plugs
- Can mate successfully with all types of standard plugs
- Press fit contacts
- Eliminates the need to solder the connector to a PCB
- Various shield options available
- Accommodates a wide range of EMI needs
- Meets Cat5e performance per EIA-568-C.2
- Supports up to 2.5G Ethernet

## AMPHENOL ICC RJSGE SERIES STACKED MODULAR JACKS



[VIEW PRODUCT DETAILS](#) 

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- Accommodates industry standard plugs
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- Press fit contacts
- Eliminates the need to solder the connector to a PCB
- Various shield options available
- Accommodates a wide range of EMI needs
- Meets Cat5e performance per EIA-568-C.2
- Supports up to 2.5G Ethernet

## AMPHENOL ICC FLA SERIES DIMMING RECEPTACLE – ANSI C136-41



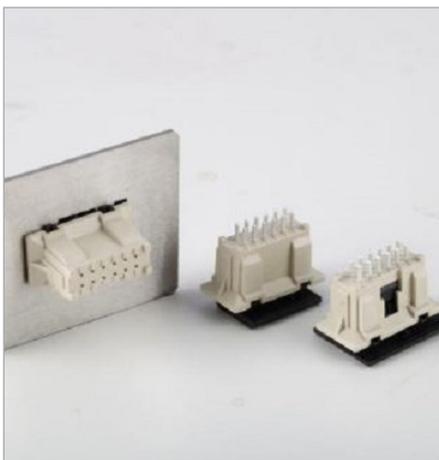
[VIEW PRODUCT DETAILS](#) 

The Amphenol ICC FLA series dimming receptacle – ANSI C136-41 is designed with power and dimming/signal contacts to provide a connection between dimmable photocell and the luminaire for commercial and utility lighting.

### Features and benefits

- 0, 2 or 4 dimming contacts options
- UL94V-0 rated high temperature resistant housing
- Operating temperature from -40°C to +105°C
- RoHS compliant
- Receptacle comes pre-terminated with wire ranging from 18AWG to 14AWG rated at 105°C or 150°C
- Design and application flexibility
- Ensures application safety
- Suitable for wide range of application environments
- Meets environmental, health and safety requirements
- Ease of integration into new or existing lighting fixtures

## AMPHENOL ICC MINITEK® 2.00MM BLIND MATE INTERFACE (BMI) CONNECTORS



[VIEW PRODUCT DETAILS](#) 

Minitex® 2.00mm Blind Mate Interface (BMI) is a flexible and comprehensive solution designed for application with a current rating up to 2A per circuit. It allows misalignment and provides floating for easy blind mate connections. BMI option is available in dual row with 8 or 12 circuits.

### Features and benefits

- Blind mate interface
- Allows  $\pm 2.00\text{mm}$  catching for blind mating
- Floating receptacle option available
- Allows  $\pm 1.00\text{mm}$  misalignment in x and y axes
- Passive locking on housing with low thumb latch operation
- Ensure secured mating retention
- Fully polarised housings
- Prevents accidental mismatching
- Scoop-proof housings
- Ensure terminals and header pins are not damaged from misuse
- Available in through hole, PIP and SMT as option
- Compatible with multiple manufacturing processes
- Existing crimp section and automated crimp tooling from 30AWG to 22AWG
- No specific industrial tools required
- Glow wire compliant
- Complies with international standard IEC 60335-1 for household appliances
- UL flammability
- Better safety
- RoHS compliant, halogen free and lead-free
- Meets environmental, health and safety requirements

## AMPHENOL ICC MRU SERIES USB 2.0 CONNECTOR



[VIEW PRODUCT DETAILS](#) 

Amphenol ICC's MRU series of USB 2.0 type A connectors provide IP67 protection for enclosures per IEC 60529. With data rates up to 480Mb/s, the connector series is designed to provide a standard USB interface for enclosures exposed to harsh environments. While these connectors are offered as mating pairs, the receptacles can also mate with any other standard USB 2.0 plug. This connector series is suitable for industrial, telecommunication, datacom, medical, energy, transportation, etc.

### Features and benefits

- Standard USB type A mating interface
- UL94V-0 rated high temperature resistant housing
- Available as mating combination of both panel-mount receptacle and cable-side plug
- Locking features
- RoHS compliant

### Applications

- No special cable/plug side solution required
- Wide operating temperature of -45°C to +85°C
- Available as mating combination of both panel-mountreceptacle and cable-side plug
- Solution enables IP67 application environment
- Provides secure mating and data transmission
- Meets environmental, health and safety standards

## AVX 00-6791 SERIES RF COAXIAL IDC CONNECTORS



[VIEW PRODUCT DETAILS](#) 

Designed to simplify the connection process, the AVX 6791 series wire to board connectors for coaxial cables enable simple termination with one press. Expanded the proven-reliable IDC (Insulation Displacement Connector) from signal/power transmission to high frequency transmission field up to 6GHz, the IDC contact pierces the jacket and insulation of the cable and makes direct contact with the strands and conductor of the wire at the same time.

### Features and benefits

- Can replace costly traditional RF connector systems
- Good RF performance up to 6GHz
- Mechanically strong with peel off force up to 70N
- Easy assembly process with ability to automate

### Applications

- The connector comes in multiple types for different coaxial cables.
- Small package size and mechanical strength allows usage in automotive and industrial antenna applications
- Reference application notes 201-01-214

# Connectors

## BEL MAGNETIC SOLUTIONS QUAD PORT 1GBASE-T 100W MAGJACK® ICMS



[VIEW PRODUCT DETAILS](#) 

The MagJack® brand of 1GBase-T 100W, 4-pair power over Ethernet ICMS are aimed at customers looking to upgrade their product performance for maximum power – 100W, or 1A over standard Ethernet cable. Customers can implement 100W PoE to basically double the amount of power their product can handle over any existing application, while still operating at Gigabit Ethernet speeds. These parts are backward compatible to existing Ethernet networks. The 100W products are ideal for LED lighting applications at both the switch side and lighting ballast side.

### Features and benefits

- 1GBase-T capable design
- 100W PoE
- Industry standard footprint and pinout
- Compatible with all known 1GBase-T current-mode and voltage-mode PHYs on the market today
- Can be used on PoE products where 60W of power is not enough
- 1G products are footprint compatible to each other

### Applications

- 5G cellular switching applications
- High power sourcing applications (low density 1GBase-T Ethernet switches requiring up to 100W of 48V power)
- Higher bandwidth wireless access points
- High powered devices (LED lighting & Ethernet cameras that require more than 60W of power)
- Base stations
- Large screen video display units

## HIROSE CX SERIES USB TYPE-C CONNECTORS



[VIEW PRODUCT DETAILS](#) 

The Hirose CX series is a USB 3.1 Gen2 connector and 10Gbps high-speed transmission can be achieved that transfers data twice as fast compared to a conventional 5Gbps USB 3.0 connector.

### Features and benefits

- Number of contacts: 24
- Pitch: 0.4mm SMT/0.8mm DIP
- Current rating: 1.25A (Pin No. A1, A4, A9, A12, B1, B4, B9, B12) 0.25A (others)
- Voltage rating: AC 20V
- Transmission speed: 10Gbps
- Mating cycles: 10000

## HIROSE FH28K SERIES OF ROBUST FLAT FLEXIBLE CABLE/FLAT PRINTED CABLE



[VIEW PRODUCT DETAILS](#) 

The Hirose FH28K series can withstand higher operating temperatures than the standard FFC/FPC connectors with a temperature range of up to 125°C; with this heat resistance capability the connector satisfies the needs of severe automotive requirements.

### Features and benefits

- Satisfies severe automotive requirements: heat resistance 125°C
- Firm and clear tactile click to confirm lock completion
- Robust lock design preventing actuator coming off
- FPC tabs allow high connection reliability
- High FPC retention force
- User-friendly: improved FPC insertion and 0.3mm FPC/FFC thickness
- RoHS compliant, halogen-free product

## HIROSE FH52K SERIES OF ROBUST AND FLAT FLEXIBLE CABLE/FLAT PRINTED CIRCUIT



[VIEW PRODUCT DETAILS](#) 

The Hirose FH52K series satisfies the needs of severe automotive requirements with its heat resistance capability. The connector can in fact withstand higher operating temperatures than the standard FFC/FPC connectors, with a temperature range of up to 125°C compared to the FH52 series.

### Features and benefits

- 125°C heat resistant connector to satisfy severe automotive requirements
- Robust lock structure with unique contact design
- Increased FPC/FFC retention force with tabs
- Easy visual inspection and enhanced PCB retention force by L-shaped metal fittings
- Board area under the connector is available for PCB patterning
- Compatible with automatic mounting
- RoHS compliant, halogen-free product

# Connectors

## HIROSE DF51K SERIES WIRE-TO-BOARD CONNECTORS FOR STRENGTH AND DURABILITY



[VIEW PRODUCT DETAILS](#) 

The DF51K series of robust wire-to-board connectors has been designed for applications requiring more strength and durability such as industrial machinery, medical devices, smart meters, industrial robots, and many others.

### Features and benefits

- Number of contacts: 1 row: 2 to 6; 2 rows: 4 to 30
- Contact pitch: 2mm
- Current rating: 2A (max.)
- Voltage rating: AC/DC 250V
- Temperature: -55°C to +105°C
- Cable size: AWG 22 to 30
- Accepts resin sealing
- UL/C-UL certified

### Applications

- Office equipment
- Industrial machinery
- Industrial robots
- Amusements equipment
- Medical equipment

## MOLEX 172253, 172258, 172256, 172264 SERIES ULTRA-FIT TANGLESS POWER CONNECTORS



[VIEW PRODUCT DETAILS](#) 

The Murata Ultra-Fit power connectors solving four key design challenges while offering the premium housing features of proven Mini-Fit and Micro-Fit 3.0 connector systems. Color-coded housings mitigate the risk of mis-mating. Optional TPA retainers significantly reduce terminal backout. A streamlined design that is 17% smaller than competing power connectors provides space savings, and an ultra-low mating force reduces operator fatigue when mating numerous high-circuit connectors.

