Test & Measurement
Rental Solutions Guide 2019
Message From The CEO

As we expand our product offering within TechRentals, the core values of innovation and service excellence have continued to shape our focus on you, our customers.

I’m pleased to reveal our most comprehensive fleet of test and measurement instruments: more choice yet with the same expert guidance that has made TechRentals the most trusted rental provider in the field.

With the launch of our new Survey & Spatial category, combined with expanded ranges in Electrical Power, and Environmental & OHS areas, TechRentals offers a truly complete solution to any of your test and measurement rental needs.

Importantly, having also solidified our presence outside of Australia with thriving offices in Singapore, Malaysia, and New Zealand, our Asia Pacific focus enables us to deliver the same outstanding service across the region.

The 2019 edition captures the extensive range of test and measurement equipment solutions available to you. However, if there’s anything you require that isn’t listed, please call us as we are constantly adding products to our fleet. We look forward to partnering with you in the exciting year ahead.

Yours sincerely,
Dave Gallagher, CEO
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10 Reasons
WHY YOU SHOULD RENT

1 Stretch your budget
Test equipment is often used just some of the time. Rental allows you to pay for it only when you use it, as well as stretching your budget by accessing more equipment than you could if you purchased it outright.

2 Utilise operating expense
Test equipment is expensive often sitting on a shelf collecting dust – not an effective use of your valuable business capital. Rental allows you to free up cash for other parts of the business where it can be used to generate additional profits.

3 Conduct product research before purchasing
It is not always clear immediately which make and model will fulfil your requirements best. Trialling it on casual rental gives you hands-on experience to guide purchase decisions.

4 Recover costs more quickly
Generally rental payments are fully tax deductible and the expense can be recovered far more quickly than the tax allowances for ongoing asset depreciation.†

5 Eliminate running costs
The expense of maintaining, calibrating and warehousing your test and measurement equipment can be high. With rental you avoid these costs, as well as freeing up storage space within your premises.

6 Cost allocation is simplified
Rental payments are easy to track and account for in your business, making it easy to allocate appropriate costs to departments, clients or specific projects.

7 Respond to sudden demands
At peak periods, for unexpected projects, or when essential equipment breaks down, rental can put the necessary equipment in your hands ensuring seamless operations.

8 Apply new technologies and avoid obsolescence
Rental allows you to update your equipment in line with other businesses and take advantage of new technologies. It also avoids the potential cost of owning equipment that can be quickly superseded.

9 Preserve credit
Renting avoids the potential cost of utilising credit facilities such as an overdraft or credit cards, which are often used for equipment purchases.

10 Technical support
When you rent from TechRentals you’ll have the support of an experienced team of product experts, who’ll help you get the most from your equipment. And in the unlikely event of equipment failure we will do our utmost to rectify the issues as soon as possible.

†Please ensure you obtain independent professional taxation advice.
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Can’t see what you’re looking for?
New items are being added to the inventory constantly, so please call us on 1800 632 652 to discuss your requirements.
Fluke 233 Digital Multimeter with Remote Display
FLU,233 (1224) AU

The removable display has a range of 10 meters and allows the user flexibility when the meter and the display need to be in separate places. Features temperature, True-RMS AC voltage and current for accurate measurements on non-linear signals, can measure up to 1000VAC and DC, up to 10A (20A for 30 seconds), and features a capacitance range of 10,000 µF.
**Fluke 28II EX Intrinsically Safe True-RMS Multimeter**

FLU,28II-EX (1239) AU

Intrinsically Safe Multimeter is a completely sealed IP67 rated case. For use inside and outside of hazardous zones. Measures up to 1000V, 10A AC and DC with true-RMS for accurate measurement on non-linear signals. Frequency measurements to 200kHz, resistance, conductance, diode test, capacitance, and temperature. Results are displayed on the bright, 4-1/2 digit LCD (20,000 counts).

**Fluke 87-5 Industrial True-RMS Multimeter with Thermometer**

FLU,87-5 (1205) MY/SG

Unique function for accurate voltage and frequency measurements on adjustable speed True-rms AC voltage and current for accurate measurements on non-linear signals. Built-in thermometer. Measures up to 1000VAC and DC. Measures up to 10A (20A for 30 seconds). 10,000uF capacitance range. Frequency to 200kHz and % duty cycle. Peak capture to record transients as fast as 250µs. 4½ digit mode.

**Keysight U1253B OLED Digital Multimeter**

KEY,U1253B (1225) AU

True RMS 4.5 digit handheld digital multimeter (DMM). Up to 0.025% basic DCV accuracy. Organic LED (OLED) display that provides razor - sharp readings even in dark, off-angle situations. Internal logging and virtual unlimited data recordings to PC with the data-logging software included. Integrated 20MHz frequency counter, and a built-in programmable square-wave generator with selectable frequency and duty cycle. Safety rating CAT III 1000V and CAT IV 600V. Smoothing function. Internal logging memory 1000 Points.
Simco-Ion FMX-004 Electrostatic Fieldmeter

Compact electrostatic fieldmeter used for locating and measuring static charges. Its pocket size and 3-button operation makes it convenient and easy to use. Auto range switching up to 30kV, digital and bar graph display with ± indicators, with audible alarm.

Keysight 34461A Digital Multimeter 6½ Digit Truevolt

Precision 6.5 digit multimeter. 100% drop-in 34401A compatibility, graphical views of your measurement results, long-term trends and measurement histograms for a statistical view. Control, capture and view your DMM’s data on your PC. Measures noise and injected current, input bias current, AC RMS (3Hz to 300kHz), DC and AC V (100mV to 1000V), resistance (100Ω to 100MΩ), frequency, period, continuity, diode (5V), current and temperature. Using TrueVolt technology the analogue to digital converter displays results on a clear 11cm hi-res display.

Function Generators

See also RF Signal & Sweep Generators on page 30

Keysight 33612A 80MHZ 2 Channel Waveform Generator

80MHz, 2 channel waveform generator, sine, square, pulse, ramp, triangle, Gaussian noise, PRBS and arbitrary waveforms. Capable of modulation, sweep, burst, waveform summing and combining. Maximum output into 50Ω, 1mVpp to 10Vpp. Up to 120MHz sine and Gaussian noise at <= 4 Vpp. Memory is 4M Samples deep.
Digital Storage Oscilloscopes

**Keysight DSOX3024A Oscilloscope 200MHz 4 Channels**  
KEY,DSOX3024A (1350) AU

4 channel 200MHz digital storage oscilloscope. Sampling rate 2G/s (4G/s half-channel interleaved mode). 2Mpts memory depth, waveform update rate 1 million waveforms/s, sensitivity 1mV/div to 5V/div. Built-in 20MHz function/arbitrary waveform generator. Pass/fail masks can be automatically created based on an input reference waveform or on a PC then imported via USB, also store and remove waveforms via USB.

**Keysight MSO6104A 1GHz Digital Oscilloscope with Logic**  
KEY,MSO6104A (1320) AU

1GHz 4 + 16 channel mixed signal oscilloscope (MSO). 4Gsa/s. XGA Colour display updates 100,000 waveforms/s with 256 levels intensity. 4 analogue channels & 16 logic channels. Deep memory. 8 digit frequency counter function. Triggering includes video, HDTV, I2C, SPI, LIN, CAN, & USB. FFT analysis included. LAN, USB, GPIB, & XGA interfaces standard. NATA Certified.

**Keysight MSOX3104T 1GHz Digital Oscilloscope With Logic**  
KEY,MSOX3104T MY/SG

1GHz 4 + 16 channel mixed signal oscilloscope (MSO). 5 Gsa/s. XGA capacitive touch colour display updates 1,000,000 waveforms/s with 64 levels intensity. 4 analogue channels & 16 logic channels. Deep memory. 8 digit frequency counter function. FFT analysis included. LAN, USB, GPIB, & XGA interfaces standard.
**Tektronix MDO3104 1GHz Mixed Domain Oscilloscope**

TEK,MDO3104 MY/SG

1Ghz, 4 channel oscilloscope with 50MHz arbitrary function generator, 16 logic channels and a 3GHz spectrum analyzer. Sampling rate 5GS/s, 10M record length. FasAcq feature allows for intensity grading of rarely occurring events, such as runt pulses, glitches, timing issues, and more. USB support for transferring or saving results and settings and PC control using OpenChoice software.

---

**Fluke 200MHz 4 Channel ScopeMeter 190-204/S**

FLU,SCOPEMETER 204 (1361) AU/MY/SG

200MHz 2.5GS/s (1.25GS/s 4ch), 4 channel digital oscilloscope. Features Persistence mode, Connect-and-View triggering for intelligent, automatic triggering on fast slow and complex signals. 10,000 points per trace waveform capture (scope mode), USB host port for direct data storage, automatic capture and replay of 100 screens. Roll mode gives 30,000 points per channel for low frequency signal analysis, TrendPlot paperless recorder. Isolated inputs and safety rating CAT III 1000V/CAT IV 600V.

---

**Keysight U1620A 200MHz Handheld Digital Oscilloscope**

KEY,U1620A MY/SG

With up to 2GSa/s sampling rate and 2 Mpts memory depth, this 200MHz two channels handheld scope captures more waveforms from signals such as pulse width modulated circuit, in rush, transient, and motor start up sequences. Channel to channel isolation with CATIII 600 V safety ratings, 10,000-count resolution on DMM display and data logging capability to PC.
Tektronix TPS2014 100MHz Channel Powerscope
TEK,TPS2014 (1370) AU
Sampling rate 1GS/s. All 4 channels isolated for floating measurements. Sensitivity 2mV to 5V/div. Measurements for current and voltage distortion and their spectral content, harmonics, instantaneous power, power factor and switching loss. Automatic waveform measurements. FFT, power analysis, low & high voltage power probes (P5120).

Probes and Accessories

Fluke 80i-110s AC/DC Current Probe
FLU,I-PROBE (1460) AU
Current clamp for oscilloscopes which uses a Hall effect cell for the measurement of DC or AC current. Measures currents from 0.05 to 100A peak. A thumbwheel can be used to reset zero for adaption to the measurement environment. The clamp can be used with any measurement instrument which has a BNC input and an impedance of 1MΩ, <100pF. Maximum conductor diameter, 11.8mm.

LCR Meters

Hioki 3532-50 5MHz LCR Meter
HIO,LCR 3532-50 (1290) AU
Frequency range 42Hz to 5MHz. 5ms high speed measurements. Basic accuracy of ±0.08%. Memory for 30 sets of measurement conditions, including comparator values. Includes correlation correction function, interactive touch panel operation and enlarged display function. Applications include laboratory use for evaluation of operating characteristics, production line use or R&D. Measurement data captured by a personal computer can be displayed graphically by using standard spreadsheet software.
DC Power Supplies & Loads

**Keysight 6675A DC Power Supply**
KEY,6675A MY/SG

102VDC, 18A, 2000W, auto-parallel up to five units, output can be connected in series, programmable over-voltage and over-current protection, over-temperature protection, Discrete Fault Indicator/Remote Inhibit (DFI/RI), self-test occurs at power-on from an GPIB command, user definable power-on state and VXI plug & play drives.

**Keysight 66332A Dynamic Measurement DC Source**
KEY,66332A MY/SG

Programmable DC Source. 0 to 20V, 0 to 5A. Built-in advanced measurement system to accurately measure battery current drains. Battery emulation function.

**Keysight N6702A Low Profile Modular Power System Mainframe**
KEY,N6702A MY/SG

Modular power system mainframe comes with 2 x N6762A precision DC power modules(100 watts), 1U high. Each modules capable of 0 to 50V, 0 to 3A. GPIB, LAN, and USB, interfaces standard, and LXI compliance.
Kikusui PLZ1003W Electronic Load
KIK, PLZ1003W (8110) AU

1000 watt electronic load. Voltage range 1.5 to 120V. Current range 0 to 200A. Provides constant current, resistance, voltage, and power modes (CC/CV/CR/CP). A multiple number of setting conditions can be stored in memory. Sequence function allows setting conditions to be changed automatically. Applications include characteristic or lifetime tests of a variety of DC voltage sources such as switching power supplies, primary and secondary batteries or as burn in loads.

Sorensen DCS 150V, 20A DC Power Supply
SOR, DCS150-20E (8130) AU

0-150V, 20A, 3KW. Applications range from manufacturing test and burn-in of automotive components, avionics electronics, telecommunications and consumer products to beam steering, process control, laboratory R&D use. Remote control via LAN or RS232.

Sorensen DCS60-50 60V 50A DC Power Supply
SOR, DCS60-50 (8140) AU

60V 50A DC. Supply provides 3 kW of DC power for test and measurement applications. Ideal for research, product development, production test, Automated Test Equipment (ATE), electroplating, burn-in, and other bulk power applications. Gives the user the ability to operate multiple units in series or parallel and is subject to regulatory approvals CE, CSA. It also has protection features such as over voltage protection, current limit, and over temperature protection.
Sorensen XFR 600-4  600V 4A Power Supply
SOR,XFR600-4 (8120) AU

2.4kW programmable DC power supply 0~600V, 0~4A with remote analog programming.

TV Test Equipment

See also Network Analysers/Antenna and Cable Test on page 33

Rover HD Compact Combined TV Analyser
ROV,HD COMPACT (1748) AU

For the installation, maintenance and commissioning of terrestrial, satellite and cable TV systems DVB T/C/S/S2. The HD Rover can perform measurements that include power level, MER, BER, noise margin, SNR, EVM, network and streams ID’s as well as MPEG4 HD programs for DVB-T & C. The meter has a USB port for, software upgrades, channel plan modifications and data logging. Foxtel approved.

Rover HD Tab 7 EVO Lite CATV, SAT & TV Analyser
ROV,HD TAB 7 LITE (1446) AU

For the installation, maintenance and commissioning of terrestrial, satellite and cable TV systems DVB T/C/S/S2. The HD TAB 7 LITE can perform measurements that include power level, MER, BER, noise margin, SNR, Error Constellation chart, network and streams IDs as well as MPEG4 HD programs for DVB-T & C. Also includes ROVER AUTODISCOVERY system which automatically detects and selects analogue and digital COFDM/QAM TV signals in both measurement and spectrum mode. Foxtel approved. modifications and data logging.
Electronic Calibrators

See also Industrial Process Calibrators on page 97

Fluke 5500A Multi Product Calibrator with NATA Calibration
FLU,5500A-NATA (1660) AU
FLU,5500A MY/SG
Calibrator sources direct voltage & current, alternating voltage and current, with multiple waveforms and harmonics, 2 simultaneous voltage outputs or voltage & current. Simulates power with phase control, resistance, capacitance, thermocouples and RTDs. Selectable ranges include the following outputs Vdc from 0 to 1.02kV, Vac from 1mV to 1.02kV with output from 10Hz to 500kHz. AC current from 0.01µA to 11A with output from 10Hz to 10kHz. DC current from 0 to 11A. Resistance values from short circuit to 330MΩ. Capacitance values from 330pF to 1,100µF. Temperature t/c B, C, E, J, K, L, N, R, S, T, U, RTD Pt385 100Ω, Pt3926 100Ω, Pt3916 100Ω, Pt385 200Ω, Pt385 500Ω, Pt385 1kΩ, Ni120 120Ω & Cu427 10Ω.

Genrad 1433B 1.1MΩ 6 Decade Resistance
GR,1433B-NATA (1670) AU
Six decades by 1Ω to 1.1MΩ. Accuracy 0.01%. NATA calibrated.

Genrad 1433F 111kΩ 7 Decade Resistance Box
GR,1433F-NATA (1680) AU/MY/SG
Seven decades by 0.01Ω to 111kΩ. Accuracy 0.01% +0.002Ω. Useful for platinum resistance thermometer calibration. NATA calibrated.
Gauss/Tesla Meters

FW Bell Gauss/Tesla Meter
BEL.4190 (1969) AU

Handheld digital ELF gauss meter. Maintains accuracy regardless of orientation. Applications include detecting magnetic field emissions from overhead AC power lines, video display terminals, office equipment and household appliances. Analogue o/p, data logging, auto range 0.1 to 1999 mG, minimum resolution 0.1mG/.01 uT.

FW Bell 5180 Gauss/Tesla Meter
BEL.5180 (1960) AU/MY/SG

Magnetic measuring equipment, portable gaussmeter. Built-in software eliminates the need for complex calibration procedures. Key features include Auto Zero, Min/Max/Peak Hold, Auto Range and Relative Mode. Allows the user to select Gauss, Tesla or Ampere/Meter readings. With Hall effect transverse probe STD18-0404. Frequency bandwidth DC - 30kHz, range from 0 up to 30 kG with a basic accuracy of 1.1% (FS). Analogue output (+/-3V FS) and USB interface. Battery operated.

E & H Field Strength Meters

See also Radiation Monitoring & Protection on page 167

Holaday HI-3604 E & H Survey Meter ELF
HOL,HI-3604 (1945) AU

Low frequency field meter. Designed to evaluate electric and magnetic fields associated with 50Hz power lines. Frequency range 30 to 2,000Hz. Measures magnetic fields from 0.1 milligauss to 20 gauss. Measures electric fields from 1 volt/meter to 200 kilovolts/meter. LCD display. 127 reading data memory.
**Holaday HI-3627 Magnetic Field Meter**

HOL,HI-3627 (1980) AU

Three orthogonal field sensors. Dynamic range 0.2mG~20G. True RMS detection. Frequency range 5Hz to 2kHz with an in-built 30Hz high pass filter. Meets requirements of the Swedish protocol and the IEEE P-1140 protocol.

**Narda NBM-520 ‘E’ Field Strength Meter and Probe EF1891**

NAR,NBM-520 (1925) AU

Field strength meter with EF1891 ‘E’ field probe. Detects electric fields from 3 MHz to 18 GHz, covering fields generated by broadcasting, telecoms, radar and any other transmission sources within this range. Dynamic range from 0.6V/m to 1,000V/m. Applications include measuring field strengths to comply with general safety regulations and actual radiated power. Includes fibre optic cable with optical to electrical converts for remote monitoring.

**Narda NBM-550 ‘E’ Field Strength Meter and Probe EF1891**

NAR,NBM-550 (1930) AU

Field strength meter with EF1891 ‘E’ field probe. Detects electric fields from 3 MHz to 18GHz, covering fields generated by broadcasting, telecoms, radar and any other transmission sources within this range. Dynamic range from 0.6V/m to 1,000V/m. Includes GPS, data logging, voice recording annotation and fibre optic cable with optical to electrical converts for remote monitoring.
EMC & Power Disturbance Simulators

**Schaffner 438 30kV Static Discharge Generator**
SFN.438 (8375) AU
Generates an electrostatic charge in a range from 2 to 30kV. This instrument is in a ‘gun’ form. Has a removable discharge network which can be interchanged with other (optional) impedance networks. Performs test to IEC61000-4-2 (AKA, IEC 1000-4-2) standards.

**TRAINING WITH TECHRENTALS**

TechRentals works in conjunction with industry leaders like Fluke, Megger, Omicron, Keysight, GE and Anritsu to provide training opportunities across a wide range of sectors including:

- Electrical Power
- General Industrial Testing
- Physical Measurement
- Environmental and OH&S
- Data and Telecommunications
- Construction
- Radio Frequency
- Electronics

These partnerships allow TechRentals to offer training seminars, instrument specific tutorials, and other content in various formats to enhance the technical experience and skills of our customers. These valuable seminars provide insights into the latest equipment and protocols, with hands on demonstrations on how they benefit industries in the field. Please email training@techrentals.com.au to be kept informed of upcoming courses.

