RS

MRO Solutions

May 2020

Keeping your business on track

RS is your partner you can rely on in these uncertain times.

au.rs-online.com

Supporting you every day, we're by your side

We carry more than 600,000 industrial and electronics products from over 2,500 leading suppliers. From the niche specialists to the big global brands, we stock every brand you're likely to have heard of, and many more besides. This includes our own-brand RS PRO, which offers more than 50,000 products.

With fast and easy access to a broad range of products, reliable delivery, expert technical advice and solutions to streamline your processes, we'll help you keep things running smoothly.

Customer Service

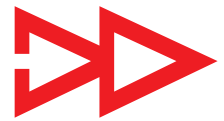Take advantage of our customer support, technical advice & dedicated account managers.

Competitive Quotes

Local team dedicated to quoting you the best price possible for all your orders.

Flexible Delivery

Free next-working-day, scheduled deliveries, or plan ahead with advance orders.

Easy Ordering

Order online, by phone, by fax, or on your mobile phone via our easy-to-use website.

From same day delivery to procurement solutions, visit RS Online to connect to a wide range of helpful services to increase productivity, save you time and money.

How can we help you today?

Order Your Way!

- **Online** at au.rs-online.com
- **On the go** with the RS Online mobile site
- **On the phone** at 1300 656 636
- **Email** ozorder@rs-components.com

Customer Services & Technical Support

Mon - Fri (8am - 6pm AEST)
T: 1300 656 636 | F: 1300 656 696
Email quotes: quotesandtenders@rs-components.com

Welcome

We know things are changing rapidly across the globe and we are committed to helping support you. We are putting the safety of our people first whilst ensuring as little disruption as possible to our customers.

Our priority is to maintain continuity of service and supply of products to our customers and we've invested in extra stock so you can keep things running smoothly. With fast and easy access to a broad range of products, reliable delivery, expert technical advice and solutions to streamline your processes, we're by your side.

As a distributor we know the importance of logistics and having an efficient and effective warehousing operation. We understand the products that are needed day-to-day to keep warehouses running smoothly and safely.

We have invested in additional stock in our Sydney warehouse of our top selling products, ensuring we continue to be able to provide the products you need.

Rail in Australia underpins the national economy and is at the forefront of innovation, productivity and during this uncertain time continues to be an essential service. Check out our article on the next page where we discuss Improving MRO practice in the rail industry.

In this edition we also highlighted just some of the products which can help you keep running during these unprecedented times, including our own brand RS PRO on page 20. Plus read about how RS PRO supported bushfire relief efforts in Australia.

We hope you enjoy the article on Page 36 in which we chat to the RMIT Electric Racing team on how RS Components supported young engineers with electronic equipment and materials to build the perfect car.

Plus don't forget to grab a bargain with 15% off RS PRO products on page 38.

Regards,

Cuong Vo

Vice President
RS Components ANZ

Contents

Terms & Conditions

Keeping MRO on Track

Improving MRO practice in the rail industry could significantly help companies meet their efficiency goals

The Australian Rail industry employs more than 142,000 people directly and indirectly and is the sixth-largest network in the world. Rail in Australia contributes over $26 billion to the national economy and is at the forefront of innovation, productivity and world's best practice.

Australian rail continues to push the limits of efficiencies for business across the world. To continue to be a competitive player within the global market place, the rail industry must take advantage of any opportunities to achieve efficiencies, and one avenue is around the Indirect Procurement category of Industrial supplies for Maintenance, Repair & Operations (MRO).

Research by RS Components shows that the price of MRO products only reflects a third of the total cost. When you take into account the time taken to place an order, holding stock, depreciation and other factors, the cost is three times that of the visible product price.

Reducing inefficiency

As such, it's important to look at how rail firms can reduce inefficiency in the MRO process as they look to hit their targets. The vital link is the alignment of your procurement strategy with proven suppliers, according to Scott Philbrook, Head of Corporate Accounts ANZ, RS Components. "Best practice

is to look at all of your options for effective cost management and reducing your supplier base for Indirect MRO needs," he explains. "To prepare for this, companies need to conduct a thorough analysis of the different categories and value of their Indirect MRO spend, and then align across their organisation to determine the critical needs and processes within those areas".

"A consistent theme across the commercial meetings that I attend with leading organisations operating in the Australian Rail Industry is the challenge to get the balance right between a competitive price position to meet the needs of the procurement teams and ensuring the supply of compliant materials with the required urgency to help in the elimination of downtime". Both areas are just as important in the development of your MRO strategy, Philbrook points out. Price is clearly not the only factor that should be considered, but by reducing the number of suppliers to a select trusted group, it's possible to achieve competitive prices while also ensuring the overall quality of the parts being bought and essential risk mitigation to enable continuation of services.

"One of the massive risks in MRO is 'maverick' spend," says Helen Alder, Head of Knowledge at the Chartered Institute of Procurement and Supply (CIPS). "There's the chance that buying parts from a non-approved supplier will cost more, and possibly take longer to source, but the biggest issue is the quality of the parts. It's not unknown for engineers or other employees to search the internet and buy parts that turn out to be counterfeit, or that don't meet the required quality levels.

"Similar to consumers, there are people who will look up items online, see a 'too good to be true' price and not consider the possibility that it's counterfeit. The only way to avoid this is to work with trusted, pre-qualified suppliers that can prove the quality of everything they sell."

Communicate risks

The challenge for procurement departments is to help communicate the risks of maverick spending and the benefits of using trusted suppliers. Alder believes that the answer is for rail firms to make use of technology through eProcurement to make the process as simple as possible.

"There's no excuse in this day and age to not have a centralised list for regular MRO parts so that employees have one approved source for this sort of regular purchase," she explains. "This should cut down on the time it takes to order the parts, you know that there is no quality risk and the business as a whole can monitor spending more closely.

"**Procurement and Engineering need to work together to determine the material listing that will form the central part of the supply contracts. Once these are finalised, it is imperative that a simplified and efficient way to capture site demand is implemented.**"

Suppliers have an important role in this process too. As Philbrook points out, companies such as RS Components have up to date information about what their customers order regularly, and they have industry sector knowledge that can help advise on the correct products, and in some cases, provide a technical equivalent substitute product that will save money for the rail company.

"As a company, we provide industry specific solutions using our global network of manufacturers to best service the needs of the rail industry," he says. "By understanding those needs, it allows the engineers to focus on more important activities in their operations and demonstrates our capabilities as a trusted partner for MRO requirements."

Another area that suppliers can help rail companies with is stockholding. Many companies are still in the habit of hoarding MRO parts in their warehouses, which costs money in terms of tying up working capital, space, and then distribution of these parts to engineers.

"**Understanding what stock is critical to your business needs which therefore should be stocked at correct levels and what stock is held for convenience. It is possible that next-day delivery, from someone like RS, could help cover the stock held for convenience and allow for significant savings in working capital and costs associated in the management of inventory.**"

This article was originally published by Connected Thinking.

For more information and articles on Driving MRO procurement efficiency, MRO strategy, savings and efficiencies, visit our online portal:

rs-connectedthinking.com

Welcome to our
Product Launchpad

NEW

Whatever your mission, we're constantly launching new products and brands. Keep coming back to see what we've added.

Visit au.rs-online.com/new

RS PRO Preassembled 50mm LED Signal tower

- The RS PRO 50mm LED Signal tower is designed to provide signalling solutions improving the safety and productivity of your Control & Automation equipment
- Preassembled and prewired, the Signal Tower are supplied with red & green light modules

1902832   50mm steady/flashing light tower RED + G   SCL-MTWS-RG-110

DC Voltmeter Analogue Panel meter

- Comprise Moving Iron & Permanent Magnet Moving Coil movements
- All meters incorporate interchangeable scales & terminal covers as standard
- A range of customized options is also available on request provided it is possible by design

1862506   96×96mm   PQ94-V0FL2N1CAW6RS

Magnetostrictive linear position sensor

- Linear position sensors with a profile design are contact-free and absolute measurement systems for the precise detection of one or more positions
- They deliver convincing performance in harsh environments, for example in presses, injection moulding machines or gantry robots, because they are made of a hermetically sealed IP67 aluminium housing

BALLUFF

1947630   300mm stroke 4..20m   BTL7-E501-M0300-P-S32

IEC Appliance Inlet C14 with Filter

- Panel mount: Screw-on or snap-in mounting from front side
- 3 Functions: Appliance Inlet protection, Circuit breaker type TA35 2-pole, Line filter in standard and medical version
- Quick connect terminals 6.3 × 0.8 mm

SCHURTER
ELECTRONIC COMPONENTS

1889495   TA35 Filter IP67 Screw (Pack of 10)   3-118-974

Omron Q2V Series Inverter Drives

- Easy installation & setup
- Reduce cabinet size with side by side mounting without derating
- Screwless terminals safe wiring installation time
- Hardware simplification thanks to built-in EMC filter, safety STO and braking transistor

OMRON

| **1943164** | 400 V, ND: 5,4 A / 2,2 kW | Q2V-A4005-AAA |
| **1943173** | 1×200V, ND: 0,75 kW | Q2V-AB004-AAA |

RS PRO Black Anodised Aluminium Enclosures With Extruded Dovetail Slots

- Available in a range of sizes - please refer to RS Online
- Manufactured from aluminium offering a lightweight yet durable enclosure
- Black anodised finish to enhance corrosion resistance
- Suitable for a range of applications

1951537   120mm Black + 2 × End Plates +   EAB120PA-KIT

Photoelectric sensor PNP IO-Link

- Wide sensing distance of 50 to 1,500 mm, enabling use on any conveyor line width
- TOF-type sensors for used with any type of conveyed workpiece
- Compact-sized body can be mounted anywhere

