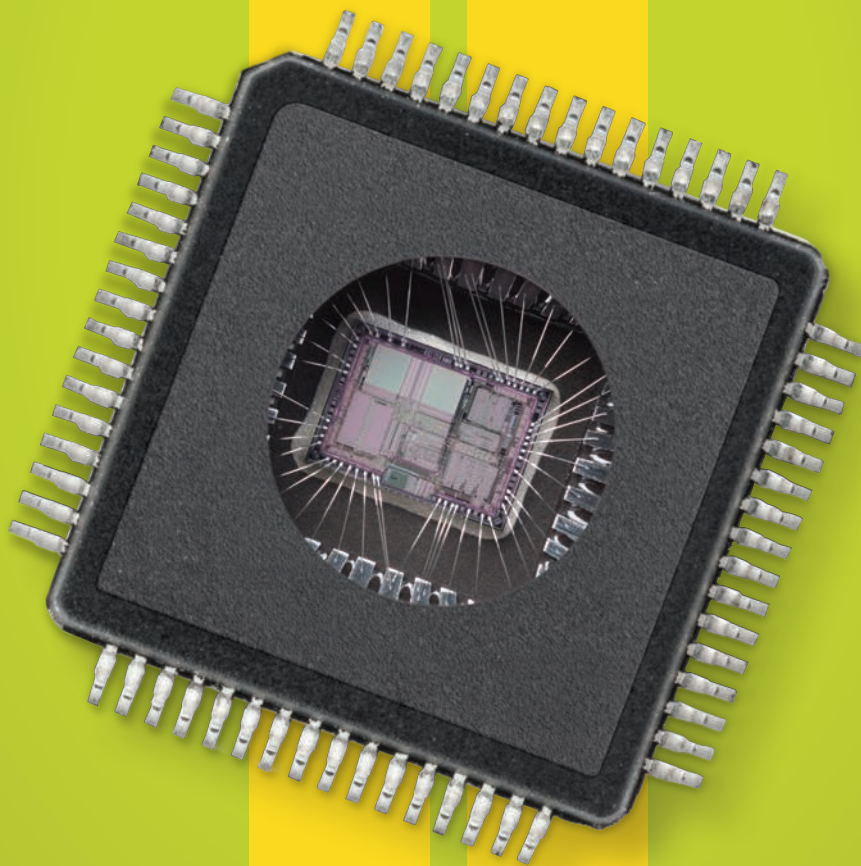
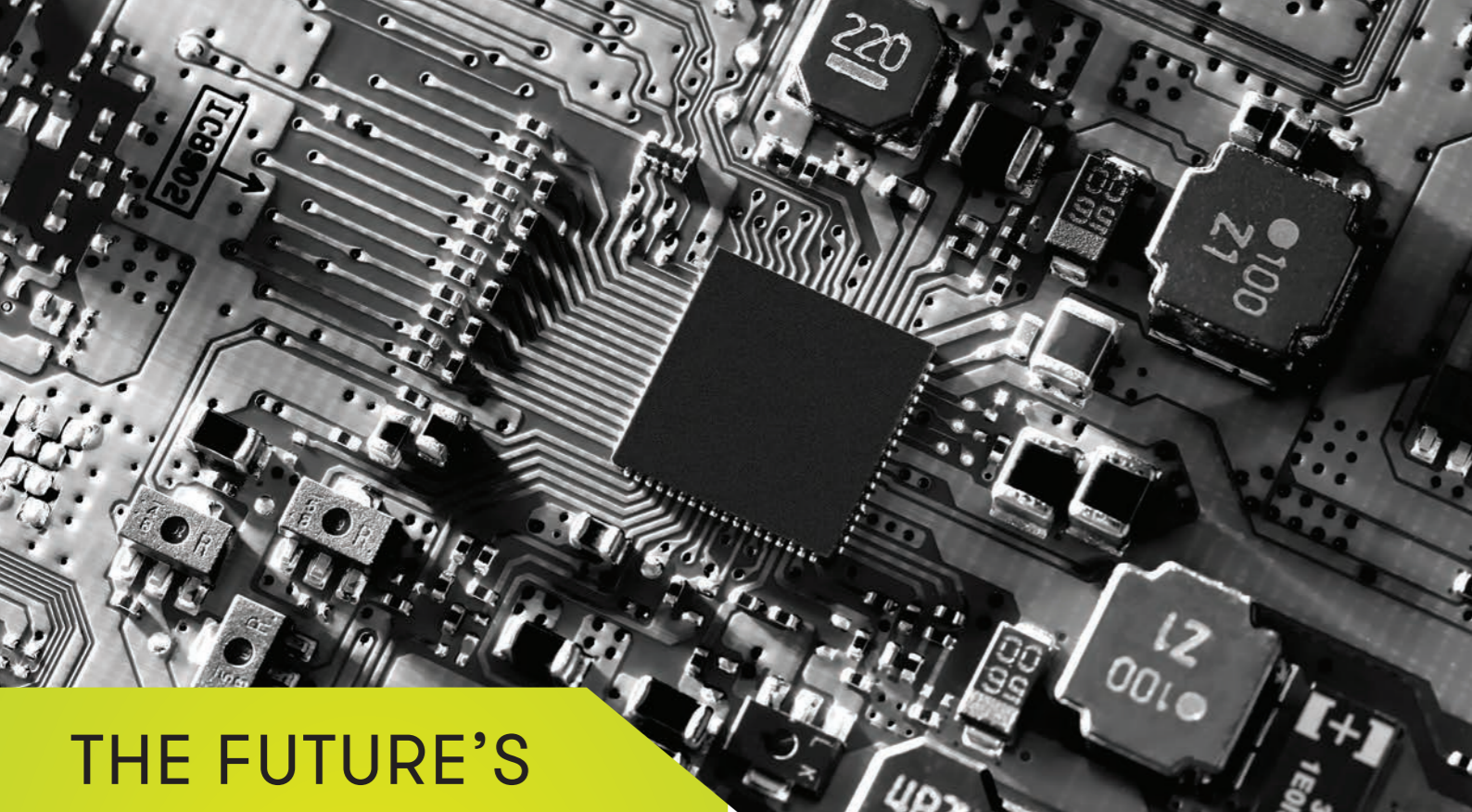


EVERYDAY ELECTRONICS

THE **FIRST CHOICE** FOR ENGINEERS,
DESIGNERS AND MAKERS



We're by your side



THE FUTURE'S BRIGHT, THE FUTURE'S ELECTRONICS...

With electronics underpinning virtually every technology advancement in some way, from 3D printing and drones to virtual reality and autonomous vehicles, those engaged in electronic design need to balance today's needs with a 6, 12, 24 month or longer development roadmap. Uncertainty is a way of life in this sector. Normally the uncertainty comes from the challenges of component obsolescence, complying with new directives and standards and those everyday supply chain challenges. We've been supporting the electronic's industry since our inception in 1937, we'd like to share brands, technologies, tools, services and ideas that can help you navigate these uncertain times, with RS by your side.

THE FUTURE'S ELECTRONICS

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IoT and Wearable Sensor Applications Development Kit

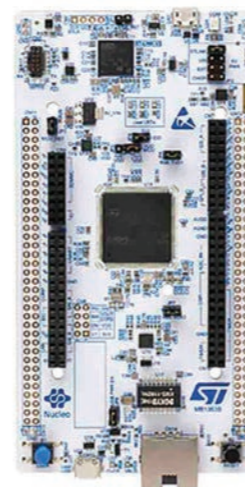
- SensorTile.box wireless multi-sensor development kit with easy-to-use app ideal for motion and environmental sensor applications
- Compact board with motion, temperature, humidity, altitude and audio high precision sensors
- Ultra-low-power ARM Cortex-M4 microcontroller with DSP and FPU (STM32L4R9)



190-8453 STEVAL-MKSBOX1V1

STM32 Nucleo-144 Development Board

- Dual core high performance NUCLEO board for a cost effective evaluation of a dual core device
- Provides a flexible way for users to try out new concepts and build prototypes by choosing from the various combinations of performance and power consumption features, provided by the STM32 microcontroller
- On-board ST-LINK debugger/programmer and comes with comprehensive free software libraries and examples



193-9788 NUCLEO-H745ZI-Q

Discovery Kit for STM32F769NI Microcontroller

- Provides you with the quickest way to evaluate the STM32F7 series
- The kit can be used in a wide range of projects as they feature multi-sensor support, audio, video, graphics and high-speed connectivity with a large set of communication peripherals
- Highly responsive so ideal to support IoT applications such as smart thermostats, fitness devices, smart device interfaces (such as washing machines), waveform generators and paper cutters
- With B-LCD40-DS11 4" 800 x 480 capacitive touch LCD display panel



123-1055 STM32F769I-DISCO

Discovery Kit for STM32F469NI Microcontroller

- This development kit offers you the opportunity to quickly and easily evaluate STM32 MCUs
- It has a wide range of connectivity options and a high degree of integration
- With a number of expansion connectors and Arduino UNO, a range of add-on boards can easily be connected to this kit



909-2865 STM32F469I-DISCO



PRO Industrial Remote Control Systems SCORPION Remote Controls

- 868Mhz based remote control with medium (150m) to long (16 km) range options
- Choice of systems or transmitter/receiver combination from 1 to 16 channels
- Systems feature IP65+ enclosed receiver and handheld transmitter
- FOBOEM features handheld transmitter and ready to integrate PCB receiver



- 192-6549** TRAP-8S4 4 channel system, 12/24Vdc, 2km
- 192-6548** TRAP-8S1 1 channel system, 12/24Vdc, 2km
- 192-6564** PRO-TAURUS-8S8-1K 8 channel 110-230Vac, 1km
- 192-6547** FOBOEM-8S4 4 button fob & receiver PCB 1.8-3.6Vdc
- 192-6570** PRO-LORAT1-8S2 Telemetry system 2in, 2out, 1km
- 192-6568** PRO-CARLTON-8S16-16K 16 channel, 110-230Vac, 16km

MAINSLINK

- An innovative solution to remove the need for switched mains wiring to run over long distances
- Available in 50-500m range FM or 1-5km range RF-LoRa options
- Supplied ready to use as matched Tx/Rx units in IP65 enclosures



- 181-3275** MAINSLINK-PRO remote control system 1-5km
- 860-7246** MAINSLINK remote control system 50-500m

- Uses FM/LoRa spread spectrum transmission for reliable 2-16km range
- Wireless recharging for internal Li-on transmitter battery
- User configurable and sealed weatherproof enclosure
- Watchdog signal with continuous or state change transmission options



- 203-4658** PRO-SCORPION-8S16-16K 16 channel system, 16Km
- 203-4652** SCORPIONELITE-8S4 4 channel system LoRa 16Km
- 203-4655** SCORPION-8TW16 16 button transmitter LoRa 16Km
- 203-4654** SCORPION-8TW4 4 button transmitter LoRa 16Km

Telemetry Antenna

- RF remote control or telemetry antennas in various form factors - Flexi, Puck, Whip, Yagi, Rod
- Choice of connector types - SMA, UFL, BNC, Embedded
- Support frequencies: 433 MHz, 868 MHz, 915 MHz GSM and GPS



- 762-0058** PUK antenna 433/868Mhz M14 screw SMA(M)
- 542-563** ¼ wave whip SMA 90DEG 868Mhz
- 793-4363** Whip antenna, hinged, SMA(M),868 Mhz,+3DB
- 542-545** ¼ wave whip BNC 90DEG, 433Mhz
- 542-551** ¼ wave whip SMA 868Mhz
- 125-1251** ¼ whip UFL 50MM 868Mhz
- 542-541** Helical BNC fixed 433Mhz



ZETA Low Power Industrial Modems

- 4G / LTE Category M / NB IoT Ready industrial cellular modems with RS-232 and USB interfaces
- Easily connect remote equipment to the new LTE Cat M and NB IoT networks or existing 2G/3G/GSM cellular networks
- Ideal for environmental monitoring, industrial sensors, access control systems, car parking payment systems, and more
- Industrial specification - extended temperature range & wide 5-42Vdc supply



- 185-3058** 4G / LTE IoT Industrial Modem & Starter Kit (EU)
- 185-3056** 4G / LTE IoT Industrial Modem & Starter Kit (Global)
- 202-4074** LTE 4G modem with GPIO + 2G/3G/GNSS Kit
- 202-4072** Ultra low power ind CAT1 modem Kit
- 202-4071** CATM/NBIOT modem with GPIO Kit
- 176-7059** ZETA-N2-GPRS GSM/GPRS Starter Kit

QUARTZ Industrial Cellular Routers

- Fast 4G / LTE / 3G/ UMTS performance for high speed remote access
- Plug & Play: automatic network detection and setup
- Powerful Linux based OS for robust industrial compliance
- Add cellular connectivity easily to remote or legacy equipment



- 124-8861** 3G & 4G Dual LAN Industrial Router (EU)
- 185-3061** Router 4G/3G EU GPS WIFI 2LAN SIM
- 185-3062** LITE router kit 3G/UMTS (EU)
- 185-3071** 4G/LTE router kit LAN SIM GPS
- 185-3069** 3G/UMTS router kit LAN SIM serial
- 185-3060** Router 3G/UMTS GPS WIFI 2LAN SIM

SNYPER-LTE+ Spectrum RF Detector

- A High performance network signal analyser dedicated to surveying the 4G/LTE, 3G/UMTS & 2G/GSM European networks with SIM free operation
- Reduce local surveys and coverage challenges, perform real graphical surveys with the Live Scan feature and see complete network breakdowns
- Frequency range from 700 MHz - 2.6 GHz (5G ready)



- 187-3714**

OSCAR Antennas

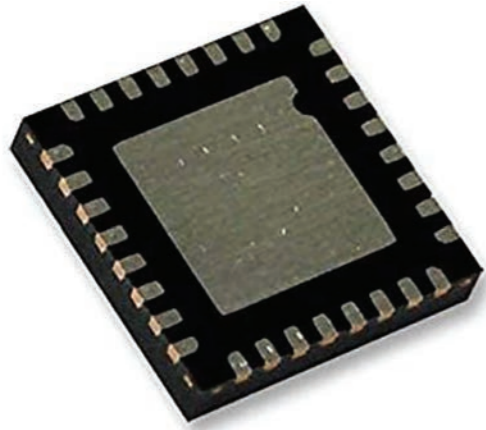
- Various form factors providing an option for every application
- YAGI, Omni-directional and Outdoor antennas
- Range supports GPRS/GSM/2G/3G/UMTS/4G/LTE
- IP67 and IP65 rated options - ideal for industrial and remote use



- 176-7070** OSCAR 4G/3G/2G YAGI antenna with SMA FEM
- 124-8696** 3G/GSM/GPRS/UMTS bracket antenna FMEF .2
- 124-8872** 4G/3G/2G/WIFI compact OMNI wall antenna
- 124-8874** 3G/2G/GSM/GPRS 5DBI wall mount antenna
- 124-8868** 4G/3GWIFI compact OMNI wall antenna
- 896-8323** Quad band GSM omnidirectional antenna

