

**The IP&E
Specialist**

Construction & Mining Equipment Application Guide

TTI, Inc., – A Berkshire Hathaway Company



The IP&E Specialist

The Specialist in Electronics Component Distribution

Founded in 1971, TTI has steadily grown to become a world leading specialist distributor of electronic components. The company was founded on the premise that passive component purchasing could be made more efficient by offering product specialization, customer-driven service and proprietary supply chain solutions.

Why TTI?

- **Technical Experts** TTI's European team of field-based Sales Engineers and local Product and Technical Specialists are here to support you; from understanding component trends, sustainable sourceability and new product roadmaps, to in depth technical support for your design from our technical engineering experts.

- **Value Added Services** Connector assembly is one of the most important value-added services at TTI, Inc. – Europe. We are specialized in distributing manufacturer controlled and certified connectors and interconnect solutions from globally leading suppliers. Thanks to a large inventory level of connector components, TTI, Inc. – Europe can serve any market requirements.

- **Global Distribution Centers** Our European headquarters is located just outside of Munich, Germany in Maisach-Gernlinden. In total, we have 45.000m² of dedicated warehouse space and local sales and technical support in over 40 locations across Europe. TTI has more than 195.000m² of automated warehousing in North America, Europe and Asia. All are linked into a global warehouse management system that provides superior customer service and overall business efficiencies. Wherever you are in the world, TTI can support you. Year after year, customers rate our inventory availability, on-time delivery and accuracy among the very best in the industry – contact us today to find out what a true specialist has to offer.

- **Quality and Reliability** TTI's global warehouses are all ISO-registered and have received certification to the ISO 9001 and ISO 14001 Standards. TTI Europe is also certified to EN9120/EN9100, IECQ-CECC and ISO/IEC 27001 Standards. Additionally, our European sales branches are ISO 9001 certified. TTI has one global documentation system that ensures that every TTI branch and warehouse in the world follows the same processes.





80+
Suppliers



45.000 m²
Warehousing Space



One of the largest Autostore systems in Europe



40
Sales Locations

24/7
Available to Order Online

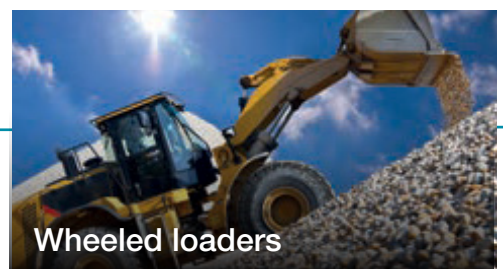
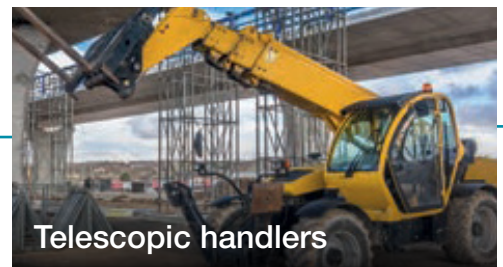
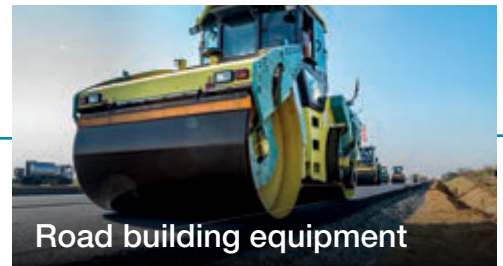
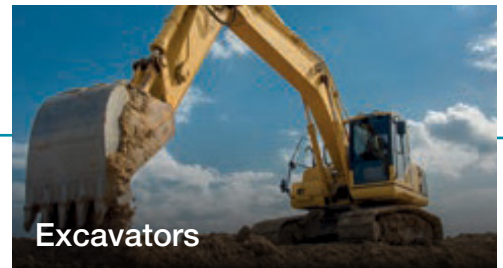
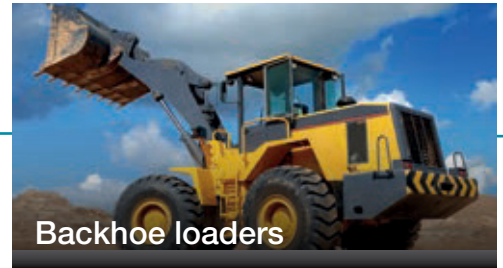


www.ttieurope.com



Application Examples

- Articulated dump truck
- Backhoe loaders
- Breakers
- Bulldozers
- Compact loaders
- Concrete mixer equipment
- Crawler loaders
- Cranes
- Crushing equipment
- Drilling equipment
- Excavators (>13t)
- Graders
- Mini excavators (0-13t)
- Powered access
- Rigid haulers
- Road building equipment
- Screening equipment
- Skid-steer loaders
- Telescopic handlers
- Wheeled loaders





Component Technology Trends

Antennas

- Smart farming requires GPS & GSM technology
- Automated guided vehicles

Capacitor

- Wider temperature range
- Lower profile
- Hybrid and polymer

Circuit Protection

- Data line protection
- HMI interface
- ESD components

Connectors

- More high-speed data connections & HV electrification

Discrete Semiconductors

- Low voltage Mosfets and TVS protection diodes

Electromagnetic

- Power storage
- EMI suppression and filtering

Power Supplies

- Wider input range DC/DCs supporting battery systems

Relays

- Move to automotive relays and HV contactors

Resistors

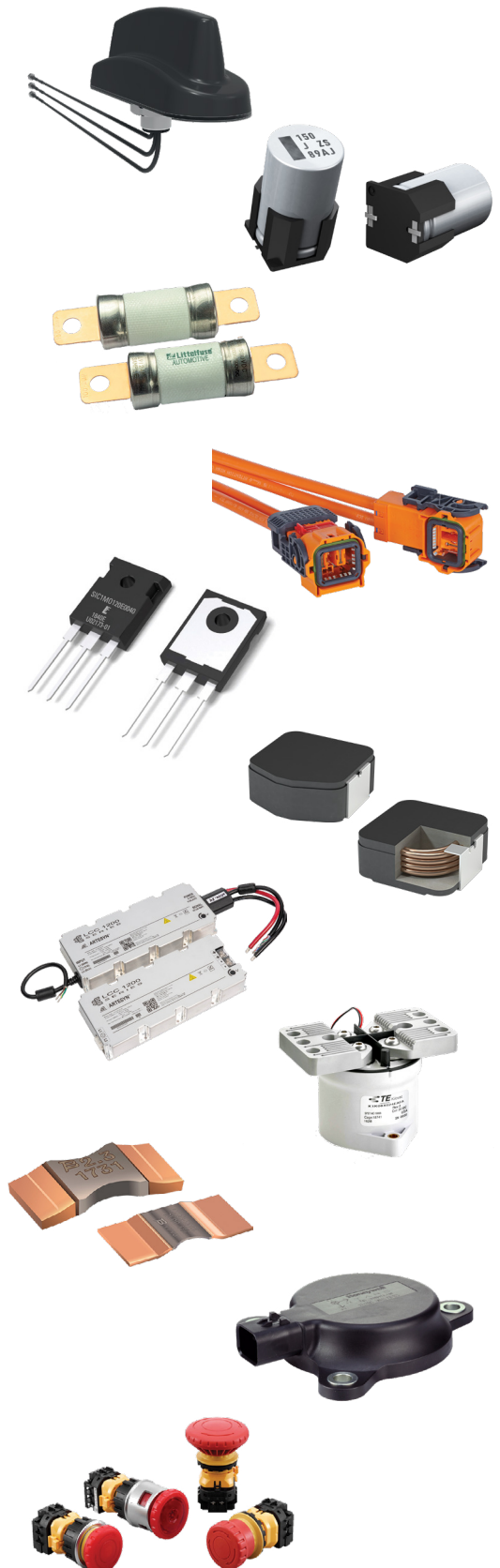
- Thin film precision
- Low ohmic shunts and current sense