OMRON

1938356   M8 4-pi   E3AS-F1000IPT M3

Petzl Tactikka+ RGB Head Torch

- Lightweight, compact and bright:
- 350 lumens at 85 g
- Three white brightness levels for comfortable proximity lighting and rapid movement
- Red, green or blue lighting (continuous or strobe) combines visual comfort and stealth

| 1919528 | 350 Lumens | E089FA00 |

3M™ VHB™ Tape 4910 F Blister IPC Clear

- Fast and easy-to-use permanent bonding method provides high strength and long-term durability
- Pressure sensitive adhesive bonds on contact to provide immediate handling strength
- Creates a permanent seal against water, moisture and more

| 1634730 | 1mm Thick , 19mm x 11000mm | 3M 4910F 19mm x 11m |

RS PRO Curved Jaw Locking Pliers

- These high-quality and robust RS PRO locking pliers allow you to maintain constant gripping force with the help of the locking mechanism making it easier and more efficient to work with
- The hardened teeth and curved jaw make it easy to grip from any angle, making them ideal for a secure grip when pulling or twisting an object in difficult spaces

| 1923656 | 240 mm | E50-240-2 |

Post-it® Extreme Notes

- Sticks to textured surfaces and in tough conditions, Water-resistant, durable and writable
- Use indoor / outdoor & hot and cold environments (Apply to dry surface to hold in wet conditions)
- Made with ultra-strong Dura-Hold™ Paper and Adhesive & removes cleanly

| 1938256 | 2 pads | EXT57M-2-UKSP |
| 1938255 | Box of 24 | EXT33M-24-EU1 |

RS PRO Adjustable Spanner

- This wrench features an adjustable jaw set at 15° and offers a concealed jaw shank allowing for greater accessibility with ergonomic design for operator comfort
- Made from high alloy tool steel that offers excellent precision and professional performance, regardless of application
- Contoured PVC handle for ultimate user comfort and ergonomics, especially when being used for long periods of time

| 1923723 | 30mm Jaw capacity | B21-250B |

Chamfer deburr tool

- E-Z Chamfer efficiently removes burrs and ridges from bolts, pipe, threaded rod, bar and dowels
- It is suitable for use on metals including mild and hardened steels, stainless steel, copper and brass, as well as timber, fibreglass and plastics
- E-Z Chamfer prevents sparks and burns

| 1955212 | 8-22mm | CHAM BURR |

13L Spill Kit in Clip Top Carrier

- A total 'one stop' package for a quick and effective response to spillages - these kits come equipped with a range of absorbent formats including disposal bags and ties

| 1890064 | 1 × 1.2m Sock, 1 × Haz, 10 × Pads | RSOSK13 |

RS PRO Hexagon Nutdriver Screwdriver

- For live working up to 1000V AC or 1500V DC
- Chrome Vanadium Molybdenum steel blade
- Softgrip handle

| 1829772 | VDE/1000V Approved | G07-B05 |

4 Piece Hook and Pick Set

- Includes an awl as well as 3 different hooks with 45° and 90° tips
- Supplied in a pocket sized case with a click lock to keep the tools secure

| 1981747 | 4 piece | TM149 |

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WHAT'S ON THE PRODUCT LAUNCHPAD

RS

TPR5 Test Probes 2× Red 2× Black

- Test probe rated 1KV CAT III for connection to standard unshrouded 4mm plugs

RS PRO

1917879	1kV		FCR19505RB

TG275 Automotive Diagnostic Thermal Came

- Designed specifically for automotive maintenance and repair technicians who want to accelerate diagnostic procedures and avoid undetected problems
- Featuring IGM™ (Infrared Guided Measurement), this diagnostic tool combines non-contact temperature measurement and thermal imaging to help you troubleshoot repairs, spot potential faults, and record images that will reassure your customer that the problem has been fixed

FLIR

1896809	-25°C to + 550°C		87503-0303

RS PRO 316 Stainless Steel Zig Zag Cable Tie

- The cable ties are self locking with a roller ball head, making them fast and easy to secure
- The zig zag design maintains installed tension on surfaces, helping to reduce movement and slips
- Uncoated version for high temperature applications

RS PRO

1834168	Bag of 100		CT-SS-ZZ-520/4.6UC

TG267 Thermal Camera

- Ideal for commercial electrical, facility maintenance, and HVAC applications, this advanced thermal camera with a brilliant 2.4 inch screen reduces diagnostic time while simplifying repair and maintenance reporting
- Patented FLIR MSX® (Multi-Spectral Dynamic Imaging) enhancement improves image clarity by embossing visual scene details on full thermal images, providing added context to help you accurately target potential faults and troubleshoot repairs

FLIR

1932383	25°C to +716°C		TG267

Croc Clip CRC-01 Black / Red

- Rated 600V CAT III (1000V CAT II)
- EN61010 compliant

RS PRO

1873805	Current rating 10A		FCR7940BR

Fluke ii900 Sonic Industrial Imager

- The handheld Fluke ii900 Sonic Industrial Imager enables maintenance teams to quickly and accurately locate air, gas and vacuum leaks in compressed air systems; even in noisy environments
- Specifically designed for noisy production facilities the new SoundSight™ technology is simple to learn and easy to implement
- The 7" LCD touchscreen overlays a SoundMap on a visual image for quick leak location identification

FLUKE

1876163	65° Field View		ii900

TG297 Industrial High Temp Thermal Camera

- One-of-a-kind industrial diagnostic tool that combines accurate temperature measurement with the ability to image up to 1030°C (1886°F)
- Patented FLIR MSX® (Multi-Spectral Dynamic Imaging) enhancement improves image clarity by embossing visual scene details on full thermal images

FLIR

1932384	-25°C to +1886°C		TG297

3 core 1.5mm SWA cable

- Steel wired armoured cables predominantly used for industrial wiring and mains distribution
- These cables are designed in such a way that they are to be used in industrial areas, in and around buildings and other similar environments

RS PRO

1964720	50m Reel		H6943XL1.5050RS

Fluke PTi120 Pocket Infrared Camera

- Automatically organize and file thermal images with Fluke Connect Asset Tagging
- Fully radiometric thermal imager gives you measurement data to the pixel with 120 × 90 infrared resolution (10,800 pixels)
- 3.5" LCD touchscreen display for easy troubleshooting
- -20 °C to +150 °C temperature measurement range

FLUKE

1864695	120×90		PTi120

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600 Series Flex Fibre Connector

- Flex, Flex In-Line and Rear Panel
- Secure, proven locking system
- 30o twist locking. Tamperproof lock prevents accidental un-mating

bulgin

1917983   for OM3 c (Bag of 5)   PXF6050A

HPM 5m Heavy Duty Extension Lead

- Fully moulded and clear plug and socket for easy safety inspection
- Heavy duty cable offers protection against wheelbarrows and falling building materials
- Complies with Workcover, OH&S, Electrical safety requirements and AS/NZS standards for construction and demolition sites

HPM
A brand of legrand

1968591   10Amp   R2805

Low Clamp Varistor

- Low Clamping to Working Voltage Ratio
- EMI/RFI filtering in the off-state

AVX

1877630   0603 16Vdc 0.1J 50A   VLAS060316A350DP
(Pack of 50)

Sealed Vandal Switch

- Stainless Steel Illuminated Double Pole Changeover Switches
- 18mm diameter

arcolectric

1873301   Red LED, 220V DC (Tray of 40)   MP0045/1E1RD220S

Thick Film Surface Mount Fixed Resistor

- Small size and light weight
- Highly reliable multilayer electrode construction
- Compatible with all soldering process
- Long side terminations

RS PRO

1840033   ±5% (Reel of 1000)   CR-12JL4---10K

SFP56 Stacked 2X1 Receptacle Assembly

- Data rates: Up to 28 Gbps NRZ and 56 Gbps PAM-4, 10 Gbps Ethernet and 16 Gbps Fibre Channel
- Surface-mount connector design for single high 1×N cages
- Press-fit 1×N cages and stacked assemblies (connector and cage) for one-step, easy PCB placement

TE connectivity
AUTHORIZED DISTRIBUTOR
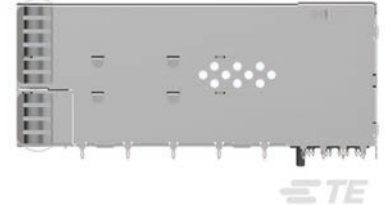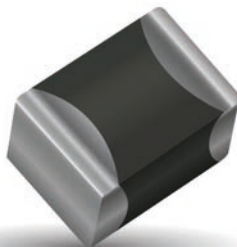
1888333   20 Contacts, Female (Tray of 18)   2349202-5

8 Way PCB Terminal Block

- Connector Style : Header
- Connector System : Wire-to-Board
- Number of Positions : 8
- Centerline (Pitch) : 5 mm

TE connectivity
AUTHORIZED DISTRIBUTOR
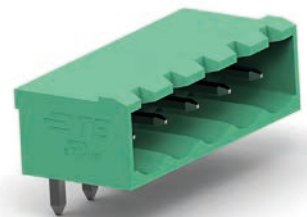
1952037   300 Vac (Pack of 5)   2350513-8

To see this month's full range of New Products, visit;

au.rs-online.com/new

With a range of over 600,000 products including the latest cutting edge technologies from leading manufacturers, RS Components is a digitally led business helping engineers across all industries to innovate for the future. So why not put us to the test?

Shaun Gilchrist
Digital Business Manager

RS

EFM8™ Busy Bee Low Cost 8-bit MCU Starter Kit

- The EFM8BB1 Low Cost Kit is an easier to use yet powerful development starting point
- It contains an integrated debugger and a simple USB micro connection to allow rapid prototyping

SILICON LABS
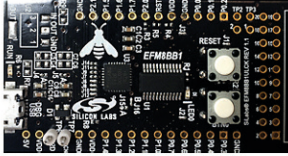
1935481   EFM8BB1LCK

Arduino CTC 101 PROGRAM - FULL Education Kit

- Arduino CTC101 is an ideal Education Toolbox for the Classroom. Suitable for teachers or instructors to teach school students aged from 13 to 17 and require no prior experience with electronics or programming. Creative Technologies in the Classroom 101 or CTC 101 is Arduino's one-of-a-kind STEAM (Science, Technology, Engineering, Arts, and Mathematics) program for upper secondary education.

ARDUINO

1271382   AKX00002

XinaBox LoRaWAN IoT Starter Kit

- XinaBox produces a range of 80+ modular "xChips", which includes cores/CPUs, sensors, power, communication, output, and storage. xChips can be clipped together in seconds using a connectivity standard without wires, soldering, breadboards or any consumables: no hardware knowledge is required to build digital instruments with XinaBox.

IN A BOX

1906042   XK70

dsPIC33CK Curiosity Development Board (DM330030)

- The is a cost-effective development and demonstration platform for the dsPIC33CK family of single-core high performance digital signal controllers.
- Designed to take full advantage of Microchip's MPLAB® X IDE, the board includes an integrated programmer/ debugger and requires no additional hardware, making it a perfect starting point to explore the dsPIC33CK family

MICROCHIP

**1936257**   DM330030

BeagleBone Black MCU Development Board

- The BeagleBone Black from beagleboard. org is a development board based on the AM335× Arm Cortex-A8 processor. This BeagleBone board is a single board computer (SBC) which can be used as a stand-alone computer or it can be embedded into a system.
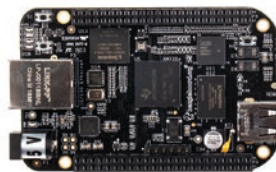
beaglebone

1252411   BeagleBone Black

Ci40 IoT SBC Development Kit

- The Creator Ci40 board from Imagination Technologies is a high-performance, low-power microcomputer optimised for IoT applications. The Creator Ci40 is compatible with a wide range of GNU/Linux OS distributions, including OpenWrt, Debian and Brillo – the IoT-optimised operating system from Google. This board is also compatible with many existing Raspberry Pi HATs and MikroBUS Click expansion modules.

Imagination
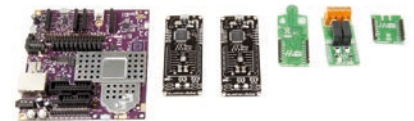
1253307   VL-62899

Arduino Tinkerkit Braccio Robot

- The TinkerKit Braccio is a fully operational robotic arm, controlled using an Arduino Board. Designed for desktop use and is supplied in kit form so you can assemble it to your own requirements. It can be used in several ways and is easily adapted. Pickup and move objects, mount a camera and track your movements in a video call or attach a solar panel and track the movement of the sun.

ARDUINO

1113738   T050000

XinaBox IoT Starter Kit

- The XinaBox IoT Starter XK19 Kit gives you everything needed to build an IoT smart (edge) device, that collects environmental data, and to which an actuator can be attached for automation projects. Control an electric gate, garage door, or fan, and connect to IoT dashboards to create alerts and control algorithms. View sensor data, IoT messages and diagnostics locally on the mini-OLED display.