MAX32520 - ChipDNA Secure Arm Cortex M4 Microcontroller

- High-Efficiency Microcontroller for Secure Element IoT
- ChipDNA technology involves a physically unclonable function (PUF) that enables cost-effective protection
- Power management maximises operating time for battery applications



196-8960 Each
196-8959 Tube of 60 (MPO)

MAX77827 - 5.5V Input, 1.8A/3.1A Switch Buck-Boost Converter with 6µA IQ

- High-efficiency buck-boost regulator targeted for one-cell Li-ion powered applications
- Supports input voltages of 1.8V to 5.5V and an output voltage range of 2.3V to 5.3V
- Features two different switching current levels (1.8A and 3.1A) to optimise external component sizing



196-8976 Pack of 5
196-8975 Tape of 10 (MPO)

MAX44284 - 36V, Input Common-Mode, High-Precision, Low-Power Current-Sense Amplifier

- Offers precision accuracy specifications of 2µV VOS and gain error of 0.05%
- Optimised for very low power operation with only 21µA of quiescent current
- Four fixed gain options simplify design



190-6395 H version - pack of 5
190-4344 H version - reel of 2,500 (MPO)
190-6383 F version - pack of 5
190-4343 F version - reel of 2,500 (MPO)

DS3231MPMB1 - Peripheral Module - ±5ppm, I2C Real-Time Clock

- Industry's first temperature-compensated RTC with internal MEMS resonator reduces crystal mechanical failure susceptibility
- Simple serial interface connects to most microcontrollers
- Battery-backup input for continuous timekeeping



191-4210

Military / Professional Grade Potentiometer - PE30 Series

- Featuring a fully sealed body and an IP67 rating
- With a cermet element, through-hole mounting in a 19.7mm body
- High power ratings at 70°C and excellent thermal stability



790-4445 10k (price each in a pack of 10)
790-4457 1K (price each in a pack of 2)
167-8701 2k2 (price each in a pack of 2)
790-4482 4k7 (each)
790-4460 1M (each)

MKP 1848C Series High Density DC-link Capacitor

- High ripple current capability, low ESR and low ESL
- Very long useful life time: Up to 100,000 hours at UNDC and 70°C
- Applications include: renewable energies inverters UPS, battery chargers and motor drives
- 1kV versions shown, more options available on the RS website



825-1461 30µF
825-1470 40µF
825-1473 50µF
825-1477 100µF

Sfernice RPS Series Thick Film Non-Inductive Power Resistors

- Developed specifically for electrical traction applications
- High power rating: 500W and high overload capability up to 2 times rated power
- Heatsink mounting and low thermal radiation from the case



789-1216 1R
821-9940 3R6
821-9962 6R8
789-1204 10R
789-1200 100R
821-9959 470R

LVAC Power Capacitors

- For wind power plants, solar panels and inverters, thermal power stations, power factor correction and as a harmonic filter
- Terminal block with spring connection reduces assembly times up to 60%
- Vibration proof in wind power plants and during transport
- Supplied and priced as a box of 4



187-5373 3 x 77µF 20kvar
187-5374 3 x 96.2µF 25kvar
187-5368 3 x 132.6µF 20kvar
187-5371 3 x 154µF 28.1kvar
187-5369 3 x 165.8µF 25kvar

TRS® Thermal Reed Switches

- Highly reliable, precise temperature-sensitive switch ideal for energy conservation
- Unique proprietary design features a magnet and a temperature-sensing soft ferromagnetic substance called Thermorite®.
- Wide range of operating temperatures available from -10°C to +130°C
- Excellent temperature accuracy of ±2.5°C
- High reliability for on/off operations
- High-speed response
- 140V switching voltage, 0.5A switching current
- 264V / 0.27A variants also available, visit our website



188-0540	5°C lot of 50
188-0541	10°C lot of 50
188-0776	15°C
188-0548	45°C lot of 50
188-1026	50°C
188-0931	65°C
188-0966	105°C
188-0506	110°C lot of 50
188-0933	120°C
188-0927	125°C

KC-LINK™ Capacitors

- Surface mount capacitors are designed to meet the growing demand for fast switching wide bandgap (WBG) semiconductors that operate at higher voltages, temperatures, and frequencies.
- By utilising KEMET's robust and proprietary COG/ NPO base metal electrode (BME) dielectric system, these capacitors are well suited for power converters, inverters, snubbers, and resonators, where high efficiency is a primary concern.
- With extremely low effective series resistance (ESR) and very low thermal resistance, KC-LINK capacitors can operate at very high ripple currents with no change in capacitance versus DC voltage, and negligible change in capacitance versus temperature.
- Operating temperature range of -55°C to +150°C



193-0972	22nF 1700V
193-0971	22nF 1700V reel of 250
193-0970	47nF 1200V
193-0969	47nF 1200V reel of 250
193-0968	56nF 1000V
193-0967	56nF 1000V reel of 250
193-0966	150nF 650V
193-0965	150nF 650V reel of 250

MPLCV Wire Wound Surface Mount Inductors

- Metal composite inductors are ideal for use in DC to DC switching power supplies for automotive applications.
- The combination of composite core material and round wire allows these inductors to be used in applications with high switching frequencies and where efficiency is important.
- Operating temperature up to +155°C
- Typical applications: Automotive ECU, LED head lights, meter cluster panels, Head-up displays (HUD), Electric water pumps (EWP), Electric oil pumps (EOP), Electric power steering (EPS)



180-9270	4.7µF 6.3/10.5A tape of 5
180-9186	4.7µF 6.3/10.5A reel of 1000
180-9268	10µF 4/6.5A tape of 5
180-9185	10µF 4/6.5A reel of 1000
180-9281	10µF 7.1/12A tape of 5
180-9189	10µF 7.1/12A reel of 1000
180-9289	22µF 4.2A tape of 5
180-9191	22µF 4.2A reel of 1000
180-9285	22µF 5.5/7A tape of 5
180-9190	22µF 5.5/7A reel of 1000
180-9272	33µF 2.6/4A tape of 5
180-9187	33µF 2.6/4A reel of 1000
180-9276	47µF 2.1/3A tape of 5
180-9188	47µF 2.1/3A reel of 1000

ZCT Zero Phase Current Transformers

- Compact, moulded, zero-phase current transformers which are ideal for improving the sensitivity, compactness and weight of electric shock prevention
- Laminated iron core with output voltage 8.0-12.5V and DC resistance 25 to 30Ω
- Operating temperature -20°C to +80°C



181-0075	15A
180-9997	15A box of 80
181-0077	30A
180-9998	30A box of 80
181-0079	60A
180-9999	60A box of 50
181-0081	125A
181-0001	125A box of 50

Hybrid Aluminium Electrolytic Capacitors

- High endurance surface mount capacitors using electrolyte fused with conductive polymer and electrolyte liquid
- Offer low ESR, low leakage current, extended temperature and high reliability which allow downsizing and increased end product reliability
- Priced per pack, extensive range of ZA, ZC, ZK and ZS variants available from stock



758-1082	10µF, 50V dc, surface mount - EEHZC1H100R
758-1086	22µF, 50V dc, surface mount - EEHZC1H220P
131-1959	33µF, 35V dc, surface mount - EEHZK1V330R
758-1054	56µF, 25V dc, surface mount - EEHZC1E560P
758-1076	68µF, 35V dc, surface mount - EEHZC1V680XP
758-1092	100µF, 50V dc, surface mount - EEHZC1H101P
179-9287	120µF, 50V dc, surface mount - EEHZC1H121P
758-1070	150µF, 35V dc, surface mount - EEHZC1V151P
131-1962	180µF, 35V dc, surface mount - EEHZK1V181P
758-1244	220µF, 25V dc, surface mount - EEHZA1E221P
758-1089	270µF, 35V dc, surface mount - EEHZC1V271P
181-2294	470µF, 35V dc, surface mount - EEHZA1V471V
181-2291	560µF, 25V dc, surface mount - EEHZA1E561V

ETQP Power Choke Coils

- Surface mount power choke coils using metal composite core (MC) and particularly suited to automotive and industrial applications
- High reliability with high vibration resistance and stability over a broad temperature range
- 6mm footprint VN variants listed (priced per pack) with 8mm VK and 10mm VC options available



122-1747	680 nH common mode choke, ETQP3MR68KVN
122-1734	1 µH common mode choke, ETQP3M1R0KVN
122-1765	47 µH 4.7 A Power Choke Coil 132mΩ
122-1728	47 µH 3.8 A Power Choke Coil 210mΩ
122-1741	3.3 µH common mode choke, ETQP3M3R3KVN
122-1743	4.7 µH common mode choke, ETQP3M4R7KVN
122-1744	4.7 µH 6.7 A Power Choke Coil 45.6mΩ
122-1731	10 µH common mode choke, ETQP3M100KVN
122-1748	680 nH 6.1 A Power Choke Coil 65.7mΩ

Metal Thin Film Resistors - 0805

- Panasonic metal film chip resistors offer high reliability and remain stable in high temperature / high humidity environments
- Highly accurate with a good resistance tolerance and temperature coefficient of resistance
- Offers low current noise and comply with IEC 60115-8, JIS C 5201-8, EIAJ RC-2133A
- Priced per pack - 0803 format listed, with 0603 and 1206 formats available from stock



565-948	10kΩ, ±0.1% 0.125W - ERA6AEB103V
566-765	100kΩ, ±0.1% 0.125W - ERA6AEB104V
662-0451	1kΩ, ±0.1% 0.125W - ERA6ARB102V
565-964	1kΩ, ±0.1% 0.125W - ERA6AEB102V
662-1218	1kΩ, ±0.05% 0.125W - ERA6ARW102V
662-0833	1kΩ, ±0.1% 0.125W - ERA6APB102V
828-0554	2kΩ, ±0.1% 0.125W - ERA6AEB202V
566-474	2.2kΩ, ±0.1% 0.125W - ERA6AEB222V
708-6339	4.99kΩ, ±0.1% 0.125W - ERA6AEB4991V
565-932	4.7kΩ, ±0.1% 0.125W - ERA6AEB472V
662-0495	10kΩ, ±0.1% 0.125W - ERA6ARB103V
662-1252	10kΩ, ±0.05% 0.125W - ERA6ARW103V
566-507	12kΩ, ±0.1% 0.125W - ERA6AEB123V
708-9182	49.9Ω, ±0.1% 0.125W - ERA6AEB49R9V
566-755	82kΩ, ±0.1% 0.125W - ERA6AEB823V
662-1296	100kΩ, ±0.05% 0.125W - ERA6ARW104V
565-853	1MΩ, ±0.1% 0.125W - ERA6AEB105V

Bluetooth® Modules

- The quickest way to implement Bluetooth® connectivity to your design is via a pre-approved module
- Options with Host Controlled Interface (HCI) or SPI and Dual Mode Bluetooth modules supporting both Bluetooth Low Energy and Bluetooth Classic connectivity
- Full details of each module available online



828-9680	PAN1740-ETU Bluetooth chip 4.1
787-0452	PAN1026-SPP Bluetooth chip 4.0
828-9024	PAN1326B-HCI-85 Bluetooth chip 4.0



TECHNOLOGY TRENDS

If you ask your kid to use their hands as a phone and pretend to answer a call, **what do you think they will do?**

Most probably, they will put their palm next to their ears like you would do with smartphones without any mechanical buttons. For anyone who was born before the 2000s, it might be more natural to use a thumb and pinky finger to do the same action. This shows how the electronics market is evolving at an extremely high pace with new devices coming out every year with more features, smaller in size and more powerful than their predecessors.

In this article, we would like to draw your attention to the three technology trends that we think will transform the electronics industry in the up and coming years.

EDGE AI

Artificial Intelligence (AI) has often been a buzzword in the news recently, but what does it mean and what you can do with it? The term generally refers to the ability of machines to perform tasks that are inherently associated with humans, such as “problem-solving” and “learning”.

Some of the examples that are already available include smart assistants with tools like Siri and Alexa, conversational bots for customer service, customised recommendations based on your favourite shows or songs on Netflix and Spotify, and more. Until recently, almost all computations were performed within the data centres in the cloud to satisfy the extensive computing power requirements of AI algorithms.

However, the issues that come with cloud computing; including the latency, scalability and cost as well as data security and privacy concerns, have sparked the evolution of AI at the edge of the network, or so-called edge AI. The benefits of implementing edge AI devices come from the fact that the computations are performed locally without sending a large amount of data to a remote location.

Semiconductor manufacturers are currently investing in the development of edge AI chips that have sufficient processing power to perform intensive AI computations. Deloitte estimates that more than 750 million edge AI chips will be sold in 2020. STMicroelectronics, for example, offers software and hardware solutions for implementing AI on the widely used STM32 family of microcontrollers, including STM32Cube.AI tool for mapping and running pre-trained Artificial Neural Network (ANN) algorithms.

5G

After four generations of cellular mobile communication technologies (from 1G to 4G), we have unavoidably reached the limit of speed and reliability of the connection that we can achieve on our devices.

With the number of internet users increasing exponentially, the existing network is struggling to support the increased mobile data traffic. 5G, the fifth-generation cellular mobile communication network, promises the latency of less than a few milliseconds and ten times the speed of today’s 4G networks.

To achieve these parameters, wireless engineers are working on the development of several brand-new technologies, including millimetre wave broadcasting, small cells, massive MIMO, utilising multiple signal path propagation to enhance performance, and beamforming via the use of complex antenna arrays.

However, device manufacturers are faced with significant constraints, including cost, space and power consumption, when it comes to designing electronics components compatible with 5G. The operation of antennas, RF circuitry, as well as thermal management solutions, must be optimised to be able to completely leverage the benefits of 5G. Manufacturers such as Molex, TE Connectivity, Cypress Semiconductor, are just a few examples of companies driving the innovation in this area.

MEMS SENSORS FOR PREDICTIVE MAINTENANCE

With the adoption of Industry 4.0 and the Industrial Internet of Things (IIoT) initiatives, the manufacturing sector is increasingly investing in tools and solutions to achieve improvements in the efficiency of their production processes. Implementing predictive maintenance on the factory floor is perhaps one of the most prominent use cases for IIoT.

Predictive maintenance techniques can help to identify any deterioration in the equipment by continuously monitoring its “health” and hence avoid any unpredicted failures and downtime costs. With the IIoT in mind, sensors for predictive maintenance are required to not only withstand harsh operating conditions of the factory floor, but more emphasis is being placed on utilising wireless, ultra-low-power sensing technologies.