Check out our YouTube site for over 100 training, practical demonstration and technical information videos at [http://www.youtube.com/techrentals](http://www.youtube.com/techrentals)

The World Health Organisation (WHO) classifies diesel engine exhaust fumes as a carcinogen – a deadly substance that causes cancer.

The Pinssar Air Monitoring DPM Technology can ensure reliable continuous monitoring resulting in safer, cleaner air environs.

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RF Signal & Sweep Generators

Frequency Counters

Spectrum Analysers - High Frequency

Network Analysers/Antenna & Cable Test

Communication Test Sets

Power Meters - RF

Antennas

RF Accessories

See also Function Generators on page 18

**Keysight N5181B MXG X-Series 6GHz RF Analog Signal Generator**

KEY,N5181B (2328) AU

MXG-X RF Analog Signal Generator, 9k to 6 GHz, -144 to +19dBm. Features fast switching, low phase noise, pulse, and narrow pulse, AM, FM, phase modulation and sweep. Applications include R&D, receiver and component testing, 1000BaseT LAN, LXI, USB 2.0, and GPIB interfaces.
Frequency Counters

See also Electronics on page 16

**Keysight 53181A 3GHz Frequency Counter**

KEY,53181A AU/MY/SG

3GHz frequency. Option 010 high stability timebase included. HPIB interface.

Spectrum Analysers - High Frequency

**Aaronia Spectran HF-60105 9.4GHz Handheld Spectrum Analyser**

AAR,HF-60105 MY/SG

Portable. 9KHz to 9.4GHz comes attached with directional antenna. DANL -155dBm (1Hz) with preamp DANL -170dBm (1Hz). RBW 200Hz to 50MHz. Demodulator for AM/FM/PM/GSM. 1MB memory with USB interface for trace download. Maximum power +20dBm. Suitable for cellular walk or drive coverage testing.

**Keysight N9344C 20GHz Spectrum Analyser with Tracking Generator**

KEY,N9344C-TG (2537) AU/MY/SG

9kHz to 20GHz with 5MHz to 7GHz tracking generator. -144dBm displayed average noise level (DANL), <0.95s sweep time for 20GHz full span. Average continuous power, +30dBm for 3 minutes maximum. Flexible remote control via USB/LAN. User memory 64MB, able to store approximately 14,000 traces.
**Keysight N9344C 20GHz Spectrum Analyser with GPS**

KEY,N9344C (2538) AU

9kHz to 20GHz with GPS. -144dBm displayed average noise level (DANL), <0.95s sweep time for 20GHz full span. Average continuous power, +30dBm for 3 minutes maximum. Flexible remote control via USB/LAN. User memory 64MB, able to store approximately 14,000 traces.

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**Keysight N9030A PXA Signal Analyser**

KEY,N9030A MY/SG

Real-time spectrum analyser, 3Hz to 26.5G with built-in Pre-Amp (+20dB) and electronic attenuator(24dB) both up to 3.6GHz. 8 inch XGA display. Run on Windows 7 and has a USB storage port. Included software: N9051A-Pulse Measurement, N9036A-Analog Demodulation Measurement and N9064A-VXA Signal Analysis.

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**Anritsu MS2712E Handheld 4GHz Spectrum Analyser with Tracking Generator and GPS**

ANR,MS2712E (2560) AU

Ideal for field testing of spectrum monitoring, broadcast proofing, RF & microwave measurements, and Wi-Fi & wireless network measurements. You can store up to 2,000 traces and setups on-board or on a USB flash drive. Set-up time is minimised and information is effectively organised with the Trace Save-on-Event and one-button envelope creation features. Tracking generator -50dBm to 0dBm in 0.1dB steps. Dynamic range 102dB. DANL -162dBm. GPS tagging of saved traces.
3Z RF Vision Antenna Alignment Tool
3ZT,RFV-2000 (2145) AU
This tool replaces a compass, GPS, and range finder. Effective, reliable and ensures that installers perform jobs as indicated in RF design specifications. Use for accurate antenna alignment to prevent coverage gaps, network performance degradation, loss of voice quality and traffic. Features a built in HD camera which provides augmented reality line of sight image, reporting capabilities and an easy to use GUI.

Keysight E5071C-260 ENA Series Network Analyser
KEY,E5071C (2744) AU/MY/SG
2 port, 9kHz to 6.5GHz network analyser is a fast, accurate, and versatile solution to RF component testing. Incorporates an integral S-parameter test set and 85032F calibration kit. The E5071C-260 is suitable for RF evaluation tests concerning component manufacturing and is deal for R&D engineers, wireless designers, and aerospace/defence contractors. Features: Wide dynamic range: >123 dB dynamic range at test port (typical). Low trace noise: 0.004 dB rms at 70kHz IFBW. Fast measurement speed, 41ms. High temperature stability, 0.005dB/°C.
Anritsu MW82119B 2,100MHz PIM Master with Site Master Option
ANR,MW82119B-2100 (2198) AU

Passive Intermodulation (PIM) analyser with measurement frequency 2,100 MHz and Site Master (cable and antenna analysis) options. Portable battery-operated, high power for the major wireless standards. Verify PIM performance at difficult to access sites such as Remote Radio Head (RRH) installations or indoor Distributed Antenna Systems (DAS). PIM measurements include PIM vs time, sweep PIM, distance to PIM (DTF), 1-port phase and smith chart.

Anritsu MW82119B 850MHz PIM Master with Site Master Option
ANR,MW82119B-850 (2199) AU

Passive Intermodulation (PIM) analyser with frequency, Cellular 850MHz band and Site Master (cable and antenna analysis) options. Portable battery-operated, high power for the major wireless standards. Verify PIM performance at difficult to access sites such as Remote Radio Head (RRH) installations or indoor Distributed Antenna Systems (DAS). PIM measurements include PIM vs time, sweep PIM, distance to PIM (DTF), 1-port phase and smith chart.

Anritsu S331E 4GHz Sitemaster Cable & Antenna Tester
ANR,S331E (2180) AU

Cable and antenna analyser, frequency range 2Mhz to 4GHz. Measures return loss, VSWR, cable loss, and Distance To Fault. Suitable for legacy networks in addition to the new 3G and 4G networks being installed. Applications include cable & antenna installation and maintenance for wireless service providers.
Anritsu S331L 4GHz Sitemaster Cable & Antenna Analyser
ANR,S331L MY/SG
Cable and antenna analyser, frequency range 2Mhz to 4GHz. Built in power meter 50MHz to 4GHz, -33dBm to +20dBm. Measures return loss, VSWR, cable loss, and Distance To Fault. Suitable for legacy networks in addition to the new 3G and 4G networks being installed. Applications include cable & antenna installation and maintenance for wireless service providers, contractors, military, aerospace, defence, and public safety applications.

Anritsu S332E Sitemaster including Spectrum Analyser
ANR,S332E (2175) AU
2MHz to 4GHz and spectrum analyser 100KHz to 4GHz. DANL -152dBm. Measures return loss, VSWR, cable loss, and Distance To Fault. N(f) Type port. Analysis software containing DTF and Smith chart tools included. Complete with calibration standard, AC/DC adaptor, and 12VDC car adaptor. Cable & antenna installation and maintenance for wireless service providers, contractors, military, aerospace and defence, and public safety applications.

Anritsu S332E Sitemaster Including Spectrum Analyser and Opt 431,31,509,27
ANR,S332E-CMAP-MOD (2165) AU
2MHz to 4GHz and spectrum analyser 100KHz to 4GHz. DANL -152dBm. Options included, indoor outdoor Coverage Mapping, GPS Receiver, Channel scanner and AM/FM/PM Analyser. Measures return loss, VSWR, cable loss, and Distance To Fault. Analysis software containing DTF and Smith chart tools included. Applications include cable, antenna, installation and maintenance, spectrum analysis, channel scanning, coverage mapping, AM/FM/PM demod for wireless service providers, contractors, military, aerospace and defence, and public safety applications.
**Anritsu S820D Microwave Sitemaster 25MHz to 20GHz**  
ANR,S820D MY/SG

Microwave antenna and cable test set. Portable single port analyser, providing return loss (SWR) insertion loss and distance to fault measurements in the frequency range of 25MHz~20GHz. Unit comes standard with RS232 interface, Smith chart and software management tools, AC/DC and automotive adaptor. A comprehensive range of precision waveguide components and adaptors are available.

**Anritsu Microwave Site Master Handheld**  
ANR,S820E MY/SG

Microwave antenna and cable analyser, frequency range 20 MHz to 20 Ghz with 110 dB dynamic range. Performs coaxial and waveguide system measurements. Includes 1-port Return Loss, VSWR, Cable Loss, Distance-To-Fault, Smith Chart, Transmission, and phase measurements. Unit comes standard with USB interface, Smith Chart, and software management tools. Included UM120 (10 to 15 GHz) precision waveguide component and adaptors, other waveguide ranges rented separately.

**Anritsu Sitemaster Waveguide Components**  
ANR,WAVEGUIDE-ADAP (2190) AU/MY/SG

Calibration components and wave guide to co-ax adaptors for Anritsu S820x Sitemaster. Set includes 1/8 and 3/8 shorts, termination, and waveguide to co-ax adaptor.
Can’t afford to lose a moment of connectivity? Rely on TR Hirecom to keep your two-way radio fleet operating effectively with Motorola certified repairs, maintenance, and installations.

Discover complete service support for your two-way radios. Whether you need simple radio installations or a comprehensive Managed Service Agreement, our experienced staff will ensure your equipment and systems are operating efficiently.

**Complete Support for Your Communication System Including:**

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- On-the-spot repairs wherever possible
- Antenna performance checks
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Quality assured since 1995, our highly trained staff work to strict procedures to meet ISO 9001 accreditation. Our National Service Centre is in close proximity to Motorola Headquarters, and combined with our Motorola Platinum Dealership, access to spare parts and technical support is readily available.

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Communication Test Sets

General Dynamics R8000B Communications Analyser
GD,R8000B (2380) AU

A compact communication system analyser which is designed to monitor and service radio communications equipment. It also generates and receives signals and measures modulation and frequency. The R8000B performs a variety of tests on AM, FM, PM, and optional digital standards P25, DMR, NXDN, and TETRA radio transceivers. A full-featured instrument which acts as a spectrum analyser, signal generator, sensitive measurement receiver, oscilloscope, and much more. With high spectral purity, it is a lightweight and truly portable solution to effective communications system analysis.

Features: Frequency range 250 kHz to 1 GHz. 50W 5 min, 150W max. Less than 6.4 kg and has an 8.4” colour LCD screen. DANL is -140dBm (50Ω input termination).

Aeroflex 8800SX Digital Radio Test Set
AER,8800SX (2379) AU

10MHz external reference and software capabilities to further speed testing of Land Mobile Radio systems. Hybrid portable design, the industry’s largest colour touch-screen display, ruggedness, internal battery, power accuracy, advanced automated test and alignment, fast VSWR/return loss and cable fault measurements. Features: Frequency range 100kHz to 1000MHz, automated test & alignment, fast channel analyser with six colour markers, user-defined frequency lists, digital audio quality performance tests, colour indicates pass/fail results on each meter, distribution, constellation and eye diagram plots, TDMA Burst Profile Plot (for DMR only), includes a burst “Mask” for visual pass/fail, tracking generator, VSWR, return loss, DTF, and tuning duplexers. Oscilloscope.
**Power Meters - RF**

**Keysight E4416A EPM P-Series Power Meter**
KEY,E4416A MY/SG

Power meter, for peak, average, peak-to-average ratio and time-gated measurements. 100µW to 25W (-70dBm to 44dBm), 9 kHz to 110GHz (power sensor dependent), 4 digit display - watts, dBm, dB (rel). Analyser Software for complete pulse and statistical analysis. 8 pre-defined wireless configurations (GSM, EDGE, NADC, iDEN, Bluetooth™, IS-95 CDMA, W-CDMA and cdma2000). Comes with E9322A Peak & Average Power Sensor (50MHz to 6GHz, 1.5MHz bandwidth, -45dBm to +20dBm at Normal Mode).

**Antennas**

**Anritsu Dipole Antenna Kit**
ANR,ANTENNA (1834) AU

MP534A dipole antenna 25 to 520MHz and MP651A 470 to 1700MHz.

**Directional Yagi Antenna**
ANT,DIRECTIONAL YAGI (1829) AU

Various directional Yagi antennas. Frequency ranges from 824 M (UHF) to 2.17 GHz (UHF).
Omnidirectional Antenna
ANT,OMNIDIRECTIONAL (1826) AU
Various omnidirectional antenna types such as telescopic whip, folded dipole and monopole. Frequency ranges from 70MHz to 5.4GHz

RF Accessories

Keysight 89601B Vector Signal Analysis Software
KEY,89601B (2880) AU/MY/SG
A comprehensive set of software tools for demodulation and vector signal analysis. Measure and analyse signals in the time, frequency and modulation domains. Analyse data from over 40 supported hardware instruments, or use in simulation tools to verify design. Included license: 200-Basic Vector Signal Analysis, 300-Hardware Connectivity, AYA-Vector Modulation Analysis and TEDS-Modulation Analysis. For you with N9030A PXA Signal Analyser.

RF Connectors - Various Connector Types
TR,RF-CONN (2816) AU
RF Connectors - Various Connector Types. BNC, TNC, VHF, FME, Mini UHF, N, MMCX, SSMB, MCX, SMB, SMC, SMA series and 7/16 DIN.

Follow TechRentals on LinkedIn and stay up-to-date on Test and Measurement news, application notes, and case studies.
As networks evolve, so do the requirements of the cabling infrastructure to support them. Equip your front-line technicians with reliable cable testing and certification equipment, so you can always meet demand during peak periods.

**The DSX-5000 will identify potential errors from improperly installed cabling which can result in downtime, bottlenecks, and lost productivity. Its high-speed cable certification and superior accuracy enables technicians to do more in only a fraction of the time!**

The intuitive touchscreen interface allows for easy operation by less-experienced installers and provides faster system acceptance.

**Key features include:**

- ProjX management system for tracking complex jobs
- Taptive user interface – simplified testing protocols across multiple media types
- LinkWare management software for test analysis and professional test reports
- Dedicated diagnostics

The DSX-5000 copper test solution enables testing and certification of twisted pair cabling for up to 10 Gigabit Ethernet deployments. With test times under 10 s, this cable analyser can accurately certify shielded and unshielded structured cabling systems of all grades up to CAT 7A at Level V accuracy.

**TechRentals has an extensive team of highly trained, experienced staff members who would be more than happy to assist with any questions you may have. To learn more, contact us on 1800 632 652 today!**
LAN Cable Testers
LAN/WAN Analysers
PDH/SDH Analysers
DSL/POTS Test Set
Light Sources & Power Meters
Fusion Splicers
OTDR & Fibre Inspection
Fibre Optic Launch Cables & Patch Leads

LAN Cable Testers

Fluke DSX-5000 Cable Analyser 1GHz Class FA
FLU,DSX-5000 (3278) AU/MY/SG

1GHz cable analyser copper test solution enables testing and certification of twisted pair cabling for up to 10 GigE deployments and will certify shielded and unshielded structured cabling systems from Cat 3, to 7A and Class C, to FA at Level V accuracy. 9 second Cat 6 autotest. Built in Alien Crosstalk testing capability. PLA004 (Cat 6A / Class EA), CHA004 (Cat 6A/Class EA) adapters and LinkWare PC reporting software included.
Fluke CertiFiber Pro MM Optical Loss Test Set
FLU,DSX-MM (3269) MY/SG


Kit of Encircled Flux MM Test Reference Leads (B)
FLU,DSX-MM EF LEADS B (3385) AU

Kit consists of Encircled Flux (EF) compliant test reference leads suitable for use with the Fluke CertiFiber Pro Optical Loss Test Set on the following network types: SC, ST 62.5um (OM1 & 2) & SC 50um (OM3 & 4)

Fluke CertiFiber Pro MM-SM Optical Loss Test Set B
FLU,DSX-MMSM B (3263) AU

Fluke CertiFiber Pro SM Optical Loss Test Set

**FLU,DSX-SM (3264) AU/MY/SG**


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LAN/WAN Analysers

Netscout AirCheck G2 Wireless Network Tester

**NET,AIRCHECK G2 (3219) AU**

Handheld wireless tester that allows users to quickly verify and troubleshoot 802.11 a/b/g/n/ac networks with interference detection, channel scanning, connectivity tests, and iPerf performance testing. Identify issues responsible for spotty connections, dead zones, slow speeds, unauthorized access as well as locating rogue access points. Tests for POE and is fully controllable over IP. Intuitive user interface and management platform provides actionable intelligence to remove the complexity of wireless troubleshooting.

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VeEX VePAL CX350s CATV Analyser

**VEE,CX350S (3216) AU**

Supports legacy analog CATV signals, HD DVB-C carriers, and DOCSIS 3.0/3.1 cable modem emulation/ measurement. Features include a dual band Signal Level Meter (SLM), forward/return path ingress measurement, deep interleaving support, and QAM constellation diagram and diagnostics.
Veex MX100E+ 1G Ethernet Test Set
VEEX,MX100E+ MY/SG

Full-featured Next Generation Mobile Backhaul and Carrier Ethernet Tester. Supports 10/100/1000Base-T on RJ45 port, 100Base X/ 1000Base-FX on SFP(1310nm) port interfaces. Ethernet throughput testing at Layer 1, Layer 2, Layer 3 and Layer 4 without VLAN. Performs RFC2544, Multiple Streams, BER Test and VSAM (ITU-T Y.1564). MultiStream Throughput Test (Up to 8 independent bandwidth), Advance IP (PING, Trace Route, Web Test/FTP Test. ReVeal PC Software.

Viavi OneExpert CATV 620V HFC Tester
VIA,ONX 620 (3215) AU

An approved signal analysis meter for verifying and troubleshooting network performance on the NBN and Telstra HFC network. Specific to the Australian market and has been released initially as a TAP down (RF only) enabled tester (no DOCSIS). Multitouch interface and performs OneCheck automated tests with a simple dashboard displaying clear pass/fail results. Features automatically built Channel Plans, “Session Expert” which identifies issues and assists in their resolution, and downstream scan including MER/BER in 60s.
**Viavi SmartClass Ethernet Tester 10M-1G**
VIA,SMARTCLASS ETH-1 (3221) AU

For the installation, turn up and maintenance of Ethernet IP services up to 1 Gbit electrical or optical. This kit includes a Loopback device for performing RFC2544 acceptance testing, throughput, latency, frame loss, back-to-back frame and jitter. Applications include performance assessment of Carrier Ethernet services, activation and maintenance of metro Ethernet networks, deployment of active Ethernet (point-to-point) access services, switched networks, traffic generation and QoS verification.

**PHD/SHD Analysers**

**VeEx VePal TX130M+ DSn/PDH/Ethernet Analyser**
VEEX,TX-130M+ MY/SG

Full-featured Mobile Backhaul test solution supporting legacy PDH/DSn, Carrier Ethernet technologies, and Synchronized Packet networks. The unit is capable of emulating both Master and Slave clocks according to ITU-T G.8261 SyncE and IEEE 1588v2 standards. At the same time able to provide E1 and 1G Ethernet Testing according to RFC2544 standards. It has options of Pulse Mask, E1 Wander and MTIE&TDEV.