IN A BOX

1906041   XK19

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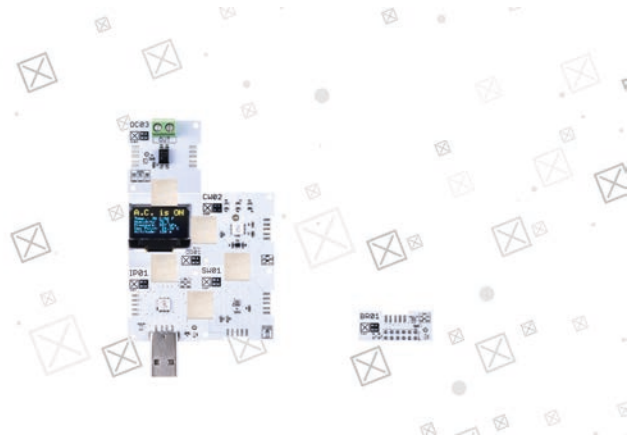
Raspberry Pi 4 Model B

- The Raspberry Pi 4 Model B is the latest computer board from Raspberry Pi.
- This latest version offers more processing power, more memory and more connectivity while being backward compatible with the projects created on previous models

1822096	Raspberry Pi 4 Model B (4G)	Raspberry Pi 4 4G Model B
1888310	Raspberry Pi 4 Model B (4G) (Bulk 150)	Pi4 4GB Bulk

Raspberry Pi 4 Cases

- These Official Raspberry Pi case is designed to house and protect your Raspberry Pi 4 board, whilst also making it look great. It fits the Raspberry Pi 4 Model B 1GB, 2GB and 4GB. This no-fuss case simply snaps together around your board. There is no need for additional tools or screws to secure it. Once the case is closed, you will still have access to all the ports on the board through cut-outs. It is mainly designed to protect your Pi board from knocks and bumps, but it has also been designed to be lightweight and sleek.

1876752	Raspberry Pi 4 Case Black/Grey (Bulk 256)	RPI4 Case Black/Grey Bulk
1876751	Raspberry Pi 4 Case Red/White (Bulk 256)	RPI4 Case Red/White Bulk
1876749	Official Raspberry Pi 4 Case in Red/White colours	RPI4 Case Red/White
1876750	Official Raspberry Pi 4 Case in Black/Grey colours	RPI4 Case Black/Grey

OKdo Standard Clear Cases

- A range of Okdo Cases specifically designed for use with the Raspberry Pi 4 Model B

1873434	OKdo White 2-piece slide Case for Pi 4 Model B	ASM-1900138-11
1873432	OKdo White 3-piece standard Case for Pi 4 Model B	ASM-1900133-11
1873435	OKdo Clear 2-piece slide Case for Pi 4 Model B	ASM-1900138-01
1873433	OKdo Clear 3-piece standard Case for Pi 4 Model B	ASM-1900133-01
1873798	OKdo Black 3-piece standard Case for Pi 4 Model B	ASM-1900133-21
1873799	OKdo Black 2-piece slide Case for Pi 4 Model B	ASM-1900138-21
1873800	OKdo Black power-HAT Case for Pi 4 Model B	ASM-1900141-21

Okdo Power Supplies

- An OKdo high quality and reliable plug-in AC-DC adapter for converting AC mains current into a 3A, 5.1V power using a USB-C type connector. With a power rating of 15.3W, this power supply comes with four regional interchangeable heads.

1871380	5.1V/15.3W, Multihead (Bulk 60)	T7715DV_Bulk
1871381	TTE Power Supply 5.1V/15.3W, Multihead	T7715DV

Official Raspberry Pi 4 Power Supply

- This Official Raspberry Pi power supply is the perfect choice for powering your new Raspberry Pi 4 Model B board. This PSU works with all variants of the Raspberry Pi 4 board, the 1GB, 2GB and 4GB. It is a 5.1V, 3A power supply featuring a USB-C connector at one end, and a plug socket at the other. Simply plug the USB-C into your Pi 4 and plug the socket into the mains and you're ready to go!

1873423	5.1V/3A, USB-C, White (Bulk 100)	RPI4 PSU AU WHITE BULK
1873427	5.1V/3A, USB-C, Black (Bulk 100)	RPI4 PSU AU BLACK BULK
1873415	Official Raspberry Pi 4 Power Supply, 5.1V/3A with USB-C in White for AU	RPI4 PSU AU WHITE
1873419	Official Raspberry Pi 4 Power Supply, 5.1V/3A with USB-C in Black for AU	RPI4 PSU AU BLACK

Rasp Pi Adaptors

- This Official Raspberry Pi USB-B to USB-C adapter enables you to connect USB-B devices to the USB-C port on your Raspberry Pi 4 board. So you can continue to use your standard micro-USB power supply cable. Please note, the Pi 4 board requires a 5.1V/3A PSU

1882074	RPI uUSB-B to USB-C adapter, White	USB-Micro B to USB-C Adapter White
1875394	RPI uUSB-B to USB-C adapter, Black	USB-Micro B to USB-C Adapter Black

Rasp Pi Cables

- The Official Raspberry Pi HDMI cable is the perfect accessory to compliment your new Raspberry Pi 4 Model B board. This is a micro HDMI to standard HDMI cable which is 1m long and available in black or white.

1871375	RPI uHDMI - std-M Cable, 1m / White	T7689AX
1871377	RPI uHDMI - std-M Cable, 1m / Black	T7732AX

NOOBS / SD Cards

- The latest version of NOOBS has been upgraded to enhance performance and user experience, using the Debian Jessie version of the Raspbian operating system.

1213897	16SD Card with NOOBS for Pi4	NOOBS_16GB_Retail

15% OFF TE CONNECTIVITY CABLES, WIRES & CONNECTORS

To receive 15% discount, Promotion Code TE15OFF must be entered in the 'Add Promotion Code' field of your online order, or stated to our customer service personnel at the time of your order

Terms & Conditions apply. This offer cannot be used in conjunction with any other offer or discount. This offer is valid till the 31st of May 2020. Promotion code has to be quoted at the time of order to avail the discounted price. RS reserves right to cancel or modify the promotion at any time without prior notification.

Between Series RF Coaxial Adapters

- Between Series Coaxial Transmission Line Adapters provide convenient transitions between popular series coaxial connectors
- The adapter design provides a minimum length consistent with good electrical performance
- The small size, low VSWR, and broad frequency coverage permits a wide range of applications in both measurement and systems use

|		
7130710	N to SMA	1057377-1
7130726	SMA Jack to OSP Jack PM	1059724-1

50 Ohm N Series Silver Plated RF Coaxial Crimp Jacks

- 50 Ohm N series RF coaxial straight crimp jacks with a hex crimp coaxial cable termination, silver plated brass body, PTFE dielectric and silver plated contact

1361752	Str Plg Hex RG9B/U (Box of 25)	1-1337415-0
3941645	Str Plg Hex RG9B/U	1-1337415-0
1648456	Str Plg Hex RG58C/U (Bag of 50)	1-1337416-0
4729890	Str Plg Hex RG58C/U	1-1337416-0

Type N RF Coaxial 50 Ohm Solder / Clamp Plugs

- 50 ohm N series RF coaxial right angle/elbow solder cable plugs with PTFE dielectric, solder/clamp coaxial cable termination and silver plated brass body

4232093	RG58, RG141	1-1478419-0
4232100	RG8, RG213	1-1478420-0
1355012	RG8, RG213 (Bag of 25)	1-1478420-0
5120008	SMA crimp bulkhead jack, RG174	3-1478955-0

Waterproof IP67 Toggle Switches

- Toggle switches with silver plated contacts sealed to prevent the ingress of dust or liquids
- Connection via 250in. (¼in.) receptacles or soldering
- For biased operation '(on)' refers to momentary on position Brass actuator and Glass Filled Polyester case

317421	SPDT on-on toggle switch,20A	AWTD1504
317825	SPDT on-off-on toggle switch	AWTE1504
317437	DPDT on-on toggle switch,20A	AWTN1504
317847	DPDT on-off-on toggle switch	AWTP1504

RT4 Series PCB Power Relays

- RT4 PCB have 5mm pinning and are flux proof
- Creepage and Clearance 10//10 mm
- Applications: interface, automation, domestic applications, security lighting, heating systems
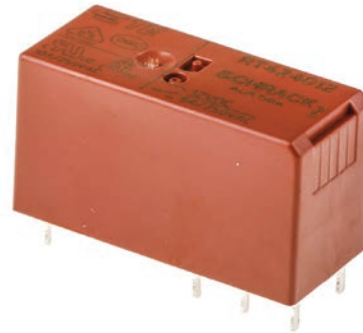
6803830	8A 12Vdc AgNi	RT424012 6-1393243-3
6803849	8A 24Vdc AgNi	RT424024 6-1393243-8
6803855	8A 24Vac AgNi	RT424524

T92 Series Flange Mount Relays

- Meets requirements of UL 873 and UL 508 spacing - .315in. (8mm) through air, .375in. (9.5mm) over surface
- Designed to control compressor loads to 3.5 tons, 25.3 FLA, 110 LRA
- Meets VDE 8mm spacing, 4kV dielectric coil to contacts
- UL Class F construction system standard

2355510	DPDT, 30A 240Vac coil	T92P11A22-240 4-1393211-4
2355497	DPDT, 30A 12Vdc coil	T92P11D22-12 5-1393211-3
2355481	DPNO, 30A 240Vac coil	T92P7A22-240 6-1393211-2
2355469	DPNO, 30A 12Vdc coil	T92P7D22-12 6-1393211-9

A Series Micro ISO Automotive Relay

- SPDT contacts
- Suppression resistor fitted across coil
- IP rating: IP54
- Contact Material: AgSnO2

5352558	30A SPDT 24Vdc	V23074A1002A403 3-1393292-8

202K1 Series Ready Coated General Purpose Straight Cable Boots

- Moulded parts that provide durable strain relief, protection and an environmental seal when used with an adhesive
- Available in straight and right angled types, these chemical and abrasion resistant heat shrink boots are made from a tough modified elastomer, and meet the Def Stan 59-97 Issue 3 Type DE requirements

7183118	Size 32	202K132-3/42-0
7183111	Size 32	202K132-3/86-0
7183332	Size 32	202K132-3-0
7182871	Size 42	202K142-100/180-0

General purpose Y-Shaped heat shrink moulded boot

- Y-Shape transition
- Good resistance to aggressive chemicals at high temperature
- Manufactured from fluid resistant elastomer

7122429	81.3mm Length	382A023-25/225-0

Atum - Moisture Proof 4:1, Heat Shrink Tubing

- Provides excellent environmental sealing for electrical components, wire splices, cable jackets and harness breakouts
- High strength bonding
- Medium walled for increased mechanical protection
- Flame retardant jacket
- Operating temperature range -55°C to +110°C

3161580	12-4mm i/d	ATUM-12/4-0
3161653	16-4mm i/d	ATUM-16/4-0
3161596	19-6mm i/d	ATUM-19/6-0
3161669	24-6mm i/d	ATUM-24/6-0

SolderSleeve Shield Terminators

- A one piece soldering system for jointing signal cables and terminating cable screens
- The system consists of heat shrinkable sleeve containing a predetermined amount of fluxed solder and a thermoplastic sealing insert at each end
- The solder sleeve is placed over the joint to be made and the sleeve is heated by a heat gun

5425690	Size 1 (Pack of 100)	B-155-03
5425713	Size 3 (Pack of 100)	B-155-07
5425729	Size 4 (Pack of 100)	B-155-11

Expandable Braided Copper Cable Sleeves

- Provides EMC screen for wires and cables
- Easy removal from PVC former
- Min. 93%, max. 100% optical coverage
- Highly usable expansion ratio (min 2:1)
- Tin-plated copper or Nickel-plated copper sleeving available

2445219	12.5mm former dia (10m length)	RAY-101-12.5(10) CK0610
2445225	20mm former dia (10m length)	RAY-101-20.0(10) CK0610
2445152	3mm former dia (10m length)	RAY-101-3.0(10) CK0610
2445168	4mm former dia (10m length)	RAY-101-4.0(10) CK0610
2445174	6mm former dia (10m length)	RAY-101-6.0(10) CK0610

Solder Sleeve Kit

- The Solder Sleeve introduction kit contains various solder sleeves suitable for terminating a wide range of cable and wire constructions from 0.9mm to 15.1mm.