Sensors

- 3-D position sensing
- Improved temperature and soil detection

Switches

- Enhanced sealing performance
- Need for emergency stops














High-Voltage Connectors



<p style="text-align: center;">Amphenol</p>	<p style="text-align: center;">Amphenol</p>	<p style="text-align: center;">Amphenol</p>	<p style="text-align: center;">Amphenol</p>
<p style="text-align: center;">Radlok</p>	<p style="text-align: center;">Surlok Plus</p>	<p style="text-align: center;">HVSL 2xx-6xx Series</p>	<p style="text-align: center;">E-Power Lite</p>
<ul style="list-style-type: none"> • 1000V DC, up to 500A • Unshielded and wire to device • 10mm² to 150mm² cable sizes 	<ul style="list-style-type: none"> • 1000V DC, up to 300A, IP67/IP69K • Unshielded and wire to device • 6mm² to 95mm² cable sizes 	<ul style="list-style-type: none"> • Up to 1000V DC • Shielded, inline and wire to device • 2, 3, 4, 5 and 6 circuit versions 	<ul style="list-style-type: none"> • 1000V DC, up to 120A • Shielded and wire to device • 2.4, 3.6 and 5.7mm contact versions
			
<p style="text-align: center;">Amphenol</p>	<p style="text-align: center;">Amphenol</p>	<p style="text-align: center;">Amphenol</p>	<p style="text-align: center;">Amphenol</p>
<p style="text-align: center;">HVSL 800 – 1400 Series</p>	<p style="text-align: center;">UPC</p>	<p style="text-align: center;">HVSLs</p>	<p style="text-align: center;">HVBI</p>
<ul style="list-style-type: none"> • 1000V DC, up to 350A • Shielded and wire to device • 8.0, 10.0, 12.0 and 14.0mm contact versions 	<ul style="list-style-type: none"> • 1000V DC, up to 450A • Shielded and wire to device • 9.1 and 14.0mm contact versions 	<ul style="list-style-type: none"> • 1000V DC, up to 180A • Metal, shielded and wire to device • 6.0 and 8.0mm contact versions 	<ul style="list-style-type: none"> • 1000V DC, up to 250A • Metal, shielded and wire to device • Push-pull connection, secondary lock
			
<p style="text-align: center;">Amphenol</p>	<p style="text-align: center;">Amphenol</p>	<p style="text-align: center;">Amphenol</p>	<p style="text-align: center;">Amphenol</p>
<p style="text-align: center;">Powerlok</p>	<p style="text-align: center;">Powerlok Gen 2</p>	<p style="text-align: center;">Manual Service Disconnects</p>	<p style="text-align: center;">Powerlink Cables</p>
<ul style="list-style-type: none"> • 1000V DC, up to 500A, IP67 • Metal, shielded and wire to device • From 16 to 150mm² cables 	<ul style="list-style-type: none"> • 1000V DC, up to 500A, IP67/IP6K9K • Metal, shielded and wire to device • Improved keying, latching and sealing compared to Gen 1 	<ul style="list-style-type: none"> • Mini-MSD: 690V DC, up to 400A • MSD: 690V DC, up to 630A • MSD-XL: 1000V DC, up to 630A 	<ul style="list-style-type: none"> • Shielded & unshielded versions • From 2.5 to 150mm² cables • Standard: ISO 6722 Class C 125
			





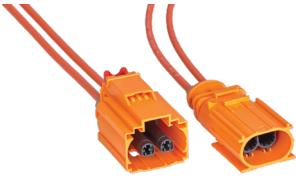

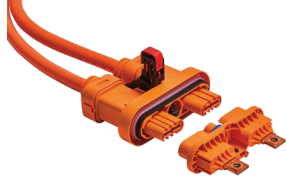
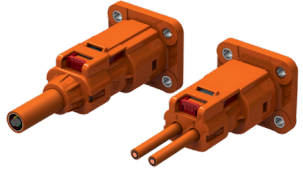














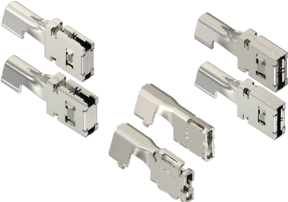

High-Voltage Connectors



<p>• APTIV •</p>	<p>• APTIV •</p>	<p>• APTIV •</p>	<p>• APTIV •</p>
<p>PowerPack Sealed Ring Connector</p>	<p>PowerPack HV Apex 280 OBC</p>	<p>ShieldPack HV APEX280 SB</p>	<p>ShieldPack HV AK CLASS 1 SMU</p>
<ul style="list-style-type: none"> • 48V DC, 250A at 85°C • Unshielded and wire to device • High robustness against vibrations 	<ul style="list-style-type: none"> • PowerPack HV APEX 280 OBC 3 & 5 ways is optimized for 32A on-board charging solutions using 6mm² cable range and based on field proven Apex 2.8 terminal 	<ul style="list-style-type: none"> • 1000V DC, 38A at 85°C • Bundle shielding and wire to device • 2-stage disconnect for safe unmating 	<ul style="list-style-type: none"> • 850V DC, 30A at 85°C • Shielded and wire to device • Standard AK interface
			
<p>• APTIV •</p>	<p>• APTIV •</p>	<p>• APTIV •</p>	<p>• APTIV •</p>
<p>ShieldPack HV280 SI</p>	<p>ShieldPack HV CTS 630 SI</p>	<p>ShieldPack HV AK PASS-THROUGH SI</p>	<p>ShieldPack HV AK CLASS 4 SI</p>
<ul style="list-style-type: none"> • 1000V DC, 40A at 85°C • Shielded and wire to device • Inner connector with TPA 	<ul style="list-style-type: none"> • 1000V DC, 50A at 85°C • Shielded, inliner and wire to device • Most compact 630 2-way system 	<ul style="list-style-type: none"> • 1000V DC, 1,2 3 ways • Shielded and wire to device • High robustness against vibrations 	<ul style="list-style-type: none"> • 1000V DC, 245A at 85°C • Shielded and wire to device • Inline and right angle versions
			
<p>• APTIV •</p>	<p>• APTIV •</p>	<p>• APTIV •</p>	<p>• APTIV •</p>
<p>ShieldPack HV RCS800/890 SB</p>	<p>ShieldPack HV RCS890 SI</p>	<p>ShieldPack HV RCS800/890 SI DM</p>	<p>ShieldPack HV RCS1190/1100 SI</p>
<ul style="list-style-type: none"> • 1000V DC, 230A at 85°C • Bundle shielding and wire to device • Inline and right angle versions 	<ul style="list-style-type: none"> • 600V DC, 210A at 85°C • Shielded and wire to device • Slider solution for limited space designs 	<ul style="list-style-type: none"> • 850V DC, 220A at 85°C • Direct mate shielding to device • Innovative screw position assurance 	<ul style="list-style-type: none"> • 1000V DC, 370A at 85°C • Shielded and wire to device • Innovative screw position assurance
			