Learning to operate unfamiliar equipment costs you time and can lead to errors. Save time and reduce your real costs. Discover our Configuration and Download solutions on page 68.
**DSL/POTS Test Set**

**JDSU/Viavi HST-3000 ADSL2+/VDSL2**

JDSU,HST-3000DSL (3470) AU

With Broadcom Bonded module (SIM) for complete copper testing from POTS to full spectrum Very High Speed Digital Subscriber Line. Supports ADSL1, ADSL2, ADSL2+, VDSL2 and vectored VDSL2. Features include web browser, advanced IP suite, balance and capacitive open measurements, load coil detection, DVM, wideband impairment measurements, spectral analysis, POTS dialer with caller ID, fault locator and Pulse Echo Tester (PET).

**Viavi OneExpert DSL**

VIA,ONX DSL (3469) AU/MY/SG

Designed for testing and qualifying POTS to full spectrum Very High Speed Digital Subscriber Line. Supports ADSL1, ADSL2, ADSL2+, VDSL2, and vectored VDSL2. Features include web browser, balance and capacitive open measurements, load coil detection, DVM, wideband impairment measurements, spectral analysis, POTS dialer with caller ID, fault locator, and Pulse Echo Tester (PET).

**Light Sources & Power Meters**

**Fluke FTK1000 Multimode Fibre Optic Light Source & Meter**

FLU,FTK1000 (3365) AU/MY/SG

Light source is multimode 850nm and 1300nm. Power meter has 850/1300nm multimode and 1310/1550nm single mode. Manage results and print reports via Power meter memory, PC and supplied software.
JDSU/Viavi SmartClass OLP-87 PRO Fiber PON Power Meter & VIP
JDSU, OLP-87 PRO (3350) AU

TFTTx/PON power meter with P5000i inspection probe. Used for qualification, activation, inspection and troubleshooting of B-PON, E-PON, and G-PON networks. The FiberChek software and P5000i probe allow for pass/ fail fibre inspection analysis and reporting. Ideal for end-of-line testing, activation, and maintenance of all FTTx/PON signals. The through-mode capability can simultaneously measure voice, data, and video signals on fiber at 1490 and 1550nm downstream and 1310nm burst mode upstream. Supplied with various tip adapters please inquire.

Kingfisher KI-28010 Single Mode APC Light Source and KI-7600 Power Meter
KIN, KI28010-2600 (3361) AU


Fusion Splicers

Fitel S123M12 Ribbon Fusion Splicer
FIT, S123M12 (3312) AU

Hand-held 12-core ribbon fibre fusion splicer. Protection sleeve shrink time is 35 seconds, while splicing requires only 15 seconds for 12 core ribbon fibre allowing up to 160 splicing cycles (splicing/heating) using the 2 battery packs installed in the main body. Includes cleaver and thermal jacket stripper.
**Fitel S178 Fusion Splicer and S325 Cleaver**  
FIT,S178_S325 (3314) AU  
This handheld, core-alignment fusion splicer provides typical losses of 0.02dB and 0.01dB on single and multimode fibres. 7 s splice time, built in heater, and tension test. Operated from battery or AC source. Features a built-in sharps collection bin that automatically stores fibre off-cuts.

**Fitel S179 Core Alignment Fusion Splicer and Cleaver**  
FIT,S179 (3313) AU  
Hand-held, core-alignment fusion splicer for single and multimode fibre, includes S326 cleaver. 6 s splice time, 9 s heating time, and losses of 0.02 dB and 0.01 dB on single and multimode fibre respectively. Features include 4.3-inch LCD touch screen, 3+1 LED lights illuminate entire splicing chamber for improved visibility in low-light and Intentional high attenuation splice function, splice loss of 0.1 dB to 15 dB(0.1dB step) can be made for an inline fixed attenuator.

**Fujikura FSM70R Ribbon Fusion Splicer, Cleaver, & Stripper**  
FUJ,FSM70R (3309) AU  
Typical splice time 15s and sleeve shrink time 40s. Detachable work table and arc-free calibration system. Includes CT-30 cleaver and thermal jacket stripper.

**Fujikura FSM70S+ Core Alignment Fusion Splicer and Cleaver**  
FUJ,FSM70S+ (3317) AU  
Single fibre core alignment fusion splicer and CT50 cleaver. Typical splice losses of 0.02dB and 0.01dB on single and multimode fibre respectively. Automated tension test, wind and heater cover, 6 second Ultra Fast splice time, 14 second heat time and 20,000 splicer result storage.
ODTR & Fibre Inspection

Anritsu MT9083A Access Master SM and MM OTDR
ANR,MT9083A SM-MM (3337) AU/MY/SG

850/1300 nm (29/28dB) and 1310/1550 (39/37.5dB). Singlemode port is SC/APC. Intelligent analysis software identifies problem splices, connectors and even macrobends. Full 1×64 PON support. Store up to 1,000 traces internally (much more using USB), drop and drag results to PC.

Fluke Networks FI-1000 FiberInspector Kit
FLU,FI-1000-KIT (3338) AU

Enables you to quickly inspect and certify fibre end-faces inside ports or patch cords. It’s 2-second automated PASS/FAIL certification eliminates human subjectivity. *Requires Versiv mainframe to operate such as the DSX-5000 (with or without fibre modules) or Optifiber Pro.

Fluke FI-7000 FibreInspector Pro Video Probe
FLU,FI-7000 MY/SG

A fibre optic inspection scope that allows you to inspect and certify fibre optic connector end-faces in 2s. The inspection scope provides automated PASS/FAIL certification in the VERSI main unit. Supplied with LC and SC probe tips.
**Fluke Optifiber Pro Quad OTDR**  
FLU,OPTIFIBER-PRO Q (3344) AU  
FLU,OPTIFIBER-PRO QS MY/SG  
Multi and singlemode OTDR, wavelengths 850, 1300, 1310 and 1550nm, dynamic range 28, 30, 32 and 30dB respectively. Designed for testing, troubleshooting and certifying multi and singlemode fibre optic networks. Smartphone user interface, shortest event and attenuation deadzones, LinkWare download and reporting software included.

**JDSU/Viavi MTS-2000 OTDR FibreComplete 2**  
JDSU,MTS-2000-FCOM2 (3335) AU  
Multi-Test Platform with FiberComplete™ singlemode module is ideal for field technicians looking to perform traditional fibre qualification tests such as bidirectional Insertion Loss (IL), acceptance testing, and general maintenance on metro and PON-based FTTx networks. Comes with a power meter, a fibre inspection probe, and an Optical Time Domain Reflectometer (OTDR) module. Will measure Optical Return Loss (ORL), simplify troubleshooting in FaultFinder mode, and perform on-board, automated NBN test sequences. Features: 1310, 1550, and 1625nm wavelengths at 43, 41, and 41 dB dynamic range (respectively). Performs IL, ORL, and OTDR from one optical port. Real-time continuity check and automatic product pairing. Fewer connections/disconnections significantly reduces testing time.

JDSU/Viavi MTS-2000 OTDR FibreComplete
JDSU,MTS-2000-FCOMP (3335) AU

Multi-Test Platform with FiberComplete™ singlemode module is ideal for field technicians looking to perform traditional fibre qualification tests such as bidirectional Insertion Loss (IL), acceptance testing, and general maintenance on metro and PON-based FTTx networks. Comes with a power meter, a fibre inspection probe, and an Optical Time Domain Reflectometer (OTDR) module. Will measure Optical Return Loss (ORL), simplify troubleshooting in FaultFinder mode, and perform on-board, automated NBN test sequences. Features: 1310, 1550, and 1625 nm wavelengths at 37, 35, and 35 dB dynamic range (respectively). Performs IL, ORL, and OTDR from one optical port. Real-time continuity check and automatic product pairing. Fewer connections/disconnections significantly reduces testing time.

Fibre Optic Launch Cables & Patch Leads

Launch Fibre Multimode 62.5µm 300m
FIB,LAUNCH MM 62.5UM (3382) AU

SC to SC multimode 62.5µm launch fibre.

Launch Fibre Single Mode 9µm
FIB,LAUNCH SM 9UM (3378) AU

Single mode 9µm SC launch fibre.
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TR Calibration are specialists in the calibration, repair, and sale of test and measurement instrumentation within Australia. Our Prestons, Rocklea, and mobile laboratories are NATA accredited and ISO 9001 certified, including our Mobile Laboratory that provides on-site calibration solutions for extra convenience. With years of experience calibrating equipment from over 2,500 manufacturers, we will ensure your equipment is operating to the standards you need, when you need it.

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✓ Megger Electrical

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✓ GE Measurement & Sensing (Pressure) products, including Air Data Test Sets

Sales:
✓ Approved distributor for GE Druck
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Micro-Ohm Meters & Earth Testers
Power Analysers, Loggers & Recorders
Current Clamps Probes & Accessories
Insulation Testers & Meggers to 20kV
Oil, Hipot & VLF Testers above 20kV
Transformer Testers
Circuit Breaker Testers
Current Injectors
Protection Relay Testing Systems
Power Transformers & Variacs
Battery Management Systems

Cable & Pipe Tracers and Fault Locators

See also Underground Services Location on page 144

C.Scope DXL4 and SGV4 Cable and Pipe Locator
CSC,DXL4-SGV4 (3719) AU

Cable and pipe avoidance and location tool with depth measurement. Simultaneous dual 33+131kHz frequency will assist in the detection of smaller buried pipes and cables such as telecoms, cast iron and street lighting spurs. 4 available power levels up to 1 watt and depth detection approximately 3 meters (depending on soil type and operating mode). Four detection modes; Power, Radio, Generator and Allscan. Features a Dynamic Swing Sensor to aid in cable and pipe location.
**Fluke Cable Locator**
FLU,2042 (3602)AU

Ideal for tracing cables in walls and underground, locating fuses/breakers on final circuits as well, and many other applications. Kit comprises a transmitter and receiver in a carry case. Voltage measurement range 12 to 400V. Frequency range 0 to 60Hz. Transmitter output signal 125kHz. Transmitter voltage 0 to 400V AC/DC. Depth location 0 to 2.5m. Receiver voltage detection range 0 to 0.4m. The receiver has a torch for working in dimly lit areas.

**Megger Cable Indentification Kit**
MEG,CI-KIT (3600)AU

Provides reliable cable identification for both energised and non-energised cables. It can generate pulses on cables 440V 3 phase cables.

**Megger EZ-Thump 12kV Thumper & TDR Power Cable Fault Locator**
MEG,EZ-THUMP12 (3610)AU

12kV Hipot tester, TDR and Thumper. Designed as a portable cable fault finder. Operates off AC supply or batteries. Kit includes the Megger pinpointer to locate faults when used in thump mode. Generates a 500J 0~12kV @12mA pulse for thumping.

**Megger TDR2000/2RM Dual Channel TDR Cable Fault Locator**
MEG,TDR2000/2RM (3605)AU

Time Domain Reflectometer cable fault locator. User selectable ranges from 0 to 50m up to 20km, minimum resolution 0.1m. Dual cursor measurement. Internal memory for 15 traces. Megger “Tracemaster” software supplied. RS232 interface for PC communications. High resolution LCD display. Battery powered. Dust and shower proof to IP54.
**Electrical Power**

**Megger TDR2000-3P Advanced Dual Channel TDR**
MEG,TDR2000-3P (3606) AU/MY/SG

Time Domain Reflectometer cable fault locator. User selectable ranges from 0 to 50m up to 20km, minimum resolution 0.1m. Dual cursor measurement. Internal memory for 15 traces. Megger “Tracemaster” software supplied. High resolution LCD display. Battery powered. Dust and shower proof to IP54. This system can operate on live cables.

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**Electrical Testers**

→ See also Current Clamps Probes & Accessories on page 65

**Martindale Phase Sequence & Continuity Indicator**
100 to 600V, 50/60Hz
MAR,PSCI424-585 (3502) AU

Check the presence and sequence of the phases on 3ph circuits. Provides a visual indication of loss of phase or incorrect sequence. Supplied in 2 forms. Probe style; the connection to the tester is via 3 insulated cables to 3 fused test probes, 1 with an insulated crocodile clip. Plug style; a 16A, 4 pin (3ph & earth, BS4343) plug is fitted to the tester. Use as a socket tester prior to plugging in 3ph equipment.

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Seaward PV200 Solar PV Tester with Irradiance Meter
SEA,PV200+KIT MY/SG

Comes with PV Tester, irradiance meter and solar cert software. It is all-in-one solar commission tester, with I-V curve tracing, in accordance with IEC 62446 and IEC61829. It can perform earth continuity, insulation resistance (auto short circuit test and point to point), AC/DC voltage measurement, open circuit voltage up to 1000VDC. Short circuit current up to 15ADC. Comes with current clamp up to 40A and Solar Survey 200R to record real-time irradiance, ambient temperature and PV module temperature. Can be paired with Android unit device for more options.

PAT Testers & RCD Testers

Megger RCDT330 Residual Current Device Tester
MEG,RCDT330 (2618) AU

Tests standard, DC, selection and programmable RCDs. Ramp testing. Auto (remote) testing. Auto sequence test feature. 3ph safe. Enables testing on 110V centre tapped supplies. Performs 1/2I, 1xI & 50xI tests on RCDs rated at 10mA, 30mA, 100mA, 300mA, 500mA & 1,000mA on general and selective (time delayed) RCDs. Weatherproof to IP54. USB interface for test results download.

Megger PAT150 Battery Operated Appliance Tester
MEG,PAT150 (2601) AU

This instrument does the full range of PAT tests required. Includes 10 mA & 30 mA portable RCD testing. Does ‘substitute’ and mains powered leakage testing. Light weight, portable, and battery operated.
Megger PAT420 Testing and Tagging System  
MEG,PAT420 (2600) AU/MY/SG  
Portable appliance tester. Tests to AS3760. Stores data on USB memory stick. Includes a barcode scanner and label printer.

Metrel IT3017- Installation Tester for Testing to AS/NZS3000  
MET,IT3017INSTALTEST (2610) AU  
Multifunction installation tester with measurement functions and Pass/Fail limits set to AS/NZS3000 Wiring Rules. Capable of storing test results for printing compliance test reports. In-built Australian measurements and Pass/Fail limits, and guarantees accountability and traceability with storing of test results. Simply conduct the test, press the Memory button to save the result and assign the result to a location, then download results to PC software and print-out compliance test reports with actual test results. Earth Continuity & Resistance, Insulation Resistance, Polarity, Correct Circuit Connections, Fault Loop Impedance and RCD Testing. “Auto-Sequence Test” mode further speeds up compliance testing and reporting.

Trio SafeTCheck Pro Logger II with 3 Phase, Printer, and Barcode  
TRI,SAFETCHK-3PH (2601) AU  
PAT tester with RCD, Printer, Barcode, and 3 Phase options. The 3 Phase option includes the two common most connector types. These instruments fully complies with the AS3760 In-service safety inspection and testing of electrical equipment requirements.
Micro-Ohm Meters & Earth Testers

Fluke 1625 KIT GEO Earth Ground Tester
FLU,1625-KIT (2650) AU/MY/SG

Measure total earthing resistance (RA) with 3 or 4-pole Fall of Potential method, selective earth resistance measurement and 4-pole soil resistivity testing (0.001Ω to 19.99kΩ). Performs stakeless ground loop measurements (0.001Ω to 199.9Ω). Includes automatic frequency control to minimise interference effects. Battery powered.

Fluke 1630 Earth Ground Clamp
FLU,1630-EARTH CLAMP (2651) AU/MY/SG

Earth ground loop testing and continuity testing without breaking the circuit. Ground loop resistance range 0.025Ω to 1.5KΩ. Ground leakage current measurement range 0.2mA to 1000mA. Current measurement range 0.2A to 30A. Logs and stores measurements for on screen recall. LCD display. Battery powered.

Megger DET4TC Four Pole Soil Resistivity Testing Kit
MEG,DET4TCR2 (2655) AU

IP54 rated, 2, 3 and 4 point testing. Selectable 25V or 50V output, complete with lead and stake kit. Simple one button operation. Includes 2x50m and 1x30m test cables. Stakeless testing. Has the I & V clamps to enable attached rod testing.
Megger DLR010X Digital Low Resistance Ohm Meter
10A/0.1µΩ-2KΩ
MEG,DLR010X (2633) AU/MY/SG
Self contained fully automatic (with manual option) micro-ohm meter, selecting the most suitable test current up to 10Adc. Range 0.1µΩ to 2kΩ, resolution 0.1µΩ. Internal memory for 700 tests. Download software supplied. RS232 communications to PC. LCD display. Rechargeable battery.

Megger DLR0200 200A Micro-Ohm Meter
MEG,DLR0200 (2664) AU
Test current range 10A to 200A dc. Measurement range 0.1mΩ to 1Ω, resolution 0.1mΩ. Current cables 2 x 5m. Internal memory for 300 tests. Download software supplied. RS232 communications to PC. LCD display.

Megger DLR0600 Digital Micro-Ohm Meter - High current
MEG,DLR0600 (2665) AU
Test current range 10A to 600Adc. Measurement range 0.1µΩ to 1Ω, resolution 0.1µΩ. Current cables 2x5m. Internal memory for 300 tests. Download software supplied. RS232 communications to PC. LCD display.

Megger DLR0 Wind Turbine Lightning Protection Test Lead Set
MEG,DLR0-100LEAD (2662) AU
For Megger DLR0 10 series digital micro-ohm meters. Specially designed for measuring resistance of lightning protection circuit between wind turbine blade tip and ground. Kelvin clip and hook ends on 100m cable reel. 5m DH2 lead with duplex hand spikes and hook end.
Megger DLRO Lead Set Current & Voltage Leads  
MEG,DLRO-LEADSET (2666) AU  
For Megger DLRO digital micro-ohm meters. Potential spike lead set x2 and current clip lead set x2. Leads are used to separate the C & P connections. This avoids the erroneously high readings taken due to a high resistance contact. Current clip lead set 2m (242041-7) and potential spike set 2m (242021-7).

Megger MOM2 Micro-Ohm Meter  
MEG,MOM2 (2638) AU/MY/SG  
Lightweight (1 kg), handheld micro-ohm meter. Up to 220A test current, autoranging from 999 uΩ to 1000 mΩ FS. Rechargeable batteries provide 2200 measurements for Imin = 50A, or 800 for Imin = 100A. Memory for 190 recorded measurements, downloadable via Bluetooth with provided software. Kelvin probes included.

Power Analysers Loggers & Recorders

CHK Power Logger PowerMonic PM40 Power Quality Analyser  
CHK,PM40PQA (8708) AU  
Weatherproof IP65 field unit. Channels: 3 voltage, 63 to 440V (isolated). 4 current 0 to 3,000A (3ph and neutral) RMS. Supplied with 4 flexible 3,000A clamp-on CTs (flexible CT length 600mm and Diameter 190mm). Memory: 15Mb. Inbuilt Graphic 128x64 bits LCD display, 7 rows x 20 characters. Records: V, A, pf, f(Hz), kVA, kVAr, kW, harmonics, Inter harmonics, voltage and current imbalance (THD and individual to 48th ) and Flicker. Total energy, tariffs, maximum demands, and transient and sub-cycle disturbances. Included software provides graphs and summaries to PC. Download files while logging USB interface.
CHK Miro PQ45 Power Quality Analyser
CHK,MIRO-PQ45 (8710) AU

Weatherproof compact power analyser and logger. Certified to IEC61000-4-30, Class A. Includes WiFi and mobile interfaces and GPS time sync. Graphical customisable colour display. Supplied with 4x CatIV 600V 3000A flexible CTs. Also supplied wiring for both Star and Delta configurations. Includes an Android Tablet to configure the instrument and download data. It also has two temperature probes.