5425583	1.5 to 15.1mm	B-155-MIXT-01

CGAT Adhesive lined 3:1 Heat Shrink Tubing

- High strength bonding
- Moisture proof
- Flame retarded jacket
- Environmental sealing

1573818	12mm	CGAT-12/4-0
1573824	18mm	CGAT-18/6-0
1573903	24mm	CGAT-24/8-0

CM-SCE-TP Series Tie-on Cable Markers

- Flame retardant
- Fluid resistant
- Easy to fit and replace
- Ideal for retrofitting and repairs
- Held in position with standard cable ties
- Excellent print performance
- Print on using thermal transfer technology

9148110	12.7mm length (Box of 250)	CM-SCE-TP-1/2-6H-4
9148123	6.4mm length (Box of 250)	CM-SCE-TP-1/4-4H-4

Splash Resistant Solder Sleeve

- Heat Shrinkable radiation cross linked modified polyolefin material
- Thermally stabilized thermoplastic meltable sealing ring
- Designed for termination of a bare or tin plated copper shield

7820716	Maximum of 7.3mm	CWT-7-W122-5

CERTI-LOK Hand Crimping Tool Frame Assembly

- Durable and lightweight design
- Accepts a full range of interchangeable dies
- Ratchet control ensures that a full crimp cycle is achieved

817325	Frame Only	

CPC series 2 connectors

- CPC series 2 connectors accept Size 20 DF (precision formed) and Size 20 DM (screw-machined) pin and socket contacts with a .040 [1.02] pin diameter
- From 8 thru 63 positions

6806797	Recpt, Wire-to-Panel	206433-1
6806794	Plug, Wire-to-Wire	206434-1

SUPERSEAL Series 1.5 Automotive Connectors

- Comprised of black 6.6 glass filled poly-amide
- 1 - 6 positions
- Plug housings for receptacle contacts, cap housings and tab contact variants
- Pre-assembled secondary lock
- Silicon rubber seals
- Panel or cable mount

3141182	1.5 1 way plug housing (Pack of 5)	282079-2
3141198	1.5 2 way plug housing (Pack of 5)	282080-1
3141255	1.5 2 way cap housing black (Pack of 5)	282104-1
3141261	1.5 3 way cap housing (Pack of 5)	282105-1
3141277	1.5 4 way cap housing (Pack of 5)	282106-1
3141306	1.5 6 way cap housing (Pack of 5)	282108-1

SUPERSEAL Series 1.0 mm Plug Housing Assembly

- SUPERSEAL 1.0mm plug housing assemblies for 1.0 mm receptacle contacts with polarization key, thermoplastic GF housings and upper locking
- The secondary locking mechanisms of these SUPERSEAL automotive plug connectors facilitate contact insertion into the housing and prevent the contacts from backing out during mating

6807765	1.0 26 way plug housing, 4 row	3-1437290-7
7199671	1.0 26 way plug housing, 4 row	3-1437290-8

AMPSEAL Plug Style Receptacle Housings

- Rugged and highly reliable design
- IP67 rating to protect against the harshest of conditions
- Housed in a strong plastic
- 2-piece contact hold
- Integrated latch for mating
- Operating temperatures of -40°C to +125°C

6809437	Black	776164-1
7266960	Natural	776164-2
7181484	Grey	776164-4

Deutsch Crimp Extraction Tool for IMC Series

- A set of low cost hand crimp tools for the solid contacts required for the Deutsch IMC and Quick Connect (QC) range of connectors

DEUTSCH

425513	Size 16	AMSC16/A/1
425519	Size 20	AMSC20/1
425478	Size 22	AMSC22/1

MiniSeal High Performance Immersion-Resistant Crimp Splices

- Small and lightweight design
- Easy one-step installation
- Immersion resistant
- Environmentally sealed against liquid penetration and resulting corrosion

4445659	Red, 0.15-0.75sq.mm wire (Pack of 25)	D-436-36
4445687	Yellow, 0.39-1.37mm wire (Pack of 25)	D-436-38

DT Series 12 Pin Receptacles

- Wire-to-Wire Connection
- Integrated Lock
- IP68
- Operating Temperature of -55°C to +125°C

DEUTSCH

425418	with Crimp Termination Method	DT0412PA-CE02
425799	Flanged	DT0412PA-CL06

Effective Solution for Managing Fast Moving Products

Have you ever run out of stock at a critical moment?

Poor practices around inventory ties up your working capital and leads to waste around overstocking, obsolescence, poor availability and lost productivity.

Stockee Smart shelf was created to ensure you never run out of critical items again. It has been developed to automate old Kanban systems and ensure your supplier is immediately notified when a product reaches the re-order point.

Because Stockee measures in real time, you can even see current stock levels from any-where you can access the internet.

Take control of low-value, fast moving industrial supplies with our Stockee Smart Shelf System.

HOW IT WORKS

Stockee smart shelf is an intelligent shelving system.
Each bin location can detect the remaining product via the total weight of the bin.

The product quantity is relayed in real time to the Stockee server in the cloud.

An automated replenishment email is sent to re-order stock which is running low. Re-order can be integrated into your ERP system.

Authorised users can also log in to the stockee website to view bin status or print actual product status reports.

> **To find out more about the Stockee system contact RS today!**

au.rs-online.com

The value of time - Long Tran explains how RS's Stockee Solution allows Downer Newport to focus their employees' time on value-added activities and away from the MRO purchase process.

How did you first hear about the Stockee solution?

Downer was looking a multiple vendors who could offer a low maintenance solution to deliver safety products and other factory consumables. RS suggested the Stockee system to Downer as a potential solution that would meet our needs.

Describe your experience, from initial scoping to final installation on-site?

The implementation of the RS Stockee system has been very efficient from the time schedule viewpoint. The determination of the initial stock range by Downer was the main reason for any delay during the initial project scoping phase. Once the scope is defined, the implement was completed in a relatively short time frame.

How has Stockee helped your business operations?

The RS Stockee system has significantly reduced the interface between Production Personnel and the Support Staff responsible for managing the delivery of both Safety and Factory Consumable products. This equates to reduce time lost in managing and delivering essential low-cost products to the shop floor.

How would you describe the interactions with and responsiveness of RS Components staff during the entire process?

RS has been pro-active in supporting Downer to ensure quick implementation. Once the Stockee Bin system was delivered, RS was able to get the system GO-LIVE within 24 hours.

Would you like to share any specific cost or time savings for your business (or other benefits)?

The main gain from the Stockee System is the time saving and user satisfaction. The Stockee system enables our support staff to focus on more value-added tasks, at the same time satisfying the end-users with a more accessible supermarket type inventory system.

What are the site users saying about the Stockee solution?

The feedback from the end-users has been positive. We had to double the size of the Stockee system after only about 6 weeks into the initial roll-out.

What would you say to other businesses considering the Stockee solution?

The supermarket-style RS Stockee System requires minimum effort both to get stock replenishment and to restock the bins are its key advantage for manage low-cost factory consumables related products.

Are there any improvements or advice on how the system or process could be improved?

Reporting on consumption as part of the software would be very useful. A higher level of buffer stock at the RS warehouse would be useful to smooth out any unanticipated delay from its supply chain.

Pictured left to right: Scott Philbrook (RS Components), Long Tran (Downer) & Cuong Vo (RS Components)

EVERY PART MATTERS

RS PRO is the only global brand that gives you every part you need across all industries at the quality and price you expect.

RS PRO offers all the latest technologies at affordable prices and we're are continuing to to widen our product categories to offer you even more choice of premium products. We have over 50,000 products across 5 categories; electrical, test & measurement, tools & safety, automation & control and electronics.

With over 20 million RS PRO products used by our customers each year, backed up with the RS PRO Seal of Approval, 4 out of 5 customers tell us that they'd recommend RS PRO to a friend, so it's no surprise that our products are trusted by engineers across the world.

AUDITED
In compliance with industry standards

▶

INSPECTED
By leading engineers

▶

TESTED
For guaranteed quality and performance

RS PRO APPROVED

WARRANTY 3 YEARS

RS PRO
Supporting Rural Fire Brigades.

Australia faced one of the most devastating fire seasons in 2019-20. With severe dry conditions and long periods without rain, our emergency services were put to the test to swiftly contain the spread utilising all the tools available to them.

Emergency services are among the more familiar users of thermal detection cameras. The technology is deployed regularly and are extremely useful in low visibility environments.

Thermal imaging from fixed mount cameras on aircraft, provide information back to planners during bush fires. Identifying hot spots in rugged and in accessible terrain allows for ground crews to be inserted and to work these areas with aviation support. The accuracy of the information reduces the time it takes to detect and deal with dangerous hot spots and reduces the risk of re-ignition near containment lines.

To support Australia's bushfire relief effort, RS Components decided to donate RS PRO Thermal Imagers and other critical equipment to the Rural Fire Service.

"On behalf of the Hall Volunteer Rural Fire Brigade I would like to thank you and RS Components for your very generous donation of the thermal imaging cameras to assist and support the firefighting efforts of the Brigade. These will provide additional capabilities to assist and support the Brigade during the current bushfires and in future incidents"

"As volunteer rural fire fighters we thank you for your generosity in donating thermal imaging cameras to further assist our work. Hall Volunteer Rural Fire Brigade is proud to count the RS Components as a true friend and supporter of the Brigade." Bill Henderson | President, Hall Volunteer Rural Fire Brigade

RS PRO has donated products to nine RFS/CFS across the country, and we look forward to sharing more of these stories in future editions of our MRO Solutions magazine.

RS PRO was proud to be one of many businesses supporting the RFS whose contribution to the community is immeasurable.