High-Voltage Connectors



 <small>AUTHORIZED DISTRIBUTOR</small>	 <small>AUTHORIZED DISTRIBUTOR</small>	 <small>AUTHORIZED DISTRIBUTOR</small>	 <small>AUTHORIZED DISTRIBUTOR</small>
<p align="center">HVU280</p>	<p align="center">HVU630</p>	<p align="center">HVU2100</p>	<p align="center">HVA280</p>
<ul style="list-style-type: none"> • 1000V DC, up to 30A at 85°C • Unshielded and wire to device • Supports 2.0 to 4.0mm² wires 	<ul style="list-style-type: none"> • 850V DC, up to 45A at 85°C • Unshielded and wire to device • Supports 4.0 to 6.0mm² wires 	<ul style="list-style-type: none"> • 1000V DC, up to 372A at 85°C • Unshielded and wire to device • Uses the PCON 21mm terminal 	<ul style="list-style-type: none"> • 850V DC, 40A at 85°C, 2&3 way • Shielded and wire to device • Multicore and individually shielded versions
			
 <small>AUTHORIZED DISTRIBUTOR</small>	 <small>AUTHORIZED DISTRIBUTOR</small>	 <small>AUTHORIZED DISTRIBUTOR</small>	 <small>AUTHORIZED DISTRIBUTOR</small>
<p align="center">HVA630</p>	<p align="center">HVA1200</p>	<p align="center">HVP800</p>	<p align="center">HC Stak 25</p>
<ul style="list-style-type: none"> • 850V DC, up to 56A at 85°C, 2&5 way • Shielded and wire to device • Straight tab and 90° headers 	<ul style="list-style-type: none"> • 1000V DC, up to 100A at 85°C • Shielded and wire to device • Inline and right angle cable plugs 	<ul style="list-style-type: none"> • 850V DC, up to 200A at 85°C, 2&3 way • Shielded and wire to device • Inline and right-angle cable plugs 	<ul style="list-style-type: none"> • 1000V DC, up to 257A at 85°C • Shielded and wire to device • Released for copper and aluminium wire
			
 <small>AUTHORIZED DISTRIBUTOR</small>	 <small>AUTHORIZED DISTRIBUTOR</small>	 <small>AUTHORIZED DISTRIBUTOR</small>	 <small>AUTHORIZED DISTRIBUTOR</small>
<p align="center">HVP1100</p>	<p align="center">IPT</p>	<p align="center">PCON Terminal</p>	<p align="center">Manual Service Disconnects</p>
<ul style="list-style-type: none"> • 750V, up to 300A at 85°C • Shielded and wire to device • Multiple coding options available 	<ul style="list-style-type: none"> • 850V DC, 1, 2 & 3-way versions • Shielded and wire to device • 16, 25, 35 and 50mm² versions available 	<ul style="list-style-type: none"> • 11, 18 and 21mm contacts available • Supports cables from 5 to 95mm² • Using silver plated contacts 	<ul style="list-style-type: none"> • Automotive – 450V DC, up to 360A fuses • ICT – 750V DC, up to 630A fuses
			

Vehicle Inlets & Custom Assemblies



Amphenol	Amphenol	Amphenol	Amphenol
AC Charge Inlets – Type 2	AC/DC Combo Inlets – Type 2	Custom Cell Connection Systems	Custom Power Distribution Units
<ul style="list-style-type: none"> • 500V DC, 16A, 32A 1 & 3 Phase • IP55 (mated), 2.5 to 6mm² cables • TUV Certification 	<ul style="list-style-type: none"> • 480V AC & 1000V DC, 32A AC and up to 500A DC • Up to 100mm² cables • TUV Certification 	<ul style="list-style-type: none"> • Temperature and voltage sensing of cells • Cable, FPC and busbar construction • Full assembly design 	<ul style="list-style-type: none"> • Power distribution unit (PDU) • Battery disconnect unit (BDU) • Build to print and custom design
			
• APTIV •	• APTIV •	• APTIV •	• APTIV •
CCS Charge Inlets – Type 1	CCS Charge Inlets – Type 2	Mode 2 Charge Boxes	Mode 3 Jumpers Cables
<ul style="list-style-type: none"> • Cover provides dust protection • Drains fluids when opened • Lock actuator positioned on the top 	<ul style="list-style-type: none"> • AC: slow charge (3-phase, 20A) • DC: fast charge (600V, 125A) • Interface complies with IEC62196 	<ul style="list-style-type: none"> • EVSE restarts in the event of grid fault • Meets IEC62752 standard • IP67 water sealing protection 	<ul style="list-style-type: none"> • Superior durability that is proven in automotive mass production • Wiring crimps sealed from environment • CE and CQC marking/certification
			
 ITT <small>cannon</small>	 ITT <small>cannon</small>	 <small>AUTHORIZED DISTRIBUTOR</small>	 <small>AUTHORIZED DISTRIBUTOR</small>
AC Charging Inlets – Type 2	Mode 3 – AC Jumper Cables	AC Charge Inlets – Type 2	AC/DC Combo Inlets – Type 2
<ul style="list-style-type: none"> • IEC 62196 Type 2 vehicle inlet • 20A, 32A, 63A current rating • Optional dust cap or locking devices 	<ul style="list-style-type: none"> • IEC 62196 Type 2 Mode 3 jumper cables • 20, 32 or 63A, single or three phase • Custom lengths possible 	<ul style="list-style-type: none"> • 480V DC, 16A or 32A 1 or 3 phase • IP44 rating (front & rear) • Vibration: SG 2 (LV 215-1) 	<ul style="list-style-type: none"> • 480V AC & 1000V DC, 32A AC and up to 200A DC • 50mm² cables, 90 and 180° cable outlet
			

Low Voltage Connectors



<h2 style="text-align: center;">Amphenol</h2>	<h2 style="text-align: center;">Amphenol</h2>	<h2 style="text-align: center;">Amphenol</h2>	<h2 style="text-align: center;">Amphenol</h2>
<p style="text-align: center;">Armor IPX</p>	<p style="text-align: center;">AT Series</p>	<p style="text-align: center;">DuraMate</p>	<p style="text-align: center;">Ecomate Aquarius</p>
<ul style="list-style-type: none"> • Intermateable with standard connectors • Optional header configurations • AT Series™ 12, 24, 36, 48 I/O (A, B, C & D keying) 	<ul style="list-style-type: none"> • 14-22AWG, 13A, size 16 • Thermoplastic housing with integrated latch • High-temperature silicone seals 	<ul style="list-style-type: none"> • 3 key-way bayonet design • Mixed signal & power configurations • Operating range: -55°C to +125°C 	<ul style="list-style-type: none"> • IP67/69K mated • Bayonet rapid coupling system • Power, mixed power/signal
			
<h2 style="text-align: center;">Amphenol</h2>	<h2 style="text-align: center;">Amphenol</h2>	<h2 style="text-align: center;">Amphenol</h2>	<h2 style="text-align: center;">Amphenol</h2>
<p style="text-align: center;">Isobus Implement Connectors</p>	<p style="text-align: center;">J1939 AHD Series</p>	<p style="text-align: center;">AUTOMATE® Type A Mini-FAKRA</p>	<p style="text-align: center;">FAKRA Automotive Connector Systems</p>
<ul style="list-style-type: none"> • Compatible to ISO 11783-2 • #8 power contacts for 6/10/16mm² wire gauge • #12 and #16 contacts available 	<ul style="list-style-type: none"> • IP67 rated (mated) • 6 position: 10-14AWG, 25A, size 12 • 9 position: 14-20AWG, 13A, size 16 	<ul style="list-style-type: none"> • Supports data rates up to 20Gbps • High-density savings over traditional FAKRA • Modular multiport design configuration 	<ul style="list-style-type: none"> • Keyed & colour coded • Locking feature & audible click • Tape & reel packaging
			