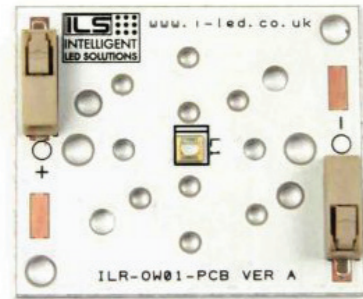
This puts the spotlight on micro-electro-mechanical systems (MEMS) sensors that can offer compact, low-power, yet extremely precise measurement capabilities for IoT-enabled predictive maintenance solutions. Although the popularity for MEMS sensors originated from the world of personal electronics, such as their use in smartphones and smartwatches for applications such as for tracking steps and distance with in-built accelerometers, the current advancements in MEMS technology can provide a more affordable and scalable alternative for existing sensing technologies within the industrial environment.



“We have unavoidably reached the limit of speed and reliability of the connection that we can achieve on our devices.”

ILS UV 1 LED LEDiL Selector Board

- Contains 1 compact, high quality and reliable TSLC N3535U 1-chip UV LED, with a primary 60° lens, featuring high radiometric power density and design flexibility
- With a ceramic substrate, the N3535U is ideal for anti-bacterial and disinfection applications. The range is suited to demanding industrial applications, including sterilisation, disinfection and purification
- Available with push-in connectors for easy installation, UV LEDiL selectors are ideal for development, and designed to fit numerous secondary optics from LEDiL, such as JENNY & ROSE
- Available wavelengths include 260nm, 270nm and 300nm. Also available in 90 and 130 degree primary lens angles



201-7458 ILS-XN01-S270-LEDIL-SC201

ILS UV 12 LED VIOLET Strip

- At the heart of each UV VIOLET strip are 12 compact, high quality and reliable TSLC N3535U 1-chip UV LEDs, with a primary 60° lens, featuring high radiometric power density and design flexibility
- The VIOLET strip has been specifically designed to work with the VIOLET linear lens from LEDiL
- The UV VIOLET range is suited to demanding industrial applications, including sterilisation, disinfection and purification
- Full range of wavelengths available
- Also available in 90 and 130 degree primary lens angles



201-7483 ILS-XN12-S260-0280-SC201-W2
201-7484 ILS-XN12-S270-0280-SC201-W2
201-7485 ILS-XN12-S300-0280-SC201-W2

FN17294 VIOLET-12X1-S LED LEDiL Lens

- VIOLET is a silicone 12-lens array made from highly resistant UV materials and is also LEDiL's first optic designed for UV-C applications
- This ingress protected optic is an excellent solution in surface, air and water UV disinfection applications as well as for prevention of plant disease and insect infestation
- Perfectly suited to work with the ILS 12 LED VIOLET UV strip for a complete solution



201-7710 FN17294_VIOLET-12X1-S

Stanley Electric Water Disinfection Unit

- New from Stanley, UVC 254nm CCL Reactor 150mm or 274mm for sterilising flowing water
- It uses the Stanley's UV cold cathode lamp (UV-CCL) which incorporates original metal cup electrodes. The main characteristics of the reactor are anti-vibration and long lifetime of 20,000 hours
- Single self-contained unit for water purification, industrial circulation equipment, water taps etc



203-5802 US/30F150/R3
203-5801 US/50F274/R2

LUXEON IR ONYX Broadband Infrared LEDs

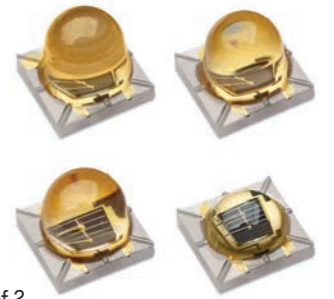
- For industrial, scientific, medical and consumer applications
- Broadband infrared (IR) emission from 650 to 1100nm with superior light output characteristics
- Standard 2720 package and footprint for easy integration in existing designs
- New possibilities for miniaturization of spectroscopy and hyperspectral imaging applications in hand-held devices



203-9045 Each
203-9043 Reel of 1000 (MPQ)
203-9045P Production Packaging version - price each

LUXEON IR Domed Asymmetric LEDs

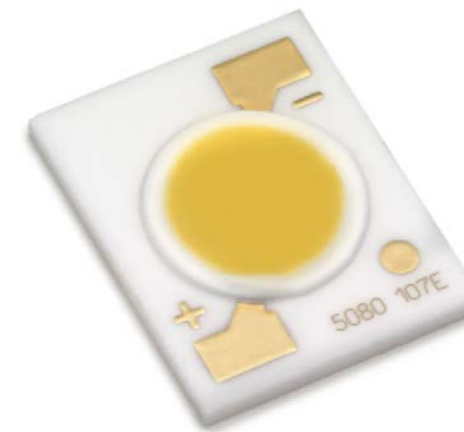
- Available in 850nm and 940nm wavelengths to provide optimised performance for each type of application
- Radiant Power of 1350mW (850nm) and 1450mW (940nm) for a greater system performance
- 3.7mm x 3.7mm package with 3 pad configuration compatible with the industry standard footprint, enabling a direct upgrade in existing designs
- Ultra-low Rth of 2.5°C/W typ, the industry's best thermal conductivity, solves thermal challenges and supports space saving designs



203-9047 850nm pack of 2
203-9046 850nm reel of 1000 (MPQ)
203-9047P 850nm Production Packaging version - price each
203-9049 940nm pack of 2
203-9048 940nm reel of 1000 (MPQ)
203-9049P 940nm Production Packaging version - price each

Lumileds LUXEON CoB Compact Series LEDs

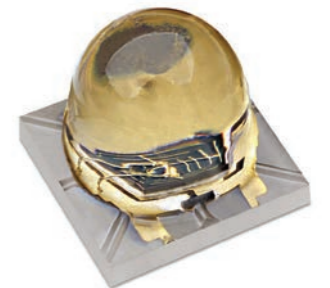
- The LUXEON CoB Compact range, from Lumileds, is a family of chip-on-board (CoB) white LEDs designed for directional lamps and spotlights
- Available in a range of different colour temperatures, these LEDs are ideal for use in the home, hospitality and retail
- Good thermal resistance allows for smaller heat sinks



170-9872 Lumileds L2C3-2290105E06000
873-4852 Lumileds L2C3-2290105E06000

LUXEON IR Domed IR LEDs

- High-power IR emitters featuring integrated primary optics for accurate beam control
- Available in a choice of different wavelengths and viewing angles
- Industry standard footprint of 3.7 x 3.7mm
- Suitable applications include CCTV, machine vision, 3D scanning, biometric data, user interface control and virtual reality
- Examples shown supplied and priced as a pack of 4. Other pack quantities available.



136-6476 850nm 60°
136-6477 850nm 90°
136-6478 850nm 150°
136-6479 940nm 60°
136-6480 940nm 90°
136-6481 940nm 150°

Adhesive Lined Heat Shrink Sleeving 3:1

- Provides environmental sealing for electrical components, wire breakouts and cable jackets
- High strength bonding and flame retardant jacket
- Operating temperature range of -30 to +80°C
- Supplied in lengths of 1.2m



157-3789	3mm
157-3795	6mm
157-3802	9mm
157-3818	12mm
157-3824	18mm
157-3830	40mm

ENTRELEC SNA Series 1 kVac Standard Din Rail Terminals

- Offering current capacities from 3A to 300A
- Choice of screw clamp, spring or stud terminations
- Examples shown 4mm (32A) screw terminals. Extensive range available on the RS website



424-759	1SNA115116R0700 grey
425-998	1SNA125116R0100 blue
426-008	1SNA105116R1600 yellow
426-014	1SNA105002R2000 orange
193-657	1SNA105032R1500 red
193-663	1SNA105031R1400 black

RT2 Series PCB Power Relays

- Offers a variety of coil voltages and contact configurations
- Uses 5mm pin spacing and are flux proof (wash tight options)
- 2 pole 8A, 2 form C change-over contacts
- Ambient temperature up to 85°C



198-6911	24Vdc coil - RTE24024
198-6898	5Vdc coil - RTE24005
680-3943	6Vdc wash tight - RTE24006
198-6905	12Vdc coil - RTE24012
200-1904	24Vac coil - RTE24524
200-1926	230Vac coil - RTE24730
680-3959	5Vdc wash tight - RTE25005
680-3953	12Vdc wash tight - RTE25012
680-3962	24Vdc wash tight - RTE25024
420-372	Relay socket for use with RT Series 240Vac max

AMPLIMITE D-Sub Connectors

- Rugged, corrosion resistant, passivated stainless steel connectors for demanding applications
- Subminiature D connectors have become the most popular type of input/output (I/O) connectors in use today
- Complete AMPLIMITE range available online



187-0997	9 pin plug
187-0977	9 pin socket
187-1001	15 pin plug
187-0981	15 pin socket
187-1006	25 pin plug
187-0985	25 pin socket

A Series - Sealed Heavy Duty, Multi-Pin Plastic and Metal Connectors

- Our A Series™ family of sealed heavy-duty, multi-pin plastic and metal connectors include a wide range of products serving many industries
- The connectors were developed as a high-performance, cost-effective solution for use with heavy equipment, agricultural, automotive, military, alternate energy and other demanding interconnect architectures.



696-4187	AT06-2S cable mount plug 2 pole
696-4196	AT06-3S cable mount plug 3 pole
696-4199	AT06-4S cable mount plug 4 pole
194-9800	ATF13-2P-BM03 BoardLock 2 pole
194-9806	ATF13-3P-BM03 BoardLock 3 pole
194-9818	ATF13-4P-BM03 BoardLock 4 pole

SurLok Plus Connectors

- A field installable, highly reliable alternative to common compression lugs
- Due to the IP67 protection class and a special quick lock and press-to-release design, the SurLok Plus series is suitable for use in harsh environmental conditions
- Three different colours and different mechanical coding options allow the use of several SurLok connectors side by side without the risk of reverse polarity
- Extensive range available on the RS website. Examples shown



124-3995	SLP IR C 50 C P S O 1 socket 200A
124-4010	C10-730190-0500 plug 200A
124-3986	SLP IR C 70 C P S O 0 socket 300A
124-4004	C10-730190-0700 plug 300A
124-3980	SLP IR C 85 C P S O 0 socket 350A
124-4001	C10-730190-0801 plug 350A

PowerLok Connectors

- If you choose to use PowerLok Series you will receive a compact, metal-shell interconnect solution made for electric and hybrid transportation technologies
- With the possibility to use wire gauges up to 150mm² it can reach currents up to 500A and a voltage rating of 1.000 Vdc
- Equipped with automatic secondary lock, HVIL contacts, shielding and several mechanical coding options PowerLok series is offering maximum safety
- Extensive range available on the RS website. Examples shown



197-4749	PL282X-301-70 2 way 70A right angle plug
197-4751	PL182X-301-70 2 way 70A straight plug
197-4816	PL183X-301-70 3 way 70A straight plug

Industrial Circular Metal Connectors MIL Style MS 5015 Series

- The MS 5015 class is a standard of cylindrical MIL-C-5015 connectors, according to latest performance requirements of MIL-C-5015
- The threaded coupling connectors contain shells fabricated from high grade aluminium alloy in a wide variety of shell styles
- Applications include any industrial application such as robotics, machine tools and welding industries
- Extensive range available on the RS website. Examples shown



298-2493	MS-A 17 way cable mount male
298-2437	MS3106A 14 way cable mount male
298-2443	MS3106A 17 way cable mount male
200-4763	MS-A 8 way cable mount male
200-4760	MS-A 14 way cable mount male
298-2421	MS3106A 7 way cable mount male

3M™ Round Conductor Flat LSHF Cable HF447 Series

- Designed for Low Smoke Halogen-Free insulation in internal wiring applications.
- Featuring a “zippable” construction for discrete termination, they accommodate mass termination to a broad line of IDC (insulation displacement contact) connectors, including the Mini Delta Ribbon (MDR) series from 3M.
- They can also be directly soldered to a printed circuit board.
- The LSHF design reduces smoke and toxicity of combustion gases and support operating temperatures from -40°C to 90°C.



3M™ Mini Delta Ribbon (MDR) Connectors

- Industry leading 1.27mm interconnect system, consisting of board and wire mount ribbon style connectors and accessories in a wide range of configurations, for high speed/density input/output applications.
- Design features include: shielded shells providing EMI/ESD protection, pre-loaded ribbon contacts providing proven reliable connection, IDC U-shaped contacts allowing mass termination and a wide range of pin counts and form factors to enable design flexibility.
- The MDR connector system gives reliable contact during insertion and withdrawal cycles and utilises an insulation stripping U-contact to connect to the cable conductor wires.
- The contact is stamped from a high performance copper alloy, which provides an excellent combination of mechanical strength, electrical conductivity and corrosion resistance.



3M™ Delta Sub (D Sub) Connectors 8200 and 8300 Series

- A range of high quality wire mount standard D Subs and accessories giving advanced shielded I/O solutions to meet industry standards.
- Low profile, available in either open or closed end cover and with improved metal strain relief hooks directly to metal shell.
- 3M™ D Sub plug, 8200 Series is available with dimples to aid in EMI/ESD protection.
- 3M™ D Sub socket, 8300 Series is available in preassembled open cover



3M™ Cables

- 3M offers an extensive portfolio of cables and accessories built for speed and reliability in popular constructions, pitches and wire gauges compatible with 3M connectors.
- The 3M cable range includes Halogen free, flat ribbon, colour coded, twisted pair, jacketed flat, pleated foil, round jacketed and twin axial cables.
- This extensive range also offers suggested crosses* for a selection of the discontinued Amphenol Spectra-Strip cable products: 1700, 1785, 3302, 3365, 3517, 3600B, 3603, 3625, 3644B, 3659, 3749, 3801, 3811 and HF365 series



2.4GHz / 5GHz Wifi Stand Alone Balance Antenna

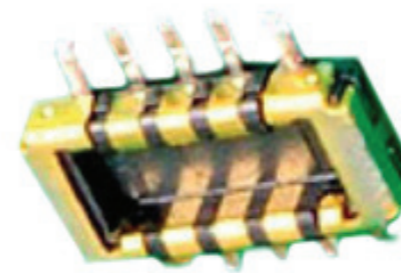
- Balanced antenna with ground-plane independent design
- High radiation efficiency with 34.9 by 9mm strip antenna (cable length 100mm)
- Poly-flexible, double-sided adhesive tape on antenna



907-6517

SlimStack 0.35mm Pitch Board-to-Board Connectors

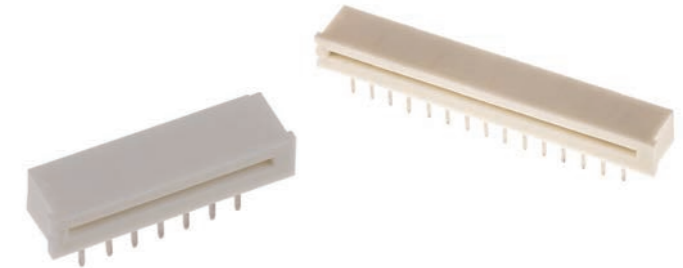
- Robust connectors deliver upscaled performance with up to 5A power
- Proprietary full-armor housing protection
- Superior reliability in challenging applications
- Supplied and priced as a bag of 10



881-2882 505066-0610 6 way, 2 row pack of 10

Easy-On 1.25mm ZIF PCB Through Hole FPC Connector

- Space saving design making them ideal for use in tight packaging applications
- ZIF for repeat cycling with minimum wear
- Slide type actuator for easy insertion and secure connection of FPC
- Other numbers of ways and pack quantities available (examples are priced as pack of 5)



- 542-7078 6 way pack of 5
- 369-609 8 way pack of 5
- 370-778 12 way pack of 5
- 371-709 14 way pack of 5
- 372-437 20 way pack of 5
- 372-447 26 way pack of 5
- 372-443 30 way pack of 5

Compact USB Type-C Connectors

- Expanded family supports up to 10Gbps
- Robust, reliable connectivity in IoT, wearable devices and other high-speed data I/O applications
- Receptacles feature high-temperature Nylon insert-mould housing to increase connector strength and reduce potential shorting between mid-plate and terminals



- 920-9180 105444-0001 Pack of 5
- 920-9199 105450-0101 Pack of 5
- 176-8672 105455-0101 Pack of 5
- 176-8676 201267-0005 Pack of 5
- 176-8674 202410-0002 Each
- 196-8696 204711-0001 Pack of 2



PCB Pro –

“What’s not to love about it?”