Fluke 345 Power Quality Clamp Meter
FLU,345 (8739) AU

Ideal for measurements on switching loads such as variable frequency drives, electronic lighting and UPS systems. Low-pass filter and high EMC immunity design make unit ideal for noisy environments. 600V CAT IV rated, 1400A AC, 2000A DC. Measure and log harmonics, inrush current, ripple current on battery systems. Analyse data and generate reports with included Power Log software.

Fluke 435 3-Phase Power Quality & Energy Analyser
FLU,435 (8738) AU/MY/SG

Power Quality Analyser to suit a broad range of AC mains studies. Includes 4 x 600/6000A AC CTs. A unique energy loss calculator provides the ability to monetarily quantify energy losses. Supplied with Fluke Power Log Software for detailed data analysis and report generation. Optional accessory: FLU,I5SPQ3 (3 x i5s 5A AC current clamps).
Fluke 1738 Power and Energy Logger  
FLU,1738 (8736) AU/MY/SG  
3 phase power logger with Fluke Connect® mobile app. Includes 4 x 1500 A flex probes (1 A to 150 A 100 mA resolution, 30 mA accuracy) and 4 x 6000 A 1 m flex probes. Copy logged files to a USB memory stick. Measures to 50th harmonic. Capture transients. Can be powered off phase one if required. 4 h backup battery operation. 1000 V CAT III/600 V CAT IV. Colour Touch Screen. Displays real-time waveforms and FFT.

Fluke VR1710 Single-Phase Voltage Quality Recorder  
FLU,VR1710 (8720) AU  
Single phase power quality analyser. Records RMS, transients, flicker & harmonics up to the 32nd. Selectable logging periods from 1s to 20min. Provides continuous recording with no gaps. Includes software for download, analysis and automatic reporting.

Hioki PW3198 Power Quality Analyser including 3 x 1,000A, 1 x 200A AC/DC & 4 x 5,000A Flex CTs  
HIO,3198 (8732) AU/MY/SG  
Premium Power Quality Analyser for demanding applications. Includes 3 x 1,000A AC CTs, 1 x 200A AC/DC CT and 4 x 9667 5,000A flexible CTs. Ideal for AC mains studies as well as solar inverter evaluations. Supplied with Hioki 9624 PQA-HiVIEW Software for detailed data analysis and report generation.
Hioki PW3360-21 Clamp On Power Logger with Harmonic Measurement
HIO,PW3360-21 (8735) AU
HIO,3360-21 MY/SG

Power logger, supports single to three phase 4 wire circuits. Supplied with 3x500A CTs 5/10/50/100/500A ranges 0.3% rdg+0.01%fs and 3x5000A Flexible CTs 50/500/5000A ranges 2%rdg+0.3%fs. Has a built in battery and can also be powered by the line voltage. Provides harmonic measurement upto the 40th harmonic. Has plug in SD card. Is recognized and a diskdrive when connected to a computer. Includes analysis software.

HT Instruments Solar I-Ve Curve Tracer & Efficiency Meter
HTS,SOLAR-I-VE (8760) AU

Multifunction device for testing maintenance of single phase solar installations. Will verify the I-V curve with an inbuilt database of different panel types. Measures PV Modules/Strings at up to 1000V & 15A or 1500V & 10A. Includes temperature cell and Irradiation cell. Efficiency measurements of the PV system. Measures efficiency, I-V curves, open circuit and short circuit currents.

We offer a calibration service on selected equipment. To find out more, contact us today.
Current Clamps, Probes & Accessories

See also Electrical Testers on page 56

See also Power Analysers & Recorders on page 61

Fluke 376 True-rms AC/DC Clamp Meter with iFlex
FLU,376 (8770) AU/MY/SG
1,000A AC and DC current measurement with fixed jaw.
2500A AC current measurement with the 45cm iFlex flexible current probe. 1000V AC and DC voltage measurement. Voltage and current measurements are true rms. Includes ability to measure frequency, resistance and capacitance. Rated CAT IV 600V and CAT III 1000V.

Fluke 90I-610S 1A to 600A AC/DC Current Probe
FLU,90I-610S MY/SG
Compatible with any Fluke scopemeter test tool, power harmonics analyser, oscilloscope, multimeter or other voltage measurement device that has the following features: BNC input connectors or if using a meter a BNC to banana plug adaptor PM9081/001 (included) lets you use this probe with your DMM.

Fluke i5sPQ3 AC Current Clamps, 5A (3 x i5S per set)
FLU,i5SPQ3 (8790) AU/MY/SG
A pack of 3 pieces of the i5s 5A AC current clamps, specially configured to provide low current accuracy while taking measurements on secondary current transformers. CAT III 600 V (For insulated conductors only). Suits the Fluke 435 and other instruments with BNC inputs.
Hioki 3285 AC/DC Clamp-on Meter with Analog Output
HIO,3285 (8781) AU

Ranges 200A/2kA AC/DC. Measure volts, ranges 30V, 300V & 600V AC/DC. Frequency ranges 10Hz, 100Hz & 1kHz. Display LCD, counts max 2,500 current, 3,750 voltage and 1,250 frequency. Output voltage 1V for 2,000 count fs for each current range, can select Rec RMS output, response time about 250ms rise time, fall about 500ms. Waveform output. 1V is produced for 1,000 count on full scale frequency range. Output not available for voltage measurements. Supplied with signal output cord, 4mm to BNC convertor, carry case and AC adaptor. Powered with internal 9V battery or AC adaptor. (AC adaptor not supplied).

Hioki 9694 Clamp-on CT 5A (Set of 3 or 4)
HIO,9694CT5A (8789) AU/MY/SG

Rated primary current 5A AC. Amplitude accuracy ±0.5% rdg. ±0.2% FS (at 45 to 66Hz), 66Hz to 5kHz ±1% or less. Max circuit voltage 300V RMS/insulated wire. Core jaw 15mmØ. Size mm: 46w × 21d × 135h, cord length 3m.

Insulation Testers & Meggers to 20kV

All-Test 5 Pro Motor Circuit Analyser
ATP,ALL-TEST5PRO (8495) AU

A comprehensive electrical motor circuit analyser designed for stand alone troubleshooting, and QA of stored new, or repaired electric motors. It can also provide trending analysis. It detects winding contamination, stator faults such as turn-to-turn, coil-to-coil shorts, open connections, ground faults, and broken or fractured rotor bars. It will run for 8 h on battery.
EA Technologies UltraTev Plus Partial Discharge Detector
EAT,ULTRATEVPLUS (8410) AU/MY/SG

Multi-function Partial Discharge (PD) Instrument. It measures accurate PD activity using the UltraTEV detector and an ultrasonic detector. It gives you an objective measure of the level of activity. Will display PD severity level. The kit includes the Ultradish for measurement of overhead assets.

Fluke 1577 Insulation Terster 2GΩ
FLU,1577 (8420) AU

True RMS Multimeter, Autoranging. User selectable test voltages up to 1000V. Measurement range .1MΩ to 600MΩ.

Fluke 1587 Insulation Multimeter
FLU,1587 MY/SG

Insulation: measurement range: 0.01M to 2GΩ. Test Voltages: 50V, 100V, 250V, 500V, 1,000V Multimeter: Voltage 1mV to 1,000VAC/DC, current 0.01mA to 400mA AC/DC, resistance 0.1Ω to 50.0MΩ, capacitance 1nF to 9999μF, frequency 0.01Hz to 99.99kHz.

Fluke 1587FC Insulation Multimeter
FLU,1587FC (8422) AU

It will test to 2GΩ. Includes Fluke Connect capability.50V, 100V, 250V, 500V & 1000V Insulation test capability. Using Fluke Connect can do PI/DAR, store, Temperature Compensation & VFD low-pass filter
Learning to operate unfamiliar equipment costs you time and can lead to fundamental errors in the data capturing processing. Use a better solution - our Setup and Download service.

Fluke DSX-5000 Cable Analyser

Setup:
- Company name
- Site
- Tester
- Setup of certification test limit
- Cable type/fibre type

Results Downloaded:
- Raw Fluke Linkware files
- Linkware software
- PDF report results

Our technical staff can provide you with any downloaded data for you on a USB drive. These drives usually include PDF files, raw data files, and the appropriate software – everything you need for meaningful analysis.

Once you nominate the appropriate technical information, we take care of the rest. The downloaded files can be promptly forwarded to you, or collected at an arranged time that’s more convenient.

Equipment marked with the symbol is available to rent with this service. Fees vary depending on the complexity of operation and the level of detail involved.

Data management services are available for many products. Above is an example of what you can expect.
Fluke 1663 FVF Installation Tester  
FLU,1663FVF (2615) AU/MY/SG

Provides the following tests: Continuity test under 200mA, Loop Impedance without triggering an RCD can be set for 10,30,100,300,500,650mA & 1A. Insulation resistance measurement under 500V. Measure earth plug resistance by earth rods (Rods not in kit). Voltage measurements.

Kikusui TOS-5101 10kV AC/DC Hipot Tester  
KIK,TOS-5101 (8430) AU

Hipot testing up to 10kV in either DC or AC. Digital voltmeter and ammeter, digital timer. Window comparator for more reliable pass/fail judgement. Automatic discharge of device under test in DC test mode. Equipped with Key Lock and Interlock functions for greater safety.

Ofil Systems Uvolle-VX Corona Camera  
OFI,UVOLLE-VX (4570) AU

Corona video/still camera to record and display corona and partial discharge. IP54 includes GPS, temperature and humidity measurement capability. Visible and UV Zoom, UV events counter, Integrated flashlight. Minimum discharge detection 1pC, Spectral range 240~280nm. 4Hr operation on one battery. Two batteries supplied.

Follow TechRentals on LinkedIn and stay up-to-date on Test and Measurement news, application notes, and case studies.
Megger MIT525 5KV DC Insulation Resistance Tester
MEG,MIT525 (8426) AU/MY/SG

Measures to 20TΩ at 5kV. Tests include PI, DAR, DD, SV and ramp test. Li-ion battery with rapid charge, mains operation possible while battery is charging. Advanced memory with date/time stamp. Noise filter rejects up to 3mA noise. PowerDB Lite asset management software supplied with unit for download of test data to a PC.

Megger MIT1025 10kV DC Insulation Resistance Tester
MEG,MIT1025 (8427) AU

10kV DC Insulation Resistance Tester. Measures to 20 TΩ at 10kV. Tests include PI, DAR, DD, SV and ramp test. Li-ion battery with rapid charge, mains operation possible while battery is charging. Advanced memory with date/time stamp. Noise filter rejects up to 3mA noise. PowerDB Lite asset management software supplied with unit for download of test data to a PC.

Megger MIT1525 15 kV DC Insulation Resistance Tester
MEG,MIT1525 (8428) AU

Measures to 30TΩ at 15kV. Tests include PI, DAR, DD, SV and ramp test. Li-ion battery with rapid charge, mains operation possible while battery is charging. Advanced memory with date/time stamp. Noise filter rejects up to 6mA noise. PowerDB Lite asset management software supplied with unit for download of test data to a PC.
Megger S1-1052 High Current Insulation Resistance Tester 10kV
MEG,S1-1052 10KV-DIT (8424) MY/SG

High output current 5mA for fast charging of capacitive loads. Testing up to 10kV, mains or battery powered, digital/analogue backlit display, variable test voltage from 50V to 10,000V, automatic IR, PI, DAR, SV and DD tests. Measures to 35TΩ. RS232 and USB download of results.

Omicron MPD 600-1 Single Channel PD Measurement System
OMI,MPD600 (8411) AU

Single Channel High-end partial discharge measurement and analysis system. IEC 60270-compliant partial discharge measurement. Recording and analysis of measurements with full function control. This unit is suitable for many PD testing applications.

Oil, Hipot, & VLF Testers above 20kV

High Voltage Inc PFT301 30kV AC HiPot Tester
HIV,PFT301CM (8452) AU/MY/SG

Portable HiPot 0~30kVac 1kVA resistive/capacitive load: 33mA. Duty cycle at 1kVA 1h on 1h off 700VA continuous. Tests the integrity of items including insulating materials, isophase bus duct, switchgear, transformers, vacuum bottles & interrupters, vacuum switches, automatic circuit reclosers, bushings, fuses, arrestors, circuit breakers, transformers, capacitors, motor and generator windings.
High Voltage Inc PFT-503CM 50kV AC Hipot Test Set
HIV,PFT503 (8453) AU

Single, portable (34kg) unit suited for testing overhead apparatus, vacuum bottles and interrupters, switch gear, bus duct, motorized vacuum switches, reclosers, bushings, fuses and arrestors, linemans safety products, small transformers, electrical components and motors. This 3kVA model features capacitive load compensation enabling full load testing with a power draw of 1.5kVA while operating from a conventional line input. 60mA output current capability.

High Voltage Inc PFT-1003CMF 100kV AC Hipot Test Set
HIV,PFT1003 (8456) AU

Portable (16kg control unit, 39kg HV tank) hipot tester, 100kV, 50Hz, rated 3kVA into capacitive loads. Features continuously adjustable output voltage, external safety interlock, zero start safety interlock, self resetting over current protection, guard/ground return mode, HV on/off and main power push button ruggedized meters and with glass windows that eliminate static buildup.

HV Diagnostics HVA TD60 Portable TanDelta Measurement System
HVD,HVA TD60 (8460) AU

Optional Accessory for HVD,HVA60-DC/VLF and HVD,HVA90_DC-VLF. Tan Delta or Power Factor tester used to determine the power factor of cables, transformers, capacitors, rotating machines and other switchgear. This test allows the detection of insulation defects before they fail in service.
HV Diagnostics HVA30 30kV-15mA DC/VLF High Voltage Insulation Dielectrics Test Set
HVD,HVA30-DC/VLF (8461) AU/MY/SG

VLF and DC test capabilities combined in one unit (20kg). Suitable for testing cables (XLPE, PE, EPR, PILC etc), capacitors, switchgear, transformers, machines (IEEE 433), insulators and bushings. VLF (0.1Hz to 0.02Hz), DC (±), cable fault conditioning (burning) and sheath/jacket testing modes all included. Fully automatic or manual cable test sequences complying with International Standards/Guides such as IEEE 400.2, VDE 0276 and CENELEC. True symmetrical sinusoidal, load independent, output waveform across the full load range. Real-time display of actual output wave form. Easy to use, ergonomic, menu guided, large backlit user interface. Large output load capability (up to 5uF). Automatic and integrated load capacitance measurement with optimum frequency selection. Storage of test results for later retrieval or download to a PC/Laptop.

HV Diagnostics HVA60 60kV VLF/DC Test Set
HVD,HVA60-DC/VLF (8462) AU/MY/SG

VLF and DC test capabilities combined in one unit (60kg). Suitable for testing cables, capacitors, switchgear, transformers, machines, insulators and bushings. VLF (0.1Hz to 0.02Hz), DC (±), cable fault conditioning (burning) and sheath/jacket testing modes all included. Fully automatic or manual cable test sequences. True symmetrical sinusoidal, load independent, output waveform across the full load range. Real-time display of actual output wave form. Large output load capability (up to 5uF). Automatic and integrated load capacitance measurement with optimum frequency selection. Storage of test results for later retrieval or download to a PC/Laptop. For a more comprehensive understanding of insulation condition perform tan delta testing at the same time with optional accessory HVD,HVA TD60.
Megger OTS80PB Transformer Oil Tester  
MEG,OTS80PB (8450) AU/MY/SG  
Test voltage 80kV max at 61.8Hz. Fully automatic operation. Rechargeable batteries. RS232C interface.

HV Diagnostics/B2HV HVA94 94kV VLF Test Set  
HVD,HVA94 (8463) AU  
VLF, DC and Jacket/Sheath testing. Sinusoidal: 0-94kV peak, 0-66kV rms. DC: ± 0-90kV and Squarewave: 90kV. Capable of testing cables up to 3,300m - 1µF at 0.1Hz and 61kV rms, 0.85µF at 0.1Hz and 66kV rms. The variable output frequency allows the testing of even much longer cables. 0.01 ... 0.1Hz in steps of 0.01Hz (default 0.1Hz) - auto frequency selection. Stores 50 test records.

Megger IDAX 300 Insulation Diagnostic Analyser  
MEG,IDAX300 (8552) AU  
Provides an accurate and reliable condition assessment of insulation in transformers, bushings, generators, and cables. This device has been used in the field for over 15 years and is proven to maintain accurate, reliable data in high interference environments. Utilizes Dielectric Frequency Response (DFR) combined with software analysis to determine the percentage of moisture in paper insulation, oil conductivity, and more. Features: Weighs under 5kg. Inaccuracy <0.5% +0.0001, 45 to 70Hz, C>100pF. True frequency domain measurement for highest interference rejection. Laptop with preloaded software included.
NEW!

Megger 3Ph TTR & Winding Resistance Tester
MEG,MWA330A (8550) AU/MY/SG

Capable of performing 3-phase turns ratio, 3-phase winding resistance, OLTC Continuity (make-before-break), 3-phase core demagnetisation, magnetic balance/flux distribution, excitation current, polarity and phase angle deviation, auto vector detection, and heat-run tests. Includes 18m test leads, which means once the test leads are connected, the instrument performs the full range to transformer tests without the need for test lead reconnection or a separate switch box. Includes a built-in touch-screen PC which will produce PDF reports via USB memory stick, and a built-in printer.

NEW!

Omicron CT Analyser Current Transformer
OMI,CTANALYZER (8555) AU

Tests protection and metering CTs according to IEEE and IEC standards. Measures phase-angle, ratio, winding resistance, excitation/saturation, residual magnetism, and burden impedance. Results of the assessment are received as a “pass or fail” decision within seconds due to the automated testing process. Features: Field verification up to the 0.1 accuracy class. Compact and lightweight (< 8 kg). High noise immunity for on-site testing.
Ponovo CT/PT Analyser
PON,PCT2001 (8559) MY/SG

Accurately tests all types of instrument transformers using low-frequency and variable-frequency methods. Short testing times combined with Windows PC ensure that analysis and reporting for multiple transformers is a simple and efficient task for HV engineers. Other features include: test M/P/TP types, as well as bushings and GIS styles; ratio check 30,000:1 to 45,000:5 (±0.1%); knee point check up to 30 kV; test in accordance with IEC60044-1/6 and ANS/IEEE C57.13. This instrument also supports IEC61850 protocols.

Circuit Breaker Testers

ISA CBA1000 Circuit Breaker Analyser
ISA,CBA1000 (4657) AU/MY/SG

116 timing channels (6 main contacts, 6 Resistive contacts, 4 aux contacts), up to 3 trip/1 close coils, motion and speed analyser (single analogue transducer input), suitable for EHV, HV and MV circuit breakers, standalone no PC required for operation, Analysis and results directly on display. Accuracy 100µs c0.025%.

New items are being added to the inventory constantly, so if you can’t see what you’re looking for, please call us on 1800 632 652.
**Current Injectors**

**Megger TM1760 Circuit Breaker Analyser System**  
MEG,TM1760 (4670) AU

Offers powerful technology that achieves safe, efficient, and reliable circuit breaker testing. This advanced system includes a built-in PC and the patented DualGround™ method, which makes testing safe and saves time by keeping the circuit breaker grounded on both sides throughout the test. With its isolated inputs and outputs, it performs all relevant measurements in one test, eliminating the need for a new setup and re-connections. Includes three static and dynamic resistance modules with up to 220A test current, a 3-channel dynamic capacitance module, and a full set of required cables. Applications include timing measurements, coil current testing, and dynamic resistance measurement. Features: Provides reliable and accurate test results in noisy, high voltage substations. High-level user interface including 8” touch screen. On-screen assistance with connection diagrams and test template Wizard.