### Features and benefits

- Multiple mechanically keyed color-coded options
- Optional TPA (Terminal Position Assurance) retainer
- Positive-lock housing with anti-snag design
- Terminal interface with six independent points of contact (split-box terminal design)
- Ultra low mating force terminal
- Fully isolated terminals
- Multi-color cable configurations with Ultra-Fit TPA connectors available off the shelf

### Applications

- Automotive
- Consumer
- Defense

## MOLEX MULTICAT MID-POWER CONNECTORS WITH PRECISION-MACHINED CONTACTS



[VIEW PRODUCT DETAILS](#) 

Currently, locking mechanisms on many wire-to-wire and wire-to-board power connectors are metalised, increasing the connector size and weight. This creates difficulties for designers dealing with size and weight constraints in many applications, including drones and industrial automation. Molex has designed the wire-to-wire and wire-to-board MultCat power connector with a locking mechanism that is both compact and lightweight, easing OEMs' design constraints.

### Features and benefits

- 2 piece hermaphroditic backshell
- -40°C to +150°C operating temperature range
- Mating cycles: at least 500
- Manual mating/unmating
- Scoop-proof design
- High-Power 3 circuit circular components available
- High-power version: 1200V; mid-power version: 500V
- High-power current: 14A to 40A per contact

### Applications

- Commercial aviation
- Commercial vehicle
- Industrial automation
- Medica
- Telecommunications/networking

## MOLEX 206461, 206832, 206462, 206460 SERIES MICRO-FIT+ CONNECTORS



[VIEW PRODUCT DETAILS](#) 

The Micro-Fit+ connector is a wire-to-board system which offers a 3.00mm pitch, a higher-current rating of 12.5A and superior design options for flexibility and efficient assembly.

### Features and benefits

- Fully isolated contacts on each side of the interface
- Smaller PCB footprint
- Enhanced TPA design
- V-0/glow wire combination resin
- Unique keying design
- Reduced mating force by 40%
- Fully polarised housings

### Applications

- Consumer
- Telecommunications/networking
- Medical
- Sustainable energy
- Solar power
- Automotive

## MOLEX 204318, 204365, 204316, 204313, 203263 SERIES COEUR CST HIGH-CURRENT INTERCONNECTS



[VIEW PRODUCT DETAILS](#) 

Molex Coeur CST high-current interconnect system provides up to 1.0mm of float (industry leading) due to its unique design. This will serve to assure ease of mating and also prevent potential damage to the socket contacts. The 204318, 204365, 204316, 204313, 203263 series offer a mated profile as low as approximately 5.00mm. It can do so without the compromise of having to have large protrusion above or below the mated boards.

### Features and benefits

- Capable of 30A to above 200A current rating
- Multiple contact beams
- Wave springs provide float mechanism so entire core socket assembly moves within housing
- Terminal retention housings
- Termination methods include busbars, PCBs and wire
- One common contact design in all CST sockets regardless of form factor sizes
- Premium housing features available
- Fully shrouded female and male contacts

### Applications

- Data center solutions
- Industrial
- Telecommunications/networking

## MOLEX 53460, 53984, 53462, 55445 SERIES 2.00MM I/O PCB CONNECTORS



[VIEW PRODUCT DETAILS](#) 

Molex's 2.00mm I/O connector system is available in 6, 8 and 10 circuit options. The 6 and 10 circuit connector systems feature auto-mounting and reflow-soldering for wire-to-wire applications. Additionally, the 6 circuit option conforms to the IEEE 1394 standard, making this system ideal for industrial control applications.

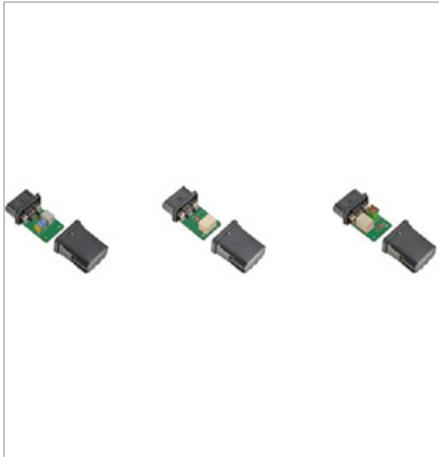
### Features and benefits

- Auto-mounting option
  - Saves time and improves operation efficiency
- 6 and 10 circuit PCB socket in straight and right-angle orientation
  - Offers design flexibility
- Stand-off design for reflow soldering
  - Improved soldering process

### Applications

- Industrial
  - Servo motor controller and amplifier

## MOLEX 200316 SERIES MICRO POWER DISTRIBUTION BOX (μPDB) SEALED MODULES



[VIEW PRODUCT DETAILS](#) 

Molex's Micro PDB (μPDB) sealed modules, offered in standard and customisable versions, are compact automotive power distribution boxes that provide a junction point for power switching and circuit protection for vehicles or subsystems within wiring architectures.

### Features and benefits

- Connectorised system
- Standard connector configurations
- Modular design
- Fully sealed with an IP6k7 NEMA rating
- Small footprint

### Applications

- Automotive
- Commercial vehicle

## STEWART CONNECTOR USB 3.0 TYPE-A VERTICAL CONNECTORS



[VIEW PRODUCT DETAILS](#) 

The Stewart Connector USB 2.0 and USB 3.0 type-A connectors are designed to meet the ever-growing demand for small yet reliable I/O connectors that comply to universal serial bus standards. The USB 3.0 connectors are fully backwards compatible with USB 2.0 and 1.0 connectors allowing for re-designs without having to update or change the mating connector. Stewart's line of USB connectors are known for being reliable, robust and versatile for all USB applications.

### Features and benefits

- High temperature plastic material used for reflow or wave soldering
- All configurations are shielded
- Through hole soldering
- Plug and play capability that allows for hot pluggable insertion and ejection

### Applications

- Desktop and laptop computers
- Portable storage devices
- IoT applications
- Printers and scanners
- Audio and diagnostic applications
- POS equipment
- Servers
- Game ports

## STEWART CONNECTOR IP20 MODULAR PLUGS



[VIEW PRODUCT DETAILS](#) 

Stewart Connector was pleased to introduce a complete line of IP20 rated modular plugs complimenting the existing standard RJ45 modular plugs. The IP20 rated RJ45 modular plug line has been developed to bring reliable data connections to industrial environments at Gigabit Ethernet (1000Base-T) through 10 Gigabit Ethernet (10GBase-T) transfer rates while supporting Power over Ethernet (PoE) applications.

### Features and benefits

- Modular plug options for cable conductors up to 1.5748mm and overall diameters up to 8.382mm
- Suitable for CAT6A, CAT6, CAT5E applications delivering 10G base-T and Gigabit Ethernet
- Low profile design allows for use in high density switches and routers
- Packaging available for both field installation and factory terminations
- Supports PoE applications

## TE CONNECTIVITY LUMAWISE DRIVE LED HOLDER TYPE Z50 DALI-2



[VIEW PRODUCT DETAILS](#) 

The TE Connectivity LUMAWISE drive LED holder type Z50 DALI-2 (Digital Addressable Lighting Interface) allows luminaire designers to remove driver boxes from spot and track lighting, creating a more aesthetically pleasing lighting solution. LUMAWISE drive LED holders bring integrated functionality to the already successful Zhaga inspired range of LED holders.

### Features and benefits

- Achieve an elegant luminaire design through a 'Driver on Board' solution
- Designed to meet the requirements of Zhaga book 12
- Provides thermal and electrical connection to four different CoB sizes
- Achieve design flexibility with an LED holder available with four different current outputs
- Obtain added functionality with DALI control

### Applications

- Track lighting
- Spot lighting
- Downlights

## TE CONNECTIVITY RAYCHEM CANBUS CABLE



The TE Connectivity Raychem CANbus (Controller Area Network) cables offer speeds up to 1Mb/s for your military ground system, marine and aerospace environments. TE Connectivity's CANbus cables are designed to provide speeds up to 1Mb/s. Designed in accordance with the J1939 requirements, we offer cables to both J1939-11 and -15 for military ground vehicles. In addition to the J1939 CANbus cables, we offer designs which cater to marine and aerospace applications as well. TE Connectivity's ruggedised constructions provide customers a solution which withstands most harsh environmental exposures.

### Features and benefits

- High performance twisted pair
- Shielded and unshielded variations available
- Flexible design
- Easier routing through a system
- 18AWG to 26AWG available

### Applications

- Military ground systems
- Military and commercial aerospace
- Marine
- Flight control
- Glass cockpit

[VIEW PRODUCT DETAILS](#) 

## TE CONNECTIVITY ZSFP+ 1X3 CAGE ASSEMBLIES



TE Connectivity was pleased to introduce an 1x3 zSFP+ cage assembly that offers a configuration for high-speed applications and is being adopted by key industry players for their 5G wireless platforms to address the design challenges of configuration upgrades.