RS PRO A2 Stainless Steel Plain Washer - Metric

- Stainless steel plain washers, metric BS4320

527369	M3 (Bag of 250)
527381	M4 (Bag of 250)
527397	M5 (Bag of 250)
527404	M6 (Bag of 250)

RS PRO Brass Hex Standoff Male/Female

- Easy to fit
- The hexagonal body allows tightening with a wrench
- Better level of corrosion resistance provided by the brass build and nickel plating
- These brass standoffs maintain electrical conductivity when looking to maintain a circuit
- Available in different lengths

606686	10mm, M3 × M3 (Bag of 50)

RS PRO 890 piece E Type, External, Internal Stainless Steel Circlip Kit

- For Shaft Diameters 2.25 → 12 mm, 4 → 16 mm, 8 → 12 mm
- Fits Groove Diameter 1.5 → 9 mm, 3.8 → 15.2 mm, 8.4 → 12.5 mm

278360	890 pieces

RS PRO Thread Forming Screws for Plastics

- Bright zinc plated steel
- Available in either Pan head or Countersunk head forms
- Supplied in bags of 100, and also available in kits of 250 pan head or countersunk screws

1176664	6 × 3/8in (Pack of 1000)
4827461	6 × ½in (Pack of 100)

RS PRO Cylindrical Male - Male Anti-Vibration Mounts

- RS Pro cylindrical male to male anti-vibration mounts made from a natural rubber designed to be simple and economical to fix
- The anti-vibration mounts achieve high vibration damping in both shear and compression

1263914	50mm dia. EPDM +100°C

RS PRO Stainless Steel Plain Washers

- These stainless steel washers are generally used with a machine threaded fastener and nut to spread the load over a greater surface area when tightening a bolt, screw or nut
- As they are made of stainless steel, they have an element of corrosion resistance and are suitable for use in many environments

189636	M4 (Pack of 100)
189642	M5 (Pack of 100)
189658	M6 (Pack of 100)

RS PRO M6 Cage Nut

- Zinc plated steel & spring steel construction
- Available in M5 & M6 sizes to suit two ranges of panel thickness

523137	ZnPt steel wide, M6 (Bag of 50)

RS PRO 600 piece Nylon Screw/Bolt Kit

- Nylon Metric, Slotted Cheesehead & Countersunk Heads
- A range of mixed head nylon metric screws, nut & washers. Supplied in a polypropylene compartment storage case.

524095	M3, M4, M5

RS PRO Black Phosphated Steel clips

- Contained in a moulded compartment storage box, complete with a layout sheet giving dimensional information

289534	15mm (Bag of 50)

RS PRO Slotted Insulated Screwdriver

- Insulated VDE screwdrivers suitable for safe working on live equipment at up to 1000Vac
- Ergonomically handled screwdrivers to VDE 0680//2
- Shafts are hardened & blackened chrome-vanadium steel

4500841   2.5 × 80mm

RS PRO ABS with Aluminium Frame Tool Case Without Wheels

- ABS shell ensures that the case cannot bend or be dented. Its interior and exterior are designed with excellent quality and with many practical benefits for professionals out there.

619345   485 × 350 × 180mm

RS PRO 1.2kg Tool Balancer

- Suitable for a wide range of drivers
- It offers a 1.6m retractable cord with a cable stop and hangs overhead
- The spring balancer is housed in a durable plastic casing to ensure that the balancer or mechanism doesn't get damaged in the environment that it is being used in

7932774   0.5 - 1.2Kg Tool Balancer

RS PRO Cabinet Key Diecast Zinc

- Four position arm tool, offering five differing drive possibilities
- This universal cross key is made of alloy with excellent workmanship and durability
- Key holes with square, triangle and circle shapes suitable for many especially radiators and electric control cabinet
- Compact size, easy to carry and store, an essential tool for maintenance applications

4393019   Chrome finish

RS PRO Gas Blow Torch

- Piezo electronic ignition system
- Infinitely adjustable flame temperature
- Ideal for brazing, soldering, plumbing and maintenance

199270   Gas powered blowtorch

RS PRO 170 Piece HSS-TiN Coated Drill Set

- RS Pro 170 piece high-speed steel titanium coated drill set that comes in a RS Pro red metal case with a handle and two locks
- This drill set has a wide range of drill bit sizes ranging from 1.0 mm to 10 mm making it perfect for many workshop applications

5071732   1mm to 10mm

RS PRO 88 Piece VDE Electricians Tool Kit

- Ergonomic multi-component handles
- Optimum balance of torque and control
- High quality and professional tools
- VDE approved for electrical safety

7348885   ½in. Socket & VDE Tool Kit

RS PRO HSS 3 Piece Step Drill Set

- Provides clear holes in applications requiring small hole size increments
- No pilot hole required easily enlarges existing holes
- Capable of cutting holes from 4 mm to 30 mm diameters
- Ideal for use with most power drills

232614   3 pce set 4-12,4-20,4-30

RS PRO 8 piece Hex Key Set

- Comprised of a chemically blackened , chrome vanadium steel
- The high quality materials offer a long life and service
- The set features a compartmental plastic wallet
- The keys have been heat treated, which improves their strength and resistance to rotational distortion

4501002   Metric miniature hexagon key set

RS PRO Safety Bump Caps

- This lightweight and high-quality RS PRO bump cap offers protection from minor head scrapes, bumps and lacerations
- The high-profile ABS shell acts as a shock absorber and comes with a soft padded crown, giving optimum safety and protection for the wearer
- Made from 100% cotton, ABS and EVA Foam

9185668   Black

RS PRO Reusable ESD Laboratory Coat

- Ideal white coat for engineering, medical and all lab work
- ESD symbol on the breast pocket of the lab coat
- Unisex lab coat suitable for men and women
- Different sizes available - refer to RS Online

7898087   Medium

RS PRO Wrap Around Safety Glasses

- RS Pro wrap around glasses are stylish and protect your eyes complete with a contoured design and a one piece curved lens
- The glasses are lightweight, protect you against impacts plus feature a flexible temple
- The wrap around style gives you a near total eye orbital seal plus have an anti-scratch coating

9185747   Clear lens

RS PRO Black Polyurethane Kneeling & Sitting Mat

- Comprised of CFC free polyurethane formula, enabling the mat to be highly flexible
- High tear resistance due to the strong and durable exterior
- A multitude of small air bubbles are enclosed within the main body of the pad, offering a soft cushion, foam-like texture - this gives evenly distributed the user's body weight

154867   24 × 44 × 3cm

RS PRO Polyurethane-Coated Cut Resistant Gloves

- EN388 Cut level 5 protection
- Protective material covers palm and fingers while still allowing for a good grip
- Perfect for working environments where there is a cut risk
- Comfortable fit reduces hand fatigue and increases efficiency

8691632   Size 8, Black

RS PRO Hi-Vis Bomber Jacket

- From RS PRO Hi-Vis bomber jacket is not only comfortable but weatherproof and designed to enhance your visual presence
- This waterproof jacket has a wealth of benefits including an attached hood, 2-way front zip, storm flap and a fleece-lined collar
- For high visibility solutions in outdoor and challenging conditions, this bomber jacket style high visibility wear is ideal

9185958   Hi-Vis Yellow Bomber, XL

RS PRO PU Foam Ear Plugs

- Uncorded reusable ear plugs
- Made from PU Durable foam
- Moulds to the contour of the rear
- Easy to insert and remove

9185692   30dB, 200 pairs

RS PRO Gel Adjustable Strap Rubber Knee Pad

- One size, gel filled
- Comfortable, extra thick support round the knee
- Single neoprene strap prevents chafing
- Pneumatic gel injection held in 7 layers, keeps knee dry and protected

4659369   Black

RS PRO Classic Ear Defenders

- From RS PRO, these classic ear defenders are lightweight and robust, with an adjustable multiple position headband for added comfort
- The ear cups are filled with sound-absorbing foam to filter out harmful noises and protect your hearing from damage
- With super-soft ear cushions, these high-quality ear defenders can be worn with comfort even for long periods of time

9185728   27dB

Ansell HyFlex Nitrile-Coated General Purpose Gloves

- Ansell's First-to-market foam coating provides more breathability that extends workers' comfort
- The foam nitrile coating promotes better grip allowing the worker to perform tactile tasks with ease
- Tailored fit at the base of the pinky finger better matches natural hand contours

Ansell

1775844	Size 6, Grey, White	11-800 06

Ansell Alphatec Nylon Nitrile-Coated Chemical Resistant Gloves

- For light to medium chemical applications
- Industry leading grip, enhanced dexterity and comfort
- Thin double wall nitrile shell 15 gauge seamless nylon liner
- Retains minimal heat, reducing perspiration

Ansell

7497060	Size 9, Black, Green	58-270/09
7497066	Size 8, Black, Green	58-270/08
7497079	Size 10, Black, Green	58-270/10

Ansell HyFlex Nylon Nitrile-Coated Special Purpose Gloves

- Outstanding fingertip sensitivity for greater ease and flexibility in handling small and sensitive component
- Excellent grip, dry wet or on lightly oiled surface
- Palm coated allowing the back of the hand to breathe

Ansell

7698572	Size 9, Grey (Pack of 12)	11-800/09
7698575	Size 7, Grey (Pack of 12)	11-800/07
7698581	Size 10, Grey (Pack of 12)	11-800/10

Ansell HyFlex Nylon Nitrile-Coated General Purpose Gloves

- Extreme durability and superior fit
- The ultra-thin FORTIX™ nitrile foam coating (patent pending) lasts up to three times longer than comparable coatings
- Provides enhanced dry grip and is 20% more breathable than earlier formulations

Ansell

7917514	Size 8, Black	11-840/08
7917523	Size 9, Black	11-840/09
7917526	Size 10, Black	11-840/10

Orange POM Glove Grabber For Use With Tool Belt

- Clips to belts, tool belts, trousers and other clothing
- Detachable, usable with 'beeners, D-rings, etc.
- Breakaway feature
- Dielectric / non-conductive material

POLYCO

7495698	Glove Grabber	E3405-OR

JSP Canvas HDPE Navy Short Peaked Safety Cap

- Baseball cap style
- Unique angled adjuster combined with the castellated protective liner
- Removable liner, machine-washable
- Terry-towelling sweatband for added comfort
- Subtle reflective piping for added visibility safety

JSP

7362289	Hardcap A1+, Short 5cm Peak, Navy	ABS000-002-100

Uvex 9972-101 Lens Cleaning Fluid

- Replacement cleaning fluid for 9990.000 uvex lens cleaning station
- Use on anti-fogging and scratch resistant lenses

uvex

1302351	500ml Bottle	9972-101

Uvex 9963-000 Lens Cleaning Wipes

- Silicon free Individually wrapped Lens cleaning towelette
- Moist when opened
- Suitable for all lenses
- Use on the go or keep in your pocket

uvex

1302352	Box of 100	9963-000

Uvex 9192 Anti-Mist Safety Glasses

- Excellent peripheral vision with optical class 1
- Lightweight design with ergonomic features
- Arms with advanced ventilation system
- No metal parts
- Fully recyclable
- Anti Scratch Anti Fog

uvex

7689057	black/grey grey lens	9192-300
7689079	Clear Lens	9192-310

emb-papst 4000 N Series Compact AC Axial Fans

- Performance from 80m3/h to a maximum of 180m³/h, depending on variant
- Fan motor integrated into the impeller hub to form a compact fan unit
- Air intake via struts
- External rotor shaded pole motor

ebmpapst

1018052	46dB, 160m³/h, 19W, 230 V ac	4650N
2720396	47dB, 160m³/h, 19W, 230 V ac	4656N