**Megger CSU600AT Current Supply Unit with Timer Option**  
MEG,CSU600AT (4602) AU/MY/SG

600A current supply unit, including timer option. Current supply, 100A @ 9.0V 1hr, 600A @ 6.5V 30s.

**Megger INGVAR Primary Current Injection Test System**  
MEG,INGVAR AU/MY/SG

Primary injection testing system consists of a Control Unit and a Current Unit. Up to 1600A output current with cables supplied. Unit is capable of up to 5000A output current with special cables (not supplied). Suitable for switchgear and CT commissioning, ground grid, circuit breaker testing and more.
Multi-Amp MS-2 High Current Test Set
MUL,MS-2 (4600) AU

Designed to test overload relays, circuit breakers and earth fault trip devices. Input 240V 50/60Hz. Output continuously adjustable in 4 ranges 120V/5A, 24V/25A, 6V/120A & 3V/240A. Short term over current of several times the rated current ranges is possible. Digital current meter has read and hold facilities for short duration currents. Digital timer measures elapsed time between energisation and the test device operating.

Omicron CPC 100 Multi-functional Primary Test System
OMI,CPC100PTS (4620) AU/MY/SG

Portable (29 kg) primary test system suited for testing of current transformers, voltage transformers, power transformers, power lines, HV cables, grounding systems, switchgear and circuit breakers, protection relays and more. Tests to 800A (extended to 2000A with CP CB2) over frequency range 15Hz to 400Hz, or to 400A DC. Laptop included, preloaded with CPC 100 Toolset. Optional accessories: OMI,CPCU1 (with or without OMI,CPSTEP) OMI,CPSB1 OMI,CP-TD1 OMI,CPCB2.

Omicron CP CB2 Current Booster
OMI,CPCB2 (4605) AU/MY/SG

Combined with the CPC 100, the CP CB2 boosts the output current of a CPC 100 from 800A to 2000A.
Omicron CP CU1 Multi-Purpose Coupling Unit for PC 100
OMI,CPCU1 (4623) AU

Combined with the CPC 100, the CP CU1 is a measurement system for line impedances & k-factors of overhead lines or power cables, mutual coupling of parallel lines, ground impedances of large substations and coupling of power lines into signal cables. This test system overcomes the problem of power system frequency interference that has previously made it necessary to use extremely large, high-power equipment to carry out these measurements.

OMICRON Step & Touch Voltage Accessory Set
OMI,CPSTEP (4624) AU

Combined with the CPC 100 and CP CU1, this kit is a measurement system for Step & Touch voltages. The battery powered FFT Voltmeter (CP AL1) operates with short leads and requires no connections back to the CPC 100.

Omicron CPSB1 Switch Box
OMI,CPSB1 (4621) AU

Switch Box to allow fully automated 3 phase transformer testing, accessory for the CPC100.
**Omicron CP TD1 Capacitance and Tan Delta Add-on**

OMI,CP-TD1 (4622) AU

Combined with the CPC 100, the CP TD1 measures the capacitance and dissipation factor (power factor) with laboratory precision. This allows the insulation condition of transformers, generators and other parts of high-voltage systems to be tested according to IEEE 62 (C57.152), IEC 60076-1 and -3, as well as the CIGRE “Guide for Transformer Maintenance”. As recommended in the CIGRE Guide, testing is performed at variable frequencies to better diagnose signs of ageing in insulation. The portable test system (max. 29 kg per component) can also generate output voltages of up to 12kV. Trolley included.

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**Protection Relay Testing Systems**

**Omicron CMC256-6 Universal Relay Test Set**

OMI,CMC256-6 MY/SG

Protection relay test set and universal calibrator (energy meters, measuring transducers, power quality measurement devices, phasor measurement units etc) with six current sources (6 x 12.5A, 3 x 25A or 1 x 75A), four voltage outputs (4 x 300V or 1 x 600V), 4 x binary outputs, 10 x multifunctional binary inputs (dry/wet) and Generator Combination Cable for wiring convenience. The voltage and output channels are adjustable in amplitude, phase and frequency. All outputs overload and short-circuit proof. LLO-2 option not included. Laptop included, preloaded with Test Universe software (Universal).
Omicron CMC 256plus Universal Relay Test Set
OMI,CMC256PLUS (4661) AU
Protection relay test set and universal calibrator (energy meters of class 0.2, measuring transducers, power quality measurement devices, phasor measurement units) with 6 current sources (6 x 12.5A, 3 x 25A or 1 x 75A), 4 voltage outputs (4 x 300V or 1 x 600V), 4 x binary outputs, 10 x multifunctional binary inputs (dry/wet) and Generator Combination Cable for wiring convenience. The voltage and output channels are adjustable in amplitude, phase and frequency. All outputs overload and short-circuit proof. LLO-2 option not included. Laptop included, preloaded with Test Universe software (Universal).

Omicron CMC 356 Advanced Protection Relay Test Set
OMI,CMC356 (4656) AU/MY/SG
Protection relay test set with 6 current sources (6 x 32A/430VA, 3 x 64A/860VA or 1 x 128A/1000VA), 4 voltage outputs (4 x 300V or 1 x 600V), 4 x binary outputs, 10 x multifunctional binary inputs (dry/wet) and Generator Combination Cable for wiring convenience. The voltage and output channels are adjustable in amplitude, phase and frequency. All outputs overload and short-circuit proof. Laptop included, preloaded with Test Universe software (Advanced Protection + Transducer).

Omicron Arc 256X Arc Flash Initiator
OMI,ARC256X (4662) AU
CMC accessory designed to simulate an arc using a xenon tube. It has a 6m (19.7 ft) long connection cable it is connected to the external interface socket of the CMC test set, which provides both the supply voltage as well as the signal that will trigger the flash.
**Omicron CMC 356 Advanced Protection Relay Test Set**

OMI,CMC356-BASIC MY/SG

Protection relay test set with 6 current sources (6 x 32A/430VA, 3 x 64A/860VA or 1 x 128A/1000VA), 4 voltage outputs (4 x 300V or 1 x 600V), 4 x binary outputs, 10 x multifunctional binary inputs (dry/wet) and Generator Combination Cable for wiring convenience. The voltage and output channels are adjustable in amplitude, phase, and frequency. All outputs overload and short-circuit proof. Laptop included, preloaded with Test Universe software (Basic+Distance+Advanced Differential + Control Centre).

**Omicron GPS time reference**

OMI,CMGPS588 (4663) AU

Synchronisation unit is an antenna-integrated GPS controlled time reference. Optimised for outdoor usage and works as a grandmaster clock according to IEEE 1588-2008/ IEEE C37.238-2011 Power Profile.

**Omicron CMC 356 Advanced Protection Relay Test Set +61850**

OMI,CMC356_61850 (4657) AU

Protection relay test set with 6 current sources (6 x 32A/430VA, 3 x 64A/860VA or 1 x 128A/1000VA), 4 voltage outputs (4 x 300V or 1 x 600V), 4 x binary outputs, 10 x multifunctional binary inputs (dry/wet) and Generator Combination Cable for wiring convenience. The 6 current and 4 voltage output channels are continuously and independently adjustable in amplitude, phase and frequency. All outputs overload and short-circuit proof. Includes IEC61850 software package (GOOSE, Sampled Values, IEDScout, SVScout). ELT-1 and LLO-2 options not included. Laptop included, preloaded with Test Universe software (Advanced Protection + Transducer) and IEC61850 package. Optional accessories: OMI,CMA156-6PCA OMI,C-PROBE1 OMI,CMGPS
**Megger Freja 300 Secondary Relay Tester**

MEG,FREJA300 (4652) AU

The Megger Freja300 Secondary Relay Tester. All tests can be configured from the front panel. Accuracy typically 0.01%. Freja Win software supplied for PC control.

**Megger (Programma) Sverker760 Relay Test Set**

PRO,SVERKER760 (4672) AU

Relay test set for 1ph protective relay equipment. Three phase relays can be tested 1 phase at a time or by synchronising more than one unit. Current ranges to 100A with full load current to 250A. AC outputs to 250V & DC outputs to 300V. In-built capacitor and resistors for current output phase shifting. In-built timer, ammeter, and voltmeter. Measures phase angle, PF, and impedance. RS232 communications and control interface.

**Megger (Programma) Sverker780 Relay Test Set**

PRO,SVERKER780 MY/SG

Relay test set for 1ph protective relay equipment. Three phase relays can be tested 1ph at a time or by synchronising more than one unit. Tests voltage relays with a frequency range from 15Hz up to 550Hz. Current ranges to 100A with full load current to 250A. Voltage source up to 250VAC and 300VDC. Inbuilt capacitor and resistors for current output phase shifting (360°). Inbuilt timer, ammeter, and voltmeter. Measures phase angle, PF, and impedance.

**Megger (Programma) Sverker 900E Relay Testing System**

PRO,SVERKER900E (4674) AU

Relay test set for 3ph protective relay equipment. Current ranges to 105A. AC outputs to 900V and DC outputs to 900V. Power factor and phase shifting measurements. 4x Voltage, 4x Current generators with 4 binary inputs, 2 binary outputs, and timing measurement. Built in computer controller for setting up and sequencing tests.  
*Note this is the expert model.*
Power Transformers & Variacs

**Dimmer Dot 0-270V AC, 17A Variac**
DIM,D201P (8230) AU

Single phase variac. 240 V AC input, 0-270V AC output at 17A. Input and output connections must be wired up under a protective cover.

Battery Management System

**Hioki 3554 Battery HiTester**
HIO,3554 (8270) AU/MY/SG

Takes on-the-spot measurements of the internal resistance, voltage and temperature of lead-acid batteries, principally for UPS and similar applications, without needing to shut off the battery. Instantaneous results, on a three-rank scale of Pass, Warning, or Fail, using a composite decision based on the internal resistance and the voltage. Resolution of 1µΩ, necessary for high capacity batteries (of at least 500Ah). Includes Hioki 9460 clip type temperature leads.

**Megger (Programma) TORKEL 840 Battery Load Unit**
PRO,TORKEL-840 (8276) AU

Portable (22 kg, 38 kg with accessories and transport case) battery discharge load unit. Works with 12V to 250V battery systems and can discharge at up to 110A (15kW maximum power). Can be programmed for constant current, constant power, constant resistance or user defined load profiles. The included DC current clamp allows on-load testing. Tests can be PC controlled and results reviewed using the included TORKEL Win software. The load current can be extended with the optional accessory PRO,TXL870 extra load unit.
**Megger (Programma) TXL870 Extra Load Unit**  
PRO,TXL870 (8277) AU  
Optional accessory for the PRO,TORKEL-840 battery load unit. Adds up to an extra 112A load capacity to a discharge test (15.8kW maximum). Operates as a slave in combination with a PRO,TORKEL-840 battery load unit.

**Megger (Programma) TORKEL 860 Battery Load Unit**  
PRO,TORKEL-860 (8278) AU/MY/SG  
Portable (22kg, 38kg with accessories and transport case) battery discharge load unit. Works with 12V to 480V battery systems and can discharge at up to 110A (15kW maximum power). Can be programmed for constant current, constant power, constant resistance or user defined load profiles. The included DC current clamp allows on-load testing. Tests can be PC controlled and results reviewed using the included TORKEL Win software. The load current can be extended with the optional accessory PRO,TXL870.

**Megger Torkel 950 Battery Discharge Tester & BVM300 Logger**  
MEG,TOR950-BVM300 (8280) AU  
Works with 7.5V to 500V battery systems and can discharge at up to 220A (15kW maximum power). Can be programmed for constant current, constant power, constant resistance or user defined load profiles. Includes a 200ADC current clamp allows on-load testing. Tests are controlled by a built in PC and results can be copied to a USB memory stick. Also includes a BVM300 which is a 0~5VDC and 0~20VDC 1mv resolution 0.1% accuracy daisy chained 31 channel voltage datalogger. This integrates with the Torkel controller to give cell by cell voltage measurement. This means if the battery string fails a load test the individual battery that is the culprit can be easily identified. These two instruments combined together meet the test standards IEEE450, IEC896-1, IEEE 1188-1996 & IEC896-2.
Temperature Meters/IR Thermometers
Infrared Thermal Imaging Cameras
Endoscopes Borescopes Visual Inspection
Tachometers/Stroboscopes
High Speed Video Inspection Cameras
Laser Rotational Shaft Alignment
Industrial Process Calibrators
Wet & Dry Block & Calibrators
High Speed Waveform Recorders
Data Loggers
Pressure Vacuum Gauges/Recorders
Flow Meters for Liquids & Gases
Combustion, Flue & Industrial Gas Analysers

**Temperature Meters/IR Thermometers**

*Fluke 54-2B 2 Channel Data Logging Temperature Meter with FlukeView*

FLU,54-2B-FVF (4507) AU/MY/SG

Dual input digital thermometer with data logging. Will take most TC inputs. Accuracy ±0.05% of reading +0.3°C. 500 point logging with date & time stamp. Also records min, max or avg. Logged data can be reviewed on meter or downloaded to PC using software included. Supplied with 2 x 1m K type thermocouple leads -200 to 800°C.
Fluke 572-2 High Temperature Infrared Thermometer
FLU,572-2 MY/SG

Temperature measurement range from -30 to 900°C with USB interface. 60:1 distance to spot ratio with dual laser sighting for fast, accurate targeting. Adjustable emissivity and predefined emissivity table. Accuracy of ±1°C for reading from 0 to 950°C, display resolution 0.1°C. Stores 99 data points, data output via USB cable, comes with software for viewing and reporting.

Fluke 63 Infrared Thermometer to 535°C
FLU,63 (4525) AU/MY/SG

Non-contact mini IR thermometer with 12:1 distance to spot ratio and a temperature range from -32 to 535°C. Delivers 1% accuracy and 0.5% repeatability with laser targeting.

Fluke 1524 NATA Precision Handheld Thermometer
FLU,1524-NATA 15 (4512) AU

Precision portable, electronic thermometer with trending, memory for logging 15,000 data and time stamped measurements and 25 readings with statistics. Includes 5615 PRT probe, maximum immersion length 254mm, diameter 6.35mm, -200 to 420°C, stability ±10mK, accuracy ±0.024°C at -200°C, ±0.012°C at 0°C, ±0.035°C at 420°C.
**Testo 845 IR With Humidity Probe and T/C Probe**  
TES,845 (4527) AU

Temperature measurement -35 to 950°C. Relative humidity probe 0 to 100% RH. Fast-action surface probe with sprung thermocouple strip, also for uneven surfaces. Switchable optical resolution: Far field: 75:1 (16mm at a distance of 1200mm). Close focus: 1mm at a distance of 70mm. Adjustable emissivity from 0.1 to 1, max, min, displayed on backlit LCD. Continuous measure mode. Data output software and cable included. Accuracy ±0.75% of reading 100 to 950°C. Display resolution 0.1°C.

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**Infrared Thermal Imaging Cameras**

**Flir T640 Thermal Imaging Camera**  
FLI,T640 (45656) AU

High performance with on-board 5MP visual camera, 640 x 480 thermal resolution, 8X continuous zoom, time lapse and GPS are just a few of its many features. Temperature range -40 to 2,000°C (optional high temperature calibration).

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**Flir E8 Infrared Thermal Image Camera**  
FLI,E8 (4570) AU

-20 to 250°C, IR and MSX resolution 320 x 240, 9Hz, NETD <60 mK. Infrared camera applications include electrical distribution, mechanical (belts, rollers, couplings, gaskets/seals, compressors etc), product development, HVAC/R, automotive. PC report writing software provided.
Flir E75 Infrared Thermal Image Camera
FLI,E75 (4574) AU/MY/SG

-20 to 650˚C, IR resolution 320 x 240, 30Hz. Display 10cm 640 x 480 touchscreen, 1-4 continuous digital zoom, video recording, Wi-Fi, USB and Bluetooth enabled. Image modes include infrared, visual, MSX and picture-in-picture. Features Laser-assisted auto or manual focus, laser distance measurement, moisture, insulation, measurement alarms and GPS image tagging. Applications include electrical distribution, mechanical (belts, rollers, couplings, gaskets/seals, compressors etc), product development, HVAC/R, automotive.

Flir E60 MK-II Infrared Thermal Image Camera
FLI,E60-II (4575) AU/MY/SG

-20 to 650˚C, IR and MSX resolution 320 x 240, 60Hz. NETD 50 mK. 2 and 4x digital zoom. Visual image 3.1mpix, built in LED lamps, laser locator, scalable IR picture in picture. Video recording, touch screen, composite video out, Wi-Fi, and USB. Infrared camera applications include electrical distribution, mechanical (belts, rollers, couplings, gaskets/seals, compressors etc), product development, HVAC/R, automotive. Bluetooth support for voice annotations and selected Extech equipment. PC software provided. Mobile app available.

We offer a calibration service on selected equipment. To find out more, contact us today.
Fluke TiS55 Infrared Camera
FLU,TiS55 (4580) AU/MY/SG

Temperature range -20 to 450°C, resolution 220 x 165, 9Hz refresh, NETD 80mK. IR-Fusion technology, manual focus, sighting laser and internal 4GB memory as well as SD card. Infrared camera applications include electrical distribution, mechanical (belts, rollers, couplings, gaskets/seals, compressors etc), product development, HVAC/R, automotive.

Fluke Ti400 High Temperature Infrared Thermal Image Camera
FLU,Ti400 MY/SG

Can record AVI video, and is suitable for almost any application such as electrical surveys, building diagnostics, and mechanical inspections. Features a 3.5” touch screen, Fusion functionality, auto and manual focus, target illuminator, laser locator, and voice text annotation. 9 Hz refresh rate, IR Resolution 320 x 240, visible light camera (5 MP).

Endoscopes, Borescopes & Visual Inspection

See also Pipeline & Cavity Inspection on page 147

GE Mentor Visual iQ Inspect 3m x 4mm
GE,MENTOR IQ INSPECT (4575) AU

3 meter, 4mm diameter handheld videoscope with a 16.5cm daylight readable LCD screen. Capture video and still images using a high intensity LED light source and advanced processing for improved image brightness. Features comparison measurement function, 160 degree 4 way articulation, insertion tube waterproof to 1 bar (10 meters) IP65 (assembled) and IP55 (disassembled) compliant.
DEFEND AGAINST UNSEEN PROBLEMS
Fluke PRO Series Infrared Cameras

Fluke Connect® Desktop Software
In the field or the office, get Fluke’s free Smartview software making it easy for you to optimise, analyse and share infrared images and create reports.

Fluke Connect® Mobile App
Wirelessly sync images directly from your camera to the Fluke Connect system. Email images to colleagues from the field to collaborate in real time.
General Industrial

**Olympus Series C Videoscope, 2m**
OLY, SERIES C (5180) AU

6.2mm insertion tube with 8 brightness settings, glare reduction and all direction 120deg articulation. Will capture images in JPEG format or MPEG-4 video which can be stored to a SDHC card or the unit can be connected directly via a USB cable to a PC, also has HDMI output. Applications include turbine inspection, heat exchangers, gearboxes in automotive or electrical power generation, chemical, oil and gas vessel inspection. Recording available per 1GB: about 6,500 images or about 55 minutes video.