[VIEW PRODUCT DETAILS](#) 

## TE CONNECTIVITY SOLARLOK 2.0 CONNECTOR



[VIEW PRODUCT DETAILS](#) 

The TE Connectivity SOLARLOK 2.0 connector is a tool-less field installable product using Insulation Displacement Contact (IDC) technology. Offering the installer an easy, quick and reliable connection from the PV cable to the PV panel. This incorporates the SOLARLOK 1500V PV4-S interface and meets the latest solar PV needs. SOLARLOK 2.0 connectors are available in both male and female versions and are gel-filled, which is a unique feature in the Solar market to ensure IPx8 water ingress protection.

### Features and benefits

- Reduce total applied cost of value chain
- Accelerate the termination process with loose parts to handle and no customs tools required
- Reduce 80% installation time in comparison to market standard PV DC connectors (with multi-components and crimp-contacts)
- Unique gel-filling ensure IPx8 water ingress protection (1m/24hours)

### Applications

- PV installations
- PV systems
- Inverters

## TE CONNECTIVITY MICRO-COAXIAL RECEPTACLE



[VIEW PRODUCT DETAILS](#) 

TE Connectivity's micro-coaxial receptacles offer excellent electrical performance to connect an RF cable assembly or antenna to a main printed circuit board in a broad range of applications.

### Features and benefits

- Reliable electrical performance and robust design
- Components are manufactured under high precision tolerance
- TE Connectivity can offer competitive pricing for the micro-coaxial receptacles
- TE Connectivity's engineering and manufacturing expertise and global footprint enable fast delivery
- With the launch of these RF receptacles, together with the existing antenna and RF cable assembly portfolio, TE Connectivity can provide RF total solution

### Applications

- Wearables
- Rugged phones
- Smart meters
- Smart speakers
- Infotainment
- Industrial devices

## TE CONNECTIVITY LUMAWISE LED HOLDERS FOR BRIDGELUX® VESTA® SERIES DIM-TO-WARM COB



TE Connectivity was pleased to introduce a LUMAWISE LED holder product extension for Bridgelux®Vesta® series dim-to-warm COB LEDs. LUMAWISE LED holders are market proven providing a reliable electrical and mechanical connection for a light fixture's power source, heat sink and reflector. Clearance was created within the existing one piece Z45 and Z35 series LED holder housings to accommodate added components on the Vesta COB products. Poke-in wire connections for ease of termination and adhesive tape for COB retention during assembly are features carried over from the original Z45 and Z35 LED holders.

### Features and benefits

- Provides a reliable, competitively priced solution utilising our one-piece housing design
- Quick and easy assembly of the COB LEDs into the luminaire
- Optics close to light emitting area
- Fast and easy termination

### Applications

- Spot lights
- Downlights
- Track lights
- Street lights
- General lighting
- Horticultural lighting

[VIEW PRODUCT DETAILS](#) 



## C&K LCW SERIES SUBMINIATURE SEALED SNAP SWITCHES



The C&K LCW series offers cost effective subminiature sealed snap-acting switches. With a wide variety of actuator configurations including pin plunger, short lever, long lever and simulated lever, these switches are highly adaptable and suitable for a wide range of applications, mostly found in the industrial market. Their compact design and range of available terminal configurations deliver valuable space savings when mounted on a PCB.

### Features and benefits

- Compact design
- Quick connect, solder terminals, PC terminals, wire leads option
- Wide variety of actuator styles
- RoHS compatible, RoHS compliant
- IP67
- New generation price competitive

### Applications

- Smart energy metering
- Switchgear
- Motorised equipment
- Sump pump
- Thermostatic controls

[VIEW PRODUCT DETAILS](#) 

## C&K KSC DCT SERIES SEALED TACT SWITCHES



The C&K KSC DCT series offers sealed tactile switches for SMT with SPDT function. This dual-circuit functionality provides two outputs from a single input. Housed in a tiny 6.2mm x 6.2mm x 2.9mm PCB-mount package, the silicone 70SH actuator included in the package extends the height to 5.2mm above the PCB surface for easy operation and easier integration through pre/post travel.

### Features and benefits

- SPDT NC-NO
- Soft silicone actuator 5.2mm high
- J or G terminations
- IP67

### Applications

- Automotive openings
- Electrosurgical tools
- Industrial electronics

[VIEW PRODUCT DETAILS](#) 

## C&K PTS815 SERIES 4.2MM X 3.2MM SMT TACT SWITCHES



[VIEW PRODUCT DETAILS](#) 

The C&K PTS815 series offers tactile switches with a 4.2mm x 3.2mm footprint in SMT version with 2.5mm height. Three actuation forces are available: 180gf, 250gf and 400gf. Its hard actuator ensures that it can be integrated into standard processes, with no need for an additional interface button. These small tactile switches have an operating life lasting up to 100,000 actuations.

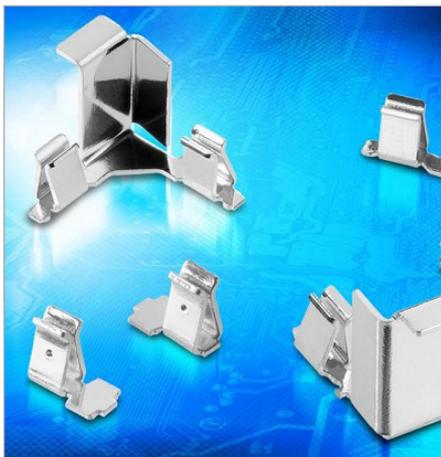
### Features and benefits

- 4.20mm x 3.20mm form factor
- Hard actuator in 2.50mm height
- IP40

### Applications

- IoT devices
- Home automation
- Remote controls
- General usage applications

## HARWIN S0911-46R AND S0921-46R SERIES SMD SHIELD CLIPS



[VIEW PRODUCT DETAILS](#) 

The Harwin shield clip S0911-46R is the smallest surface mount shield clip on the market, now making it possible for the smallest of cans with sides of 1mm to be fixed to a pcb by hand. The S0921-46R corner shield clip provides an additional shielding area for the corner gaps in the folded cans, improving all-round protection against interference. Shield clips avoid the need for soldering, are packaged in tape and reel for automation, and enable the can to be easily removed in case of the need for inspection or regular servicing.

### Features and benefits

- Ease of manufacture for EMI shielding solutions and more environmentally friendly
- Use with maintenance or inspection
- Save space on your PCB with the compact clip design
- Make your PCB design flexible during development
- Increased shielding coverage
- Mid retention force for a high range of applications
- Packaged in tape and reel
- Protect against RFI

### Applications

- IOT
- Wearables
- Sensors with antennas
- Portable devices

## OMRON G2RL-E2 (23A) PCB POWER RELAY



[VIEW PRODUCT DETAILS](#) 

Omron Electronic Components has extended its popular G2RL power relay family with an extra high capacity 23A model, the G2RL-1A-E2-CV-HA, for switching the heaviest current loads in home appliance, industrial and HVAC applications.

### Features and benefits

- Small and high switching capacity
  - Achieve 23A with G2RL(16A) package (+44% capacity increase)
  - Contribute to downsize boards and design margin.
- High temperature
  - Widely use from home appliance to industrial use @105°C
- Long life
  - Contribute to longer life of product with 100K times ops

### Applications

- Cooking HA (cooking top/MWO)
- White goods (fridge/washing machine)
- Industrial inverter
- UPS, power supply

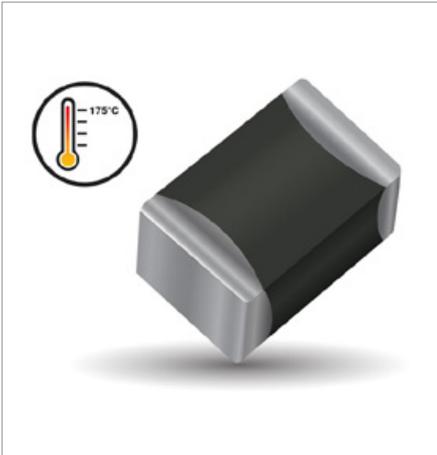
## SCHAFFNER FN9262 AND FN9266 HIGH PERFORMANCE FILTERS



[VIEW PRODUCT DETAILS](#) 

The high-performance filter series FN9262 (with fuse holder) and FN9266 (with dual pole switch), are developed for applications demanding high attenuation performance. These represent an enhanced version of the already market proven FN9260 and FN9264 filter families. One of the key applications for this filter is the medical market and the filter carries additional approvals making it easier for the end user to implement into their design. FN9262B and FN9266B (B-types) filters meet the insulation requirements according to IEC 60601-1 1MOPP (1 means of patient protection).

## AVX TRANSGUARD® VT SERIES HIGH-TEMPERATURE MLVS



[VIEW PRODUCT DETAILS](#) 

The AVX TransGuard® VT series high-temperature MLVs provide extremely reliable bidirectional overvoltage protection across operating temperatures extending from -55°C to +175°C with zero derating across the entire range, are qualified to AEC-Q200, and are currently available in compact, surface-mount 0603 and 0805 cases sizes.

### Features and benefits

- AEC-Q200 qualified
- No derating up to 175°C
- EMI/RFI filtering in the off-state

### Applications

- Under hood
- Down hole drilling
- Applications with temperatures up to 175°C

## BOURNS SF-2410XX-T SERIES FAST ACTING AND HIGH INRUSH SMD FUSES



[VIEW PRODUCT DETAILS](#) 

Bourns was pleased to introduce the SF-2410xx-T series of fast acting precision, fast acting, and high inrush SMD fuses to complement its already successful line of SinglFuse™ SMD Fuse products.