RS PRO AC Dual Bearing Axial Fans

- Robust die-cast aluminium frame, ideal for industrial applications
- PBT UL94V-0 thermoplastic impeller
- Dual ball double sealed bearing system, supporting excellent performance and life expectancy

RS PRO

6196961	44dB, 186.9m³/h, 24W, 230 V ac	OA4715-23TB

Sunon DP Series Sleeve Bearing AC Axial Fans

- Low power consumption
- High temperature resistance
- Impedance protected
- Service life of approximately 50000 hours

SUNON

5440706	49dB, 161.4m³/h, 21W, 220 240 V ac	DP200A/2123XST.GN

Stego Compact DIN Rail Thermostat

- Large setting range
- Small size 60 × 33 × 43 mm
- Plastic casing according to UL94 V-0, light grey
- Variable fitting position and simple to mount (clip for 35mm DIN rail)

STEGO

6974446	NO, 120 250 V ac	01141.0-00

Thermostats with SPCO contacts

- Surface mounting suitable for industrial and commercial applications
- Snap action switch with change over contacts
- Shunt accelerator minimises overshoot
- Dial can be set for max/min settings

RS PRO

3750168	Thermostat with C/O contact,+10/+60degC	RTRE6705

Grey Steel Vent Grille

- For ventilation by convection
- Easy 4-screw assembly

RITTAL

5170025	110 × 330mm (Box of 4)	2543235

Axial fan finger guard

- Industrial standard size zinc plated steel finger guards for axial fans 4 standard fixing points except 172 × 172 which has 2 points
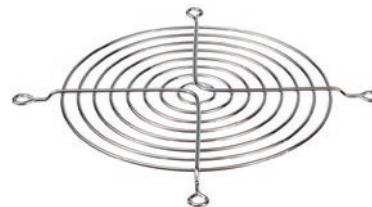
SUNON

5440548	120H x 120W mm	FG-12

Humidity Indicating Desiccators

- Controls humidity levels within small containers
- Conforms to BS2540 and CPU/CON/250-1
- Each box contains 50 sachets of gel, each packed in a permeable membrane
- Ease of use in sachet form and range of sizes - refer to RS Online

RS PRO

601041	10g sachet (Pack of 50)	

ebm-papst Filter Pad

- The ebm-papst fan filter replacement pad achieves a 75% dust particle retention down
- It has a size of 5-10 microns and can withstand temperatures of up to 100ºC
- The pad is flame resistant and reduces the airflow about 20% to 30% with a clean filter assembly
- This pad is used with PMFA120 filter assembly suitable for 119mm and 119mm fan size

ebmpapst

1186133	Filter Pack For PMFA120 (Pack of 5)	FP120

Economy Spitfire LED recessed non-maintained

- 1 year warranty
- D40 photometric classification
- LED technology 75,000 hours lamp life

ABB

| 1794051 | 3.6W | ESFLED |
| 1794052 | Battery 4 cell NiCad 4.8V 1.8Ah | 03-01222 |

Signature Spitfire LED recessed non-maintained

- 3 year warranty
- Superior photometric classification
- LED technology 100,000 hours lamp life

ABB

| 1794053 | Single, 5.5W | SF1LED |

Platinum Spitfire LED weatherproof non-maintained

- 5 year warranty
- Superior photometric classification
- LED technology 100,000 hours plus lamp life

ABB

| 1794072 | Single, 1.0W | SFBWP1LEDP |
| 1794055 | Battery 5 cell NiCad 6.0V 1.8Ah | 03-01220 |

BA15d Base Clear Incandescent Car Lamp

- Areas of application;
- Position and parking light
- Indicator, brake, fog and reversing lights
- Number plate and side position lights

OSRAM

| 170878 | 5W 24V (Pack of 10) |

BA9s Miniature Bayonet Base LED Lamp

- Colour temperature: 6000K
- Viewing angle: 30°
- Maximum current rating: 20mA
- Diameter: 9.6mm
- Overall length: 24mm

JKL COMPONENTS CORPORATION

| 7693003 | LED T3 ¼ | LE-BA9S-24W |

20 W Halogen Capsule Bulb G9

- Mains voltage compact G9 halogen lamps, no transformer required.
- Up to 20% energy saving with UV filter (UV stop)
- 1:1 direct replacement for standard Osram Halopin® lamps
- Approved for use in open luminaires to IEC 60598-1

OSRAM

| 7916523 | 230 V, 235 lm, 2000h | 4008321945273.00 |

RS Pro 8 mm LED Indicators Pin Terminal

- 5 mm tinted diffused epoxy lens
- Various voltages
- Recessed or prominent bezel style
- Longevity and low power consumption
- Solder pin terminals

RS PRO

| 212121 | IP67 8mm green LED |

10mm Mount Neon Indicator

- 14mm coloured diffused polycarbonate
- Prominent or low profile style lens
- White nylon 6.6 body
- Chrome bezel

arcolectric

| 589705 | Green neon panel indicator, 230Vac |

Stanley General Purpose Snap-Off Knife Blade

- Durable - ensures a sharp cutting edge is always to hand
- Safety design- plastic blade dispenser included with built in blade snapper for safe removal and storage
- Quantity of blades included: 10

STANLEY

| 841378 | 9mm L (Pack of 10) | 0-11-300 |
| 841788 | 18mm L (Pack of 10) | 0-11-301 |

Facom Precision Slotted Phillips Screwdriver Set

- Handles have revolving ends and colour coded
- Blades are chromed with burnished tips
- Individually colour coded
- Case dimensions: L.205 × W.130 × H.31 mm

FACOM

| 1622207 | 8 Piece | AEF.J3 |

Facom Height Safe Carabiner

- Stainless steel construction with excellent corrosion resistance
- Quick and easy to attach or detach tools and other equipment
- Perfect for working at height to reduce injury and damage or loss of tools
- Available in a range of sizes - refer to RS Online

FACOM

| 9103350 | 300kg Support Weight | MOUSQ6X60SLS |

RS PRO Individual Hex Keys

- The key is precision formed to give an exact dimensional tolerance, to give a precise fit
- Metric size
- The L shape and long arm makes it easy to reach deeply in-set bolts
- High corrosion protection

RS PRO

| 734911 | 4mm (Pack of 5) | |
| 734882 | 2mm (Pack of 5) | |

Bahco 55mm Single Ended Open Spanner

- Heavy-duty single open ended spanners for industrial applications such as shipyards and the rail industry
- Standard alloy steel
- Gunmetal finish
- Angle 15°

BAHCO

| 7179021 | 55 mm | 894M-55 |

Xcelite by Weller Precision Cutting Precision Knife Blade

- Scalpels for delicate work
- Knurled end for more secure handling and a firm grip

Weller Xcelite

| 6756709 | Pack of 5 | XNB103 |

Electronic-Super-Knips

- Electronic side cutter, stainless steel or bronzed special tool steel, length 125 mm
- Precision-ground cutting tips
- Zero-play joints with stainless steel rivet
- With opening spring and limiter

KNIPEX

| 288910 | Lead Catch 125mm | 78 91 125 RS |

Wera 35 Piece VDE/1000 V Electricians Tool Kit

- Laser tip with micro rough surface for increased grip and bite requiring less contact pressure
- Non-roll hexagon shoulder to prevent lost drivers
- Screwdriver size and tip type markings

Wera

| 1231889 | 35 Piece | 135926 |

Hakko FX-888D Soldering Station

- ESD safe
- Small footprint
- Simple and easy operation
- Ceramic heating element Ironholder with full of functions
- Digital display

HAKKO

| 7804852 | 230V | FX-888D |

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RS

AVO®830 Series Digital TRMS Multimeters

- IP54 environmental protection
- Phase rotation
- High / Low sensitivity live circuit detection
- 10 MΩ / 10 kΩ input impedance
- MIN / MAX / AVG / Smoothing

Megger.

1367898	10A ac 600V ac 10A dc 600V dc	1007-494
1367899	10A ac 1000V ac 10A dc 1000V dc	1008-221

MIT230 Insulation & Continuity Tester

- Insulation testing to 1000 MΩ
- Dual & triple test voltages models
- Digital display with electronic analogue arc display helps to confirm insulation condition & to monitor fluctuating readings not apparent on the digital display

Megger.

5353191	999MΩ CAT III 300 V	MIT230-EN

DM62 True RMS Digital Multimeters

- All the Features You Need in One Tool
- Rich feature set ideal for various electrical applications.
- Safely check voltage with non-contact voltage detection
- Measure both AC-DC voltage and current (A, mA, µA)

FLIR

1681345	10A ac 600V ac 10A dc 600V dc	DM62

C3 Thermal Imaging Camera with WiFi

- R Resolution 80 × 60
- Digital camera 640 × 480 pixel
- 3" colour display 320 × 240 pixels
- Image mode: Thermal, visual, MSX®, Picture-in-Picture

FLIR

1353287	-10 → +150 °C 80 × 60pixel	72003-0303

Kyoritsu KEW Snap Digital Clampmeter 2009R

- CAT IV clampmeter measures voltage and current in both very low and high power circuits
- Accurate True RMS reading of AC current or voltage with distorted waveform
- Measures AC and DC currents up to 2000 A
- Provides frequency reading in AC current or voltage measurement

KYORITSU

9163374	2kA ac, 2kA dc CAT III 1000 V, CAT IV 600 V	2009R

Druck DPI 705 Manometer

- 0.1% accuracy
- Large 13mm 5 digit LCD display
- 16 selectable pressure units
- Suitable for use with liquids compatible with the stainless steel diaphragm

Druck

3120523	IP54, 20bar	I705-13G–2388

FLIR ONE Pro iOS Thermal Imaging Camera

- Pixel size 12um (con), 8-14um spectal range
- Higher Resolution Thermal Sensor
- Advanced Diagnostics
- One-Touch Reporting
- Enhanced FLIR ONE App
- Video, Photo, Time-Lapse

FLIR

1368284	-20 → +400 °C, 160 × 120pixel	435-0006-03

TG167 Spot Thermal Camera

- -25°C to +380°C temperature range
- 24:1 spot ratio
- 80 × 60 pixels
- 9 Hz image frequency

FLIR

9228761	2.02 TFT LCD display	TG167

Transportation—Light and Commuter Rail Solutions

Fluke solutions for transportation professionals.

Professionals involved in transportation infrastructure or vehicle operations are under extreme pressure to keep their systems moving smoothly and safely.

Fluke makes rugged, reliable, quality tools you can count on to meet the demanding needs of our transportation systems. Depend on Fluke, the industry standard against which all other tools are measured.