**Olympus IPLEX UL 3.5m Handheld Videoscope**
OLY, IPLEX-UL (5182) AU

Designed to simplify industrial visual inspections where portability and access are an issue. Ideal for thorough examinations of various equipment including heat exchangers, welded pipes, gas and wind turbines, and a range of automotive gear. Facilitates one-handed user operation, with the LCD monitor and control unit integrated together. At only 900g, the unit is both portable and lightweight. Shock resistant and the insertion tube is operable underwater at depths up to 3.5m (excluding the stereo tip adapters). Features: 3.5m, 6mm diameter videoscope. 120°C articulation (up, down, right, left). Still image and video recording (JPEG 300 KB and MPEG-4 600 KB/s). Rain and dust proof (compliant with IP55).

**Olympus IPLEX RX 3.5m x 4mm Videoscope with Measurement**
OLY, IPLEX-RX (5184) AU

Battery powered videoscope. 3.5m x 4mm insertion tube, 4 way, 130° articulation and 120° FOV. Stereo Measurement functions, Distance, Point-to-line, Depth and Area. Applications include inspection of heat exchangers, turbines, gearboxes, automotive parts and aircraft. Still and video recording to USB flash, approx 3,400 images and 30 mins per 1GB.
Olympus IPLEX RT 7.5m Portable Industrial Videoscope
OLY,IPLEX-RT 7.5 (5186) AU/MY/SG

Designed for the visual inspection of heat exchangers, turbines, gearboxes, automotive parts, aircraft, and other industrial machinery. This lightweight videoscope comes with a 7.5m long, 6mm diameter tungsten braided insertion tube. The insertion tube will withstand high temperatures, with 100°C articulation and a 120°C field of view. Handles bright and sharp still images as well as high quality movies, which can all be downloaded via USB. Navigating through the functions of the unit is simple with the InHelp™ Inspection Assist Software and on-board instruction manuals.

Olympus IPLEX-LT 7.5 Portable Industrial Videoscope
OLY,IPLEX-LT 7.5 MY/SG

Battery powered videoscope. 7.5 meter insertion tube, 6mm diameter. 4 way, 120° articulation. Applications include inspection of heat exchangers, turbines, gearboxes, automotive parts and aircraft. Still and video recording to USB flash, approx 3,400 images and 30 mins per 1GB.

Olympus IPLEX LT 3.5m Portable Industrial Videoscope
OLY,IPLEX-LT 3.5 (5190) AU

Lightweight, 2.7kg out of transit case. 8.5mm diameter, 3.5m length tungsten insertion tube. 4 way, 140° articulation. Still and movie recording to USB flash. IP55 compliant. Applications include inspection of, heat exchangers, turbines, gearboxes, automotive parts and aircraft.
RF Systems VJ-ADV Articulating 3.9mm Video Borescope
RFS,VJ-ADV (5195) AU

Video borescope is 3.9mm in diameter and 1.5 meters long with a flexible stainless steel braided insertion tube with adjustable brightness and 90 degree 4 way articulation. Images and video can be captured and saved to a micro SD card. Applications include turbine inspection, heat exchangers, gearboxes in automotive or electrical power generation, chemical, oil and gas vessel inspection.

Chadwick Helmuth 135M-12 Strobex Blade Tracker
CHA,135M-12 (5250) AU

To suit Chadwick Helmuth Vibrex 2000 kit. For setting the timing on helicopter rotor blades.
**Hioki FT3406 Contact/Non Contact Tachometer**

HI0,FT3406 MY/SG

Speed range for non-contact measurement is 30 rpm to 99,990 rpm, and contact base measurement is 15 rpm to 19,999 rpm. Contact adaptor included for mechanical connection to rotating shaft, and rim wheel adaptor included for linear speed measurement. Analogue output: 0-1 V DC FS with 2% accuracy. Internal battery or external AC operation.

**Monarch PLT200-KIT Digital Contact/Non Contact Tacho**

MON,PLT200-KIT (5214) AU

Hand held digital contact/non-contact tacho kit. Ranges optical/non-contact 5 to 200,000 RPM, contact 0.5 to 20,000 RPM. Display 5 digits, 5 alpha numeric LCD. Non contact operating range 90cm, tripod mounting. Direct contact tips and contact wheel supplied. Programmable for IPM, FT/M, YPM, cm/M, m/M, RPM, RPS, RPH and Totaliser up to 200,000. Output TTL pulse.

**High Speed Video Inspection Cameras**

**Olympus High Speed Camera (2000fps)**

OLY,ISPEEDLT (5217) AU

Gives valuable insight into your production line and identifies any problems it might have. If an area intermittently breaks down, you can set the camera up at that area to find out why the break down has occurred so that it can be fixed. This simple point and shoot camera is portable and easy to use, with colour images instantly provided for review and analysis. This unit comes with a stand as well as F and C-mount lenses for zoom versatility. Features: 800 x 600 sensor resolution, 2000fps recording capability, on-board editing and optional battery operation.
Laser Rotational Shaft Alignment

**Fixturlaser Dirigo Laser Bases Shaft Alignment System**  
FIX,DIRIGO MY/SG

Measurement resolution to 0.01mm. Shaft diameter range 40 to 150mm using an extension chain 150 to 500mm. Maximum distance between measurement units 0.85m. Very simple to use and operate as shims are applied the alignment can be monitored in real time. 20h of operation from alkaline batteries.

**Fixturlaser ECO Laser Base Shaft Alignment System**  
FIX,ECO MY/SG

Measurement resolution to 0.01mm. Shaft diameter range 25 to 175mm using an extension chain 25 to 450mm. Maximum distance between measurement units 3m. Horizontal Shaft Alignment, Vertical Moves for fast alignment process, additional features include Soft Foot Check, Target Values and Tolerance Table. Wireless configuration. 1,000 measurement can stored in JPEG and notes format. Alignment can be monitored in real time. 8h of continuous operation from Li-Ion bat.

**Pruftechnik Optalign Smart RS5 Optical Alignment System**  
PRU,OPT-RS5 (4940) AU

Optical alignment system with 5 axis precision sensors. Includes Target, thermal growth and dial gauge input. Multipoint measurement. Spacer and cardan shaft measurement. Compact magnetic brackets. Reliability centre software included.
**Pruftechnik Rotalign Ultra Laser Shaft Alignment**
PRU,ROT-ULTRA (4945) AU

Laser based rotating shaft alignment system. Maximum separation between emitter and receiver 10m. Aligns horizontal and vertical machines, aligns coupled and uncoupled shafts equally well. Ultra modern computer design, backlit colour display, Intel XScale 400MHz CPU, USB for peripheral devices, PC, printer, also Bluetooth communication. Backlit keyboard, rechargeable Li-Ion battery pack. Machine train alignment - 14 machines. Alignment results in 3 quick steps, thermal growth computation. Rotalign Ultra Reader software included.

**Pruftechnik 1500mm Length Tension Chains**
PRU,AL12.116 (4946) AU

1500mm length tension chains for PRU,ROT-ULTRA.

**Industrial Process Calibrators**

**Beamex MC5 Multifunction Calibrator NATA Certified**
BEA,MC5 (4731) AU

NATA certified MC5 provides calibration capability for pressure, temperature, electrical and frequency signals with HART communication and Document Calibrator option included. Performs as a field-entry device (FED) allowing for the recording of non-calibration related maintenance results. Pressure modules included, -1 to 20 bar and 600 bar. DC voltage & current, frequency, and pulse.
Beamex MC5-IS Multifunction Calibrator NATA Certified
BEA,MC5-IS MY/SG

NATA certified MC5-IS provides calibration capability for pressure, temperature, electrical and frequency signals. HART communication and CMX light software provided. Calibration results can be stored or printed. Performs as a Field-Entry Device (FED) allowing for the recording of non-calibration related maintenance results. Pressure measurement range, -1 to 20 bar and 600 bar (up to 1,000 bar with optional external transducers). DC voltage and current, frequency, and pulse measurement. RTD, thermocouple, and resistance simulation and measurement. Pressure accuracy EXT-600 bar 0.007% FS +0.01% Rdg, INT-20 bar 0.005% FS +0.01% Rdg, temperature coefficient ±0.001 % Rdg/°C outside 15 to 35°C.

Beamex MC6 Multifunction Calibrator NATA Certified
BEA,MC6 (4727) AU

NATA certified MC6 provides calibration capability for pressure, temperature, electrical and frequency signals with HART communication and Document Calibrator option included. Performs as a field-entry device (FED) allowing for the recording of non-calibration related maintenance results. Pressure modules included, -1 to 20 bar and 600 bar. DC voltage & current, frequency, and pulse measurement. RTD, thermocouple, and resistance simulation & measurement. Pressure accuracy EXT-600 bar 0.007% FS + 0.01% Rdg, INT-20 bar 0.005% FS + 0.01% Rdg, temperature coefficient ±0.001 % Rdg/°C outside 15 to 35°C.
Beamex MC6 Multifunction Calibrator NATA Certified -C
BEA,MC6-C (4727) AU
Provides calibration capability for pressure, temperature, electrical, and frequency signals. HART communication and CMX light software provided. Calibration results can be stored or printed. Performs as a field-entry device (FED) allowing for the recording of non-calibration related maintenance results. Fluke dry well communication firmware and pressure modules, barometric, 0 to 100m, -1 to 20, 0 to 160, and 600 bar included.

Beamex CMX Light
BEA,CMX LIGHT (4730) AU
Easy-to-use calibration software for a single workstation. It is the calibration solution for all large and mid-sized companies that wish for advanced, yet simple to use calibration software.

Beamex External Pressure Module
BEA,PRESSURE MODULE (4731) AU
External pressure modules compatible with MC6, MC5, MC4, MC2 MC5-IS, MC2-IS and MC5P calibrators. Various rangers available, please inquire.

Crystal nVision Pressure Calibrator 30 Bar IS NATA
CRY,NVISION-30-NATA (4757) AU
Intrinsically safe pressure calibrator. Displays real-time recorded data graphically on a high res screen with ability to zoom into specific events. 500,000 data point memory records all data from all enabled screens from two modules simultaneously. Fastest logging interval 10 readings/sec. Configured with MA20 current, voltage and switch test module and 30 bar pressure module, accuracy to 0.025% of reading. Includes hand pump and CPF (finger tight to 700 bar) fittings.
Crystal XP2i 1 Bar (15 psi) NATA with Druck PV411 Hand Pump
CRY,XP2I CAL KIT 1 (4735) AU

Range -1 to 1 bar (15 psi) Nata certified pressure gauge with hand pump. Accuracy, ±0.1% of reading between 20 to 100% of full scale, ±0.02% of full scale between 0 to 20% of full scale. Generation 3 gauges have 32,000 point logging capacity at intervals from 1 second to 18 hours, ULP (Ultra Low Power) setting allowing logging for 1 year and PSV/PRV (Pressure Safety/Pressure Relief Value) mode increasing measurement rate to approx. 8x per second. Gen 2 gauges have 6,000 points and logging intervals from 1 second to 18 hours. Logs actual pressure, average pressure, average pressure with peaks and, on demand. Intrinsic and safety ratings registered under IECEx, ATEX and DNV standards.

Crystal XP2i 345 Bar (5,000 psi) NATA with Druck PV411 Hand Pump
CRY,XP2I CAL KIT 345 (4765) AU

Range -1 to 345 bar (5,000 psi) Nata certified pressure gauge with hand pump. Accuracy, ±0.1% of reading between 20 to 100% of full scale, ±0.02% of full scale between 0 to 20% of full scale. Generation 3 gauges have 32,000 point logging capacity at intervals from 1 second to 18 hours, ULP (Ultra Low Power) setting allowing logging for 1 year and PSV/PRV (Pressure Safety/Pressure Relief Value) mode increasing measurement rate to approx. 8x per second. Gen 2 gauges have 6,000 points and logging intervals from 1 second to 18 hours. Logs actual pressure, average pressure, average pressure with peaks and, on demand. Intrinsic and safety ratings registered under IECEx, ATEX and DNV standards.

Learning to operate unfamiliar equipment costs you time and can lead to errors. Save time and reduce your real costs. Discover our Configuration and Download solutions on page 68.
Druck DPI 611-2-NATA 2 Bar Pressure Calibrator
DRU,DPI611-2-NATA (4736) AU
DRU,DPI611-2 MY/SG

Fully self-contained pressure test and calibration system combines pressure generation, signal measurement and loop power. Generates from 95% vacuum to 2 bar/30 psi pneumatic pressure with 0.0185% FS accuracy. Calculates PASS/FAIL errors and documents results. User Guide stored in the memory of the instrument, 3-touch set-up for any application.

Druck DPI 611-20-NATA 20 bar Pressure Calibrator
DRU,DPI611-20-NATA (4748) AU
DRU,DPI611-20 MY/SG

Fully self-contained pressure test and calibration system combines pressure generation, signal measurement and loop power. Generates from 95% vacuum to 20 bar/300 psi pneumatic pressure with 0.0185% FS accuracy. Calculates PASS/FAIL errors and documents results. User Guide stored in the memory of the instrument, 3-touch set-up for any application.

Druck DPI612 350 Bar Pressure Calibrator
DRU,DPI612-350 MY/SG

Hydraulic pressure calibrator including pump and current voltage standard. Pressure range 0-350bar (5000psi) +/- 0.005% FS. Voltage input +/- 30VDC +/-0.018% rdg +/-0.005% FS. Current input +/-55mA +/-0.018% rdg +/-0.005% FS. Temperature -10~30ºC +/-1ºC (ambient) switch open/closed. Voltage output 10VDC +/-0.1% or 24 V +/-1%. Current output 0~24mA +/-0.018% rdg +/- 0.006%FS. Data logger -8Gb. mA step & ramp configurable. Pressure port G 1/8 female (Quick-to-fit connection) and 1/8 NPT female adaptors, includes flexible hose kit. Pressure relief valve attached. Comes with rechargeable battery and charger.
Druck DPI612 700 Bar Pressure Calibrator
DRU,DPI612-700 MY/SG

Fully self-contained pressure test and calibration system combines pressure generation, signal measurement, and loop power. Generates from 0 to 700 bar/10,000 psi hydraulic pressure with 0.005% FS accuracy. Calculates PASS/FAIL errors and documents results. User Guide stored in the memory of the instrument, 3-touch set-up for any application.

Druck DPI615-20-NATA 20 Bar Pressure Calibrator
DRU,DPI615-20-NATA (4750) AU

Pneumatic pressure calibrator including pump and current voltage standard. Pressure range 0 to 20 bar ±0.025% FS. Voltage input ±50VDC ±0.05% rdg ± 0.004% FS. Current input ±55mA ±0.05%rdg ±0.004%FS. Temperature -10 to 40°C ±1°C (ambient) switch open/closed. Voltage output 10VDC ±0.1% or 24V ±5%. Current output 0 to 24mA ±0.05%rdg ±0.01%FS. Data logger stores upto 10,000 values. mA ramp configurable. Pressure port G 1/8 female, includes flexible hose. Pump includes screw adjustment.

Druck DPI620 GENII 20 Bar Pressure Calibrator
DRU,DPI620-20-NATA (4749) AU

20 Bar multi-function calibrator with advanced modular pressure options and a HART communicator. Allows the user to measure, source, and simulate electrical, temperature, pressure, and frequency parameters for the setup, testing, and calibration of process instruments. Ideally suited for use with transmitters, transducers, gauges/indicators, switches, proximity detectors, counters, RTDs, thermocouples and valve positioners. Features: Updated user interface with gesture/swipe compatible touch display. Single touch configuration for common devices. Option to add user configured tasks to library. HART Communicator.
**Druck DPI620 GENII 350 Bar Pressure Calibrator**

DRU,DPI620-350-NATA (4767) AU
DRU,DPI620-350 MY/SG

Advanced modular pressure calibrator with HART. Includes hydraulic pressure station with 1/8 BSP(G) or 1/4 NPT test port and 350 bar gauge and absolute pressure module, accuracy 0.005 and 0.015 %FS respectively. Provides simultaneous measurement and source capabilities for the setup, testing and calibration of process instruments including transmitters, transducers, gauges/Indicators, switches, proximity detectors, counters, RTDs, thermocouples and valve positioners.

**Druck DPI 620 Genii Process Calibrator with HART**

DRU,GENII (4778) AU

A multi-function documenting process calibrator with HART communicator. Measure and source electrical, temperature, and frequency parameters for the setup, testing, and calibration of process instruments. Ideally suited for work with transmitters, transducers, gauges/indicators, switches, proximity detectors, counters, RTDs, thermocouples, and valve positioners. Updated user interface with gesture/swipe compatible touch display. Single touch configuration for common devices. Option to add user configured tasks to library. HART Communicator.

**Druck PV411A Multifunction Hand Pump Kit**

DRU,PV411A (4789) AU/MY/SG

Provides up to 700 bar hydraulic, 40 bar pneumatic pressures and vacuum to -950mbar. Built-in stroke adjuster, lower pressure fine control and tamper proof overpressure protection.
**Emerson AMS Trex Device Communicator with HART**
EME,AMS TREX-LH (479) AU

Intrinsically safe HART device communicator. Allows technicians to configure, isolate, diagnose and repair problems while devices continue to run using the Loop power function and on board ammeter. Segment and loop diagnostic tools quickly validate loop and segment characteristics for easy troubleshooting. L "Device Communicator Plus Communication Module” and H-"HART”.

**Emerson AMS Trex Device Communicator -LF**
EME,AMS TREX-LF (4793) AU/MY/SG

Intrinsically safe HART and Foundation fieldbus device communicator. Technicians can configure, isolate, diagnose, and repair problems while devices continue to run using the Loop power function and on board ammeter. Segment and loop diagnostic tools quickly validate loop and fieldbus segment characteristics for easy troubleshooting. L-”Device Communicator Plus Communication Module” and F-”HART + Foundation Fieldbus”.

**Emerson 475 Hart Communicator**
EME,475 (4794) AU/MY/SG

Will configure, test, and diagnose your HART® and Foundation FieldBus devices. Able to communicate with any device, by any manufacturer. Intrinsically safe. Easy upgrade over the Internet. Interfaces with AMS PC Suite Software.
**Softing BC-700-PB Profibus Tester 5 PB-T5**  
SOF,PROFIBUS-5 (4722) AU

A powerful diagnostic and troubleshooting tool for testing cables, measuring signals and analysing the communication of PROFIBUS networks. It’s battery-powered and provides a graphical display, allowing for quick results when working in stand-alone mode. In addition, the BC-700-PB supports the export of test results for advanced analysis.

**Fitting Set with 700 Bar Hose**  
FIT,HP MY/SG

Fitting set (max pressure = 10,000 psi) for pressure calibrators. Comes with 700 Bar Hose, 20 bar Hose and various connectors. Female connector sizes: 1/4 inch BSP & NPT; 1/8 inch BSP & NPT; 3/8 inch BSP & NPT; 1/2 inch BSP & NPT.

**Fitting Set With 20 Bar Hose**  
FIT,LP MY/SG

Fitting set for pressure calibrators. Comes with 20 bar Hose and various connectors. Female connector sizes: 1/4 inch BSP & NPT; 1/8 inch BSP & NPT; 3/8 inch BSP & NPT; 1/2 inch BSP & NPT.