PCB Pro provides a host of useable features in a simple, intuitive PCB tool.

Positioned at a low price point, engineers will recognise a few of the high-end features such as:

- Blind and buried vias
- Configurable design rules editor
- Hierarchical schematic design
- Panel design editor
- Variant manager

Whether you are seamlessly upgrading from DS PCB or are a new engineer joining DesignSpark for the first time, check out the tutorials, contribute to the debate and experience what users are already saying about DS PCB Pro:

“Hierarchical design is a feature I have been waiting for. The implementation of blocks is very intuitive and greatly simplifies schematics when working with duplicated sections or complex designs. Adding multi-screen support is a great benefit too, particularly for cross probing the schematics and PCB. Also lots of really nice track features would make the Pro version a great asset to have. – JustFred, DesignSpark member”



Your go-to design engineering platform

www.rs-online.com/designspark/home



DG11 Power Entry Module with Circuit Breaker

- Easy clean Tested to IP67 ingress protection
- V-lock compatible highest possible level of safety and reliability against unintentional unplugging of power cords
- Offers high quality Circuit breaker protection for equipment
- Also available in a range of current and mounting options



188-6542

DD14 Power Entry Modules with Line Filter

- Most compact power entry module with 2-stages filter
- Attractive flat design with screw mounting (other options also available)
- Fuse drawer meets requirements of medical standard IEC/EN 60601-1
- V-Lock cord retaining



- 188-9508 3-104-202 1A
- 188-9509 3-104-203 2A
- 188-9510 3-104-204 4A
- 188-9511 3-104-205 6A
- 188-9512 3-104-206 8A
- 188-9513 3-104-207 10A

DD12 Medical Power Entry Module with Filter

- Ultra-compact design. Ideal for low profile designs
- Switch for highest inrush current
- Suitable for use in medical equipment according to IEC/UL 60601-1



708-5667

DD12 Power Entry Modules with Line Filter

- Ultra Compact design, with aluminium case providing good shielding
- Fuse drawer meets requirements of medical standard IEC/EN 60601-1
- Ideal for applications with high transient loads, designed for standard and medical applications



- 708-5654 DD12.1321.111 1A
- 708-5657 DD12.2321.111 2A
- 708-5651 DD12.4321.111 4A
- 708-5660 DD12.6321.111 6A
- 708-5663 DD12.8321.111 8A

Schurter 2m Power Cable, C17, IEC to CEE 7/17, Schuko (Female, Straight), 10 A, 250 V ac

- This system is designed to prevent accidental disconnection
- The yellow coloured catch mechanism is easily released by depressing the built-in lever, eliminating the requirements for extra hardware, reducing costs, and installation time
- Time saving installation



131-6394

FH64MA FPC Connectors

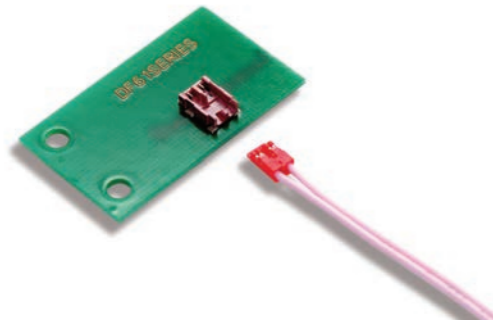
- Compact 0.25mm pitch, 0.5mm height, low-profile & space-saving FPC Connector - in 15 or 7 way variants
- Easy & smooth insertion with high FPC retention force
- Halogen-free



- 162-0961** FH64MA-15S-0.25SHW(99) - pack of 1
- 162-0852** FH64MA-15S-0.25SHW(99) - reel of 500
- 162-0965** FH64MA-7S-0.25SHW(99) - pack of 1
- 162-0853** FH64MA-7S-0.25SHW(99) - reel of 500

DF61 Wire-to-Board Swing-Lock Connector

- Compact SnapBee 2.2mm pitch, high power wire-to-board connector ideal for power supplies
- High reliability guaranteed with Hirose's "Swing Lock" offering a unique double locking mechanism
- Range includes headers, sockets, and crimp contacts with the capacity to handle up to 5A current rating



- 792-2831** DF61-2S-2.2C(11) red socket - pack of 5
- 792-2840** DF61-2S-2.2C(12) yellow socket - pack of 5
- 792-2843** DF61-2S-2.2C(13) beige socket - pack of 5
- 792-2825** DF61-2P-2.2V(21) red header - pack of 5
- 792-2834** DF61-2P-2.2V(22) yellow header - pack of 5
- 172-2429** DF61-2S-2.2C(11) red socket - reel of 1000
- 172-2430** DF61-2S-2.2C(12) yellow socket - reel of 1000
- 172-2431** DF61-2S-2.2C(13) beige socket - reel of 1000
- 172-2468** DF61-2P-2.2V(21) red header - reel of 3000
- 172-2469** DF61-2P-2.2V(22) beige header - reel of 3000
- 166-5106** Contact DF61-2226SCF(41) - reel of 18,000
- 792-2847** Contact DF61-2226SCF(41) - pack of 100
- 791-8214** HT305/DF61-2226S crimp tool

CX Series USB Type-C™ Connectors

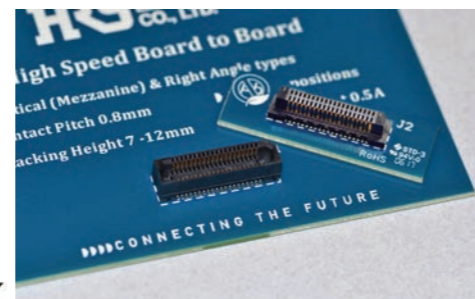
- Next-generation USB Type-C™ compliant with 10Gpbs high-speed transmission (3.1.Gen. 2)
- Various hybrid designs with a reversible interface for easy mating
- Clear tactile click with excellent locking



- 173-9952** CX60-24S-UNIT PCB wire solder - pack of 5
- 173-9953** CX90B1-24P top mount SMT - pack of 5
- 173-9955** CX60-SLDA plug shell - pack of 10
- 173-9647** CX60-24S-UNIT PCB wire solder - pack of 150
- 173-9648** CX90B1-24P top mount SMT - reel of 1500
- 173-9649** CX60-SLDA plug shell - reel of 3000

ER8 10+ Gbps Board-to-Board Connectors

- 0.8mm pitch, supporting high-speed transmission of more than 10+ Gpbs for industrial applications
- Self-aligning with mating/un-mating forces up to six times greater than other micro pitch connectors
- A licensed second source for the Samtec Edge Rate series
- Full range available ex-stock, with reel options



- 175-0189** ER8-10P-0.8SV-2H
- 175-0209** ER8-20P-0.8SV-2H
- 175-0223** ER8-40P-0.8SV-2H
- 175-0182** ER8-60P-0.8SV-2H
- 175-0180** ER8-10S-0.8SV-5H
- 175-0233** ER8-20S-0.8SV-5H
- 175-0174** ER8-40S-0.8SV-5H

Standard Series Buccaneer

- One of the most compact and versatile circular power connectors on the market
- With a robust Valox PC/PBT construction and quick-turn bayonet coupling mechanism it's perfect for many applications
- Rated to IP66, IP67, IP68 & IP69K standards, it's ideal for harsh environments where space is at a premium and high performance and reliability are vital
- Complete range of plugs & sockets available - including inline, flange mount and PCB termination options



- 483-893** 2 pole, cable plug, screw, PX0736/P
- 489-396** 3 pole, cable socket, screw, PX0731/S
- 489-526** 2 pole, panel plug, screw, PX0735/P
- 489-380** 3 pole, panel plug, screw, PX0730/P
- 489-554** 6 pole, panel plug, screw, PX0738/P
- 483-887** 2 pole, panel socket, screw, PX0735/S
- 483-944** 6 pole, panel socket, screw, PX0738/S
- 293-5857** 4 pole, cable plug, screw, PX0748/P
- 483-950** 6 pole, cable plug, screw, PX0739/P/07
- 489-560** 6 pole, cable socket, screw, PX0739/S
- 293-5829** 4 pole, panel plug, screw, PX0747/P
- 483-922** 3 pole, cable plug, screw, PX0731/P
- 489-532** 2 pole, cable socket, screw, PX0736/S
- 293-5863** 4 pole, cable socket, screw, PX0748/S
- 483-916** 3 pole, panel socket, screw, PX0730/S
- 293-5841** 4 pole, panel socket, screw, PX0747/S

4000 Series Simplex LC Fiber

- The smallest, rugged optical connector available - suitable for outdoor broadcast, building, marine, aviation & rail applications
- A small form factor makes it ideal when installation space is limited or multiple connectors need to be accommodated
- Features a secure quick twist (30°) bayonet connection and uses industry standard LC interfaces (IEC 61754-20)



- 176-8872** Panel mount LC socket, PXF4053
- 176-8863** LC-LC cable plug, 62.5/125µm, 5m, PXF4050BAA
- 176-8875** C-LC cable plug, 9.5/125µm, 5m, PXF4050AAA
- 176-8860** LC-LC cable socket, 62.5/125µm, 5m, PXF4051BAA
- 176-8833** LC-LC cable socket, 9.5/125µm, 5m, PXF4051AAA
- 176-8846** C-LC cable socket, 50/125µm, 5m, PXF4051CAA

Buccaneer Standard Series USB

- Part of the 4000 Series Buccaneer family, a range of industrialised USB sockets and cables offering high environmental sealing
- Rated to IP66, IP67, IP68 & IP69K standards, it's ideal for harsh environments where space is at a premium and high performance and reliability are vital
- Complete range of sealed cables in 2m, 3m and 5m available, as well as sealing caps and PCB adaptor leads



- 468-6311** USB A socket, front mount, PX0842/A
- 612-0740** USB A socket, front mount, 150mm fly lead, PX0843/A
- 468-6327** USB B socket, front mount, PX0842/B
- 612-0756** UUSB A socket, rear mount, solder terminals, PX0845/A
- 612-0778** USB B socket, rear mount, solder terminals, PX0845/B
- 612-0762** USB B socket, front mount, 150mm fly lead, PX0843/B
- 468-6333** USB A cable socket to USB B, 2m, PX0840/A/2M00
- 468-6355** USB B cable socket to USB A, 2m, PX0840/B/2M00

M5 Circular Industrial Connectors

- Waterproof M5 sensor connectors come in straight and angled forms with PVC or PUR overmolded cable connector options and a variety of panel mount receptacles
- Screw coupling and IP67 rating make these particularly suited to process control, automotive, commercial electronics & instrumentation applications that require reliable and robust miniature sensors
- Complete range of >100 options available online



- 144-6760** 4 pole, plug, panel mount, PXMBN112RPM04APCM16
- 144-6761** 5 pole, plug, panel mount, PXMBN112RPM05APCM16
- 144-6685** 3 pole, straight cable, PVC, PXPPVC05FBF03ACL010PVC
- 144-6677** 3 pole, right angle cable, PVC, PXPPVC05RAFO3ACL010PVC
- 144-6688** 4 pole, straight cable, PVC, PXPPVC05FBF04ACL010PVC
- 144-6683** 4 pole, right angle cable, PVC, PXPPVC05RAM04ACL010PVC

TEN 40E 40W DC-DC Converters

- Developed to deliver quality via a cost efficient design with excellent temperature performance capabilities
- 2" x 1" metal package with 1600Vdc in to out isolation and wide 2:1 input voltage ranges
- Complete range of 24 variants available from stock, also available in tubes of 10 pieces



194-4601	9-18Vdc input, 5Vdc output
194-4603	9-18Vdc input, 12Vdc output
194-4605	9-18Vdc input, 15Vdc output
194-4607	9-18Vdc input, 24Vdc output
194-4619	18-36Vdc input, 5Vdc output
194-4622	18-36Vdc input, 12Vdc output
194-4626	18-36Vdc input, 24Vdc output
194-4628	18-36Vdc input, +/-12Vdc output
194-4637	36-75Vdc input, 5Vdc output
194-4639	36-75Vdc input, 12Vdc output
194-4643	36-75Vdc input, 24Vdc output
194-4649	36-75Vdc input, +/-24Vdc output

TMPS 05 Series 5W AC-DC Power Modules

- PCB mounting AC-DC power module housed in a 25mm x 25mm package with a 85 → 264Vac input
- Certified to EN 60335-1 for domestic appliance applications
- No load input power <300 mW to comply with ErP directive



892-0637	3.3Vdc out
892-0630	5Vdc out
892-0634	9Vdc out
892-0643	12Vdc out
892-0646	15Vdc out
892-0640	24Vdc out
892-0659	48Vdc out

TEN 40WIE Wide Input Range DC-DC Converters

- Super-wide 4:1 voltage input version of the TEN 40W DC-DC converter with excellent temperature capabilities
- 2" x 1" metal package with 1600Vdc in to out isolation and remote On/Off and trim function
- Complete range of 16 variants available from stock, also available in tubes of 10 pieces



194-4653	9-36Vdc input, 5Vdc output
194-4655	9-36Vdc input, 12Vdc output
194-4660	9-36Vdc input, 24Vdc output
194-4667	9-36Vdc input, +/-24Vdc output
194-4671	18-75Vdc input, 5Vdc output
194-4673	18-75Vdc input, 12Vdc output
194-4677	18-75Vdc input, 24Vdc output
194-4683	18-75Vdc input, +/-24Vdc output