<h2 style="text-align: center;">• APTIV •</h2>	<h2 style="text-align: center;">• APTIV •</h2>	<h2 style="text-align: center;">• APTIV •</h2>	<h2 style="text-align: center;">• APTIV •</h2>
<p style="text-align: center;">APEX Series</p>	<p style="text-align: center;">CMC Series</p>	<p style="text-align: center;">CTCS Series</p>	<p style="text-align: center;">HES Series</p>
<ul style="list-style-type: none"> • VDA & USCAR 1.2 compatible • Single-piece housing construction • Terminal position assurance (TPA) 	<ul style="list-style-type: none"> • TPA front holder latch for lock & unlock • Smooth guided terminal insertion • High terminal retention force 	<ul style="list-style-type: none"> • Mounting flexibility: panel, strap/clip and bracket • Improved vibration resistance • Robust back shells 	<ul style="list-style-type: none"> • Improved sealing performance • Superior terminal retention • Interchangeability with industry standard circular products
			

Low Voltage Connectors



<p style="text-align: center;">• A P T I V •</p>	<p style="text-align: center;">• A P T I V •</p>	<p style="text-align: center;"> ITT cannon</p>	<p style="text-align: center;"> ITT cannon</p>
<p style="text-align: center;">OCS Series</p>	<p style="text-align: center;">SICMA Series</p>	<p style="text-align: center;">APD Series</p>	<p style="text-align: center;">CA Bayonet Series</p>
<ul style="list-style-type: none"> • Housing lock overstress protection • Enhanced audible click • Optimized primary lock reinforcement (PLR) 	<ul style="list-style-type: none"> • High performance connector featuring T4/V3 performance • Backshell covers available • Suitable for harsh environment 	<ul style="list-style-type: none"> • Designed according to ISO 15170 • Bayonet locking with secondary locking feature • Up to IP69k sealing level 	<ul style="list-style-type: none"> • Rapid mating and unmating • IP67K/68K/69K environmental resistance • Shock and vibration proof
			
<p style="text-align: center;"> ITT cannon</p>	<p style="text-align: center;"> ITT cannon</p>	<p style="text-align: center;"> Littelfuse</p>	<p style="text-align: center;"> Littelfuse</p>
<p style="text-align: center;">CTC Series</p>	<p style="text-align: center;">Trident Series</p>	<p style="text-align: center;">Hard Wired – (PDM) Power Distribution Modules</p>	<p style="text-align: center;">Fuse Only – (PDM) Power Distribution Module</p>
<ul style="list-style-type: none"> • Simple to install and maintain • Hand insertable contacts • From 8-way to 24-way layouts • Up to IP69k sealing 	<ul style="list-style-type: none"> • High voltage: up to 500VAC • Circular and rectangular variants with mixed power & signal layouts • High sealing & vibration with shielded variants 	<ul style="list-style-type: none"> • PDM for vehicles or commercial equipment • Multiple electrical power outputs • Accepts many fuses, fuse types & relays 	<ul style="list-style-type: none"> • Fuse only PDM for vehicles • Multiple electrical power outputs • Accepts many fuses and fuse types
			
<p style="text-align: center;"> Littelfuse</p>	<p style="text-align: center;"> Littelfuse</p>	<p style="text-align: center;">molex</p>	<p style="text-align: center;">molex</p>
<p style="text-align: center;">POWR-BLOK Modular Power Distribution</p>	<p style="text-align: center;">Automotive and Commercial Vehicle Fuse Holders</p>	<p style="text-align: center;">MX150 Sealed and Unsealed Connector System</p>	<p style="text-align: center;">FAKRA and Sealed FAKRA Systems</p>
<ul style="list-style-type: none"> • Components for modular junction blocks • Supports ATO, Mini, MAXI Fuses, Relay Modules, Flasher Modules, Circuit Breakers 	<ul style="list-style-type: none"> • Fuseholders for MINI, ATO, MAXI, MIDI, MEGA, JCASE Fuses • Available for In-Line, Bolt-Down, Panel Mount & PCB applications 	<ul style="list-style-type: none"> • Pre-assembled TPA housing • 1.50mm low insertion force terminal system • Tin, silver & gold options • Current rating up to 22.0A 	<ul style="list-style-type: none"> • Colour-coded & keyed shrouds • Designed for automotive telematic applications • Low cost & high performance
			

Low Voltage Connectors



<p>molex</p>	<p>molex</p>	<p>EATON Powering Business Worldwide</p>	<p>EATON Powering Business Worldwide</p>
<p>HSAutoLink Interconnect Systems</p>	<p>External Combo Antennas</p>	<p>Clipper Series</p>	<p>UTGX Series</p>
<ul style="list-style-type: none"> Standard Molex automotive and USB connector components used Data rates up to 5Gbps Available in 6 and 12 circuits 	<ul style="list-style-type: none"> X-in-1 antennas with multiple protocols Ready-to-use for a number of IoT and smart devices Suitable for a range of form factors 	<ul style="list-style-type: none"> Plastic cost effective IP68/69K connector Salt spray: up to 1000h Temperature range: -40°C to +125°C UL94V0, REACH, RoHS 	<ul style="list-style-type: none"> Ruggedized connectors for harsh environments Outdoor & shock-proof Waterproof UV resistant Quick mating
<p>EATON Powering Business Worldwide</p>	<p>EATON Powering Business Worldwide</p>	<p>STE connectivity AUTHORIZED DISTRIBUTOR</p>	<p>STE connectivity AUTHORIZED DISTRIBUTOR</p>
<p>UTO Series</p>	<p>UTS Series</p>	<p>AMPSEAL 16 Connectors</p>	<p>DEUTSCH DT Series</p>
<ul style="list-style-type: none"> Metal IP68K/IP69K connector Temperature range: -40°C to +105°C High Vibration and shock resistance UL94V0 RoHS and REACH 	<ul style="list-style-type: none"> Plastic IP68K/IP69K waterproof connector 250 mating cycles Temperature range: -40°C to +105°C UL94V0, UL94HB RoHS and REACH 	<ul style="list-style-type: none"> 14-20AWG (2.50 to .50mm²) 2, 3, 4, 6, 8, and 12 circuits In-line mount Rectangular, thermoplastic housing 	<ul style="list-style-type: none"> 14-20AWG (2.50 to .50mm²) wiring 2, 3, 4, 6, 8, and 12 circuit arrangements In-line, flange, or PCB mount Rectangular housing
<p>STE connectivity AUTHORIZED DISTRIBUTOR</p>	<p>STE connectivity AUTHORIZED DISTRIBUTOR</p>	<p>STE connectivity AUTHORIZED DISTRIBUTOR</p>	<p>STE connectivity AUTHORIZED DISTRIBUTOR</p>
<p>DT-XT Sealed Connector Systems</p>	<p>Heavy Duty Sealed Connector Series</p>	<p>M2M MiMo LTE Antennas</p>	<p>SiSo Rooftop Antennas</p>
<ul style="list-style-type: none"> Rear seals made from HCR (high consistency rubber) Housings are pre-assembled Housing in various colour codes 	<ul style="list-style-type: none"> Contact sizes 6.3/4.8K (up to 40A) 2.8 (up to 40A), and 1.5K (up to 20A) 2, 3, 4, 6, 7, 8, 10, 12, 15, 16, and 18 circuits 	<ul style="list-style-type: none"> MiMo Cellular/LTE antenna function Compact, robust weatherproof low-profile housing Freq. range 698 to 960MHz or 1710 to 3800MHz 	<ul style="list-style-type: none"> Cellular 698 to 6000MHZ UHF versions covering 380 to 430MHz or 450 to 470MHz Optional active GPS/GLONASS antenna