### Features and benefits

- Single blow fuse for overcurrent protection
- Ceramic tube wire-in-air design
- EIA 2410 size footprint
- Surface mount packaging for automated assembly
- UL 248-14 listed
- RoHS compliant and halogen free

### Applications

- Notebooks
- LCD monitors
- LCD backlight inverters
- POE, POE+
- PC servers
- Power supplies
- Game consoles
- White goods
- Battery protection

## BOURNS MF-USML/X SERIES LOW RESISTANCE PPTC RESETTABLE FUSES



[VIEW PRODUCT DETAILS](#) 

The Bourns Multifuse product line was pleased to introduce the 12V rated model MF-USML/X series of low resistance surface mount Polymer Positive Temperature Coefficient (PPTC) resettable fuses. The series includes Ihold current ratings from 1.75A to 5.5A at the 12V maximum rated voltage.

### Features and benefits

- Surface mount packaging for automated assembly
- Small footprint size (1210) and low profile for space-constrained mobile applications
- Ultra-low resistance
- Higher voltage withstand
- RoHS compliant and halogen free

### Applications

- Li-ion battery pack protection
- PC and server motherboard protection
- Mobile phone battery and charging protection
- USB port protection
- Power port protection
- Gaming console port protection

## BOURNS GMOV™ HYBRID OVERVOLTAGE PROTECTION COMPONENTS



[VIEW PRODUCT DETAILS](#) 

Bourns was pleased to introduce the GMOV™ line of hybrid overvoltage protection components combining the patented, space-saving FLAT™ Gas Discharge Tube (GDT) technology with a Metal Oxide Varistor (MOV) to create a compact and enhanced overvoltage protector that is a drop-in replacement for standard 14mm and 20mm MOVs.

### Features and benefits

- Hybrid design
- Compact form factor
- Matched MOV-GDT pairings
- Bourns® GDT with FLAT® technology
- GDT isolates MOV from line voltages
- Zero standby energy consumption and leakage
- Low capacitance
- Recognised to UL 1449, 4th edition
- Meets IEEE 62.41 ring wave test

### Applications

- LED lighting
- Surge Protective Devices (SPDs)
- Chargers
- Power supplies
- Consumer appliances
- Communications equipment

## BOURNS SMF4L AND SMF4L-Q SERIES DISCRETE TVS DIODE



[VIEW PRODUCT DETAILS](#) 

Bourns was pleased to introduce the ESD/EFT/ surge protection series products, model SMF4L and SMF4L-Q. These products are well suited for voltage transients and ESD protection in data lines and DC power supplies. Both series are available in a compact, low-profile, SOD-123FL package with a height of just 1.125mm, enabling designers to realise compact, high power density power supply designs.

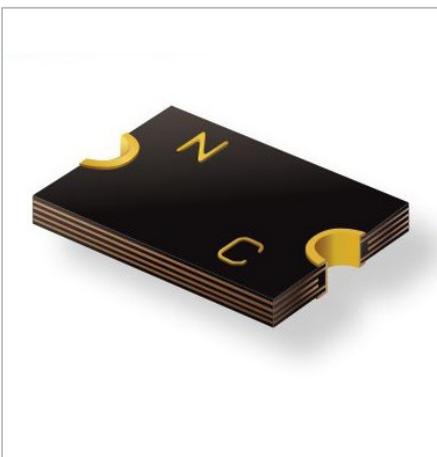
### Features and benefits

- Surface mount SOD-123FL package
- Standoff voltage: 12V to 58V
- Power dissipation: 400W
- RoHS compliant
- AEC-Q101 compliant (SMF4L-Q series)

### Applications

- Protection of power buses
- Protection of I/O interfaces
- Overvoltage transient protection
- Telecom, computer, industrial and consumer electronics applications

## BOURNS MF-GSMF SERIES HIGH POWER RATING RESETTABLE FUSES



[VIEW PRODUCT DETAILS](#) 

The Bourns Multifuse product line was pleased to introduce its 3425 (8764 metric) size surface mount MF-GSMF series of Multifuse® polymer PTC resettable fuses, beginning with model MF-GSMF300/36X-2. The initial model has higher voltage (36VDC) and hold current (3A) ratings with initial resistance as low as 0.01ohm.

### Features and benefits

- High power ratings
- Low profile
- Compatible with Pb and Pb-free solder reflow profiles
- Surface mount packaging for automated assembly
- Standard 8764mm (3425 mils) footprint
- RoHS compliant and halogen free

### Applications

- Telematics with CAN, wireless headphone power protection, WLAN, GPS and UMTS/LTE.
- Industrial controls
- IEEE ports
- Portable electronics

## BOURNS MF-FSMLX SERIES LOW RESISTANCE PPTC RESETTABLE FUSES



[VIEW PRODUCT DETAILS](#) 

Bourns Multifuse product line was pleased to introduce the 8V and 6V rated model MF-FSML/X series of low resistance surface mount Polymer Positive Temperature Coefficient (PPTC) resettable fuses. The series includes Ihold current ratings from 0.35A to 1.75A at the 8V maximum rated voltage, and Ihold current ratings from 2A to 3A at the 6V maximum rated voltage.

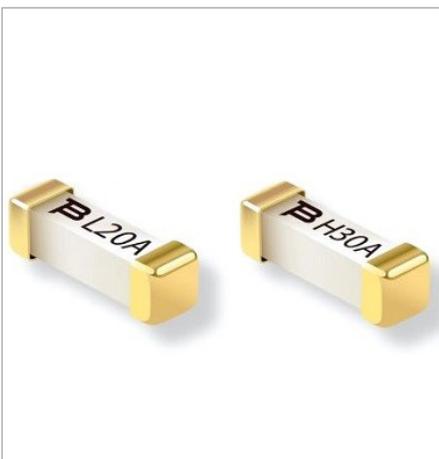
### Features and benefits

- Surface mount packaging for automated assembly
- 0603 footprint size and low profile for space constrained mobile applications
- Ultra-low resistance, quick response
- RoHS compliant and halogen free

### Applications

- Thermal protection for wearables, li-ion and polymer battery packs
- PC motherboards – plug-and-play protection
- Mobile phones, PDAs/digital cameras battery and charging protection
- HDMI 1.4 source protection
- Gaming console port protection

## BOURNS SF-3812FG-T, F-T & SP-T SERIES SMD FUSES



[VIEW PRODUCT DETAILS](#) 

The Bourns SF-3812FG-T and SF-3812F-T model families are UL 248-14 listed, and the SF-3812SP-T model family is UL 248-14 listed and meets IEC 60127 requirements. All three families utilize a ceramic tube structure with gold plated end caps to achieve higher rated voltage and breaking capacity.

### Features and benefits

- Single blow fuse for overcurrent protection
- Ceramic tube wire-in-air design
- EIA 3812 size footprint
- Surface mount packaging for automated assembly
- UL 248-14 listed and Model SF-3812SP-T meets IEC 60127 requirements
- RoHS compliant and halogen free

### Applications

- Storage systems
- Powersupplies
- Voltage regulator modules
- Battery management systems
- POE, POE+
- Protection on PCBs
- Advance Telecommunication Computing Architecture (ATCA) applications
- Power adaptors
- Power boards
- Voltage regulator modules
- Medical equipment (low/medium risk)

## MURATA DFE2HCAH AND DFE2MCAH SERIES ESD-RESISTANT POWER INDUCTORS



[VIEW PRODUCT DETAILS](#) 

Among Murata manufacturing's flagship DFEC series power inductors, which command a large market share for use in consumer products such as smartphones, the 1008 and 0806 sizes are being commercialised for in-vehicle use with improved quality specifications as the DFE2HCAH and DFE2MCAH series, respectively.

### Features and benefits

- DFE2HCAH: 1KV ESD withstand voltage; DFE2MCAH : 500V ESD withstand voltage
- Wide operating temperature range from -40°C to +150°C
- High current capability due to metal alloy core; up to 5.8A
- Compact size: DFE2HCAH 2.5mm x 2mm x 1.2mm; DFE2MCAH 2mm x 1.6mm x 1.2mm
- AEC-Q200 compliant

### Applications

- Automotive applications such as ADAS
- Powertrain
- Safety components which high reliability inductors are required

## PANASONIC ECWFE SERIES FILM CAPACITORS



[VIEW PRODUCT DETAILS](#) 

The AEC-Q200 qualified ECWFG series (Metallised Polypropylene Film Capacitors) from Panasonic Industry Europe features an operating temperature range of -40°C to +110°C; a rated voltage of 630VDC, and a nominal capacitance range of 1.0µF to 4.7µF. This enables it to cater to most of the high frequency and high current circuitry in this segment.

### Features and benefits

- AEC-Q200 compliant
- High safety (with safety function)
- High moisture resistance(85°C, 85%, 500DC, 1000hrs)
- High thermal shock resistance(-55°C to +85°C, 1000 cycles)
- High temperature load test (125°C, 450VDC, 1000hrs)
- Flame-retardant plastic case and non-combustible resin
- RoHS compliant

### Applications

- Automotive
- Industrial power supply
- EV/PHEV charger
- DC/DC, AC/DC converter
- Renewable energy

## PANASONIC VIBRATION PROOF SMD ELECTROLYTIC CAPACITORS



Panasonic has a line extensions for its series of electrolytic capacitors. The vibration type SMD capacitors are resistant to 30G of vibration and are available in sizes Ø6.3 – 18 (except for the EB series). Potting and adhesive fixation has been reduced in order to simplify customers' manufacturing processes.

### Features and benefits

- Acceleration: 294m/s<sup>2</sup> (30G)
- Frequency: 5Hz to 2000Hz
- Amplitude (max.): 5mm (peak to peak)
- Direction and duration of vibration: X, Y, Z axis for 2hrs each
- Capacitance change: within ±5% of initial measured value

[VIEW PRODUCT DETAILS](#) 

## VISHAY AY1 SERIES AEC-Q200 QUALIFIED X1 / Y1 CERAMIC DISC CAPACITORS



Vishay was pleased to introduce a series of automotive grade AC line rated ceramic disc safety capacitors that are the industry's first such devices to offer AEC-Q200 qualification for class X1 (760VAC) / Y1 (500VAC) applications in accordance with IEC 60384-14.4.