**Fluke 70 Bar Pressure Transducer & Pump suits FLU Calibrator**  
FLU,700P08-70BAR (4762) AU

Range 0 to 70 bar, resolution 7 mbar, reference uncertainty 0.025%. Connection 1/4NPT and 1/4 ISO. Includes 700PTP-1 pressure pump (Note the pump will operate to 41Bar). Suitable for use with Fluke Pressure, Documenting and Process Calibrators. Nata certified.
Fluke 690 Bar Pressure Transducer & Pump
FLU,700P31-690BAR (4771) AU

Range 0 to 690 bar, reference uncertainty 0.025%. Connection 1/4 NPT and 1/4 ISO. Includes 700HTP-1 pressure pump. For use with Fluke Pressure, Documenting, and Process Calibrators.

Fluke 345mbar Pressure Transducer & Pump
FLU,700PD3-345 MBAR (4734) AU

Dual pressure module, range +/-350mbar differential or gauge, reference uncertainty 0.04%, connection 1/4 NPT. Fluke hand pump 700LTP-1 included. Used with Fluke Pressure, Documenting and Process Calibrators.

Fluke 7 bar Pressure Transducer & Pump
FLU,700PD6-7BAR (4745) AU

Range 1 to 7 bar, reference uncertainty .025%. Connection 1/4 NPT and 1/4 ISO. Includes 700LTP-1 pressure pump. Used with Fluke Pressure, Documenting and Process Calibrators such as the 725, 744, 754 etc.

Fluke 725 Process Calibrator
FLU,725-NATA (4784) AU
FLU,725 MY/SG

Dual measure/source process calibrator. Measure DC 30 V, resistance 3200Ω, 24mA and more. Source/simulate DC 10V, 24mA, 3200Ω, 12 types of TCs and 7 types of RTDs. Power transmitters with internal loop supply. View input and output values with split display.
Fluke 726 Process Calibrator with NATA Certification
FLU,726-NATA (4783) AU
FLU,726 MY/SG

Precision multifunction process calibrator designed specifically for the process industry with broad workload coverage, calibration power, and accuracy in mind. Measures and sources almost all process parameters and can calibrate almost anything. Will also interpret results without the help of a calculator and store measurement data for later analysis.

Fluke 753 Documenting Process Calibrator
FLU,753 MY/SG

Provides simultaneous source and measure volts, mA, thermocouples, RTDs, frequency, ohms and pressure to calibrate transmitters. It can power transmitters during test, using loop supply with simultaneous mA measurement; measure/source pressure; create and run automated as-found/as-left procedures to satisfy quality programs or regulations; record and document results. Holds up to a full week of downloaded procedures and calibration results. Features include autostep, custom units, user entered values during test, one-point and two-point switch testing, square root DP flow testing, programmable measurement delay etc.

We offer a calibration service on selected equipment. To find out more, contact us today.
Fluke 754 Documenting Process Calibrator with HART
FLU,754 (4781) AU
Handheld, multi-function documenting process calibrator with HART communication. Designed for the calibration, maintenance, and troubleshooting of test sensors, transmitters, and other instruments. Allows for the testing of all common process parameters including volts, mA, Resistance Temperature Detectors, thermocouples, frequency and ohms. Compatible with all Fluke 700Pxx pressure modules, this device also allows for custom units, user-entered values during test, one and two-point switch testing, square root DP flow testing, and programmable measurement delays. Features: Simultaneous source and measure capabilities. Create and run automated as found/as-left procedures. AutoStep - set an automated sequence of steps (with a delayed start if required). Records and documents results.

Fluke 773 Milliamp Process Clamp Meter
FLU,773 (4779) AU
 Measure 4 to 20mA control lines, PLC loops, transmitters or any 4 to 20mA line without breaking the loop. Capable of 0 to 20.99mA and 24 to 100mA with clamp. Source and simulate mA and voltage signals in circuit. 4 to 20mA scaled o/p.

Fluke 789 Process Meter
FLU,789 PROCESSMETER (4786) AU/MY/SG
Multimeter with 2 to 20mA sink and source capability. HART 2500 resistor, 20mA drive into 1,200Ω. Simultaneous mA and % of scale readout on mA output. 25% manual step plus auto step and auto ramp on mA output. Min/max/average/hold/relative modes. Dual display. Accuracy, VDC 0.1% +1, VAC 0.7% +2, mA DC 0.05% +2, frequency 0.005% +1.
Fluke Pneumatic Pressure Calibrator
FLU,P5510-2700G (4797) AU

P5510-2700G pneumatic calibrator and 20 bar (300 psi) gauge.

Wet & Dry Block Calibrators

Fluke 9103 Dry Block Temp Calibrator -25 to 140°C
FLU,9103 MY/SG

Dry well calibrator, temperature range -25 to 140°C. Is stable to ±0.02°C, and its display is calibrated to an accuracy of ±0.25°C at all temperatures within its range. Insert type A with hole sizes; 1/16”, 1/4”, 3/8”, 3/16”, 1/8”, and 1/2”.

Fluke 9150 Thermocouple Furnace 150 to 1,200°C NATA Certified
FLU,9150-NATA (4840) AU

Temperature range 150 to 1,200°C. Stability ±0.5°C, display accuracy of ±5°C across entire range. Display resolution 0.1 to 999.9°C, 1° above 1,000°C. Well diameter 32mm, well depth 140mm, insert type 9150-A (3150-2) with hole sizes of 1.6, 3.2, 6.4, 9.5 and 12.7mm. Heating time 35min to 1,200 °C, cooling time 140min. NATA Certified.
Fluke 9170 Dry Block Temperature Calibrator-45 to 140 °C
NATA Certified
FLU,9170-NATA (4825) AU
FLU,9170-R MY/SG

Metrology dry well calibrator temperature range -45 to 140 °C. Display accuracy +/-0.1 °C, stability +/-0.005 °C full range, resolution 0.001 °C. Well depth 160mm (6.3”). Insert type A with hole sizes; 3x 6.4mm(1/4”), 4.8mm(3/16”), 3.2mm(1/8”), 9.5mm(3/8”) and 19mm(3/4”). Large LCD, numeric keypad and on screen menus. NATA Certified.

Grant GR150-S5 Temperature Bath NATA Certification
GRA,GR150-S5-NATA (4820) AU

Water/oil bath and circulator for calibrating temperature probes and analytical procedures. Temperature ranges from ambient to 100 °C with water and 150 °C with silicon oil. Requires 3L oil (not supplied). Stability 0.005 °C, uniformity 0.02 °C and display resolution 0.1 °C. Tank size 300mm W x 150mm D x 150mm H. Features include digital temperature controller and display, timer, alarms, offset adjustment and more.

Jofra CTC-660A Dry Block Temperature Calibrator 20 to 660 °C
JOF,CTC-660A (4832) AU/MY/SG

Range of 28 to 660 °C. Accuracy +/-0.85 °C, stability +/-0.08 °C and resolution of 0.01, 0.1 or 1 °C. Immersion depth 115mm. Supplied with insert M01 (hole sizes, 9, 5, 6, 4, 4, 3mm). Various insert sizes available, please inquire. NATA Certification.
Jofra CTC-650A Temperature Calibrator
JOF,CTC-650A MY/SG

Exceptionally fast and has deep immersion depths of 110mm (4.3 inch). Heats up to the maximum temperature in just 20 minutes. Temperature range: 33 to 650°C. Accuracy: 0.9°C. Stability: 0.1°C. Multi-Hole insertion tube: 1/4”, 1/8”, 3/8” and 3/16”.

Jofra CTC-660A Insert
JOF,CTC-660A Insert (4831) AU

Various insert sizes for the Jofra CTC-660A. Please enquire.

Jofra CTC-1200A Temperature Calibrator
JOF,CTC-1200A MY/SG

**High Speed Waveform Recorders**

**Hioki 8860 8 Channel High Speed Memory Recorder**
HIO,8860 (4129) AU

High speed memory recorder, 20MS/s sampling rate, 8 analogue channels, 16 logic channels, built in printer. 512MW or direct access memory, 60GB hard drive built-in, PC card type II slot up to 4GB ATA flash card (optional) USB, LAN interface and large colour screen.

**Data Loggers**

**Datataker DT80M with CANBUS interface**
DE,DT80M-CANBUS (4235) AU

Includes a built in GSM modem for internet access to the device supports 2G and 3G networks (GSM/GPRS/EDGE/WCDMA). Measures voltage, current, resistance and frequency. Up to 5 analogue (±30V) sensor inputs. Each channel is independent and supports: one isolated 3-wire or 4-wire input, or two isolated 2-wire inputs, or three common referenced 2-wire inputs. Store up to 10 million data points in user defined memory. Generally used at sample rates of 1Hz and slower.

**Watch how-to videos using QR Codes**

To complement our highly qualified technical support team, we are creating a range of informative how-to videos for equipment in our rental inventory. If you see a QR code on your equipment, simply scan the code with a QR mobile phone app to watch the relevant video. As we are constantly adding videos and QR codes to our fleet, be sure to check our YouTube channel for all the available videos, and do not hesitate to contact our team if you have any questions.
DataTaker DT80 5 to 15 Channel Logger with USB Memory Stick Download
DE,DT80 MY/SG

Measures voltage, current, resistance and frequency. Up to 15 analogue (±30V) sensor inputs. Each channel is independent and supports: one isolated 3-wire or 4-wire input, or two isolated 2-wire inputs, or three common referenced 2-wire inputs. 12 flexible digital channels. Expandable to 300 analogue inputs. Store up to 10 million data points in user defined memory.

DataTaker DT80M 5 to 15 Channel Logger with Built in Modem
DE,DT80M (4234) AU

Includes a built in GSM modem for internet access to the device supports 2G and 3G networks (GSM/GPRS/EDGE/WCDMA). Measures voltage, current, resistance and frequency. Up to 5 analogue (±30V) sensor inputs. Each channel is independent and supports: one isolated 3-wire or 4-wire input, or two isolated 2-wire inputs, or three common referenced 2-wire inputs. Store up to 10 million data points in user defined memory. Generally used at sample rates of 1Hz and slower.

Datataker DT85 48 Channel Logger with USB Memory Stick Download
DE,DT85 (4233) AU

Analogue inputs 32 isolated and 48 single ended inputs. 2 x 4 digital input types. 2 x serial sensor ports, Modbus capability, 4 x SDI12 channels, USB memory stick interface for easy data and programming etc. Operating time on the internal battery is 1s sample 2.4h. 5s sample 3 days, 1min sample 1 month.
Grant Squirrel 2020 Data Logger
GRA,SQ2020-1F8 MY/SG

Measure voltage, current, and resistance. 16 single-ended inputs or 8 differential inputs. 2 high voltage channel (60 v). Includes SquirrelView software for logger configuration and USB data transfer. Stores up to 14 million data.

Hioki LR8431-20 10 Channel Memory Logger
HIO,LR8431-20 (4280) AU

10 Channel Memory Logger with isolated channel to 60VDC which will take thermocouples. 10ms sampling USB interface and USB memory stick. Logging software included. Log directly to memory stick. Includes battery for 2.5hrs continuous operation.

Hioki Kit of Three 9322 Differential Probe High Voltage True RMS Interface
HIO,9322-KIT (4119) AU

Used with many memory recorders, eg. Hioki 8835. Operating modes 3. DC mode for waveform monitor output DC to 3MHz, AC mode detection of power surge noise 1kHz to 10MHz. Rectified true RMS output of dc & ac voltages. 40Hz to 100kHz response speed 200ms or less. Max voltage DC 2kV, ac 1kV CATII, AC/DC 600V CATIII, balanced differential input 1/1,000 divider.

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Keysight 34980A Multifunction Switch/Measure Unit
KEY,34980A MY/SG

34980A multifunction switch/measure unit is a flexible, reliable switching and data acquisition platform. Suitable in design verification, automated test and data acquisition. 8-slot mainframe with 21 mix-and-match plug-in modules. Scans up to 1000 ch/sec. Built-in 6½ digit DMM. LAN, USB 2.0, and GPIB connectivity, BenchLink data logger software for easy data collection and analysis. Includes 34934A Quad 4x32 Reed Matrix, 34937A, 32 channel form C/Form A general purpose switch and 34952A multifunction module with 32-bit DIO, 2-ch D/A and totalizer.

Testo Saveris2 H2 kit of 10 Temperature Humidity Loggers
TES,SAV2-H2-10KIT (4250) AU

Kit of 10 includes a preconfigured WiFi hotspot so the 10 loggers will save their data to the cloud. The logged data is available on line. The temperature sensor 0~40°C +/- 0.3ºC, Humidity sensor 0~100% +/-2%RH. 4mm diameter remote probe.

Testo Saveris2 T3 kit of 10 Temperature Loggers
TES,SAV2-T3-10KIT (4253) AU

Kit of 10 includes a preconfigured WiFi hotspot so the 10 loggers will save their data to the cloud. The logger data is available on line. The temperature sensors are typeK +/-1ºC.

Testo 175-H1 Temperature & Humidity Logger
TES,175-H1 (4251) AU/MY/SG

Large Display. 3 year battery life, 1 million sample memory. RH 0~100% ±2%, temp -20~50ºC ±0.4ºC. Includes USB interface to download data.
Testo 184 G1 Temperature, Humidity & Acceleration Data Loggers Kit 10
TES,184G1-KIT10 (4252) AU/MY/SG
TES,184G1-KIT5 MY/SG

Kit of 10 Temperature, Humidity & Shock Loggers. Simple to use with a tamperproof design. -20~70°C, 0~100%RH & 0~27g. HACCP Certified. Has built in USB port and will download to Android devices using NFC. Battery life 120 Days (15min sampling). Includes software for download of data to a PC. Saves data by default to a PDF file.

Pressure Vacuum Gauges/Recorders

Crystal XP2i Digital Logging Pressure Gauge 7 Bar NATA Calibrated
CRY,XP2I-100-NATA (4341) AU
CRY,XP2I-100 MY/SG

Range -1 to 7 bar (100 psi) Nata certified pressure gauge. Accuracy, ±0.1% of reading between 20 to 100% of full scale, ±0.02% of full scale between 0 to 20% of full scale. Generation 3 gauges have 32,000 point logging capacity at intervals from 1 second to 18 hours, ULP (Ultra Low Power) setting allowing logging for 1 year and PSV/PRV (Pressure Safety/Pressure Relief Value) mode increasing measurement rate to approx. 8x per second. Gen 2 gauges have 6,000 points and logging intervals from 1 second to 18 hours. Logs actual pressure, average pressure, average pressure with peaks and, on demand. Intrinsic and safety ratings registered under IECEx, ATEX and DNV standards.

Crystal XP2i Digital Logging Pressure Gauge 20 Bar NATA Calibrated
CRY,XP2I-300-NATA (4341) AU

Range -1 to 20 bar (300 psi) Nata certified pressure gauge. Accuracy, ±0.1% of reading between 20 to 100% of full scale, ±0.02% of full scale between 0 to 20% of full scale. Generation 3 gauges have 32,000 point logging capacity at intervals from 1 second to 18 hours, ULP (Ultra Low Power) setting allowing logging for 1 year and PSV/PRV (Pressure Safety/Pressure Relief Value) mode increasing measurement rate to approx. 8x per second. Gen 2 gauges have 6,000 points and logging intervals from 1 second to 18 hours. Logs actual pressure, average pressure, average pressure with peaks and, on demand. Intrinsic and safety ratings registered under IECEx, ATEX and DNV standards.

Crystal XP2i Digital Logging Pressure Gauge 70 Bar NATA Calibrated
CRY,XP2I-1K-NATA (4342) AU
CRY,XP2I-1K MY/SG

Range 70 bar (1K psi) resolution 0.1m bar. Accuracy is 0.1% of reading, down to 20% of the range. Vacuum accuracy 0.25% of -1 bar (-14.5 psi). Generation 3 gauges have 32,000 point logging capacity at intervals down to 125 msec (in PSV mode). Generation 2 gauges have 6,000 point logging capability at intervals from 1 sec. Logs actual pressure, average pressure, average pressure with max and min and on demand. 1/4 NPT connector. Intrinsic and safety ratings registered under IECEx, ATEX and DNV standards.

Crystal XP2i Digital Logging Pressure Gauge 138 bar NATA
CRY,XP2I-2K-NATA (4343) AU

Range -1 to 138 bar (2,000 psi) NATA certified pressure gauge. Accuracy, +/-0.1% of reading between 20 to 100% of full scale, +/-0.02% of full scale between 0 to 20% of full scale.
Crystal XP2i Digital Logging Pressure Gauge 206 Bar NATA Calibrated
CRY,XP2I-3K-NATA (4343) AU
CRY,XP2I-3K MY/SG

Range -1 to 206.8 bar (3,000 psi) Nata certified pressure gauge. Accuracy, +/-0.1% of reading between 20 to 100% of full scale, +/-0.02% of full scale between 0 to 20% of full scale. 32,000 point logging capacity at intervals from 1 second to 18 hours, ULP (Ultra Low Power) setting has logging for 1 year and PSV/PRV (Pressure Safety/Pressure Relief Value) mode increasing measurement rate to approx. 8x per second. Gen 2 gauges have 6,000 points and logging intervals from 1 second to 18 hours. Logs actual pressure, average pressure, average pressure with peaks and, on demand. Intrinsic and safety ratings registered under IECEx, ATEX and DNV standards.

Crystal XP2i Digital Logging Pressure Gauge 700 Bar NATA Calibrated
CRY,XP2I-10K-NATA (4344) AU
CRY,XP2I-10K MY/SG

Range -1 to 690 bar (10,000 psi). Accuracy, ±0.1% of reading between 20 to 100% of full scale, ±0.02% of full scale between 0 to 20% of full scale. 32,000 point logging capacity at intervals from 1 s to 18 hs, ULP (Ultra Low Power) setting allowing logging for 1 year and PSV/PRV (Pressure Safety/Pressure Relief Value) mode increasing measurement rate to approx. 8x per second. Gen 2 gauges have 6,000 points and logging intervals from 1 s to 18 hrs. Logs actual pressure, average pressure, average pressure with peaks and, on demand. Complies with safety standards IECEx, ATEX and DNV.
Crystal XP2i Digital Logging Pressure Gauge 1 bar NATA  
CRY,XP2I-15-NATA (4338) AU

Range: -1 to 1 bar (15 psi) NATA certified pressure gauge.  
Accuracy: ±0.1% of reading between 20 to 100% of full scale and ±0.02% of full scale between 0 to 20% of full scale. Generation 3 gauges have 32,000 point logging capacity at intervals from 1 s to 18 h, ULP (Ultra Low Power) setting allowing logging for 1 year and PSV/PRV (Pressure Safety/Pressure Relief Value) mode increasing measurement rate to approx 8x per second. Gen 2 gauges have 6,000 points and logging intervals from 1 s to 18 h. Logs actual pressure, average pressure, average pressure with peaks, and on demand. Intrinsic and safety ratings registered under IECEx, ATEX, and DNV standards.

GE Druck Wireless Air Data Test Set  
GE,ADTS542F (4350) AU


Flow Meters for Liquids & Gas

GE PT900 Ultrasonic Flowmeter  
GE,PT900 (6100) AU/MY/SG

Portable non-contact liquid flowmeter using transit time principle. Includes thickness gauge and 2 sets of transducers, one 12.5mm to 50mm the second 50mm to 600mm diameters & temperatures -20 to 210 °C with clamping fixtures. Flow velocity range 0.03 to 12.2m/s. Accuracy typically 1%. Data logging to internal memory, accessed as external drive when plugged into a PC via USB. Setup and monitoring using Android device. Rechargeable NiMH batteries and AC power supply/charger.
Gas-flow Small Pipe Transducer Kit for PT878GC
PAN,GC-RL302 (6153) AU

Advanced clamp-on ultrasonic transducer pair for use with Panametrics gas flowmeters. Operation at 1MHz for pipes in the range 20 to 55mm typical. General purpose use for process temperatures -40 to 176°C. Supplied with two precision gauged clamping fixtures for pipe range.