Power Supplies & Relays



			
<p>Rectifier CP3500AC65TEZ</p>	<p>CoolX Configurable Power Supplies</p>	<p>LCC Series Conduction Cooled PSU</p>	<p>Ultra Wide Input Din Rail DDRH-60</p>
<ul style="list-style-type: none"> • Compact 1RU form factor with 40w/in³ • Efficiency exceeding 96% (meets 80+ titanium) • Programmable output 23 to 65VDC 	<ul style="list-style-type: none"> • No fans, noise or vibrations (1000W & 600W) • Industrial approvals: 5 years warranty • Field-configurable: plug & play 	<ul style="list-style-type: none"> • IP65 rated options available • No fans needed • 250W, 600W, 1200W (24/28Vout) 	<ul style="list-style-type: none"> • High power density • Output: 24V to 48V with digital control • High efficiency: up to 94.5% • 5 year warranty
			
			
<p>XLG Series Constant Power LED Driver</p>	<p>AC/DC Charger DPU/DBR-3200</p>	<p>G7EB High Power PCB Relays</p>	<p>G8NB Automotive PCB Relays</p>
<ul style="list-style-type: none"> • Metal case with IP67K for outdoor applications • Perfect driver for demanding outdoor environments • Good surge protection up to 10KV 	<ul style="list-style-type: none"> • High power density • Output: 24V to 48V with digital control • High efficiency: up to 94.5% • 5 year warranty 	<ul style="list-style-type: none"> • 480VAC/100A • Withstand voltage of 10kV • Low contact resistance of ≥ 5 mΩ • Contact gap ≥ 3.6mm (applied to VDE0126) 	<ul style="list-style-type: none"> • GM certified • High switching current (25A) • Standard, low or super low operating voltage • Applicable to pin in paste reflow
			
			
<p>HE-S Relays</p>	<p>HE-V Relays</p>	<p>IHV100 Series Contactors</p>	<p>KILOVAC EV250</p>
<ul style="list-style-type: none"> • Contact gap 3.2mm • 35A/480VAC • Ambient temperature: -40°C to +85°C • Contact arrangement 2FormA, 2FormA, 1FormB 	<ul style="list-style-type: none"> • Contact gap 3.8mm • 20A/1.000VDC • Ambient temperature: -40°C to +85°C • Contact arrangement 2FormA 	<ul style="list-style-type: none"> • Hermetically sealed – intrinsically safe • 8kV isolation between open contacts • Optional auxiliary contact 	<ul style="list-style-type: none"> • Hydrogen dielectric • 400A carry, 2.500A interrupt at 320Vdc • Suited for circuit protection, control and battery switching
			

Relays



			
<p>DCNEVT500</p>	<p>G9EJ Precharge Relay</p>	<p>EV Series (10A...300A)</p>	<p>PhotoMOS® AQP258HAX</p>
<ul style="list-style-type: none"> • 1.800VDC and 500A • 360KW power switch capable, maximum short circuit 4,000A, 1 second 	<ul style="list-style-type: none"> • Capable of switching 400V 25A DC loads, a high capacity interruption through the function of extinction of magnetic arc by adopting high-efficiency magnetic circuit 	<ul style="list-style-type: none"> • High cut-off and short circuit capability up to 8,000A by inert gas for arc extinction 	<ul style="list-style-type: none"> • 1.500VDC, 20mA, for HV battery and insulation monitoring in automotive applications
			
			
<p>KT-Relay HV Reed Relay</p>	<p>HVC43</p>	<p>HVC500</p>	<p>EVC50 and EVC80</p>
<ul style="list-style-type: none"> • Switching up to 1kVDC • Breakdown voltage of 4.2kVDC • Isolation voltage to 7kVDC • Insulation resistance (IR) >10¹³ Ω 	<ul style="list-style-type: none"> • New 750VDC relay for 150A, 200A, 250A • Bi-directional design and very compact size 	<ul style="list-style-type: none"> • 1000VDC relay, for 200A, 300A, 500A • Bi-directional, dual-coil & aux contact available 	<ul style="list-style-type: none"> • Limiting continuous current 50A or 80A at 85°C. • Suitable for 450VDC with limited capability to 600VDC
			
			
<p>EVC250</p>	<p>KILOVAC EV200</p>	<p>IHVA 150 and 200</p>	<p>K1K</p>
<ul style="list-style-type: none"> • Continuous current rating of 250A • Simplified design of the EVC 250 with optimized parts allows fully automatic production 	<ul style="list-style-type: none"> • 500A, 900VDC, economizer included • Meets IEC 60947- 4-1 annex f mirror contact • Latching and NC contact versions available 	<ul style="list-style-type: none"> • 150 or 200A, non-polarity current and switching voltage range of 12-1.500VDC 	<ul style="list-style-type: none"> • 1.000VDC, 1.000A unique relay in the market in one housing
			

Relays & Sensors



 <p>AUTHORIZED DISTRIBUTOR</p>	 <p>AUTHORIZED DISTRIBUTOR</p>	<p>Amphenol Advanced Sensors</p>	<p>Amphenol Advanced Sensors</p>
<p>LEV100H</p>	<p>Mini K HV Precharge Relay</p>	<p>Temperature Sensing Solutions</p>	<p>Type JS8741 Pipe Clip Sensors</p>
<ul style="list-style-type: none"> • 150A, 1000V DC • Auxiliary contacts 	<ul style="list-style-type: none"> • For pre-charge currents up to 20A • Available with PCB and plug-in terminals • IEC 60664 compliant 	<ul style="list-style-type: none"> • Customised solutions with fast response times • High accuracy and stability • Noise immune NTC options available 	<ul style="list-style-type: none"> • High sensitivity temperature measurement • Compact design • Integrated connector with locking mechanism
			
<p>Amphenol Advanced Sensors</p>	<p>Amphenol Advanced Sensors</p>	<p>KYOCERA AVXX</p>	<p>KYOCERA AVXX</p>
<p>WTF083B00</p>	<p>GE-1395 Series Coolant Temperature Sensors</p>	<p>94086 – Packaged Temperature Sensors</p>	<p>SpinPad – Inductive Rotor Position Sensors</p>
<ul style="list-style-type: none"> • NTC exclusively designed for automotive harsh environments • Configurable to R/T curves and accuracy required • Rated to 210°C 	<ul style="list-style-type: none"> • High sensitivity • Fast response time • Wide application range • Compact design 	<ul style="list-style-type: none"> • NTC for use in liquid media • IP69K with sealing O-ring • -40°C to +150°C 	<ul style="list-style-type: none"> • High Speed up to 100,000rpm • Matching to motor poles-pairs yielding position accuracy < 0.5° • Temperature range -40°C to 160°C
			
<p>Honeywell</p>	<p>Honeywell</p>	<p>Honeywell</p>	<p>i2s an Amphenol company</p>
<p>SNG-S Series Speed Sensors</p>	<p>VM721V1 Series AMR Speed Sensors</p>	<p>VG481V1 Series Hall-effect Speed Sensors</p>	<p>IPS I2S Pressure Sensors</p>
<ul style="list-style-type: none"> • Temperature range: -40°C to 140°C • Insensitive to angular rotation during assembly • Moisture ingress protection rated to IP69K 	<ul style="list-style-type: none"> • Integrated speed sensor IC • Pole size independent operation • 2-pin current interface • -40°C to 150°C 	<ul style="list-style-type: none"> • Back-biased speed sensor IC • Zero-speed capable • AEC-Q100 qualified • 4V to 24V supply voltage range 	<ul style="list-style-type: none"> • High vibration resistant • Media proven materials suitable for H2, CNG, LPG • Flexible options for output signal and connections
			



 a YAGEO company			
FG-RO5 Current Sensors	CSCA-A Series Current Sensors	MIPS Series Industrial Pressure Sensors	SNG-Q Series Speed Sensors
<ul style="list-style-type: none"> • AC and DC leak current sensor • Digital output fault detection • Complies to IEC62752:2016 • New revisions coming 	<ul style="list-style-type: none"> • Open loop current sensor • Rapid response <1us • High load capability 	<ul style="list-style-type: none"> • Heavy duty, media isolated pressure transducer • Can handle aggressive fluids and water media • -40°C to +125°C 	<ul style="list-style-type: none"> • For monitoring speed and direction of rotating equipment • Wide selection of connector types • IP69K with lifetime 2 million cycles
			