Vehicle Maintenance

Issues faced:
- Troubleshooting for immediate response and repair
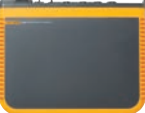- Quick turnaround time
- Predictive and preventive maintenance

Fluke solutions:
- Fluke Connect
- Indoor Air Quality
- Digital Multimeters
- Clamp Meters
- Insulation Multimeters
- Electrical Testers
- Portable Oscilloscopes
- Infrared Thermometers
- Vibration Tester

Fluke Light/Commuter Rail Solutions

Electrical Test Tools

Power Quality Analysers	Portable Oscilloscopes	Power Loggers	Clamp Meters	Insulation Multimeters	Earth Ground Testers	Battery Testers
430 Series II	190 Series II	1748	376 FC	1587 FC	1625-2 Kit	BT521

Supervisors/ Superintendents

Issues faced:
- Ensuring uptime is continuous and predictable
- Limiting downtime
- Safety of personnel and the environment
- Budget control
- On-time scheduling

Fluke solutions:
- Fluke Connect®
- Power Quality Analysers
- Infrared Cameras

Wayside Maintenance

Issues faced:
- Maintaining consistent quality power loads
- Controlling downtime

Fluke solutions:
- Fluke Connect
- Insulation Multimeters
- Digital Multimeters
- Electrical Testers
- Earth Ground Testers
- Clamp Meters
- Power Loggers
- Infrared Thermometers
- Infrared Cameras

Diagram is not intended to be an exact representation.
Diagram components are not to scale and are for illustration purposes only.

Fluke offers a full line of transportation solutions to fit all needs.

Digital Multimeters	Infrared and Vibration Tools				Air Quality	Wireless
	Expert Infrared Cameras	Professional Infrared Cameras	Infrared Thermometers	Vibration Tester	Indoor Air Quality	Fluke Connect®
a3001 289	TiX580	Ti480PRO	568	805 FC	971	

The Smart Energy Management Journey

The first step to smarter energy management is knowing what you are consuming and where. Combining PowerLogic™ energy metering with wireless solutions like PowerTag allows you to collect this vital usage data. This information can then feed the EcoStruxure™ software suite or PowerSCADA Expert software tool empowering greater energy efficiency and optimum performance.

PowerLogic™ PM5000

- The PowerLogic™ PM5000 power meter is the ideal fit for cost management applications, with enhanced measurement capabilities
- It allow the user to pin-point energy savings and perform a high level power quality assessment of the local electrical network
- The 96×96mm unit has a graphical display that enables data for all phases, neutral & ground to be monitored simultaneously

8417765	PM5100 Power Meter, Pulse Out
8417768	PM5100 Power Meter, Pulse/Serial Out,MID
8417762	PM5300 Power Meter, Serial, 2DI-2DO Out
8417774	PM5300 Power Meter, ETH, 2DI-2DO Out
8417778	PM5300 Power Meter, ETH, 2DI-2DO Out,MID
8417787	PM5500 Power Meter, ETH, 4DI-2DO Out,MID
9139769	PM8240 panel mount meter
9139649	PM82401 MID panel mount meter
9139766	PM8244 DIN rail module with remote panel display

iEM2000 DIN Rail Energy Meters

- Cost-attractive single phase DIN Rail mountable energy meters - ideal for local energy monitoring
- 40A direct measure (iEM2000 models) & 63A direct measure (iEM2100 models)
- Electromechanical display (iEM2000 models) and LCD display (iEM2100 models)
- On-board Modbus or M-Bus communication options
- MID-compliant (selected models only) providing certified accuracy and data security

9139661	iEM2000 230V 40A - A9MEM2000 - MID
9139665	iEM2010 230V 40A + Pulse - A9MEM2010 - MID
9139637	iEM2100 230V 63A - A9MEM2100
9139671	iEM2150 230V 63A Modbus - A9MEM2150
9139677	iEM2135 230V 63A Modbus - A9MEM2135 - MID

PowerTag Wireless Energy Sensor

- Acti 9 PowerTag® not only measures energy and power in real time, it also monitors your assets and immediately alerts your smartphone in the event of failure
- Simply 'tag' your circuit breakers, link these PowerTags to the Smartlink concentrator and data can then flow seamlessly into your BMS or accessible via the Smartlink embedded web pages
- Easy to install and setup using Acti 9 Smart Test free software
- PowerTag is installed with no additional wires - cutting installation time to just a few minutes, even for existing panel installations
- Can be used with Acti 9 series breakers or most other MCBs on the market

1348658	Powertag Sensor 1PW MAX 63A
1348659	Powertag Sensor 1PN UP MAX 63A
1348660	Powertag Sensor 1PN DOWN MAX 63A
1348661	Powertag Sensor 3P MAX 63A
1348662	Powertag Sensor 3PN UP MAX 63A
1348663	Powertag Sensor 3PN DOWN MAX 63A
1348667	Smartlink Modbus TCP/IP/Wireless Module
1348666	Acti9 PowerTag Top/btm Extn Kit

Link150 Ethernet Gateway

- A Modbus Serial to Modbus TCP/Ethernet IP protocol gateway with built in web-server allowing access to device data via simple browser - no software needed
- Supports both RS-485 & RS-232 serial and capable of supporting up to 32 Modbus protocol enabled meters or other devices
- Can be powered by 24Vdc or via PoE

9139646	EGX150 Gateway

ComX EBX Gateways

- ComX 200 acts as data logger collecting data from locally connected devices such as Powerlogic meters, intelligent circuit protection and Modbus enabled sensors, then makes this data accessible via the local LAN or forwards to a remote server and publishes it to the Schneider Electric cloud or another hosted platform
- The ComX 510 is similar to the 200 but as well as collecting and storing data it has embedded energy management software which provides immediate visibility of site wide energy consumption, in real-time, as well simple analysis of historical
- data in bar graph or trending formats.
- Both gateways can support up to 64 field devices (32 Modbus devices), feature 2 Ethernet ports, RS-485 Modbus serial, 2 analogue and 6 digital inputs
- 256 MB flash, 128 MB RAM memory capacity

9139722	EBX510 Gateway

Vandal Resistant Switches

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

Photoelectric Sensors

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

4000 Series Circular Data Connectors

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

9124874	3 Pole Female	PXP4010/03S/5055
9124893	8 Pole Female	PXP4010/08S/5560
9124938	3 Pole Male	PXP4011/03P/5055

6000 Series Circular Power Connectors

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

7295407	Red, 24V, IP66	MPI002/TE/RD/24
7083009	Switch,PB,vandal res,dot red/green,IP66	MPI001/TERM/D1
7083093	Switch,PB,vandal res,32mm,flush,SPCO	MP0050

1874865	Light on, NPN, Cable	SLLP3002CL
1874866	Dark on, NPN, Cable	SLDP3002CL
1874861	Light on, NPN, M5	SLLP3002M5

7659652	Flex connector,2 way pin contacts	PXP6010/02P/ST/0507
7659757	Chassis connector,2w,socket contacts	PXP6012/02S/ST
7659775	Chassis connector,16w,pin contacts	PXP6012/16P/CR

Indicators

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

400 Series Circular Power Connectors

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

900 Series Circular Power Connectors

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

585438	6.1mm red LED	DX1116/RD
585444	6.1mm green LED	DX1116/GN

4260896	2 way cable plug,8A	PX0410/02P/5560
4261114	2 way cable coupler plug,8A	PX0411/02P/5560
4260997	12 way cable socket,1A	PX0410/12S/6065

3443999	3 way	PX0911/03/P
8418932	10 way	PX0911/10/P
3444021	5 way	PX0911/05/P

Phoenix Contact has been a reliable partner of the railway industry for decades and provides products for rail vehicles and signal technology. Benefit from Phoenix Contacts high level of innovation and comprehensive industry expertise, coupled with RS Components product availability, price competitiveness and free next day delivery across ANZ when you order online.

Cabling solutions for train control
Secure and fault-free network - Ethernet network isolators and moulded connectors for fault-free control systems.

**Network isolator -
FL ISOLATOR 100-RJ/RJ**

751-1392 2313931

**Network isolator -
FL ISOLATOR 1000-RJ/RJ**

751-1399 2313915

**Network cable -
NBC-MS/ 2,0-94B/R4AC SCO US**

802-9135 1406117

Fiber optics for communication networks
Long ranges, maximum interference immunity
FO technology – perfect for interference-free connection and bridging long distances.

**Industrial Ethernet Switch -
FL SWITCH SFNB 4TX/FX SM20**

180-9171 2891029

FO converters - FL MC 1000 ST

893-7812 2891321

**Industrial Ethernet Switch -
FL SWITCH SF 14TX/2FX**

528-0605 2832593

Marking for all railway applications
Comprehensive marking portfolio
High-quality marking that complies with standards, thanks to the MARKING system

Conductor marker - UCT-WMT (18X4)

188-1705 0801462

Marker for end clamp - UCT-EM (30X5)

188-1706 0801505

Marker for terminal blocks - UC-TM 6

803-8448 0818085

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32

Power supply for point heating
Safe energy supply
Power supply for safety technology systems.

Power supply, with protective coating - QUINT-PS/1AC/24DC/ 5/CO

751-2604 2320908

Power supply, with protective coating - QUINT-PS/1AC/24DC/10/CO

739-7871 2320911

Power supply, with protective coating - QUINT-PS/1AC/24DC/20/CO

739-7875 2320898

Relays for safe braking control
Reliable switching in railway technology
Rail relays ensure electrical isolation between sensor and controller.

Relay Module - PLC-RPT- 24UC/21AU/RW

196-0398 2900321

Relay Module - PLC-RPT-110UC/21AU/RW

196-0400 2900323

Relay Module - PLC-RPT- 24UC/21HC/RW

196-0401 2900324

Terminal blocks for fast wiring
Fast conductor connection
From the feed-through terminal block to the function terminal – always the right terminal block for your application.

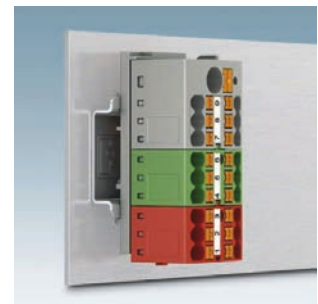### Distribution block - PTFIX 6/18X2,5-NS35 GY

136-3242 3273110

Distribution block - PTFIX 6/18X2,5 BU

187-9907 3273376

Distribution block - PTFIX 6/18X2,5 RD

187-9909 3273378

EPIC® H-BE Series Rectangular Connector Kits

- Flexible & robust 16A industrial connectors
- IP65 rated
- Numerous additional connector kit options available online

4180548	6 way M Plug	10190000+19012000+71200200
4180560	10 way M Plug	10192000+19042000+71200200
4180598	16 way M Plug	10194000+19082000+71200300
482705	24 way M Plug	10113000+10196000+12954500
448446	32 way M Plug	10136000+10194000+10202000

EPIC® H-A Series Rectangular Connector Kits

- Robust 10A industrial connectors
- IP65 rated
- Numerous additional connector kit options available online

448418	4 way M	10426500+10431000
4180447	4 way M P/Socket	10431000+19426000+53111420
3961683	3 way M/F	10420000+10421000+19424500
452186	3 way M	10420000+10427000+12957100

EPIC® MH Series Module Inserts

- High power modular connection system
- 2 way - 36 way male & female options
- Railway fire protection approved according to EN 45545-2

1809522	2 way 100A M	44423212
1809533	12 way 10A F	44423223
1809534	17 way 10A M	44423224
1809536	20 way 16A M	44423226

EPIC® MH Series Contacts

- Crimp connection for permanent vibration proof contact
- 500 cycles of mechanical operation
- 18mm stripping length

1809562	F 10mm²	44423246
1809561	M 10mm²	44423242
1809563	M 16mm²	44423243
1809564	F 16mm²	44423247
1809565	M 25mm²	44423244
1809566	F 25mm²	44423248