### Features and benefits

- AEC-Q200 qualified
- Withstands 85/85/1000 hours test
- Can pass 1000 temperature cycles (from -55°C to +125°C)
- Can pass 10kV pulses (10 per polarity)
- Complying with IEC 60384-14 4th edition
- High reliability
- Singlelayer AC disc safety capacitors
- PPAP (AIAG version) is available

### Applications

- X1, Y1 according to IEC 60384-14.4
- Application as Y capacitors for AC line filter and primary-secondary coupling on battery chargers for PHEV/EV
- Application as filter capacitors on DC/DC converters for PHEV/EV and HEV

[VIEW PRODUCT DETAILS](#) 

## VISHAY PHMKP SERIES LVAC POWER CAPACITORS



[VIEW PRODUCT DETAILS](#) 

Vishay was pleased to introduce a series of LVAC power capacitors featuring ESTAspring, the industry's first lever-operated spring terminal connection. Reducing assembly time by 60%, the Vishay ESTA PhMKP series increases connection reliability in high vibration applications.

### Features and benefits

- Maintenance free
- Reduced assembly times up to 60%
- Vibration proof in wind power plants and during transport
- Optical connection check: lever closed = successfully contacted
- 2.5mm<sup>2</sup> up to 25mm<sup>2</sup> with wire-end sleeve
- Defined continuous contact force through spring technology
- Stainless steel spring
- Corrosion proof
- Fast and easy lever-operated wire connection

### Applications

- Copper alloy for conductor material
- UL and cUL
- Wind power plants
- Solar panels and inverters
- Thermal power station
- Power factor correction 1000VACRMS
- Harmonic filter

## VISHAY HVCC SERIES RADIAL-LEADED HIGH VOLTAGE CERAMIC DISC CAPACITORS



[VIEW PRODUCT DETAILS](#) 

Vishay was pleased to introduce a series of radial-lead high voltage single layer ceramic disc capacitors in compact sizes. The industry's only such components to deliver high capacitance values of 2nF, Vishay Roederstein HVCC series capacitors offer guaranteed load life performance of 1000hrs and a low dissipation factor of <1.5%.

### Features and benefits

- Ceramic single layer DC disc/AC disc capacitor
- High reliability
- High capacitance values up to 2nF

### Applications

- High voltage power supplies for x-ray sources and pulsed lasers
- Baggage scanner
- Medical x-ray

## VISHAY IHLP-6767GZ-8A AUTOMOTIVE GRADE INDUCTORS



[VIEW PRODUCT DETAILS](#) 

Vishay was pleased to introduce an automotive grade IHLP low profile, high current inductor in the 6767 case size. To save space in under the hood automotive applications, the Vishay Dale IHLP-6767GZ-8A combines a high continuous operating temperature to 180°C with a low profile of 7mm.

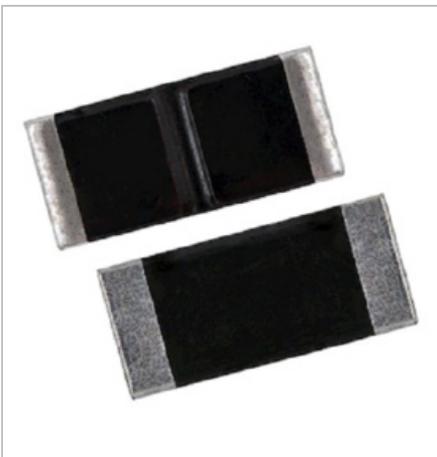
### Features and benefits

- High temperature, up to 180°C
- Shielded construction
- Excellent DC/DC energy storage up to 1MHz to 2MHz.
- Filter inductor applications up the SRF (see standard electrical specifications table).

### Applications

- Engine and transmission control units
- Diesel injection drivers
- DC/DC converters for entertainment/navigation systems

## VISHAY AUTOMOTIVE GRADE WFM POWER METAL PLATE™ CURRENT SENSE RESISTORS



[VIEW PRODUCT DETAILS](#) 

Vishay Intertechnology was pleased to introduce automotive grade WFM power metal Plate™ current sense resistors featuring 2W and 3W power ratings in 2010- and 2512-sized packages.

### Features and benefits

- High 2W and 3W power ratings
- Available in 2010 and 2512 package sizes
- Resistance values from 5mΩ to 500mΩ, with tolerances down to ±1%
- Low inductance values of 0.5nH to 5nH
- Low thermal EMF down to <math><3\mu\text{V}/^\circ\text{C}</math>
- Operating temperature range of -65°C to +170°C
- Excellent frequency response to 50MHz
- RoHS-compliant, halogen-free, and Vishay green

### Applications

- Automotive electronic controls, brushless DC motor controls, and battery management for electric and hybrid vehicles
- High power inverter/converter controls and large motor drives for industrial applications
- Power supplies for downhole instrumentation
- Inverter control for consumer appliances and HVAC systems
- Power management, conversion, and safety in servers and other computing applications

## AIMTEC AM2LO-Z SERIES 2 WATT OPEN FRAME DC-DC CONVERTER



[VIEW PRODUCT DETAILS](#) 

The AM2LO-Z is SMD DC/DC converter that offers great cost savings thanks to an improved manufacturing process. It also features excellent reliability and performance, offering a standard input voltage range of 3.3VDC and 5VDC as well as an output voltage range from 3.3V to 5V,  $\pm 3.3V$  and  $\pm 5V$ . This low height profile and open frame design will surely benefit your system design. This series offers great operating temperatures, from  $-40^{\circ}\text{C}$  to  $+105^{\circ}\text{C}$  with full power up to  $85^{\circ}\text{C}$ . Also, an isolation of 4200 VDC for improved reliability and system safety as well as a great 6 500,000hrs MTBF come standard. The AM2LO-Z is perfect for instrumentation, industrial controls, communication and IoT applications.

### Features and benefits

- Operating Temp:  $-40^{\circ}\text{C}$  to  $+105^{\circ}\text{C}$
- High isolation voltage: 4200VDC
- Low ripple and noise, 150mV (p-p), typ.
- Unregulated output
- SMD type package

### Applications

- IoT
- Industrial
- Portable equipment
- Telecommunication

## AIMTEC AMSRL-Z OPEN FRAME SMD SWITCHING REGULATOR



[VIEW PRODUCT DETAILS](#) 

The Aimtec AMSRL-Z switching regulator is an ultra-low-profile open frame non-isolated DC-DC converter. The dimensions of AMSRL-Z series are of 19.5mm x 11.8mm x 5mm which is extremely compact for this class.

### Features and benefits

- Wide input range: 9VDC to 72VDC
- Operating temp.:  $-40^{\circ}\text{C}$  to  $+105^{\circ}\text{C}$
- Low ripple and noise, up to 75mV (p-p)
- Output short circuit protection (continuous)
- Regulated output
- Adjustable output voltage
- SMD type package with a height 5mm

### Applications

- IoT
- Industrial
- Portable equipment
- Telecommunication

## AIMTEC AM200W-NZ SERIES 200W DC-DC PHOTOVOLTAIC CONVERTER



[VIEW PRODUCT DETAILS](#) 

Aimtec's AM200W-NZ series is a 200W photovoltaic DC-DC converter. It provides an ultra-wide input voltage range of 300VDC to 1500VDC, high efficiency up to 87% and low no load power consumption for energy sensitive applications.

This series has input under-voltage protection, reverse input voltage protection, output short circuit, over-current and over-voltage protection to maintain the system's stability and avoid frequent restarts. These protections greatly reduce the probability of power supply failure while enhancing the safety performance of the modular power supply and the load under abnormal working conditions.

### Features and benefits

- Ultra-wide 300VDC to 1500VDC input voltage range
- Operating temp.: -40°C to +70°C
- High I/O isolation voltag: 4000VAC
- Low ripple and noise: 200mV(p-p), typ.
- High reliability, long lifespan: 300,000hrs
- Input reverse polarity and under voltage protection, output short circuit, overcurrent and over voltage protection
- Meets 5000m altitude requirements

## ARTESYN EMBEDDED TECHNOLOGIES 4-SLOT CASE AND HOLD-UP MODULE FOR MICROMP SERIES POWER SUPPLY



[VIEW PRODUCT DETAILS](#) 

Artesyn Embedded Technologies was pleased to introduce the four-slot case and an hold-up module for its second generation MicroMP ( $\mu$ MP) series configurable AC-DC power supplies. Designated  $\mu$ MPO9, the enclosure supports a maximum power output of 550 watts at 85VAC to 180VAC and 1100 watts and 80VAC to 263VAC. The hold-up module is designed for high-reliability applications and enables the supply to continue providing power for a period of time if the input power is interrupted.

### Features and benefits

- High power density (13.9W/cu-in)
- Full EN60950 ITE and EN60601 medical safety approvals
- Rugged MIL-STD-810E
- Optional conformal coating
- Industrial temperature range (-40°C to +70°C)
- Industrial shock and vibration (>50G)
- I2C interface and monitor of PFC
- PMBus® compliant
- Smart fan speed control
- Individual module inhibit
- EMI level B
- Up to 12 outputs

### Applications

- General industrial use
- Medical and laboratory equipment
- Test and measurement systems
- Telecommunications equipment
- Production and process control equipment
- Military and aerospace systems
- Data storage systems
- Burn-in systems
- Gaming systems

## ARTESYN EMBEDDED TECHNOLOGIES ATA SERIES 10WATT ISOLATED DC-DC CONVERTERS



[VIEW PRODUCT DETAILS](#) 

The Artesyn ATA series 10 watt isolated DC-DC converters are suitable for a diverse range of low power applications, including data communication, telecommunication and computer peripheral equipment, industrial automation and mobile battery-powered systems. The series comprises 14 variants, each of which is available in a mini dual-in-line package for through-hole mounting.