	 INNOVATOR IN ELECTRONICS	 INNOVATOR IN ELECTRONICS	 INNOVATOR IN ELECTRONICS
TARS – Vehicle Acceleration and Attitude Sensors	SCL3300 Series 3 Axis Inclinometers	SCC2000 Series 3D MEMS Gyro Sensors	SCHA63T Series Inertial Sensors
<ul style="list-style-type: none"> • Ruggedized PBT thermoplastic housing IP67/69K • Advanced filtering for noise & vibration • 36V vehicle power systems 	<ul style="list-style-type: none"> • Ideal for applications demanding high stability & accuracy with tough environmental requirements 	<ul style="list-style-type: none"> • Combined X-axis or Z-axis Gyroscope & 3-axis Accelerometer • Insensitive to mechanical shocks & vibrations 	<ul style="list-style-type: none"> • Single package 6DOF Gyro & Accelerometer • Can be used in safety critical applications • AEC-Q100 qualified
			
		 AUTHORIZED DISTRIBUTOR	 AUTHORIZED DISTRIBUTOR
PTE7100 Series Analog Pressure Sensors	ACW4 Series Position Sensors	DOG2 Series Inclinometer	Triaxial Board Mount Accelerometers
<ul style="list-style-type: none"> • Stainless steel design • Wide range of ports, connectors, and electrical outputs • Can handle extreme shock & vibration 	<ul style="list-style-type: none"> • Robust, proven magnetic technology • IP67 standard (IP69K option) • Two-part design offers flexibility for installation 	<ul style="list-style-type: none"> • Digital signal processing with 12 bit resolution • Vibration damping & temperature compensation • -40°C to +85°C temperature range 	<ul style="list-style-type: none"> • Triaxial output • Hermetically sealed • Piezo-ceramic crystals • -40°C to +150°C operating range
			

Switches



			
<p>FD Series</p>	<p>KR Rocker Switches</p>	<p>QH Series</p>	<p>APB, PNP, PT Series</p>
<ul style="list-style-type: none"> • Quality of screen printed legends • Uniform luminosity without hot spot • Snap-in and threaded bushing versions 	<ul style="list-style-type: none"> • Wide choice of colours • Laser etched symbols • Illuminated or non-illuminated • Optionally sealed to IP68 or IP69K 	<ul style="list-style-type: none"> • Anti rotation pin as standard • Zero behind panel depth • 200mm 26AWG UL1061 wire terminations • Panel sealed: up to IP67K 	<ul style="list-style-type: none"> • IP67 sealed • Between 100,000 and 1,000,000 cycles • Threaded or snap-in mounting
			
			
<p>ATP Family</p>	<p>K12 Series</p>	<p>THB Series</p>	<p>Micro Switch™</p>
<ul style="list-style-type: none"> • IP67K sealed to endure harsh environments • IK10 rated impact protection • Snap-action provides positive feedback • 1,000,000 life cycles 	<ul style="list-style-type: none"> • IP67K sealed • Between 200,000 and 1,000,000 cycles • Multiple LED colours available • Excellent tactile feel 	<ul style="list-style-type: none"> • Reduced “Dead Zone” slack & wide angular sweep • 2-axis, multi-direction operation • 2,000,000 life cycle for toggle • Center select momentary switch 	<ul style="list-style-type: none"> • SPDT or DPDT circuitry • Snap-action, positive-break contacts • Silver alloy and gold plated contacts • UL, CE, cUL, CCC approvals
			
			
<p>MT, NT and TL Series Toggles</p>	<p>V15W Switches</p>	<p>E-Stop Switches</p>	<p>XN Series</p>
<ul style="list-style-type: none"> • TL series qualified to MIL-DTL-3950 • NT/MT series are sealed to IP67/68K • UL recognized, CSA certified, and CE approved 	<ul style="list-style-type: none"> • Degree of protection: IP67K • Wide current range: 0.1A, 5A, 10A • SPDT, SPNC, SPNO options • Pre-leaded wires for easy installation 	<ul style="list-style-type: none"> • Highest safety level provided • Fool-proof “Safe break action” • 3rd gen E-stop with IDEC’s original “reverse energy control” 	<ul style="list-style-type: none"> • Available in plastic bezel, metallic padlock, flush bezel • Unique safe break action • Direct opening action
			



	 Powering Business Worldwide	 a YAGEO company	
<p>Non Contacting Rotary Pots</p>	<p>High Power TVS Diodes</p>	<p>KC Link Capacitors</p>	<p>High Voltage MLCC</p>
<ul style="list-style-type: none"> • Non-contacting magnetic technology • Highly resistant to vibration & shock • Highly resistant to fluid & dust ingress 	<ul style="list-style-type: none"> • AECQ-101 compliant to ISO16750-2 5a & 5b standards • SMT from 400W to 8000W power dissipation & 247A • HT up to 12 kW peak power & 270A 	<ul style="list-style-type: none"> • EIA 1812, 2220, and 3640 case size • AEC-Q200 automotive qualified • Flexible termination option available 	<ul style="list-style-type: none"> • High temperature MLCCs available up to 250°C • Approvals to TÜV and UL specifications • Includes 1812 Y2 safety capacitor
		 INNOVATOR IN ELECTRONICS	
<p>High Temperature Varistors</p>	<p>Circuit Protection Power Solutions</p>	<p>Three Terminal MLCC</p>	<p>ETQP Metal Comp Choke</p>
<ul style="list-style-type: none"> • 175°C rated, with no derating • AEC-Q200 qualified • Bi-Directional transient voltage protection • EMI/RFI attenuation 	<ul style="list-style-type: none"> • Excellent current-limiting • High short-circuit current rating • Global certification cURus, CCC, IEC • Precise clamping voltage • No wear-out mechanism 	<ul style="list-style-type: none"> • Allow a reduction in the number of components • Contribute to noise suppression 	<ul style="list-style-type: none"> • Low profile (min. 3.0mm) • Corresponding to AEC-Q200 • Non-hard saturation characteristic • Up to 30G vibration resistance
<p>Harsh Environment DC Link Cap</p>	<p>Metal Element Inverse Shunts</p>	<p>Compact Potentiometer</p>	<p>Through Hole Aluminium Resistors</p>
<ul style="list-style-type: none"> • THB Test (85°C/85%RH/V_R/1000h) • Operating temperature: -40°C to 105°C • 450V to 1600V 	<ul style="list-style-type: none"> • Inverse 1020 & 1225 SMD shunt • 0.1 to 3m Ohms, down to 1% • Ultra-low ohmic values support high energy efficiency in the end product 	<ul style="list-style-type: none"> • Knob material either metallic or plastic • Several colour of knobs available 	<ul style="list-style-type: none"> • High power rating: 75W-500W • Wirewound resistors, high power, aluminum housed, heatsink type • Resistance range: 0.1Ω to 51kΩ