SKINTOP® ST-HF-M Nylon Cable Glands

- Completely halogen-free (including sealing material)
- Extremely flame retardant according to UL94 V0 & self extinguishing, no dripping
- DIN EN 45545-2: 2013 approval

199670	M12	53111407 + 53119200
199642	M16	53111417 + 53119210
199658	M20	53111427 + 53119220
199541	M25	53111437 + 53119230
199557	M32	53111447 + 53119240

SKINTOP® MS-HF-M Metal Cable Glands

- Halogen free & flame retardant
- Optimum strain relief
- DIN EN 45545-2, EN 45545-3, EN 1361-1 & EN 13501-2 approvals

1368511	M16	53112571
1368512	M20	53112572
1368513	M25	53112573
1368514	M32	53112574

SKINTOP® MS-HF-M SC EMC Cable Glands

- Halogen free & flame retardant
- Low resistance screen contact, optimum EMC protection
- DIN EN 45545-2, EN 45545-3, EN 1361-1 & EN 13501-2 approvals

1368516	M16	53112531
1368517	M20	53112532
1368518	M25	53112533
1368519	M32	53112534

SKINTOP® MS-HF-M BRUSH EMC Cable Glands

- Halogen free & flame retardant
- Optimum, low resistance 360 screen contact
- DIN EN 45545-2, EN 45545-3, EN 1361-1 & EN 13501-2 approvals

1368520	M25	53112543
1368521	M32	53112544
1368522	M40	53112545
1368523	M50	53112546

SKINDICHT® SM-PE-M Metal Locknuts

- For lacquered, anodised or powder-coated housings
- Suitable for all metric glands in earthing & EMC applications
- -60°C to +200°C temperature range
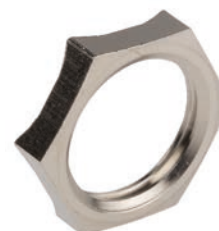
8395387	M16	52103310
8395381	M20	52103320
8395390	M25	52103330
8395393	M32	52103340
8395397	M40	52103350
8395407	M50	52103360

Expertise that puts you on the right track. LAPP.

Solutions for railway technology

Based on decades of experience as a complete supplier of electrical connection solutions, LAPP has systematically expanded and enhanced its portfolio and knowledge in the railway technology sector. With its ÖLFLEX® TRAIN, UNITRONIC® TRAIN, ETHERLINE® TRAIN, CABLE GLANDS, CONNECTORS and CONDUIT product lines, LAPP offers its customers throughout the world reliable solutions that do not compromise on safety, quality or functionality and comply with the highest national and international norms and standards.

The benefits to you:
- IRIS certification
- Safe production processes thanks to in-house electron beam cross-linking plant
- Cable, gland, connector and conduit ranges comply with EN and other standards
- LAPP test centre
- Ranges include more than 500 Train cable types and 850 matching accessories
- Extensive experience in the rolling stock market
- High warehouse availability from manufacturer
- One-stop shop for cables, connectors, cable glands, cable protection, marking systems and accessories

PRODUCT INFO

The special material properties combined with the use of electron beam cross-linking make ÖLFLEX® TRAIN cables exceptionally resistant to mechanical influences in a broad temperature range from -45 to +120 °C, and also resistant to oils, alkalis and UV. In addition to use in rail vehicles, they are therefore suitable for use in many other industries for outdoor applications and in harsh ambient conditions.

LAPP

RS Components up for the race!

RS Components was up for the race, supporting young engineers with electronic equipment and materials to build the perfect car.

We spoke to Fletcher Angrove, Chief Electrical Engineer from RMIT Electric Racing about how RS Components supported engineers from RMIT Electric Racing and the FSAE Competition.

1. **How did the program start? And any history around the event etc? And a general summary of what happens each year.**

Formula Society of Automotive Engineers (FSAE) is a competition that allows students to design and manufacture a Formula-style race car that competes against other universities from around the world. The first competition was in 1981 in the United States, but has now expanded globally with competitions in numerous countries. Almost all universities in Australia compete in the Australasian competition in December. RMIT first began the program in 1999 with a combustion vehicle team called RMIT Racing. However, in 2008, RMIT decided to take a major step in becoming the first university in the world to build an electric vehicle for the FSAE competition and thus was born RMIT Electric Racing. Since then, students from a range of study backgrounds have designed and built a competitive electric vehicle every year and won multiple events.

Universities from Australia, New Zealand and many other nations come together to compete in the annual FSAE Australasia event in December. The premise of the competition is that a fictional manufacturing company has assigned a team to develop and manufacture a Formula-style race car. This team must then present their car to their potential investors. The car is first judged on its safety and rules compliance before it is allowed to compete. It is then judged in Static Events which test the team's business and design skills. Finally, it is judged in Dynamic Events, which test the car's acceleration, cornering ability, endurance and efficiency. Points are given for each of the categories and the placings of each team at the end of the competition are based on this.

2. **Are there any criteria for selection of the team?**

RMIT Electric Racing implements an inclusive approach to team recruitment. We allow anyone to join the team no matter what their skill level is. Whether they're a first year who has never touched a car before or a final year student who has extensive experience in race cars, they are welcome on the team.

However, before people can get started working on the team, we do have an induction process. This entails holding an information night explaining the various aspects of the team and where new recruits can join in. A handbook is given to each new recruit to study the basics of the car and how the team operates. After this they are ready to begin helping out with whatever tasks are available.

3.   What benefits and skills do students gather from the RMIT Electric Racing program?

Students who join the RMIT Electric Racing program gain experience in engineering design, project management, team communication and many other areas. Working on the team is just like working in industry. There are deadlines, reports, meetings and presentations. One of the most important skills learnt on the program is learning how to work in a team. Communication and accountability are vital for RMIT Electric Racing finishing the project sufficiently and on time.

This experience is very useful for each of our graduate's employability. Many companies (not just automotive) know of the competition and are impressed by FSAE experience, making finding a job after finishing university much easier for our members.

4.   What part do the sponsors, in particular RS offer to this activity?

"Our sponsors are an extremely valuable part of the team. While RMIT are extremely generous in their expenditure on RMIT Electric Racing, we still need other sources to contribute to team costs. RS is one of our major sponsors and provides us with valuable components for the car to function. The most significant part of the car that RS contributes to is the electronics. Without RS components we couldn't build our custom PCBs and communicate with the various systems of the vehicle."

5.   What sort of componentry would be offered as support - from RS specifically?

The list of RS components we use on the car would go into the hundreds, but here are some examples of what we use. Work tools, wiring harness material, cables, tape, fans, connectors and electronic components such as transistors, capacitors, resistors, and thermostats etc. for our circuit boards. So it's obvious to see that a fairly significant portion of our car is made up of RS parts.

6.   Any ground-breaking achievements in innovation or performance worth noting?

As mentioned earlier, we were the first university in the world to build an electric vehicle for the FSAE competition in 2008. We are currently undergoing research and development in 4 wheel drive technology. This involves placing motors in each of the wheels and controlling them with 4 motor controllers. This allows for advantageous performance abilities such as torque vectoring and traction control.

We are also one of the few teams in Australia that run a completely custom electronics package. We design and build our own PCBs rather than purchasing off-the-shelf boards.

For further information and photos:
https://rmitelectricracing.com/

EVERY PART MATTERS

RS PRO 450 piece Steel Screw/Bolt Kit

- To DIN912
- High tensile steel
- Black oxide finish
- Kit contains a total of 450 metric cap & grub screws
- Supplied in hinged-lid storage box
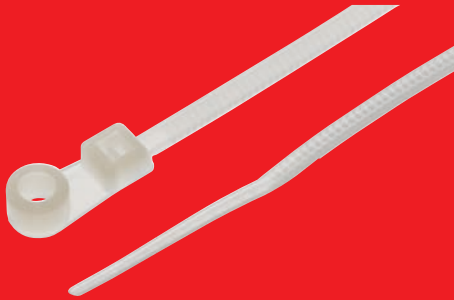
Add Promo Code "MROPRO" to receive 15% discount

| 524051 | M3, M4, M5 | $184.75 | **$157.05** |

RS PRO Natural Nylon Screw Mount Cable Ties

- Flame retardant: UL 94V-2 Flammability Standard
- Colour: natural nylon (not white)
- Suitable for a multitude of uses
- Non-releasable
- Temp rating: -40°C to 85°C

Add Promo Code "MROPRO" to receive 15% discount

| 601079 | 113mm x 2.5 mm (Pack of 100) | $15.87 | **$13.48** |

RS PRO Insulated Crimp Spade Connector

- RS Pro range of insulated crimp spade terminals made from copper with a tin plating
- These spade connectors have vinyl or nylon insulation with a flared design for easy wire insertion
- The insulation of these crimp spade terminals is colour coded to correspond with the wire size they are used with

Add Promo Code "MROPRO" to receive 15% discount

| 534272 | 0.5mm² to 1.5mm² (Pack of 100) | $16.90 | **$14.35** |

RS Pro Pocket Magnifying Glass

- 70mm magnifying lens with 5 × magnifying abilities
- Antistatic and scratch resistant properties
- Ergonomically designed handle for enhanced comfort and grip

Add Promo Code "MROPRO" to receive 15% discount

| 5285335 | 5 × Magnification, 70mm Diameter | $7.11 | **$6.05** |

RS PRO Retractable Strap Cutting Knife

- Manufactured from glass reinforced polystyrene
- Designed for cutting thick plastic sheeting, leather, box strapping, belting materials etc.
- Head design prevents personal injury

Add Promo Code "MROPRO" to receive 15% discount

| 5416630 | Strap Cutting | $27.05 | **$22.99** |

RS PRO 20 g Super Glue

- Forms a strong, clear bond in seconds
- Can be used straight from the container without special preparation
- A cyanoacrylate activator can be used to increase speed of bonding

Add Promo Code "MROPRO" to receive 15% discount

| 473461 | Transparent | $26.66 | **$22.66** |

EVERY PART MATTERS

RS PRO Foam Double Sided Tape

- Plastic foam base
- Self-adhesive on both sides
- Provides good retention on most common surfaces
- Protective backing on both sides

Add Promo Code "MROPRO" to receive 15% discount

RS PRO 400 Piece Bootlace Ferrule Crimp terminal Kit

- Colour coded insulation for easy ferrule size identification
- Excellent electrical connection
- Crimped terminal can be repeatedly inserted and removed from connection without degrading end of the wire

Add Promo Code "MROPRO" to receive 15% discount

RS PRO 2.5m Power Cable

- High-quality 3-pin AS3112 plug for use in Australia or New Zealand
- 2.5 m of harmonised mains cable H05VV-F, 1.00 mm²
- IEC connector option has straight, type C13 connector to EN60320

Add Promo Code "MROPRO" to receive 15% discount

| 512856 | 0.8mm Thick , 12mm x 150mm (Bag of 25) | ~~$10.67~~ | **$9.06** |

| 5132540 | 0.5 to 2.5mm² | ~~$42.55~~ | **$36.16** |

| 321174 | 10 A, 250 V | ~~$20.19~~ | **$17.16** |

15% OFF SELECTED RS PRO PRODUCTS!

To receive 15% discount on these selected products, please quote Promotion Code MROPRO in your order.

au.rs-online.com

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