### Features and benefits

- Ultra compact DIP package
- 23.8mm x 13.7mm x 8mm
- Efficiency up to 80%
- I/O-isolation 1500VDC
- Ultra-wide 4:1 input range
- Operating temp. range: -40°C to +80°C (for DIP module)
- Remote ON/OFF control
- Input filter meets EN 55022,A and FCC, level A

## BEL POWER SOLUTIONS BCN25-700-8 3-PHASE 25 KW ON-BOARD BATTERY CHARGER



[VIEW PRODUCT DETAILS](#) 

Bel Power Solutions was pleased to introduce the BCN25-700-8, a 25kW on-board battery charger that converts 3-phase AC voltage to DC voltage. The enclosure is made of aluminum alloy and is liquid-cooled. Providing 25kW of output power for a single unit, and up to 100kW of output power for 4 units, the BCN25 has high efficiency and high reliability, with a compact footprint of 524mm x 340mm x 84mm and weighing only 19.4kg (42.77lbs).

### Features and benefits

- Up to 25kW output power
- 93% typical efficiency
- AC 3-phase input 460VAC to 575VAC  $\pm 10\%$  (line-line)
- DC output 250VDC to 800VDC, 37.5ADC
- J1939 compliant CAN control and monitoring
- Over-temperature, output over-voltage and over-current protections
- SAE 1455 complaint environmental standards
- IP65 and IP67 rating, stackable chassis
- Agency approved to UL2202 - Standard for Electric Vehicle (EV) charging system equipment

### Applications

- Charging of hybrid/full electric vehicles operating in mining environment and in industrial environment

## FLEX POWER MODULES PKE-A SERIES OF DC-DC POWER MODULES



[VIEW PRODUCT DETAILS](#) 

Flex Power Modules was pleased to introduce the PKE-A series of DC-DC power modules for the industrial and railways sectors, broadening its product range to meet increasing demand in these sectors. The modules are provided in sealed and encapsulated packaging, to ensure they will work reliably when subjected to dust, moisture, severe vibration and other harsh conditions.

### Features and benefits

- Industry standard case dimensions  
50.8mm x 25.4mm x 11.9mm
- High efficiency up to 91%
- 2250VDC input to output isolation
- Meets functional insulation and safety requirements according to IEC/UL 62368

## MEAN WELL KSC SERIES KNX LINE COUPLER



[VIEW PRODUCT DETAILS](#) 

The MEAN WELL KNX TP media coupler KSC series works as a KNX line/area coupler to provide a bi-directional data connection between two KNX TP lines/areas. Using the TP coupler application, KSC series can be used as a KNX TP line coupler to connect several KNX TP lines but also as a KNX TP area coupler to connect several TP areas or different KNX TP installation systems via a TP backbone. Using the TP repeater application, KSC series is able to extend a KNX TP line providing unfiltered data transfer and galvanic isolation between segments. Up to four-line segments can form a single KNX TP line by connecting three KSC-series line repeaters.

### Features and benefits

- KNX TP Line coupler/repeater
- Telegram filtering function
- Long messages support up to 240 byte APDU
- Trace the subline traffic
- Diagnostic functions
- Manual function

### Applications

- Office lighting
- Smart home lighting
- Luxury villas lighting
- LED indoor lighting
- Building automation

## MEAN WELL ICL-16 SERIES 16A AC INRUSH CURRENT LIMITER



[VIEW PRODUCT DETAILS](#) 

The MEAN WELL ICL-16 series is a 16A AC inrush current limiter, which can be used to reduce the temporary peak current caused by turning on AC power or capacitive loads. Adding the inrush current limiter after the AC circuit breaker can effectively reduce the chance to falsely trip AC circuit breaker when starting AC loads, which increases the overall reliability of the system.

### Features and benefits

- Suppresses 23A peak current and 16A continuous current
- 180VAC to 264VAC input
- Built-in thermal fuse and bypass relay
- Operation temperature -30°C to +70°C
- 2 installation options available:
  - DIN rail type ICL-16R, can be installed on TS-35/7.5 or 15 DIN rails
  - Linear type ICL-16L, can be installed on flat surface
- Dimensions:
  - ICL-16R (WxHxD): 35mm x 90mm x 54.5mm
  - ICL-16L (LxWxH): 175mm x 42mm x 24mm
- Safety: EAC, CE

### Applications

- Allow connecting multiple power supply at same line
- Allows smaller and faster circuit breaker Inductive and capacitive load
- Protects against unintended trigger of circuit breaker

## MEAN WELL KNX-40E 1280D KNX POWER SUPPLY WITH DIAGNOSTIC FUNCTION



[VIEW PRODUCT DETAILS](#) 

The MEAN WELL KNX power supply KNX-40E-1280 is a 1280mA power supply with high efficiency and a small footprint of only 4SU (72mm). The device has a KNX bus choke output and additional output for auxiliary power. The -30°C to +70°C wide temperature operating range can meet all kinds of applications. LED indicators are used in case of normal operation, overload conditions and RESET operation.

### Features and benefits

- EIB/KNX power supply with integrated choke
- Compact size with 4SU width(72mm)
- Safety extra low voltage (SELV)
- Suitable for TP1-256
- 180VAC to 264VAC input
- Protections: short circuit/overload (short-circuit-proof)/over voltage
- Cooling by free air convection
- Isolation class I
- LED indicator for normal operation, bus reset and bus overload
- Installed on DIN rail TS-35/7.5 or 15
- Over voltage category III
- 100% full load burn-in test

### Applications

- Intelligent home control
- Modern building automation
- Lighting control
- HVAC system
- Security system
- Blinds and shutters
- Monitoring systems
- Energy management
- Alarm monitoring

## MEAN WELL UMP-400 SERIES 400W SLIM AND MODULARISABLE FAN-LESS POWER SUPPLY



[VIEW PRODUCT DETAILS](#) 

MEAN WELL was pleased to introduce the AC-DC 400W low-profile modular fan-less power supply, UMP-400 series. This product is a 1U low profile power supply which can also be modularised. The concept of being flexible and modular makes it an uncommon type of power supply on the market. It not only can be used as a single enclosed PSU, but also a multiple outputs PSU if installs the available NID35/65/100 series DC-DC converter module cards into the UMP-400 PCB.

### Features and benefits

- Fan-less, slim design with 1U height
- Used as a single rail PSU to provide 24VDC to 48VDC output voltages
- Wide operating temperature ranges from -30°C to +70°C
- Meet OVCIII requirements
- Operate at 5000m altitude
- Meet 2x MOPP isolation requirements, ideal for BF rated medical equipment
- Safety compliance: CB, UL/cUL, Dekra EN62368-1, EAC and CE; Design refer to 60601-1

### Applications

- Diagnostic or biological facilities
- Test or measurement systems
- Telecommunication equipment
- Industrial automation machinery
- Industrial control system
- Mechanical and electrical equipment

## MEAN WELL LCM-40/60KN SERIES WORLD FIRST KNX MULTIPLE-STAGE CONSTANT CURRENT MODE LED DRIVER



[VIEW PRODUCT DETAILS](#) 

The MEAN WELL LCM-40/60KN series is a 40W to 60W AC/DC constant current mode output LED driver featuring the multiple levels selectable by dip switch and the KNX interface to avoid using the complicated KNX-DALI gateway. This series operates from 180VAC to 295VAC and offers different current levels ranging between 350mA and 1050mA.

### Features and benefits

- Constant current mode output with multiple levels selectable by dip switch
- KNX protocol
- Support Emergency Lighting (EL)
- Integrated constant light output
- Integrated KNX push button interface
- Synchronisation up to 10 units.
- Functions: manual dim, operation hours, power consumption feedback, log/linear curve selection... etc.

### Applications

- LED indoor lighting
- LED office lighting
- LED architectural lighting
- LED panel lighting

## MEAN WELL XLG-150/200 SERIES 150/200W LED POWER SUPPLY



[VIEW PRODUCT DETAILS](#) 

MEAN WELL offers a complete product choice, the XLG-150/200 series (15W to 200W) is officially unveiled after the launch of XLG-25/50/75/100 series (25/50/75/100W). The whole series adopts constant power mode design, which is convenient for customers to design and adjust driver current for various LED light sources.

### Features and benefits

- Full power at 70% to 100% operation (constant power mode)
- Wide input range 100VAC to 305VAC (class I).
- Protection function: SCP/OVP/OTP.
- 3 in 1 dimming function with isolation design.
- Surge protection: 6KV to 4KV (10KV to 6KV optional)
- India (EESL) version with input over voltage protection.
- Lifetime >50,000hrs

### Applications

- Skyscraper lighting
- Street lighting
- Floodlight lighting
- Stage lighting
- Fishing lighting
- Horticulture lighting
- Bay lighting
- DMX power supply
- Type HL for use in class I, division 2

## MEAN WELL XLG-75/100 SERIES 75/100W LED POWER SUPPLY



[VIEW PRODUCT DETAILS](#) 

In response to the miniaturisation trend of the lighting fixture design, MEAN WELL designed the XLG series, successfully reducing by 20% to 30% of the dimension. With the constant power mode design and other advantages, it is believed the launch of the XLG-75/100 series 75W to 100W LED power supply not only meets customers' demand for medium wattage, but further facilitates the various LED light sources design and current adjustment.