			
<p>Supercaps</p>	<p>AECQ200 MLCC/Filters</p>	<p>DE1 Series Safety Caps</p>	<p>Hi-Cap MLCC</p>
<ul style="list-style-type: none"> • Superior reliability, passes 4000 hours life tests • Customized options for modules • Molded encapsulation and prismatic case options 	<ul style="list-style-type: none"> • Standard and large size MLCCs, up to 3KV • StackiCap™ high CV high-voltage capacitors • Safety certified MLCCs, AC DC dual rated 	<ul style="list-style-type: none"> • DIN 60384-14 • EN 60384-14 • UL 60384-14 • IEC 60384-14 	<ul style="list-style-type: none"> • AEC-Q200 qualified • VW 80808-2 qualified • Improved reliability due to soft termination technology
			
			
<p>ZE Hybrid Cap</p>	<p>ZKU Hybrid Cap</p>	<p>ZS Conductive Polymer</p>	<p>Ceralink Cap</p>
<ul style="list-style-type: none"> • Low leakage current • Operating temperature range: -55°C to +145°C • High rated voltage range: 25 to 63 VDC • RoHS/REACH compliant 	<ul style="list-style-type: none"> • 39µF up to 560µF • Endurance rating 4000 hours at 125°C • Operating temperature -55°C to + 125°C • Rated voltage 25VDC/35VDC 	<ul style="list-style-type: none"> • Surface mount package • 4000 hour life at 125°C • High ripple current and large capacitance • Vibration proof variants available on request 	<ul style="list-style-type: none"> • Rated voltages from 500V DC to 900V DC • Capacitance range from 0.25µF to 20µF • Ideal for high currents and in combination with SiC or GaN
			
			
<p>CGA and CKG MLCC</p>	<p>DC Link Cap</p>	<p>NTC Thermistor</p>	<p>SMD Varistor</p>
<ul style="list-style-type: none"> • Low self-heating and high ripple resistance due to low ESR • AEC-Q200 compliant 	<ul style="list-style-type: none"> • High reliability for severe ambient conditions • Long life – 50.000h (85°C, rated voltage) • AEC-Q200 qualified capacitors available on request 	<ul style="list-style-type: none"> • Type families qualified acc. to AEC Q200 • Robust design for high-voltage applications • NTC families with standard lead spacing design 	<ul style="list-style-type: none"> • Transient protection acc. to ISO 7637-2 and 16750-2 • ESD protection acc. to IEC 61000-4-2 • AEC-Q200 certified
			



<p>AS Series MLCC</p>	<p>Auto PPTC</p>	<p>HC 20EV Series High Current Fuse</p>	<p>Nano Fuse</p>
<ul style="list-style-type: none"> • AEC-Q200 qualified and PPAP ready • IATF 16949 certified • Board flex ≥ 5 mm • 100% AOI & SPC monitor 	<ul style="list-style-type: none"> • AEC-Q200 qualified, RoHS compliant, and ISO/TS16949 certified • Surface-mount form factor • High performance • Small footprint – 1812 size 	<ul style="list-style-type: none"> • Interrupting rating: 16kA at 500VDC • Voltage rating: 500VDC • Current ratings 60 – 125A • M6 bolt-down terminals 	<ul style="list-style-type: none"> • Meets AEC-Q200 automotive qualifications • Operating temperature range from -40°C to 85°C • Small size/surface mountable type
<p>AUMOV® Series Varistors Series</p>	<p>ESD Protection</p>	<p>AEC-Q200 compliant Inductors and Transformers</p>	<p>HCM1A-V2 High Current inductors</p>
<ul style="list-style-type: none"> • Complies with 1000 cycle, -55°C to 125°C, thermal shock cycling test • Wide operating voltage range • Three disc sizes available: 10mm, 14mm and 20mm 	<ul style="list-style-type: none"> • European factory (fast and flexible) • Short lead-times • Wide product portfolio • AEC-Q200 certified 	<ul style="list-style-type: none"> • Excellent long term stability • Low inductance • Low thermal EMF • AEC-Q200 compliant 	<ul style="list-style-type: none"> • Novel core material and automated process • AEC-Q200 G1 (2100hrs at 155°C, ESD HBM 8kV, up to 30g vibration) • Low DCR and low core loss
<p>METCOM Inductors</p>	<p>Power Inductors</p>	<p>PM2155 Series</p>	<p>Moulded Power Inductors</p>
<ul style="list-style-type: none"> • AEC-Q200 qualified • High efficiency inductor • Metal composite powder • Shielded construction • Low magnetic flux leakage 	<ul style="list-style-type: none"> • Wire wound metal alloy type for automotive power lines • Wire wound ferrite type for automotive power lines 	<ul style="list-style-type: none"> • Push pull converter transformer IEC 62368 and 61558 basic Insulation compliant • 12mm creepage • 4kVrms isolation (600Vrms continuous) 	<ul style="list-style-type: none"> • HM72L up to $+125^{\circ}\text{C}$/HA72L up to $+155^{\circ}\text{C}$ • HA72L: AEC-Q200 certified • Up to 80A maximum current • 3Mhz frequency performance • Low core loss





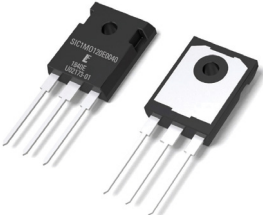


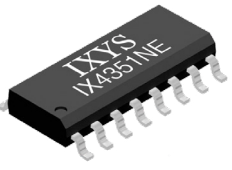


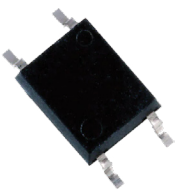
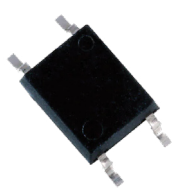
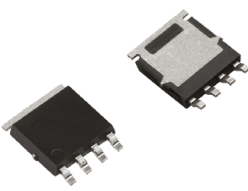
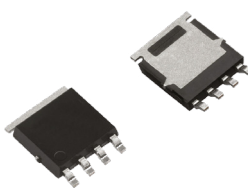




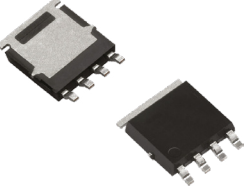
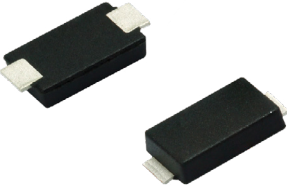
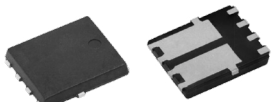
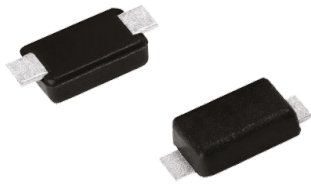
Passives & Discrete Semiconductors



			
<p>IHLD Inductors</p>	<p>IHLE Inductors</p>	<p>CSS Series High Power Current Sense Resistors</p>	<p>Anti Surge Resistors</p>
<ul style="list-style-type: none"> • Two IHLP® style inductors placed vertically in one board-space saving package • AEC-Q200 qualified • Two sizes available: 3232 and 4032 	<ul style="list-style-type: none"> • Integrated e-shields reduce EMI • High temperature operation to +155°C • AEC-Q200 qualified • Coplanarity of their four terminal $\leq 100\mu\text{m}$ 	<ul style="list-style-type: none"> • Excellent long term stability • Low inductance • Low thermal EMF • AEC-Q200 compliant 	<ul style="list-style-type: none"> • Outstanding pulse performance (SG73, SG73P, SG73G) • Excellent in ESD characteristics (SG73, SG73S) • High component and equipment reliability
			