TBA Series 1W DC-DC Converters

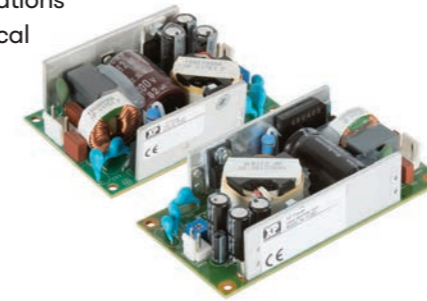
- Continuous short circuit protection
- I/O isolation: 1'500 VDC or 3'000 VDC
- Operating temperature range -40 to +85 °C without derating



187-4567	5V dc out, 10.8-13.2Vdc input
187-4457	±5V dc out, 10.8-13.2Vdc input
187-4589	9V dc out, 10.8-13.2Vdc input
187-4606	12V dc out, 10.8-13.2Vdc input
187-4213	15V dc out, 10.8-13.2Vdc input
187-4403	3.3V dc out, 4.5-5.5Vdc input
187-4439	5V dc out, 4.5-5.5Vdc input
187-4501	12V dc out, 4.5-5.5Vdc input
187-4334	±12V dc out, 4.5-5.5Vdc input

FCS40 & FCS60 Embedded Power Supplies

- 40W & 60W convection cooled, suitable for both Class 1 & Class 2 Installations
- Low cost, with ITE, medical (2x MOPP) and household approvals
- Compact 100 x 50mm footprint



177-7641	40W - 12Vdc
177-7642	40W - 15Vdc
177-7643	40W - 18Vdc
177-7645	40W - 24Vdc
177-7646	40W - 36Vdc
177-7647	40W - 48Vdc
177-7648	60W - 12Vdc
177-7649	60W - 15Vdc
177-7651	60W - 18Vdc
177-7652	60W - 24Vdc
177-7653	60W - 36Vdc
177-7654	60W - 48Vdc

VCE Ultra Compact PCB Mount Power Supplies

- The VCE series of compact, encapsulated PCB mount AC-DC single output PSUs are ideal for low cost ITE and household applications
- Low cost and offering class II isolation
- 85-305Vac input and <0.3W no load input power



172-0789	3W - 3.3Vdc
172-0790	3W - 5Vdc
172-0791	3W - 9Vdc
172-0792	3W - 12Vdc
172-0793	3W - 15Vdc
172-0794	3W - 24Vdc
172-0795	3W - 48Vdc
124-6615	5W - 3.3Vdc
124-6616	5W - 5Vdc
124-6617	5W - 9Vdc
124-6618	5W - 12Vdc
124-6619	5W - 15Vdc
124-6620	5W - 24Vdc
124-6621	5W - 48Vdc

VES Series Desktop Power Supplies

- Low cost external power supplies between 90W - 300W
- Each power supply has standard C14 mains input, 1.2m lead, and 4 pin DC power connector
- 150W options listed, 90 & 300W options available from stock



172-0740	150W - 12Vdc 12.5A
172-0741	150W - 15Vdc 10A
172-0742	150W - 19Vdc 7.8A
172-0743	150W - 24Vdc 6.25A
172-0744	150W - 48Vdc 3.12A

Chassis & AC Inlet EMI Filters

- Low cost chassis mount and IEC inlet filters - in both snap-in and screw mount
- Suitable for Medical and ITE products
- Full range of options including fused & switched inlet options



193-6544	1A Chassis mount - FHSAA01A1FR
193-6545	3A Chassis mount - FHSAA03A1FR
193-6546	6A Chassis mount - FHSAA06A1FR
193-6547	10A Chassis mount - FHSAA10A1FR
193-6548	15A Chassis mount - FHSAA15A2FR
193-6549	20A Chassis mount - FHSAA20A2FR
193-6510	1A snap-in - FASAS01PFR
193-6513	3A snap-in - FASAS03PFR
193-6515	6A snap-in - FASAS06PFR
193-6517	10A snap-in - FASAS10PFR
193-6511	1A screw mount - FASAS01SFR
193-6514	3A screw mount - FASAS03SFR
193-6516	6A screw mount - FASAS06SFR
193-6518	10A screw mount - FASAS10SFR

Portable Fans - The EC Aura

- Combines performance, efficiency and functionality with a heavy duty powder-coated frame and robust polyethylene body
- Offers free-standing mobile ventilation and 180° adjustable tilt angle
- ebm-papst GreenIntelligence energy efficient motor (IP54)
- Quiet operation, yet 7250m³/h max airflow with adjustable speed control



764-5818 230V UK Plug

764-5811 115V BS4343 Plug

400F Series DC Axial Fans

- Designed to deliver high performance while retaining a space saving size (40 x 40 x 10mm)
- This range has sleeve bearings, which offer cost effective protection of the central shaft from environmental factors, resulting in a simplified design suitable for many thermal management applications
- With efficient brushless drives, and integrated communication electronics that prevent against reverse polarity, this series of fans are both reliable and easy to use



273-772 412FM 6m³/h 17dB(A) 4,300rpm 500mA

200-7750 412F 8m³/h 22.1dB(A) 5,400rpm 700mA

200-7766 412FH 9m³/h 26dB(A) 6,000rpm 800mA

700-9231 412FH-RS0 9m³/h 26dB(A) 6,000rpm 800mA, Molex connector

K4 Drive System Development Kits

- Contains everything product designers/engineers need to get up and running with the latest ebm-papst brushless EC K4 Drive Motor and Drive Studio programming GUI
- The range covers a nominal power output from 100 – 356W and motor torque from 24Ncm – 85Ncm; with a variety planetary and 90° crown gearboxes with a maximum torque of 64Nm
- There are 6x development kits available (as featured below) with 9 additional 'bolt on' drive motor/gearboxes to choose from - offering a fully customisable drive solution



187-2145 73W, 15Nm, 472rpm, angle gearhead

187-2144 100W, 23.9Nm, 4000rpm, no gearbox

187-2149 200W, 15Nm, 133rpm, planetary gearhead

187-2147 251W, 59.9Nm, 4000rpm, no gearbox

187-2146 90W, 0.93Nm, 924Nm, planetary gearhead

187-2148 230W, 2.2Nm, 985rpm, angle gearhead

RLF Series DC Centrifugal Fans

- A versatile and rugged solution to a variety of application requirements
- DC radial blower with electronically commutated external rotor motor
- Electronic protection against reverse polarity, locked rotor and overloading



250-943 RLF35-8/12N 51x51x15mm, 9.6m³/h, 12Vdc

250-858 RLF35-8/14N 51x51x15mm, 9.6m³/h, 24Vdc

514-2963 RLF100-11/12 127x127x2 5.4mm, 64m³/h, 12Vdc

250-987 RLF100-11/14 127x127x2 5.4mm, 64m³/h, 24Vdc

DC Fan PWM Controller Development Kit

- PWM fan speed controller for up to four fans allowing optimised noise and airflow
- Four control methods: voltage, thermistor, potentiometer, or manual control knob
- Self powered by fan's voltage; 12, 24, 48Vdc with DIN rail or four screw mounting



121-9768

9GA High Performance, Low Power Fans

- Optimised impeller and guided vane design
- High airflow and static pressure with lower power
- Suitable for high cooling high impedance systems



781-5054 40x40x2 8mm 12V, 32.4m³/hr

781-5042 40x40x20mm 12V, 19.8m³/hr

136-0692 40x40x2 8mm 12V, 54.3m³/hr

781-5051 40x40x2 8mm 12V, 33.0m³/hr

885-5081 60x60x10mm 12V, 30.0m³/hr

885-5088 60x60x10mm 12V, 37.0m³/hr

885-5085 60x60x10mm 12V, 14.0m³/hr

781-5086 92x92x2 5mm 24V, 116m³/hr

781-5070 92x92x2 5mm 12V, 132m³/hr

AC / EC 100V to 240V Low Power 92mm Fan

- High efficiency electronically commutated (EC) fan uses 40% less power than AC fan
- 92mm x 38mm fan with airflow of 70.8m³/hr, and static pressure of 56Pa
- Variable voltage input for worldwide use with long 60,000 hour lifetime at 60°C



917-1514

Compact 100mmø 12Vdc Centrifugal Fan

- High 560Pa static pressure and 106.2m³/hr airflow
- 25mm thick fan with PWM control
- Ideal for cooling high density enclosures



191-9432

B29*x Series Precision Instruments

- Precision source measure units (SMUs) with up to + 210V/3Adc/10.5A pulsed source and measure and 10fA/100nV resolution capabilities
- 6.5 digit low noise power source, 100nV/10fA resolution, best-in class 10µVrms noise floor, bipolar 210V/3A (10.5A pulse) range and flexible arb waveform generation capabilities
- Precision meters, as low as 0.01fA minimum resolution, high resistance up to 10PΩ and 20,000 readings/s



- 888-2355** B2901A 1ch, 100fA, 210V, 3Adc/10.5A pulse
888-2358 B2902A 2ch, 100fA, 210V, 3Adc/10.5A pulse
888-2352 B2911A 1ch, 10fA, 210V, 3Adc/10.5A pulse
888-2361 B2912A 1ch, 10fA, 210V, 3Adc/10.5A pulse

N67*x Series Modular Power System

- N6705C DC Power Analyzer Mainframe with 4 slots, or N6702C 1U low profile for ATE testing, with up to four outputs per mainframe
- More than 30 DC power modules, source measure units or electronic loads to choose from; DC power analyser combines capabilities of up to 4 modules, DMM, scope, arb and data logger
- Ideal for flexible testing configuration and seamless measurement ranging especially in battery drain analysis, with powerful control and analysis software as optional add-on



- 136-5428** N6702C
134-5646 N6705C

344*x Series Digital Multimeters

- Histogram, bar and trend charts to speed up statistical analysis, plus Auto-calibration feature
- Test low power devices with 1 microamp range and picoamp resolution
- Patented TrueVolt technology helps you measure with greater accuracy, lower noise and lower measurement error



- 777-7101** 34460A 6.5 digits, 300 rdgs/s, 100uAdc
777-7104 34461A 6.5 digits, 1000 rdgs/s, 100uAdc
867-2287 34465A 6.5 digits, 5000 rdgs/s, 1uAdc
867-2280 34470A 7.5 digits, 5000 rdgs/s, 1uAdc

4000X Series Scopes

- Isolate signals in seconds with exclusive Zone Touch Triggering on a 12.1-inch capacitive touch screen
- See the most signal detail with 1,000,000 wfms/sec update rate
- Get more functionality with optional integrated digital channels (MSO), serial protocol analysis, dual-channel WaveGen and 3-digit Voltmeter



- 195-3168** DSOX4024A 200MHz 4 channel
195-3169 DSOX4034A 350MHz 4 channel
195-3170 DSOX4054A 500MHz 4 channel
195-3171 DSOX4104A 1GHz 4 channel
195-3172 DSOX4154A 1.5GHz 4 channel
195-3180 MSOX4024A 200MHz 4 analogue channels, 16 digital
195-3181 MSOX4034A 350MHz 4 analogue channels, 16 digital
195-3182 MSOX4054A 500MHz 4 analogue channels, 16 digital
195-3183 MSOX4104A 1GHz 4 analogue channels, 16 digital
195-3184 MSOX4154A 1.5GHz 4 analogue channels, 16 digital

3 Series MDO Mixed Domain Oscilloscopes

- 11.6-in capacitive touchscreen, optional 16 digital channels for mixed signal analysis
- Built-in spectrum analyser
- Wide range of serial bus decoding and triggering options
- With 3 FREE options - ships with serial decode, MSO and arbitrary function generator software options



- 187-5454** MDO34 4 channel, 100MHz
187-5455 MDO34 4 channel, 200MHz
187-5456 MDO34 4 channel, 350MHz
187-5457 MDO34 4 channel, 500MHz
187-5458 MDO34 4 channel, 1GHz
187-5459 MDO32 2 channel, 100MHz
187-5450 MDO32 2 channel, 200MHz
187-5451 MDO32 2 channel, 350MHz
187-5452 MDO32 2 channel, 500MHz
187-5453 MDO32 2 channel, 1GHz

Keithley DMM6500 Digital Multimeter

- 6½-digit touchscreen bench/system DMM with built-in features for education and electronics labs
- More measurement capability – including transient capture, data visualisation and analysis
- 5-in (12.7cm) multi-touch capacitive touchscreen with graphical display, adjustable cursors and pinch-and-zoom simplicity for easy waveform visualisation and analysis



173-9960

TBS2000B Series Oscilloscopes

- 9-in WVGA colour display with 15 horizontal grids – shows 50% more signal
- Up to 200MHz bandwidth, 5M point record length, 2GS sample rate for faster debug and validation
- HelpEverywhere® function provides helpful onscreen tips for students and new users
- Introductory offer, up to 15% off manufacturer's list price while stocks last



- 200-6294** TBS2072B 2 channel, 70MHz
200-6295 TBS2074B 4 channel, 70MHz
200-6297 TBS2102B 2 channel, 100MHz
200-6298 TBS2102B 4 channel, 100MHz
200-6299 TBS2202B 2 channel, 200MHz
200-6300 TBS2204B 4 channel, 200MHz

AFG31000 Series Arbitrary Function Generators

- A high-performance AFG with built-in arbitrary waveform generation and real-time waveform monitoring
- 9-in capacitive touchscreen with shortcuts to frequently used settings
- InstaView technology – see the waveform at the DUT without the need for an oscilloscope or probe



- 179-3504** AFG31021 25MHz, 1 channel
179-3505 AFG31022 25MHz, 2 channel
179-3506 AFG31051 50MHz, 1 channel
179-3507 AFG31052 50MHz, 2 channel
179-3508 AFG31101 100MHz, 1 channel
179-3509 AFG31102 100MHz, 2 channel
179-8132 AFG31151 150MHz, 1 channel
179-8131 AFG31152 150MHz, 2 channel
179-8130 AFG31251 250MHz, 1 channel
179-8129 AFG31252 250MHz, 2 channel

FULLY LOADED

3000z & 4000HD Series WaveSurfer oscilloscopes are now available with ALL software options pre-installed and ready for use. Learn more about these great 'scopes and the details of what options are available below, and see which is the one for you.



Rohde & Schwarz RTM3000 Series RTM3002 Oscilloscope

- The Rohde & Schwarz RTM3000 digital oscilloscope is featured with high vertical sensitivity and can perform multiple functions
- It allows bandwidth of 500MHz, memory depth up to 40M sample and sampling rate up to 5GS/s. It has a 10 bit analogue to digital converter that offers sharper waveforms with more signal details
- This oscilloscope has a large capacitive touch display of 10.1in with highest resolution of 1280 x 800 pixel. It has two channels
- It multi-functions as logical and protocol analyser, waveform and pattern generator for quick and efficient analysis
- This oscilloscope also acts as digital voltmeter for simultaneous and precise measurements. This instrument proves best choice for the power signal details up to 10 bit resolution.