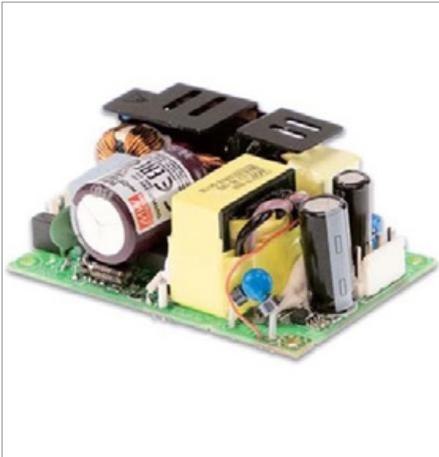
### Features and benefits

- Full power at 70% to 100% operation (constant power mode)
- Wide input range 100VAC to 305VAC (class I).
- Protection function: SCP/OVP/OTP.
- Metal case with IP67 for indoor and outdoor applications
- 3 in 1 dimming function with isolation design
- Surge protection: 6KV to 4KV (10KV to 6KV optional)
- India (EESL) version with input over voltage protection
- Lifetime >50,000hrs

### Applications

- Skyscraper lighting
- Street lighting
- Floodlight lighting
- Stage lighting
- Fishing lighting
- Horticulture lighting
- Bay lighting

## MEAN WELL RPS-120S SERIES HIGH EFFICIENCY MEDICAL GRADE OPEN FRAME POWER SUPPLY



[VIEW PRODUCT DETAILS](#) 

The RPS-120S series is the only medical grade 76.2mm x 50.8mm PCB type power supply on the market that can operate up to 120W under free air convection. The maximum power rating achieved by other 76.2mm x 50.8mm PCB type power supplies is 100W without external fan cooling. Other features of the RPS-120S include: 2xMOPP isolation level, suitable for use in type BF applications, 150W peak load capability for 10 seconds, -30°C to +85°C wide operating temperature range, no load power consumption <0.3W, 94% high efficiency, and operating altitude up to 4000 meters.

### Features and benefits

- 76.2mm x 50.8mm ultra-high power density miniaturised design (18.2W/in<sup>3</sup>)
- Full range 80VAC to 264VAC input with built-in PFC function
- 120W output power without external fan cooling, 150W peak load (10 seconds)
- 2xMOPP isolation level, low leakage current <150µA, suitable for type BF medical applications
- Suitable for installation in class I (with FG) or class II (no FG) systems
- No load power consumption <0.5W
- High efficiency up to 94%
- -30°C to +85°C ultra-wide operating temperature range
- Operation altitude up to 4000 meters
- Protections: short circuit/overload/over voltage/over temperature

- Compliance to medical (IEC/EN/ANSI/AAMI 60601)
- Safety: CB/UL/cUL/TUV/EAC/CE
- Dimensions (LxWxH): 76.2mm x 50.8mm x 28mm

### Applications

- Oral irrigator
- Hemodialysis machine
- Medical monitors
- Sleep apnea devices
- Pumps machine

## MEAN WELL CSP-3000 SERIES 3000W HIGH OUTPUT VOLTAGE POWER SUPPLY



[VIEW PRODUCT DETAILS](#) 

MEAN WELL is expanding its high-power enclosed types from low voltage to high voltage output, therefore releasing the CSP-3000 series 3000W high output voltage power supply. This is MEAN WELL's first high voltage output product, and there are not many similar products on the market.

### Features and benefits

- 180VAC to 264VAC input
- Built-in active PFC function
- High efficiency up to 93%
- Built-in DC fans for forced air cooling
- Output voltage/current programmable
- Active current sharing up to 7200W (2+1)
- Built-in remote ON/OFF control and power OK signal
- Auxiliary power 12V@0.4A
- Protections: short circuit/over current/over voltage/over temperature
- UL/Dekra/EAC/CB/CE safety approved
- Dimensions (LxWxH): 278mm x 177.8mm x 63.5mm

### Applications

- Factory control or automation apparatus
- Test and measurement instrument
- Laser related machine
- UV curing equipment
- Fish lamp
- Burn-in facility

## SCHAFFNER RWK3044 AND RWK3062 SERIES 3-PHASE AC LINE REACTORS



[VIEW PRODUCT DETAILS](#) 

Schaffner is unveiling the AC line reactor series RWK 3044 and RWK 3062.

The RWK 3044 and RWK 3062 are designed for 400VAC and 690VAC network, and providing impedance of 4% and 2%, respectively. The Schaffner PQ product portfolio is once again expanded by introducing the 2% 690VAC line reactor RWK 3062.

### Features and benefits

- Ensure reliability, performance and a long service life of electrical consumers
- Reduction of mains harmonics and commutation notches
- Help to meet international power quality standards
- Protection of motor drive electronics and DC link capacitors against mains transients
- Reduction of inrush and peak currents
- Improvement of conducted LF immunity
- Prevention from nuisance tripping caused by power line voltage spikes
- Improvement of true power factor

### Applications

- Oil and gas
- HVAC
- Robots
- Machinery
- Process automation equipment



## MOLEX 211297 SERIES 2-IN-1 EXTERNAL ANTENNA



[VIEW PRODUCT DETAILS](#)

The 211297 series 2-in-1 IP66-rated external antenna for use in automotive telematics, transportation and remote-monitoring applications. This compact antenna offers high bi-directional 4G/GPS signal performance with adhesive for easy placement.

### Features and benefits

- Compact, waterproof 3-in-1 external antenna (Diameter: 77mm; Height: 15mm)
- 3m cables
- Cable connectors
- FAKRA connectors (blue: GPS/BD, FAKRA model C; purple: 4G, FAKRA model D)
- FAKRA connectors (blue: GPS, FAKRA model C; purple: 4G, FAKRA model D; green: Wi-Fi, FAKRA model E)

### Applications

- Automotive and commercial vehicles telematics
  - Remote monitoring
  - Navigation devices
- Fleet management systems that require high-speed data requirements

## MOLEX 211624 SERIES GNSS/GPS ANTENNAS



[VIEW PRODUCT DETAILS](#)

Molex 211624 series low-profile GNSS ceramic antennas offer maximum space savings with an average total radiation efficiency of at least 60% over 1561MHz to 1602MHz bands and greater than 75% at the 1602MHz band. This 25-by-25mm patch antenna operates from -40°C to +125°C.

### Features and benefits

- Feeding pad
- Antenna radiator (low-profile GNSS)
- Ceramic patch antenna (GPS/BEIDOU/GLONASS)
- RHCP version offers horizontal plan of PCB (GPS/BEIDOU/GLONASS)
- Pick-and-place feature (RHCP/Helix SMT LDS-MID GPS Antenna)
- Feeding pad (RHCP/Helix SMT LDS-MID GPS antenna)
- Ceramic antenna housing (low-profile GNSS)
- Feeding pad (double-sided adhesive) (GPS/BEIDOU/GLONASS)
- Silver pin (GPS/BEIDOU/GLONASS)
- Laser Direct Structuring (LDS)-formed antenna radiator (RHCP/Helix SMT LDS-MID GPS antenna)
- Gold (Au) over Nickel (Ni) traces (RHCP/Helix SMT LDS-MID GPS antenna)

### Applications

- Commercial vehicle
- Consumer
- Industrial

## MOLEX 209142 SERIES 698 – 4000MHZ CELLULAR FLEXIBLE ANTENNA



[VIEW PRODUCT DETAILS](#) 

The Molex 209142 series achieving excellent performance and meeting desired 4G data rates with a small-sized antenna on a compact device remains a major technical challenge for mobile device manufacturers. Molex LTE cellular antennas are available in both cabled and SMT versions. SMT LTE antennas are compact and can be conveniently mounted on PCB corners to maximise the application's usable space.

### Features and benefits

- Ultra-compact, high gain available as SMT (ceramic) and cabled for direct-mounting to PCB via micro-coaxial connector (general cellular antennas)
- Balanced combo antenna with ground-plane-independent design (general cellular antennas)
- Poly-flexible, double-sided adhesive tape on antenna (general cellular antennas)
- Wide selection of micro-coaxial cable length options (general cellular antennas)
- Peel-and-stick adhesive mounting (LTE cellular antennas)
- Fixing pads (LTE cellular antennas)
- Antenna radiator (LTE cellular antennas)
- Peel-and-stick adhesive mounting (general cellular antennas)
- High radiation efficiencies (general cellular antennas)
- Coaxial cable to center-fed antenna attachment with over 18N of pull force (general cellular antennas)

- Ultra-compact, high gain available as SMT (ceramic) and cabled to be direct-mounted to PCB via a micro-coaxial connector (LTE cellular antennas)
- Ceramic antenna housing (LTE cellular antennas)
- Grounding pad (LTE cellular antennas)
- Fixing pads (LTE cellular antennas)

### Applications

- Smartphones and mobile devices
- Telecommunications/networking
- Automotive
- Consumer
- Industrial

## Sensors

### BOURNS BPS140 SERIES ENVIRONMENTAL SENSORS



[VIEW PRODUCT DETAILS](#) 

The Bourns BPS140 series has been designed to provide high sensitivity/accuracy, long-term reliability, high temperature capability and certain harsh media compatibility. The BPS140 pressure sensor line features certain harsh media compatibility and high temperature operation with high accuracy.