	<p>Panasonic INDUSTRY</p>		
<p>Metal Plate Shunt Resistors</p>	<p>ERJB Series</p>	<p>Metal Shunt Resistors</p>	<p>MC HP High Power Thin Film Resistors</p>
<ul style="list-style-type: none"> • 0.5mΩ to 20mΩ • 1W (0805 inch) to 5W (2512 inch) • Current ratings up to 100A • T.C.R.: $\pm 50/\pm 75\text{ppm/K}$ • 0.6... 0.7mm low profile height 	<ul style="list-style-type: none"> • Separated resistive elements for surge distribution • Achieves small size and high power and overload characteristics 	<ul style="list-style-type: none"> • Precision to 1% and 100ppm/K • Inductance <5nH • Thermal EMF <1$\mu\text{V/K}$ • Value range 50 to 250$\mu\Omega$ • Power rating 36W 	<ul style="list-style-type: none"> • Available in case sizes 0402, 0603, and 0805 • Rated dissipation up to 0.4W for case size 0805 • Operating temperature up to 175°C
			
	<p>YAGEO</p>		
<p>Power Metal Plate™ Shunts</p>	<p>Auto Grade Surge Resistors</p>	<p>CDSOT23-T24CAN-Q CANbus Protectors</p>	<p>TBU-DB055-100-WH-Q High-Speed Protectors</p>
<ul style="list-style-type: none"> • Very low inductance 0.5nH to 5 • Excellent frequency response to 50MHz • Low thermal EMF (< 3$\mu\text{V/}^\circ\text{C}$) • AEC-Q200 qualified 	<ul style="list-style-type: none"> • AEC-Q200 qualified and PPAP ready • IATF 16949 certified • Board flex $\geq 5\text{ mm}$ • 100% AOI & SPC monitor 	<ul style="list-style-type: none"> • SOT23 pack. for two I/O lines • 30kV ESD per IEC61000-4-2 • 500V surge per IEC 61000-4-5 (Level 1, CWG 1.2/50) • Along with SRF3225TAC-510Y to suppress EMI 	<ul style="list-style-type: none"> • Superior circuit protection • Blocks surges up to rated voltage limit • High-speed performance • Small SMT package
			

Discrete Semiconductors



			
<p>SiC MOSFETs</p>	<p>IX4340 5A, Dual Low-Side MOSFET Driver</p>	<p>SZ1SMB Series 600W in SMB Package</p>	<p>IX4351NE SiC MOSFET and IGBT Driver</p>
<ul style="list-style-type: none"> • 1200V & 1700V SiC MOSFET family • Extremely low gate charge and output capacitance • Low gate resistance for high-frequency switching • Ultra-low on-resistance; RoHS compliant, Pb-free, halogen-free 	<ul style="list-style-type: none"> • Two independent drivers, each capable of sourcing and sinking 5A • CMOS and TTL compatible inputs 	<ul style="list-style-type: none"> • Zener transient overvoltage suppressors • Peak power – 600W at 1ms • ESD rating of class 3 (>1 kV) per human body model 	<ul style="list-style-type: none"> • Separate 9A peak source and sink outputs • Internal charge pump regulator for selectable negative gate drive bias • Thermal shutdown
			
<p>TOSHIBA</p>	<p>TOSHIBA</p>		
<p>TLX9175J Photo Coupler</p>	<p>TLX9906 Photo Coupler</p>	<p>SQJA80EP Automotive N-Channel 80V MOSFETs</p>	<p>SQJ444EP Automotive N-Channel 40V MOSFETs</p>
<ul style="list-style-type: none"> • Normally open (1-Form-A) device • Peak off-state voltage: 600V (min) • Trigger LED current: 3mA (max) • AECQ101 qualified 	<ul style="list-style-type: none"> • MOSFET gate driver • Isolation voltage: 3750Vrms (min) • Operating temp. -40 to 125°C • AECQ101 qualified 	<ul style="list-style-type: none"> • TrenchFET® power MOSFET • AEC-Q101 qualified • 100% Rg and UIS tested 	<ul style="list-style-type: none"> • TrenchFET® power MOSFET • AEC-Q101 qualified • 100% Rg and UIS tested
			
			
<p>SQJA81EP Automotive Grade P-Channel 80V MOSFETs</p>	<p>TA6F6 Series SMD PAR® TVS</p>	<p>VS-8DKH02HM3 Hyperfast Rectifier, 2x4 A FRED Pt®</p>	<p>VS-1EFH02HM3 Hyperfast Rectifier, 1 A FRED Pt®</p>
<ul style="list-style-type: none"> • Maximum on-resistance, 17.3m Ω at 10V • Gate charge down to 52nC at 10V • Compact 5.13mm by 6.15mm PowerPAK® SO-8L 	<ul style="list-style-type: none"> • Very low profile – typical height of 0.95mm • T_J = 185°C capability suitable for high reliability and automotive requirement • Ideal for automated placement 	<ul style="list-style-type: none"> • Hyperfast recovery time, reduced Q_{rr}, and soft recovery • 175°C max operating junction temperature • Specific for output and snubber operation 	<ul style="list-style-type: none"> • Specified for output and snubber operation • Low forward voltage drop • Low leakage current
			

Discrete Semiconductors



	 <small>Kingbright Electronic Europe GmbH</small>		
<p>630 Series LED Panel Mount Indicators</p>	<p>KPT-1608LVSECK-J3-PRV – Chip LED</p>	<p>DMA1011600PA 1600V Standard Rectifier</p>	<p>LSIC1M0120E0080 1200V SIC MOSFETS</p>
<ul style="list-style-type: none"> • Heavy duty • High visibility • Available in a large range of voltage supplies and colours • Blade terminals 	<ul style="list-style-type: none"> • 1.6mm x .8mm SMD LED, 0.75mm thickness • Low power consumption • Wide viewing angle • Ideal for backlight and indicator 	<ul style="list-style-type: none"> • Planar passivated chips • Very low leakage current • Very low forward voltage drop • Improved thermal behaviour 	<ul style="list-style-type: none"> • Optimized for high-frequency, efficiency applications • Extremely low gate charge & output capacitance • Low gate resistance
			
			
<p>IXA20PG1200DHGLB IGBT</p>	<p>OPV302 850nm VCSE Laser</p>	<p>VCNL4200 – Long Distance Proximity Sensors</p>	<p>SIJH112E-T1-Ge3 – TrenchFET® Gen IV power MOSFETs</p>
<ul style="list-style-type: none"> • Low saturation voltage • Positive temperature coefficient for easy paralleling • Fast switching 	<ul style="list-style-type: none"> • 850nm VCSEL technology • High thermal stability • Low drive current • High output power • Narrow beam angle 	<ul style="list-style-type: none"> • SMD Package • Integrated modules: IRED, ALS, PS, IC • Operates ALS & PS in parallel structure 	<ul style="list-style-type: none"> • Fully lead (Pb)-free device • Up to 200A max. continuous drain current • 50% smaller footprint than D2PAK (TO-263) • 100% Rg and UIS tested
			
			
<p>VEVD5510CF Ambient Light Sensors</p>	<p>VEML6040 Colour Sensors</p>	<p>K857PE 4-Quadrant PIN Photodiodes</p>	<p>VSMA10xxx High Power IR-Emitters</p>
<ul style="list-style-type: none"> • SMD package • Radiant sensitive area 7,5mm • High photo sensitivity • Suppression filter • Fast response times 	<ul style="list-style-type: none"> • SMD package • Integrated modules: colour sensor (RGBW) and signal conditioning IC • Matching real human eye responses 	<ul style="list-style-type: none"> • SMD package top view • Technology: epitaxial • AEC-Q101 qualified • High photo sensitivity • Each quadrant PD has an active area of 1.6 mm² 	<ul style="list-style-type: none"> • SMD Package • Up to 1.5A (DC) and up to 5A (pulsed) • Low thermal resistance: 6K/W < RthJSP < 9K/W
			



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