174-2851 500MHz, 2, 16 Channels

174-2857 1GHz, 2 Channels

174-2858 1GHz, 2, 16 Channels

174-2864 1GHz, 2 Channels

Rohde & Schwarz RTC1000 Series RTC1002 Oscilloscope

- The Rohde & Schwarz RTC1000 digital oscilloscope is designed with high vertical sensitivity and can perform multiple functions
- This allows a bandwidth of 200MHz, memory depth of 2Mpts and sampling rate of 2Gsa/s. This oscilloscope also has a function generator for different types of signals having frequencies up to 50KHz
- It has eight digital channels (MSO) that are optional and adaptable. It allows you to perform voltage measurements on analogue channels with two values simultaneously
- This oscilloscope benefits you with different functions such as digital logic, protocol and frequency analysis on a single instrument.



174-2804 200MHz, 2 Channels

174-2808 300MHz, 2, 8 Channels

174-2807 300MHz, 2 Channels

174-2801 100MHz, 2 Channels

174-2810 70MHz, 2 Channels

Fluke 179 Electronics Multimeter Kit

- Reliable, precise and easy to use multimeter for troubleshooting and repairing electrical and electronic systems
- Comprehensive kit includes Fluke 179 DMM, AC220 and TP220 SureGrip crocodile clips, TPAK magnetic meter hanger, TL224 ToolPak kit test leads, TL910 test leads, AC280 SureGrip test leads, 80BK integrated probe and C35 soft case



132-176

Fluke 190 II Series 190 ScopeMeter Oscilloscope, Handheld, 4 Channels, 100MHz

- The 190 Series ScopeMeters are the first two and four channel industrial portable oscilloscopes allowing measurements in harsh, hazardous and dirty environments with the highest CAT IV 600V safety rating
- The Automatic capture and the display of the last 100 screens allows the review of observed anomalies
- Deep memory: 10,000 samples per channel waveform capture so you can zoom in on the details



737-8252

Fluke 289 Multimeter Kit

- The Fluke 289 is the next generation of high performance industrial logging digital multimeters
- Compatible with Fluke Connect, and designed to solve complex problems in electronics, plant automation, power distribution and electro-mechanical equipment
- This kit includes Fluke 289, FlukeView forms software and cable, 80BK thermocouple, TL 71 silicone test lead set, AC72 alligator clips, TPAK magnetic meter hanger and soft case



381-924

Fluke Ti401 Pro 9Hz Thermal Imaging Camera, -20 → +650 °C, 640 x 480pixel

- LaserSharp™ Auto Focus uses a built-in laser distance meter that calculates and displays the distance from your designated target and immediately adjusts the focus
- Adjust the level of infrared and visible light with patented IR-Fusion™ technology
- Best optics to transmit energy
- Produce high quality infrared images with 640 x 480 resolution



186-4696 -20 → +650 °C, 640 x 480 pixel

Fluke TLK287 Electronic Master Test Lead Kit

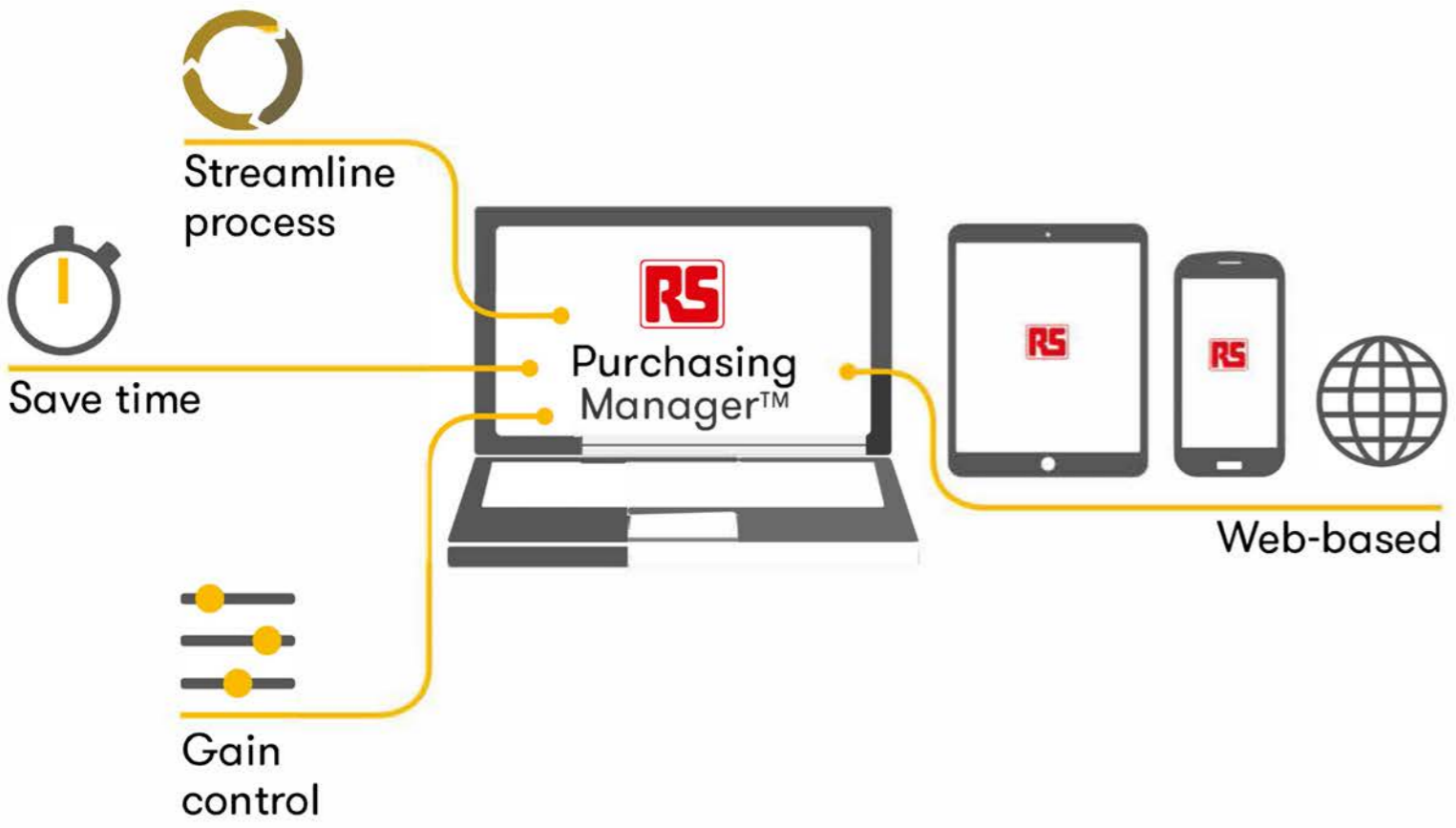
- Test lead kit ideal for designing and checking electronic circuits
- Precision electronic probes supplied with several crimped spring-loaded probe tips for maximum contact with SMD circuit test points
- Test leads with micro-wire grips for fine SMD test
- Mini crocodile clips, wire grips and probes suitable for virtually every electronic need



412-119

PurchasingManager™

Cut costs, manage processes and improve control



RS PurchasingManager™ is a free, web-based order management tool that can dramatically streamline your buying processes, save your business substantial time and money and improve control.

It helps you manage your procurement processes whilst cutting back your procure-to-pay costs, making it an effective way to reduce the costs of high-volume, low-value, ad-hoc purchasing.

This powerful, customisable tool is ideal if you don't have an in-house eProcurement system. And there's no cost or investment involved, as you don't need to upgrade your IT systems or software.

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RS No: 540-1515



RS No: 855-5911



RS No: 168-1648



RS No: 123-6455



RS No: 799-8941

EcoCable® Mini Communication Cable

- Better performance in a smaller, lighter communication cable
- Up to 32% smaller and 44% lighter than standard PVC cables
- Environmentally-friendly cable featuring 92% lower outgassing
- Extensive range of options including number of conductors or pairs, CSAs and screening.
- For full range visit our website



- 832-4846** 78122 24awg 2 conductor, foil shield
- 832-4773** 78031 24awg 15 conductor unshielded
- 832-5098** 78334 22awg 4 conductor foil and braid
- 832-4938** 78144 20awg 4 conductor, foil shield

Pro-Tekt™ High Performance UL2464 PVC Cable

- Designed to make routing of the cable easier in compact spaces
- Features a premium oil resistant PVC jacket
- Rated to handle extreme temperatures from -30°C to 105°C
- Examples shown on 50m reel, other sizes available.
- For full range visit our website



- 740-4904** B965023 20awg 2 pair, braid
- 740-4932** B963024 24awg 2 pair, foil and braid
- 740-4957** B963154 24awg 15 pair, foil and braid
- 740-4698** B953044 24awg 4 conductor, foil and braid
- 740-4692** B953064 24awg 6 conductor, foil and braid
- 740-4632** B953083 24awg 8 conductor, braid
- 740-4709** B953154 24awg 15 conductor, foil and braid

EcoWire® UL11028 Equipment Wire

- Combines increased performance with a minimized environmental impact
- Up to 45% smaller and 40% lighter than standard PVC cables and offers better dielectric strength
- Examples shown are 20AWG, 0.52mm² CSA, 600V on 30m reels
- Other reel sizes and AWGs available



- 687-7493** White
- 687-7496** Black
- 687-7499** Red
- 687-7500** Brown
- 687-7503** Blue
- 687-7506** Green
- 687-7512** Orange
- 687-7516** Slate
- 687-7519** Yellow
- 687-7525** Violet
- 687-7528** Green / yellow

Alpha Essentials Low Smoke Zero Halogen Cable

- LSZH material minimizes the effects from smoke and harmful corrosive gases in the event of combustion
- Tinned copper conductors resist corrosion and are stranded for installation flexibility
- Wide range of options in shielding, gauge size and materials to ensure you find the exact cable you need. Examples shown, 30m reel size



- 673-3239** 1172L SL005 2 core
- 673-3232** 1173L SL005 3 core
- 673-3236** 1174L SL005 4 core
- 673-3245** 1175L SL005 5 core
- 673-3248** 1176L SL005 6 core
- 673-3242** 1177L SL005 7 core
- 673-3251** 1178L SL005 8 core
- 673-3254** 1179L SL005 9 core



Skindicht Mini Nickel Plated Brass Cable Glands

- High degree of protection for the smallest conductor sizes IP 68 5 Bar
- Gentle cable clamping
- Operating temperature range of -20° to +100°C



458-3969 Price each, supplied in a bag of 5

LiFY Single Cores For Test & Measurement

- For measuring assemblies in technical training sessions, education and laboratories
- Flexible use: -15°C to +70°C
- Highly flexible Class 6 stranded single cores supplied on 100m reels



- 719-1689** 0.75mm black
- 719-1683** 0.75mm blue
- 719-1692** 0.75mm red
- 719-1699** 1.0mm black
- 719-1709** 1.0mm blue
- 719-1702** 1.0mm red
- 719-1715** 1.5mm black
- 719-1718** 1.5mm blue
- 719-1712** 1.5mm red
- 719-1721** 1.5mm green / yellow

ETHERLINE P Flex 4 Pair Cat.5e Patch Cords

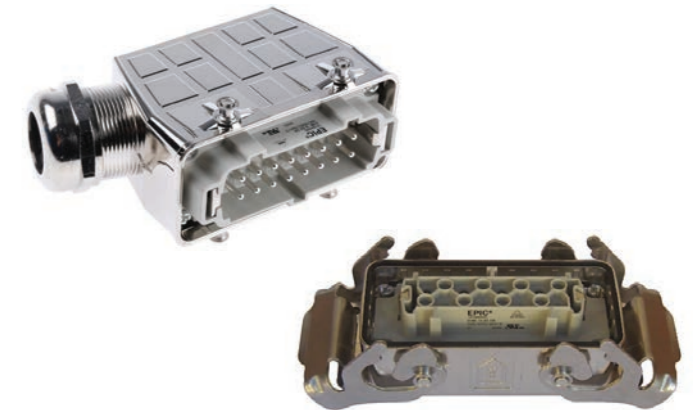
- Pre-assembled 2x2x AWG26/7 patch cord with RJ45 connectors
- Twisted pair construction permits largely interference-free operation (decoupling)
- Outer sheath made of PUR for harsh environments



- 176-9600** 1m
- 176-9601** 3m
- 176-9602** 5m
- 176-9603** 10m
- 176-9604** 20m

EPIC ULTRA H-BE EMC 16A Connector Kits

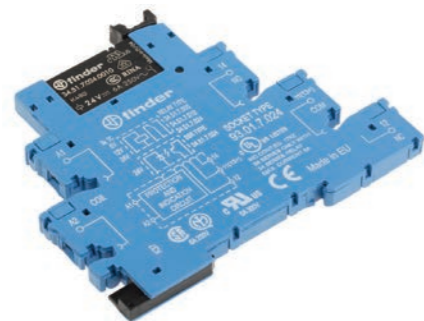
- These connectors are EMC resistant, this is especially important for the transmission of sensitive electronic signals
- They have a nickel-plated zinc die cast body which offers a high-quality housing that is scratch, impact and corrosion resistant
- Compact design for space saving applications



- 763-7713** 10 way male, panel mount base
- 763-7716** 10 way male, cable mount with gland
- 763-7719** 10 way female, cable mount with gland
- 763-7731** 16 way female, panel mount base
- 763-7725** 16 way male, cable mount with gland
- 763-7729** 16 way female, cable mount with gland
- 763-7747** 24 way male, panel mount base
- 763-7741** 24 way female, panel mount base
- 763-7735** 24 way male, cable mount with gland
- 763-7744** 24 way female, cable mount with gland

Interface Relay Modules

- DIN rail (35mm) mounting SPDT relay modules of 6.2mm width - ideal for commercial and industrial control applications
- 6A at 250Vac rated with integral coil indication and protection circuit
- Easy removal of relay from module - replacement relays via Finder 3+ series



- 386-4403** 12Vdc, 38.51.7012.0050
- 386-4419** 24Vdc, 38.51.7024.0050
- 386-4425** 24Vac/dc, 38.51.0.024.0060
- 431-7447** 125Vac/dc, 38.51.0.125.0060
- 386-4431** 230Vac, 38.51.0.240.0060

Miniature PCB Relay PCJ

- Single pole 3A form A (NO) contact rated 250Vac
- Sensitive 200mW coil and suitable for ambient temperature to 85°C
- Typical applications include domestic appliances, logic controllers and remote control systems



- 680-2644** 12Vdc, SPNO, 3A
- 680-2540** 24Vdc, SPNO, 3A
- 756-1303** 5Vdc, SPNO, 3A

PCB Mount Solid State Relays

- SIP format, compact PCB mount SSRs with full load rating and random (resistive load) or zero-crossing (inductive loads) switching
- Low current DC control (circa 15 mAdc), fast switching, vibration resistant and extended operational life