### Features and benefits

- Compensated output
- Harsh media monitoring
- Absolute and gauge types
- Isolated onboard electronics
- Ceramic port
- RoHS compliant

### Applications

- Industrial:
  - Refrigerant systems
  - Water level and pressure monitoring
- Medical devices (low/medium risk):
  - Diagnostic/analysis equipment
- Heavy Equipment:
  - Oil and fuel systems
- Exhaust gas pressure sensing

## PANASONIC ELECTRIC WORKS PAPIRS LOW PROFILE TYPE SENSORS



[VIEW PRODUCT DETAILS](#) 

Panasonic develops and produces PIR motion sensors, which combine easy integration, high reliability and environment-friendly materials.

The Panasonic PIR motion sensors abbreviated as PaPIRs, have different series of products, including:

- EKMB (WL) digital output for battery-operated devices (1μA, 2μA, 6μA)
- EKMC (VZ) digital and analog output for battery-free devices (170μA)
- Available lens colors: white, black and pearl white
- AMN3 digital output for battery-free devices (170μA)
- Available lens colors: white and black

### Features and benefits

- Total height of only 9.9mm respectively 10.9mm (top of lens)
- The low profile type is approx. 30% smaller than the standard detection type
- A slightly bigger detection area compared with the standard detection type
- 7.1m x 7.1m @2.5m (distance) and 8.5m x 8.5m @3m (distance)
- Extra lip for an easy integration into IP-rated products by using an o-ring

### Applications

- Slim luminaires with integrated PIR
- PIR based lighting control sensors in general
- Battery operated motion sensors for example for smart homes
- HVAC thermostats or devices
- Hot-desk or flex-desk sensors
- IoT devices (for the wake-up function)
- TV screens and advertisement panels

## TE CONNECTIVITY AD-101 AIR BUBBLE DETECTOR



[VIEW PRODUCT DETAILS](#) 

The TE Connectivity AD-101 air bubble detector for continuous monitoring uses ultrasonic technology to positively identify the presence of a break in flow of any type of liquid. With continuous self-diagnosis and flexibility in packaging, these sensors enable designs for the most critical applications.

### Features and benefits

- Positively identify the presence of a break in flow of any type of liquid with no direct contact to the liquid
- Provide visual indication of bubble with integrated LED
- Handle tube sizes from 3mm to 10mm diameter
- Enable more compact product design with integral electronics
- More easily integrate output with TTL
- Support high immunity to EMI/RFI/ESD
- Provide design flexibility with options on both standard ABD models and customised ABD models to fit the packaging of the end application

### Applications

- Medical infusion pumps
- Pain management pumps
- Food and beverage processing
- Dialysis equipment
- Hydroponic farming
- Pharmaceutical production
- Water treatment equipment
- Semi-conductor processing equipment
- 3D printing

# Connectors

	Automotive connectors	Lighting	Backplane - DIN 41612/2mm/high speed	Board-to-board	Circular - heavy duty	Circular - industrial	Circular - medical	Circular - military and aerospace	I/O - audio/signal/mobile	I/O - DSUB and accessories	I/O - DVI/HDMI/SCSI	I/O - modular jacks and plugs/SDL	High Speed I/O - USB/firewire/infiniband/IEC	Memory card - multimedia/PC cards	Memory card - smart card/SIM	Power IEC - connectors/entry modules	Power IEC - distribution units	Rectangular - heavy duty	Rectangular - military and aerospace	Sockets - DIL/SIL	Sockets - PLCC/PGA/BGA	Sockets - SIMM/DIMM	Sockets - battery/fuse	Wire-to-board - FFC/FPC	Wire-to-board - IDC 2.54/2.00/1.27	Wire-to-board - headers/receptacles/others	Terminal blocks	Wire-to-wire	RF inc. coax. and antennas	Fibre optics	Cable - FFC/ribbon flat/round	Cable assemblies	Terminal faston	Accessories, pins and contacts			
	Application specific	Board-to-board	Circular	I/O	Memory card	Power	Rectangular	Sockets	Wire-to-board	Terminal blocks	Wire-to-wire	High speed/high frequency	Others																								
3M																																					
AlpsAlpine																																					
Amphenol																																					
Aptiv																																					
AVX																																					
Bel Stewart																																					
Bourns																																					
Bulgin																																					
Cinch Connectivity																																					
CviLux																																					
Deltron Components																																					
Dubilier																																					
Eaton																																					
Glenair																																					
Greenconn																																					
Harwin																																					
Hirose																																					
ITT																																					
Kycon																																					
Lumberg																																					
Molex																																					
Omron																																					
PRECI-DIP																																					
Pulse																																					
Samtec																																					
Schaffner																																					
Schurter																																					
Switchcraft																																					
TE Connectivity																																					
Weidmüller																																					



# Electromechanical

	Switches										Relays					EMC filters		Thermal management		Other											
	DIP switches	Push switches	Rocker/toggle/slide switches	Rotary switches	Tact switches	Snap-action/detector switches	Multi control switches	Stainless steel/security/rugged switches	Keypads and keyboards/touch panel switches	Keylock switches	Reed switches	Circuit breakers	Signal relays	Automotive relays	Power relays	PhotoMOS relays	Solid state relays	Contact relays	Chassis filter	IEC inlet filters and output filters	Fans AC/DC/blower	Heatsinks	Thermal interface materials	Encoders	Potentiometers	Thermal printers	Enclosures, PCB hardware and accessories	Motors/actuators	Solenoids		
3M																															
Aavid Thermalloy																															
AlpsAlpine	.	.	.	.	.	.	.																								
Arcoelectric		.	.			.	.																								
Bourns		.		.	.																										
Bulgin		.						.																							
C&K Components	.	.	.	.	.	.	.			.	.																				
Deltron Enclosures																															
Diptronics	.		.	.	.	.	.																								
ebm Papst																															
Eledis	.	.	.	.	.	.	.	.	.	.																					
Fujitsu													.	.	.		.														
Grayhill	.	.	.	.	.	.	.	.	.																						
Harwin																															
ITW Switches	.	.		.		.	.																								
knitter-switch	.	.	.	.	.	.	.	.	.																						
Laird																															
Molex									.																						
Nidec Copal	.	.	.	.	.	.	.			.																					
nVentSchroff																															
Omron	.		.		.	.	.						.	.	.	.	.	.													
Panasonic		.				.	.	.																							
Panasonic Electric Works		.	.			.	.																								
Roxburgh EMC																															
Schaffner																															
Schurter		.				.		.				.																			
Switchcraft		.	.																												
TDK																															
TE Connectivity	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Vishay																															





# Power

	AC/DC								DC/DC								Magnetics					
	Enclosed – open frame	Board or chassis mounted	Conduction cooled/fanless	Din rail	LED drivers and LED system accessories	Modular	Railway/rugged	Adaptors/chargers	Front end/high power	Miniature – Industrial – bricks	Digital brick + PoL	Point of load/PIM/power block	Switching regulators	Transportation/railway	Din rail/chassis mount	LED	Medical	High voltage input	Filter boards for DC/DC	DCDC for IGBT/MOSFET driver	Inductors/chokes	Transformers
ABB Power Electronics	•		•			•		•	•	•	•	•						•				
Aimtec	•	•		•	•				•			•	•	•	•	•	•		•			
Artesyn	•		•	•	•	•		•	•	•	•		•	•				•				
Bel Power (inc. Melcher)	•		•	•		•	•	•	•	•	•		•	•				•				
Cyntec											•									•		
Datel Inc.									•		•	•	•				•					
Delta Electronics	•	•	•	•	•		•	•	•	•	•	•	•	•	•		•	•	•	•		
Excelsys	•		•			•		•														
Flex Power									•	•	•		•									
Fulham			•		•											•						
Innergie							•															
MEAN WELL	•	•	•	•	•	•	•	•	•			•	•	•	•	•	•		•			
Murata Power Solutions	•	•	•					•	•	•	•	•	•	•					•	•	•	•
Premier Magnetics																				•	•	

# Wireless

	PAN			LAN				LPWAN				
	Inductive power and data transfer	NFC	RFID	ANT	Bluetooth	Zigbee	Thread	WiFi	Optical wireless communication	LoRa	SigFox	NB-IoT
AlpsAlpine					•							
Fujitsu					•					•		
Murata		•	•		•		•			•	•	•
Panasonic		•	•		•	•	•	•				
Taiyo Yuden		•		•	•	•	•	•				
TE Connectivity	•											

# Sensors

	Microphone	Current	Air quality	Barometric	Dust	CO2	Flow	Humidity	Pressure	Conductivity	Flow	Level	Turbidity	Hall effect	Anisotropic magnetoresistive	Giant magnetoresistive	Tunnel magnetoresistive	Reed switch	Accelerometers	Gyroscopes	Inclinometers	Inertial (others)	Detect switch	Micro-displacement	Photosensor	Proximity
	Audio	Electrical	Gas/atmospheric						Liquid			Magnetic						Motion			Objects/proximity					
AlpsAlpine		•		•				•								•								•		
Amphenol Advanced Sensors			•	•	•	•	•	•	•		•		•													
AVX																										
Bourns														•												
C&K																								•		
Diptronics																								•		
Eaton		•																								
Eledis																							•	•		
Grayhill														•												
IST							•	•		•	•															
Kemet		•																								
Kingbright																										•
Kingstate	•																									
Molex																										
Murata Electronics				•					•						•								•			•
Nidec Copal		•							•																	
Omron				•	•		•		•														•	•	•	•
Panasonic					•		•		•															•		•
Panasonic Electric Works									•		•														•	•
PUI Audio	•																									
Pulse		•																								
Qinlon	•																									
SMI				•					•																	
TDK (inc. Invensense)	•	•		•			•	•	•								•						•			
TE Connectivity		•																					•	•	•	•
Vishay																							•	•	•	•



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