- 738-5581** 1.5A 4-10Vdc control, 12-280Vac load, random - CX241R
- 738-5588** 1.5A 4-10Vdc control, 12-280Vac load, zero-cross - CX241
- 291-2371** 5A 3-15Vdc control, 12-280Vac load, zero-cross - CX240D5
- 738-5531** 5A 3-15Vdc control, 12-280Vac load, random - CX240DR
- 291-2387** 5A 3-15Vdc control, 48-530Vac load, zero-cross - CX380D5
- 291-2393** 5A 3-15Vdc control, 48-660Vac load, zero-cross - CX480D5

Hockey Puck Solid State Relays

- Surface mounting SSR modules with SCR output for heavy industrial loads and zero-cross switching
- DC control and suitable for 24-280Vac loads
- Optional heatsinks available - see RS 701-8837



- 346-895** D2410 SSR, 10A rms 24-280Vac, 3-32dc control
- 346-918** D2425 SSR, 25A rms 24-280Vac, 3-32dc control
- 346-687** D2450 SSR, 50A rms 24-280Vac, 3-32dc control

Plug-In Industrial Relays

- Great value, compact relays pin compatible with many recognised industrial relay brands
- Integral indication LED, lockable test button and quick ID of coils via test button colour (AC red/DC blue)
- Rated 1 pole 12A; 2 pole 8A



- 144-1594** 1 Pole, 24Vdc + diode
- 144-1598** 1 Pole, 24Vac
- 144-1602** 2 Pole, 24Vdc + diode
- 144-1606** 2 Pole, 24Vac
- 144-1608** 2 Pole, 230Vac
- 144-1600** 1 Pole, 230Vac
- 144-1610** 1 Pole DIN/Surface socket
- 144-1609** 2 Pole DIN/Surface socket



Efficiently solving design problems with DesignSpark Mechanical v5.0

DesignSpark Mechanical software has just been upgraded to DSM v5.0

with a host of features that improve usability and design efficiency:

- User customisable shortcuts
- Custom rendering
- Flythrough display
- Improved sketching with equations and a 2D constraint-based mode
- Mass properties that better supports calculations for 3D printing

Engineers looking for extended features such as import & export of IGES format files, support for STEP files, GD&T annotations, customised drawing sheets, perspective modification on 2D drawings from 3D objects are supported too. Drawing and Exchange add-on packages add just the features you need and can be purchased individually, or as a bundle.



Your go-to design engineering platform

www.rs-online.com/designspark/home

Bopla BoCube Series

Introducing the Bocube enclosure family, a unique and innovative general purpose enclosure that is ideal for wall mount or desktop application. Available in polycarbonate, ABS or Aluminium, the range is available in various sizes and features a captive transparent or solid lid with a 0.5mm or 2mm deep recessed membrane keypad area - Aluminium version is available with smooth or membrane recessed lid.



BoCube Aluminium

- Aluminium enclosures coloured graphite grey (RAL7024) with integrated hinged lid
- Captive lid can be either smooth or offer recessed membrane keypad area
- Sealed to IP 66 / IP 68 - 1.2m (2 hrs.) / IP 69 DIN EN 60530



907-5299	159 x 86 x 60mm, membrane lid
907-5292	159 x 128 x 90mm, membrane lid
907-5306	259 x 128 x 60mm, membrane lid
907-5309	259 x 128 x 90mm, membrane lid
907-5303	299 x 173 x 60mm, membrane lid
907-5312	299 x 173 x 90mm, membrane lid
907-5268	159 x 128 x 60mm, smooth lid
907-5270	259 x 128 x 60mm, smooth lid
907-5274	259 x 128 x 90mm, smooth lid
907-5283	299 x 173 x 60mm, smooth lid
907-5286	299 x 173 x 90mm, smooth lid

BoCube Polycarbonate - Grey Lid

- Graphite grey (RAL7024) polycarbonate enclosures with solid captive lid which can be hinged from either side
- Can be used as desktop / portable enclosures or wall mounted via wall brackets - 773-9673
- UL94-V0 Polycarbonate, also available in light grey (RAL7035) and ABS plastic
- IP 66/IP 68 - 1.2m (2 hours) DIN EN 60529



773-9461	89 x 80 x 47mm
773-9506	113 x 80 x 90mm
773-9528	151 x 80 x 60mm
773-9540	151 x 80 x 90mm
773-9562	151 x 125 x 60mm
907-5321	191 x 80 x 60mm
907-5365	191 x 125 x 40mm
773-9607	231 x 125 x 60mm
773-9629	231 x 125 x 90mm
907-5466	284 x 364 x 120mm

BoCube Polycarbonate - Transparent Lid

- Graphite grey (RAL7024) polycarbonate enclosures with crystal clear captive lid which can be hinged from either side
- Uses UL94-V0 Polycarbonate, also available in light grey (RAL7035) and ABS plastic
- Can be used as desktop / portable enclosures or wall mounted via wall brackets - 773-9673
- IP 66/IP 68 - 1.2m (2 hours) DIN EN 60529



773-9474	89 x 80 x 47mm
773-9519	113 x 80 x 90mm
773-9531	151 x 80 x 60mm
773-9553	151 x 80 x 90mm
773-9575	151 x 125 x 60mm
773-9597	151 x 125 x 90mm
907-5390	191 x 125 x 60mm
773-9676	271 x 170 x 90mm
907-5479	284 x 364 x 120mm

Vented Mini-Enclosure - 1551V Series

- Vented design protects electronics from damage while allowing air flow - ideal for temperature, gas or humidity sensors
- Knockout on the base can be removed with a screwdriver and used for wire entry - IP30 protection
- Moulded in ABS UL94-HB rating plastic with black, white and grey options available



197-4495	40 x 40 x 20mm - grey
197-4494	40 x 40 x 20mm - black
197-4501	60 x 60 x 20mm - grey
197-4500	60 x 60 x 20mm - black
197-4504	80 x 80 x 20mm - grey
197-4503	80 x 80 x 20mm - black
197-4498	80 x 40 x 20mm - grey
197-4497	80 x 40 x 20mm - black

1557 Series Industrial Enclosures

- Ideally suited for mounting PCBs and use in more industrial applications - surface or wall mount possible
- Modern rounded look moulded in ABS plastic and offering IP66 sealing
- Gasketed lid with two piece "tongue & groove" construction provides protection against access of oil, dust and water



197-4331	1557BA2BK - 80 x 60 x 80mm black
197-4332	1557BA2GY - 80 x 60 x 80mm white
197-4333	1557D2BK - 120 x 45 x 120mm black
197-4335	1557D2GY - 120 x 45 x 120mm white
197-4336	1557DA2BK - 120 x 70 x 120mm black
197-4337	1557DA2GY - 120 x 70 x 120mm white
197-4338	1557F2BK - 160 x 45 x 160mm black
197-4339	1557F2GY - 160 x 45 x 160mm white
197-4341	1557FA2BK - 160 x 70 x 160mm black
197-4342	1557FA2GY - 160 x 70 x 160mm white
197-4345	1557HA2BK - 200 x 70 x 200mm black
197-4346	1557HA2GY - 200 x 70 x 200mm white

1552 Series Handheld Enclosures

- Ergonomically designed instrument enclosures, ideally suited for mounting printed circuit boards, which neatly fit a users hand
- End panels are removable for easy modification, or replaceable with rubberized cord grips
- ABS plastic with recessed top, IP54 sealing and supplied complete with black or nickel plated screws



200-6027	1552C1BK - 70 x 22 x 50mm black
200-6028	1552C1GY - 70 x 22 x 50mm white
200-6040	1552D1BK - 70 x 30 x 50mm black
200-6041	1552D1GY - 70 x 30 x 50mm white
200-6029	1552C3BK - 109 x 22 x 50mm black
200-6030	1552C3GY - 109 x 22 x 50mm white
200-6042	1552D3BK - 110 x 30 x 50mm black
200-6043	1552D3GY - 110 x 30 x 50mm white
200-6031	1552C5BK - 150 x 22 x 50mm black
200-6032	1552C5GY - 150 x 22 x 50mm white
200-6044	1552D5BK - 150 x 30 x 50mm black
200-6045	1552D5GY - 150 x 30 x 50mm white

1552 Series Cord Grip Kit

- Cord grip end panel kit is made from TPE and polycarbonate and matches the 1552 series enclosures
- Replaces the standard end panel and fits securely into the enclosure with cable clamp supplied
- Compatible with cable diameters from 2mm to 6mm



200-6035	1552 C Size - black
200-6036	1552 C Size - white
200-6048	1552 D Size - black
200-6049	1552 D Size - white

Triple awarded, patented active tip technology that works with Weller WX Stations.



Designed to meet the MIL-SPEC / IPC standards to save sensitive components from electrical overstress by using Weller's RT MS soldering tips.

Integrated USB ports provide the WX bench top control units with a connection to and control over soldering fume extractors, pre-heat plates and programmable logic controllers (PLC).

WX2010 MICRO

Set offers versatile performance for standard and micro soldering applications in aerospace, electronics, sensors, medical devices, military and automotive industry

This soldering set offers: WX 2 power unit, Intelligent Micro soldering iron WXMP with RTM013SMS tip and WSR 200 safety rest

202-4887 T0053422670

WX 2011 PICO

Set offers versatile performance for smallest soldering applications in aerospace, electronics, sensors, medical devices, military and automotive industry

This soldering set offers: WX 2 power unit, Intelligent Pico soldering iron WXPP with RTP004SMS tip, WSR 208 safety rest, Erem Tweezers 5SA and 0.2mm solder wire

202-4886 T0053422671

WX 2012 ULTRA

Set offers versatile performance for heavy duty soldering applications in LED soldering, solar technology, electronic market, multi-layer boards, large heat sinks or hyper frequency PCB with a big dissipator

This soldering set offers: WX 2 power unit, Intelligent Ultra soldering iron WXUP with RTU0325SMS tip and WSR 200 safety rest

202-4888 T0053422672

WX SOLDERING IRON SETS

Offers huge energy savings through integrated motion sensor which means that power is only consumed when irons are in use. Active Tip Cartridge System allows exchange of soldering tip despite a hot soldering iron and have very quick heat up times.



202-4890	Micro Set	T0052923499
202-4889	Pico Set	T0052923299
202-4891	Ultra Set	T0052923399
202-4892	Tweezer Set	T0051320899



Isopropyl Alcohol (IPA)

- Very versatile cleaning solution that can kill bacteria and degrease without being harmful to sensitive electrical components
- Suitable for use on a wide variety of products including PCBs electronic components, connectors, fibre optics and LCD panels



136-8530 400ml aerosol

227-4427 1 litre bottle

187-6955 3 x 1 litre bottles

Flux-Off Rosin Flux Remover

- Fast drying and safe flux remover for spot cleaning of flux and other contaminants found in electronics repair and rework
- No rinsing required after use
- 200ml aerosol with brush



Chemtronics

298-7921

Lead-Free Solder Wire

- This lead-free solder wire from RS is a resin-based SAC305 solder wire
- Suitable for soldering all products that must be RoHS compliant
- Melting point between 217-219°C



800-7655 1.01mm Wire Lead Free Solder

756-8913 1.27mm Wire Lead Free Solder

756-8875 0.38mm Wire Lead Free Solder



Freezer Spray

- Ideal for the detection of faulty joints and overheating components in electrical and electronic circuitry and testing of thermo-sensitive components
- Reduces temperature down to at least -55°C (dependant on the initial temperature of the component) in a matter of seconds
- Extension tube aids access to components in confined areas
- 400ml can



168-1648

Non-Flammable Air Duster

- Dry air blast cleaner which is non-flammable and is safe on plastics, rubbers and painted surfaces
- Extension tube helps to reach inaccessible / remote areas
- Meets military specification - NATO catalogue No. 6830-99-3826112
- 400ml can



Ambersil

165-4987



Conformal Coating Pens

- CircuitWorks® Overcoat Pen is ideal for protecting and insulating circuit board traces, components, and other delicate electronics
- Highly effective acrylic conformal coating provides excellent protection against shorts, moisture, abrasion, fungus, and other environmental hazards
- Simple to use, single component system provides a hard, durable coating
- 4.9g pen



Chemtronics

- 495-240 Green
- 665-4836 Blue
- 192-2021 Black
- 192-2025 White

Optic-Prep Wipes

- High-quality pre-moistened lens-grade tissue for cleaning optical surfaces
- Contain ultra-pure isopropyl alcohol (65% IPA/35%pure water) on an ultra-soft, lens-grade tissue
- Ideal for cleaning and polishing optical surfaces, lenses and fibre optic connectors
- Upper ozone safe CFC/HCFC free
- Box contains 50 wipes size: 102 x 210mm



Chemtronics

236-1981

Kimtech™ Science Precision Wipes

- Low-lint, high absorbency, chemically inert wipes for effective cleaning of equipment, materials and working environments
- 1-ply white-coloured wipes are made from 100% pure fibre, giving high absorbency and a soft feel
- Anti-static dispensing to reduce lint and antistatic discharge
- 30 dispenser boxes each contain 280 small 1 ply sheets



495-1665



Clear Protective Lacquer

- A general purpose coating designed to protect printed circuit boards from environmental attack
- High quality glossy finish which has good resistance to humidity
- 200ml aerosol

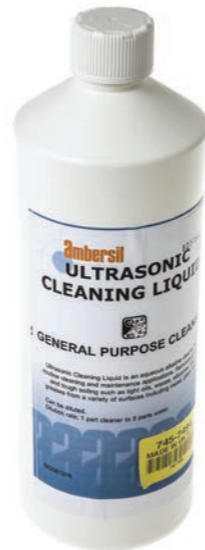


ELECTROLUBE
THE SOLUTIONS PEOPLE

118-1554

Ultrasonic Cleaning fluid

- Aqueous, alkaline, general-purpose cleaner and degreaser for routine cleaning and maintenance applications
- Thoroughly removes all the traces of contamination, including tough soiling such as light oils, waxes, silicones, etc.
- Ideal for the cleaning and degreasing of delicate electronic parts and is suitable for use in ultrasonic baths
- 1 litre bottle



Ambersil

745-7494



Anti-Static Bags

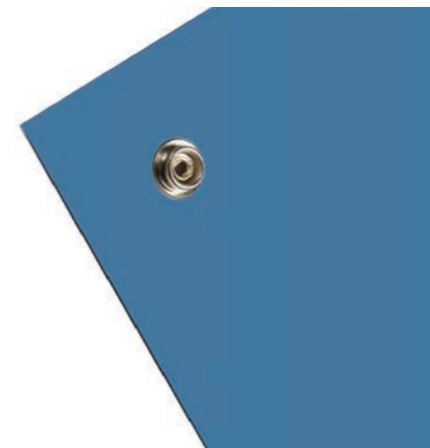
- Zipper topped bags for protecting sensitive equipment from ESD damage
- Dissipative outer section, anti-static interior
- Sold in packs of 10



- 431-9538 102 x 152mm pack of 100
- 431-9544 152 x 203mm pack of 100
- 431-9550 254 x 305mm pack 100
- 431-9566 305 x 406mm pack of 100
- 431-9572 457 x 457mm pack of 100

ESD Safe Mats

- Bench mat made of a conductive layer with a static-dissipative layer above and below
- Ideal for use on benches or floors
- Has 10mm studs on each corner
- 600 x 1200 x 3.2mm



- 466-1659 Grey
- 466-1643 Blue

Adjustable ESD Wrist Strap and Cord Sets

- Comfortable & adjustable wristband with an easy to use adjustable clip which makes taking on & off easy
- 1.8m coiled cord provides lots of movement & flexibility



- 392-163 Wrist strap only
- 287-7385 Wrist strap & cord 10mm - 10mm stud
- 287-7379 Wrist strap & cord 10mm stud - croc clip

ESD-Safe Bins & Boxes

- Empty ESD carousel for the fitting of ESD bins
- Earth wire fitted 288 slots for the fitting of ESD bins

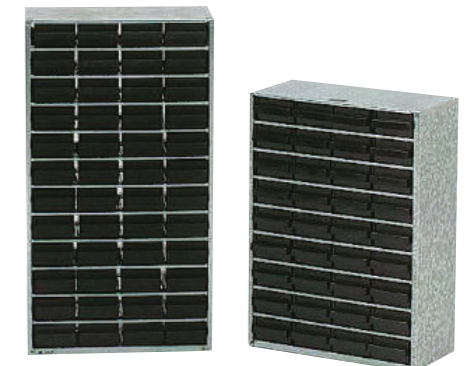


raaco

- 774-0465 50 x 125 x 133mm
- 774-0474 75 x 125 x 173mm
- 774-0477 101 x 125 x 228mm
- 774-0471 126 x 125 x 300mm

ESD Cabinets

- Provides 100 percent protection against static electricity, so ideal for storing products which are sensitive to the damage caused by static electricity
- Constructed of a special plastic containing carbon fibres, which makes the products permanently antistatic and protection will not diminish over time
- Fulfils the EN 61340-5-1 standard



raaco

- 519-217 420 x 307 x 146mm 18 drawers
- 519-201 420 x 307 x 146mm 36 drawers
- 816-271 555 x 307 x 146mm 48 drawers





Illuminated Push Button Switch

- Panel Mount with 30.2mm cut out and SPST NC/NO momentary operation and IP67 protection
- Rated 30Vdc at 1 Amp with 24Vdc illuminated ring
- Fly leads not supplied - see cables range for suitable multi-core cable



Anti-Vandal Aluminium Switches

- Illuminated anti-vandal switches protected to IK10 (physical attack) and IP67 (Ingress)
- Ideal for use in harsh conditions, on vehicles or when enhanced cleaning cycles are needed to avoid infection spread



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- 811-4047** 16mm 12V red LED illuminated, flat, SPCO
- 811-4053** 16mm 12V blue LED illuminated, flat, SPCO
- 811-4129** 22mm 24V blue LED illuminated, flat, SPCO
- 811-4069** 16mm 12V green LED illuminated, flat, SPCO
- 811-4056** 16mm 24V red LED illuminated, flat, SPCO
- 811-4078** 16mm 24V green LED illuminated, flat, SPCO
- 811-4062** 16mm 24V blue LED illuminated, flat, SPCO
- 811-4104** 22mm 12V red LED illuminated, flat, SPCO
- 811-4126** 22mm 12V green LED illuminated, flat, SPCO
- 811-4110** 22mm 12V blue LED illuminated, flat, SPCO
- 811-4113** 22mm 24V red LED illuminated, flat, SPCO
- 811-4135** 22mm 24V green LED illuminated, flat, SPCO

Panel Mount Emergency Stop

- Panel mount 32 mushroom head e-stops with integral contacts (3A rated) and IP65 sealed
- Solder tags on rear to allow ease of wiring
- Perfect for portable equipment or where space is limited



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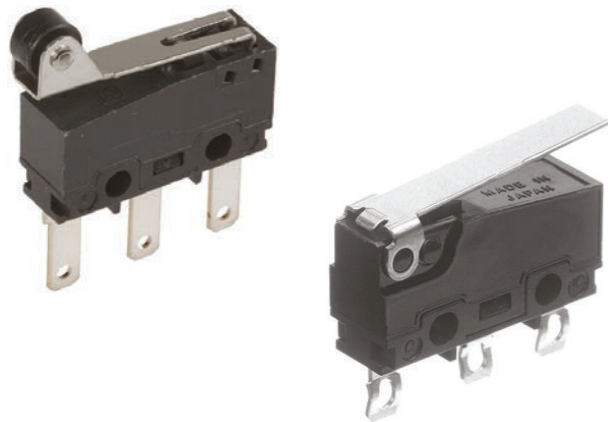
- 477-4890** Non illuminated emergency stop, 1NO+1NC
- 477-4907** LED illuminated emergency stop, 1NO+1NC
- 690-6960** Non illuminated emergency stop, 2NC



- 166-0777** Red
- 166-0783** Yellow
- 166-0785** White
- 166-0786** Amber
- 166-0781** Green
- 166-0773** Blue

Sub-miniature High Precision Microswitches

- SPDT switching rated 5 Amps @ 250V AC
- Long life version with Gold clad contacts
- Flux resistant construction



Panasonic

- 699-4673** Hinge lever microswitch
- 699-4718** Roller lever microswitch

OTII-ARC Development Power Supply

- Power supply, monitoring and analysis in a single unit the ultimate tool for any developer aiming to design highly energy efficient IoT projects.
- Uses Otii software which supports Ubuntu, Windows & macOS and has a lifetime subscription supplied with the unit
- Acts as a 5V DC power supply and high-resolution voltage and current measurement unit with connection via USB



- 192-3400** OTII-ARC-001



Anti-Surge Fuse Kit - 160 Fuses

- A kit of 20x5mm & 1 x 1/4" in LBC And HBC formats from 0.5A to 10A, and a selection of 20mm & 1 1/4" panel mount fuseholders
- Compartmented storage box contains 10 of each fuse rating - ideal for service or project workshops



- 186-6362** Anti surge fuse kit - 20mm & 1.25"

General Fuse Kit

- Selection of HBC & LBC 20mm, 1" and 1.25" fuses with a handy storage box containing 10 of each fuse rating
- Kit includes: 1" 2,3,5,10,13A (HBC) 1.25" 5,10,15A (HBC) 20mm 3.15,5,10A (HBC) 1,2,3,5A (F LBC) and 1,3,15,5A (T LBC)
- Replacement fuses available separately



- 420-252** 180 fuse kit

In-line & Panel Fuse Holders

- Two part in-line fuseholders in standard and sealed versions, and panel mount versions
- Ideal for vehicle, general and portable equipment applications protecting AC or DC circuits



- 414-601** Standard in-line, 5x20mm, 10A, FX0380 (5 pack)
- 420-050** Sealed in-line, 5x20mm, 10A, FX0385 (5 pack)
- 512-6006** Panel mount, 6.3x32mm, 16A, FX0419 (1 pack)
- 512-5996** Panel mount, 5x20mm, 10A, FX0462 (5 pack)
- 312-2670** Drawer type snap-in, 5x20mm, 10A, FX0430/63 (1 pack)

Non-Resettable Thermal Fuses

- 15A rated SF thermal fuses offer simple thermal cut-off or overload protection at a range of rated temperatures
- Suitable for AC or DC use up to 250V with VDE, UL and CSA approvals
- Sold in packs of 10



- 797-6049** SF 090 R - 94°C
- 797-6030** SF 229 R - 229°C
- 797-6046** SF 070 R - 73°C
- 797-6064** SF 094 R - 99°C
- 797-6042** SF 119 R - 121°C
- 797-6055** SF 129 R - 133°C
- 797-6061** SF 139 R - 142°C
- 797-6058** SF 150 R - 152°C
- 797-6052** SF 167 R - 167°C

OMNI-BLOK SMD Fuse Holders & Fuses

- The 154 OMNI-BLOK® offers a solution for efficient installation and easy replacement of Nano2® SMD fuses
- Fuse replacement doesn't require soldering, ideal for commercial or industrial equipment where maintenance is expected
- FF (Super fast) and T (Time delay) variants available from stock - sold in packs of 10



- 738-2905** 125mA F
- 738-2885** 750mA F
- 738-2879** 1.5A F
- 738-2863** 2.5A F
- 738-2851** 3.5A F
- 738-2854** 6.3A F
- 738-2873** 8.0A F
- 738-2867** 10.0A F

Stainless Steel Tweezer Set

- Designed for intricate work in the electronics industry
- Anti-acid and anti-magnetic
- Set contains: bent, curved, grooved and precision tweezers



136-9882

Professional Electronic Tool Kit

- Complete kit with carefully selected tools for electronics engineers
- Contains: snipe nose pliers, side cutters, slotted screwdrivers, Phillips screwdrivers, adjustable spanner and straight tipped tweezers in a handy wallet



LINDSTROM

418-9309

Lindstrom 80 Series Cutters

- With its unsurpassed cutting capacity and ability to cover a wide range of wire dimensions the 80 series remains the top choice for traditional users
- Precision screw joint minimises friction and provides maximum alignment of cutting edges
- 63-65 Rockwell hardness on cutting edges ensures longer life



LINDSTROM

614-766 Micro bevel

361-2230 Flush cut

400-6074 Ultra flush

Automatic Wire Stripper

- Self-adjusting wire stripper with hardened steel blades and integral wire cutter (for single wires)
- Stripping length adjustment to suit application
- Stripping range 0.2-6mm



613-044

Precision Screwdriver Set

- 24-piece screwdriver set is Ideal for working on small, intricate electronic devices
- Comes in a handy plastic hanging case
- Set contains: slotted: 1.0 x 50, 1.2 x 50, 1.5 x 50, 1.8 x 50, 2.0 x 50, 3.0 x 75, 3.5 x 75, 4 x 75mm; hexagon: 1.5 x 50, 2 x 50, 2.5 x 50, 3 x 75mm; Phillips: PH0 x 50, PH00 x 50, PH1 x 75mm; pozidriv: PZ0 x 50, PZ1 x 75mm; Torx: T6 x 50, T7 x 50, T8 x 50, T9 x 50, T10 x 50, T15 x 75, T20 x 75mm



876-6278



DPI 705E (with RTD probe and PM700E)

- 48 pressure ranges from ± 25 mbar to 1,400 bar (± 1.69 psi to 20,000 psi / 2.5 KPa to 140 MPa)
- Total 1 year uncertainty down to 0.05% full scale (FS) over temperature range of -10°C to $+50^{\circ}\text{C}$
- Optional remote plug and play pressure and Resistance Temperature Detector (RTD) sensors
- Examples shown, wide range available on the RS website



201-2864 200 mBar gauge

201-2865 2 Bar gauge

201-2867 10 Bar gauge

201-2868 20 Bar gauge

201-2870 70 Bar gauge

UPS III Loop Calibrator

- An essential tool for loop testing, instrument maintenance and valve set-up, with an easy to read display and simple to use time saving features.
- The UPS-III is a rugged and extremely compact loop calibrator
- Measure or source 0 to 24 mA and accuracy 0.01% of reading



434-7000

PV411 Handpump

- A high quality field proven pressure and vacuum hand pump providing great functionality
- Pressure/Vacuum selector valve also provides exceptional fine control pressure relief in both pneumatic and hydraulic modes
- Hydraulic pressures to 10,000 psi and Pneumatic pressures to 600 psi



529-3544

DPI 104 & DPI 104-IS Pressure Indicators

- A microprocessor-controlled digital pressure gauge that combines precision and functionality in a compact, robust and simple-to-use package
- 0.05% full scale (FS) accuracy with pressure ranges to 20,000 psi (1400 bar)
- The DPI 104 matches advanced silicon sensor technology with several convenient design features, resulting in an accurate, versatile yet affordable digital test gauge
- Examples shown, wide range available on the RS website



787-4615 DPI104-10G 7 Bar

787-4621 DPI104-16G 70 Bar

787-4662 DPI104S-10G 7 Bar IS

787-4669 DPI104S-16G 70 Bar IS

Industrial Grade Memory Card



ATP Industrial grade memory cards are designed and engineered specifically for critical applications and meet the growing data storage demand of IoT and edge devices.

Panasonic memory cards are going End of Life, ensure a seamless transition with ATP industrial grade memory cards.

Key Features

- SD Life Monitor
- Advanced Wear Leveling
- SiP (System in Package)
- AutoRefresh technology
- Dynamic Data Refresh
- Power failure protection
- Industrial temperature

Panasonic Part Number	Description	ATP Part Number	RS Part Number
RP-SDFC08DE1	8GB SD card (SLC)	AF8GSDI-WADXM	146-5571
RP-SDPC04DE1	8GB microSD card (MLC)	AF8GSD3-WABIX	146-5572
RP-SDF02GDE1	2GB SD card (SLC)	AF2GSDI-ZAFXM	187-4666
RP-SDPC16DE1	16GB SD Card (iTemp MLC)	AF16GSD3-WADIM	146-5573
RP-SMSC02DE1	2GB microSD Card (SLC)	AF2GUDI-ZAFXM	187-4668
RP-SMKC04DE1	8GB microSD card (iTemp MLC)	AF8GUD3-WAAIX	146-5585



DURACELL

PROCELL® The New Professional Battery Brand you can rely on from Duracell®

- Reduce maintenance costs in replacement frequency with these longer lasting* industrial batteries designed to give consistent performance in professional devices
- *vs. prior Industrial by Duracell® AA, AAA, C and D



PROCELL®

- 192-4385 AAA pack of 10
- 192-4384 AA pack of 10
- 192-4390 AA pack of 638
- 192-4386 C pack of 10
- 192-4387 D pack of 10
- 192-4388 9V pack of 10

Duracell Ultra Batteries

- Providing 100% more power compared to minimum average duration on a digital camera test
- Duralock technology keeping the batteries fresh for up to 10 years in storage
- Ideal for high usage devices such as digital cameras



DURACELL

- 448-8460 AAA pack of 8
- 791-5971 D pack of 2
- 448-8476 AA pack of 12
- 186-0600 C pack of 2
- 841-7002 PP3

Duracell Plus Batteries

- Providing 50% more power compared to minimum average duration on a digital camera test
- Duralock technology keeping the batteries fresh for up to 10 years in storage
- Ideal for everyday devices such as remote controls, torches and clocks



DURACELL

- 451-859 AAA pack of 8
- 787-2287 AA pack of 12
- 451-865 D pack of 6
- 787-2281 PP3 pack of 4
- 451-855 C pack of 6
- 188-9857 PP3