Flexim Ultrasonic Liquid & Gas Flow Meter
FLE,G608 (6156) AU

Ultrasonic flow meter is a clamp-on transit time gas and liquid flow meter, 2-channel, with Zone 2 Ex-certification for use in hazardous areas. Supplied with three transducer pairs and a pipe wall thickness gauge; includes an integral data-logger with more than 100,000 measured values, easy-to-use software for trending the data and an integral Lithium-ion rechargeable battery with AC adapter. The GLK transducers are suitable for 4 to 9mm wall thickness, the GLM 2 to 5mm and the GSM 2.5mm and greater. Utilises either Shear wave (standard) transducers, or Lamb wave (specialist gas) transducers. The Lamb wave transducers resonate the pipe wall to amplify the signal strength, thereby allowing it to measure applications at significantly lower pressures than the standard Shear wave transducers.

Learning to operate unfamiliar equipment costs you time and can lead to errors. Save time and reduce your real costs. Discover our Configuration and Download solutions on page 68.
GE Panametrics PT878GC Ultrasonic Gas Flow Meter
PAN,PT878GC-01 (6151) AU

Portable non-contact gas flowmeter using transit-time principle. For operation with ultrasonic transducer-kits (PAN,GC-RL302 & PAN,GC-RL319) - available separately. Compatible with metal or plastic pipes in the range 20 to 300mm. Suitable for use with compressed air, natural gas and other gases. Readout for flow velocity, actual or standard volumetric flow or mass-flow in numerical or graphic format. Internal logging for 100K flow data points. Infrared communications port for download to PC or printer interface. Rechargeable battery for 8h continuous operation.

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Our primary sales capabilities include:
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✓ Sales of GEC Aircraft and Truck Weighing Platforms
✓ A selection of electronic and electrical equipment
✓ A broad range of metrology instruments
✓ Approved distributor for Fluke Calibration

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Gas-flow Medium Pipe Transducer Kit for PT878GC
PAN,GC-RL319 (6155) AU
Advanced clamp-on ultrasonic transducer pair for use with Panametrics gas flowmeters. Operation at 500kHz for pipes in the range 75-300mm typical. General purpose use for process temperatures -40 to 176°C. Supplied with set of three precision gauged clamping fixtures for pipe range.

GE Panametrics PT878E Ultrasonic Liquid Flow Energy Meter
PAN,PT878E (6102) AU
Portable non-contact liquid flowmeter using transit-time principle. Includes thickness gauge and 2 sets of transducers, one 12.5mm to 50mm the second 50mm to 600mm diameters & temperatures -20 to 210 degC with clamping fixtures. Flow velocity range 0.03 to 12.2m/s. Accuracy typically 1%. Data logging for over 100K data points. Outputs analog 4 to 20mA, digital (pulse or frequency) and USB port. Large LCD display for velocity, volumetric and energy flow rate, totalised flow and trend data in alphanumeric and graphical formats. Rechargeable NiMH batteries and AC power supply/charger.

GE Panametrics PT878T Flowmeter including Liquid Thickness Gauge
PAN,PT878T (6103) AU/MY/SG
Portable non-contact liquid flowmeter using transit-time principle. Includes thickness gauge and 2 sets of transducers, one 12.5mm to 50mm the second 50mm to 600mm diameters & temperatures -20 to 210 °C with clamping fixtures. Flow velocity range 0.03 to 12.2m/s. Accuracy typically 1%. Data logging for over 100K data points. Outputs analog 4 to 20mA, digital (pulse or frequency) and USB port. Large LCD display for velocity, volumetric and energy flow rate, totalised flow and trend data in alphanumeric and graphical formats. Rechargeable NiMH batteries and AC power supply/charger.
**Polysonics Hydra SX30 Dual Frequency Doppler Liquid Flowmeter**  
POL, HYDRA-SX30-2 (6132) AU

Dual frequency doppler ultrasonic non-contact flowmeter. Velocity range 0.06 to 10m/s, accuracy ±1%. Pipe size range 12 to 5,000mm diameter. Data logging for 90,000 points, with PC software and interface cable for download via RS232C interface. Transducer temperature range -40 to 122°C. Analogue output 4 to 20mA. Battery operated, 12h continuous use (8h recharge).

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**Combustion, Flue & Industrial Gas Analysers**

See also Environmental Gas & Vapour Meters on page 158

**Novatech O₂ and CO₂ Analyser/Transmitter**  
NOV, 1637-5 (5954) AU

Oxygen and carbon dioxide analyser for packaging atmosphere, general industrial and research use. Oxygen sensor reading 1ppm to 100% with 1% accuracy. NDIR carbon dioxide analysis 0 to 100% ±3% of full scale. 2 x 4 to 20mA outputs, 1 common & 3 selectable alarm relays. Gas connection 1/8 Swagelok. Flow rate with internal pump 100 to 500cc/min. AC operation.

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**Testo Model 340 Portable Flue Gas Analyser**  
TES,340 (5915) AU/MY/SG

Includes O₂, CO (h2 compensated), CO₂ (calculated), NO & NO₂ sensors. 335 mm engine probe suitable for diesel and boiler testing with temperate probe, 350 mm pitot tube, Bluetooth printer, and easy emission software.
Material Hardness Testers
Non-Destructive Testing
Force Gauges
Load Cells
Vibration Analysis
Speed Measurement

Material Hardness Testers

GE DynaMic Rebound Hardness Tester
GE,DYNAMIC (4936) AU/MY/SG

Makes hardness testing quick and easy. The simple operation of this unit allows the user to position the impact devices and read the hardness value, all in a matter of seconds. Provides readings in HV, HB, HRC, HRB, HS, HL, and M/mm². This advanced unit will compensate for changes in testing direction. The Data Logger model can internally store hardness values along with statistical information. Features: Measurements can be conducted in any direction without the need for calibration. Rebound hardness testing standardised according to ASTM A956 and DIN 50156. Ergonomic, lightweight design (0.3kg). Test attachments for curved surfaces. Applications: Solid, coarse-grained components. Machine parts made of steel and cast aluminium alloys. Large series parts during production. Heavy forgings.
Non-Destructive Testing

Defelsko 6000 Ferrous & Non Ferrous Coating Thickness Tester
DEF,POS-6000 (4870) AU/MY/SG

Ferrous/Non Ferrous metal coating thickness tester with storage of up to 100,000 readings. Supplied with external probe, calibration standards and carry pouch. Measurement range 0 to 1500µm or 0 to 60 mils (selectable). Tolerance ±1µm +1% of reading 0-50µm, ±2µm +1% greater than 50µm. Resolution 0.1µm. Backglow display, HiLo limits audible & visible alerts when measurements exceed specified limits. Continually displays updates average, standard deviation, min/max thickness and number of readings while measuring. Built in USB, Bluetooth and Wifi for downloading readings.

PosiTector 200 B & C Ultrasonic Coating Thickness Gauge
DEF,POS-200ADV (4880) AU

Ultrasonic coating thickness gauge with type B & C Probes. Measures coating thickness over wood, concrete, plastics, composites etc. Will measure up to 3 individual layer thickness in a multi-layer system and features a graphic readout. Supplied with both B, 13 to 1000µm for wood, plastic and composites and C probes 50 to 3800µm for coatings on concrete, fibreglass etc. Accuracy is ±2µm +3% of reading.

Elcometer 266 DC Holiday Detector
ELC,266 MY/SG

Can be used to test porosity on coatings up to 7mm (275 mils) thick and is ideal for inspecting coatings on pipelines and other protective coatings. Features a built-in voltage calculator which will determine and set the correct test voltage based upon the test standard and the thickness of coating being tested. With DC30 (0.5 - 30kV) DC probe handle.
Defelsko Positest Pull Off Adhesion Tester for Concrete & Metal
DEF,POSITEST (4895) AU

Measures the force required to pull a specified test diameter of coating away from its substrate using hydraulic pressure. Pressure is displayed in both MPa and PSI on a precision dial indicator and can be related to the strength of adhesion to the substrate. Suitable for coatings on both metal and concrete surfaces. Conforms with standards ASTM D4541 and ISO 4624.

Olympus 27mg Pocket Thickness Gauge
OLY,27MG (4910) AU/MY/SG

Range 1~500mm, fast min mode. Resolution 0.01mm. Probe operates -20~150°C.

Olympus Ultrasonic Thickness Gauge including Transducers
OLY,38DL (4905) AU/MY/SG

Performs non-destructive measurements. Supplied with transducers that can measure the thickness of steel, cast, corroded steel, rubber, fibreglass and composites. Comes with dual and single element transducers including D7906-SM, M1036, and M2008 M109-RM (including delay line M202-RM), and is capable of THRU-COAT®; and Echo-to-Echo measurements on painted and coated surfaces. This handheld device is commonly used to measure the remaining thickness of pipes, tubes, tanks, pressure vessels, hulls, and other structures affected by corrosion or erosion. Features: Thickness range from 0.08mm to 635mm. Colour transflective VGA screen. Rugged design for IP67. Data logging capability.

Olympus Ultrasonic Probe for OLY,38DL & OLY,27MG
OLY,D790-SM (4909) AU

Ultrasonic high temperature probe for OLY,27MG and OLY,38DL 5MHz 7.9mm tip diameter. Operating temperature range -20°C~500°C.
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See product range on pages 92-93
Mitutoyo SJ-210-NATA Surface Roughness Tester  
MIT,SJ210-NATA (4906) AU

Comprises LCD display and a detachable detector/drive unit. Parameters measured in Ra, Rq, Ry, Rz, Rt, Rp, R3z, Rk, Rpk, Rvk, S, Sm, Pc, mr, Mr1, Mr2, A1, A2, Vo units. Ranges: 350, 100, 50um & 10um, resolution from 0.01~0.4um. Tip radius 5mm. Data output. NiCd batteries.

PCWI 30kVDC Porosity (Holiday) Detector  
PCW,DC30 (4885) AU

Detects pinholes in coatings above 150µm on metal substrates such as pipes and tanks. 0-30kV, 3.5 digit LCD display with battery indicator, display of voltage level. Alarm indicated on front panel, supplied with rechargeable battery, 10h charger, probe handle with neon and 2m length cable, 60mm connector for flat brushes, 7m earth cable with clamp, fan brush, 250mm flat brass wire brush, 450mm probe extension. Dry conditions.

PCWI 40kV Pulse Porosity (Holiday) Detector  
PCW,P40-PULSE (4890) AU

Pulse porosity (Holiday) detector. Detects pinholes in coatings and wrapping above 150µm on metal substrates such as pipes and tanks. Can be used on dry or wet surfaces. 0~40kV output, 4 digit LED display of voltage, alarm sensitivity setting between dry and wet. Supplied with rechargeable battery, 10h charger, red probe handle and 2m length of rubber coated cable, 60mm connector for flat brushes, 7m earth cable with clamp, fan brush, 250mm flat brass wire brush, 450mm probe extension and 80mm probe extension.
**Force Gauges**

**Hiliti Fastener Test System includes SafeRings Systems**

HIL,HAT28M (4465) AU


**Mecmesin AFG-1000NALC Digital Force Gauge**

MEC,AFG-1000NALC (4428) AU

Range 0 to 1,000N accuracy 0.1%. 5 digit back lit display. Peak data sampling rate 5kHz. 120% overload warning, display invert (reverse) function, dual max, max tension & max compression plus current reading. Outputs: analogue, RS232 & Mitutoyo. Accessories: test hook, compression plate, 130mm & 30mm extension rods, rotary coupling. Mounting tapped holes x 2, M5 x 0.8 x 5.5mm deep max. Optional smart sensors can be used, such as TW60 static torque wrench.
Load Cells

**Futek IHH500 Pancake Load Cell 2T Capacity**
FUT,IHH500-2T (4416) AU

The IHH500 display & LCF500-FSH02968 loadcell operate at up to 20 tonnes (50,000lb) in compression and tension. The IHH500 handheld display is a logging microcontroller which can store up to 21000 points, it is powered by a rechargeable battery which can last for up to 30 hours depending on battery condition and load. It will operate from its mains charger if needed. The system has a simple ‘Tare’ function and can display ‘Max Hold’ using a single front panel key. The lead that connects the loadcell to the display is 1.6 Meters long. The load is connected via M33x2-Threads. There are two eye bolts supplied with the system, however the eye bolt capacity is 7 ton. The software is supplied on a USB flash drive/dongle.

**Futek IHH500 Pancake Load Cell 20T Capacity**
FUT,IHH500-20T (4418) AU

The IHH500 Display & LCF500-FSH02968 loadcell operate at up to 20 tonnes (50,000lb) in compression and tension. The IHH500 hand held display is a logging microcontroller which can store up to 21,000 points, it is powered by a rechargeable battery which can last for up to 30 hours depending on battery condition and load. It will operate from its mains charger if needed. Has a simple ‘Tare’ function and can display ‘Max Hold’ using a single front panel key. The lead that connects the loadcell to the display is 1.6 Meters long. The load is connected via M33x2-Threads. There are two eye bolts supplied with the system, however the eye bolt capacity is 7 ton. The software is supplied on a USB flash drive/dongle.
Vibration Analysis

See also Noise & Sound Analysers on page 166

Bently Nevada TK3-2E Proximity Probe Test System
BEN,TK3-2E (5085) AU

Simulates shaft vibration and position for calibrating proximity probes. Uses a removable spindle micrometer assembly to check the transducer system and position monitor calibration. Features a universal probe mount that accommodates probe diameters (5 mm to 19 mm).

GCDC High Impact USB Accelerometer Data Logger X500-2
GCD,X500-2 (5055) AU

USB impact accelerometer provides 3 axis 512Hz sampling. Built in 2G micro SD card. 500g sensors.

Madgetech 5g Transient Shock Transport Logger
MAD,TSR101-EB-5 (5000) AU

Includes a 5g triaxial Accelerometer. The extended battery option gives a 30 day battery life. It also includes the magnetic mount kit. Records detail of all shocks above a user selectable threshold from 1 Hz to 1024 Hz. Has a total of 340k measurements per axis. Resolution .01g accuracy 0.2g.
ESS Gecko Ground Vibration Logger
ESS,GECKO-BLAST (5020) AU

Includes audible and visible alarm. Will operate continuously to supplied battery and solar panel. 32bit ADC 3 axis vibraphone built in. Includes GPS receiver for accurate time stamping and location information. Will record PPV exceedence data for assessing vibration of structures. Will record 1 year of data at 100sps. Data format Miniseed, industry standard for seismic data. Will timestamp alarm events with waveform and frequency data.

Profound Vibra Ground Vibration Logger
PRO,VIBRA (5023) AU/MY/SG

Designed for long-term ground vibration logging. Ideal for applications in the construction industry where safety and environmental considerations must be taken into account. Includes a geophone and remote alarm with flashing light (for loud environments), and comes bundled in an IP65 rated case. Download of data is possible without interrupting ongoing measurements and the unit is configured to meet DIN 4150 (part 2, 3 and SBR - part A and B) Vibration in buildings - effects on structures and effects on persons in buildings standards. Features: Remote monitoring possible with alarms and reports sent via email. Up to four weeks operation on 3 x D cell batteries. Velocity range 0 to 100 mm/s. Smart alarm (frequency dependent on velocity according to DIN 4150). USB interface.

Profound Vibra Plus Ground Vibration Logger
PRO,VIBRA-PLUS (5023) AU

Ideal for long term ground vibration logging. Includes a Geophone and remote alarm with flashing light. Velocity Range 0~100mm/s. 4 weeks operation on 3xD cell batteries. IP65 case. Provides dominant frequency information and has a Modem so alarm messages can be emailed and sent via SMS, and a daily report can be emailed.
Rion VA-12 Vibration Analyser
RIO, VA-12 (5040) AU/MY/SG

Includes magnetic pickup type. Stores measurements. Measures acceleration, velocity and displacement. Displays in either time or frequency domain. Display rms, peak and crest factor. Uses FFT to display power and vibration spectrum. Stores memory to SD.

TMS Portable Vibration Calibrator including Wobulator Option
TMS, 9110D-WOB (5080) AU/MY/SG

Tests accelerometers, velocity transducers and proximity probes. 7Hz to 10kHz vibrations. Maximum amplitude 20g (no load). Maximum payload 800gram. Includes report generation capability.

TR Viblog Vibration and GPS Logger
TR, VIBLOG (5060) AU

Incorporates a 3D accelerometer, a 3D gyroscope and a 10Hz GPS system. Logs 10 measurements per s. Records measurements and provides a Google Earth plot of the horizontal and vertical vibration by location. Vibration against velocity histogram also provided. Battery lasts around 24hrs. Records 10 samples per 5 and has sufficient memory.

We offer a calibration service on selected equipment. To find out more, contact us today.
Speed Measurement

**Phantom 53550 Radar Gun with Case and Tuning Fork**
PHA,53550 (5724) AU

Doppler K band (24.150GHz) stationary radar gun. Pull the trigger and the speed display appears instantly. Invisible to all radar detectors. Power requirements 10.5 to 16.5VDC, 13.5VDC nominal, 1.5A max, external source, connection via 1.8m coiled power cord with fused lighter plug. Operating environment -20 to 60 DegC, 90%RH @ 37ºC (non-condensing). Accuracy ±0.17kph. Accuracy verification tuning fork (K-Band), internal 90kph. Speed range 17 to 332kph.

**Stalker PRO II Radar Speed Gun Kit Including Large Display**
STA,PROII-KIT (5722) AU

Includes a radar gun, tripod & large 3.5 digit display with 20cm high digits. Includes 4 modes of operation; Carnival, Baseball, Tennis, and Vehicle modes. Operates at up to 1290 kph.

**Vehicle Counts PC2500 2 Channel Vehicle Volume & Speed Counter**
VEH,PC2500 (5700) AU

Automatic traffic counter for collecting vehicle traffic data on roadways. It collects data from one or two road tubes (rubber hose) stretched across the road. It can be used to collect data for traffic volume, vehicle classifications, and/or vehicle speeds.
Wide Area Communication Solutions

Discover a New Generation of PTT Radio
TR Telecom’s Wide Area Communication Solutions utilise Radio over Internet Protocol (ROIP) to deliver industry leading Push-To-Talk over Cellular (PTToC) technology. Our system enables customers to transmit and receive secure two-way communication through public and private cellular networks.

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Cost & Efficiency – Reduced infrastructure costs and ease of deployment
Security – Highest level of security features and protocols

Devices
Choose from a range of fully compatible portable, portable glass, and mobile PTToC devices to suit the needs of your communication environments.

Advanced Dispatcher Console
TR Telecom’s Advanced Dispatcher Console (ADC) is the ultimate real time visual interface solution. Now you can manage and support team communications across your network with an up-to date geographical interface using Google Maps and system features.
Air Conditioning & Air Flow

**Alnor EBT731 Balometer Electronic Balancing Tool**
ALN,EBT-731 MY/SG

Features a detachable multi-purpose digital manometer that can be used with the following test and balance tools, such as pitot, static pressure probe or a 16-point velocity matrix. Volume Range: 25 to 2,500 ft cube/min (42 to 4250 m cube/h) with capture hood. Velocity Range: 25 to 2,500 ft/min (0.125 to 12.5 m/s) with velocity matrix. Unit comes with 2ft x 2ft, 2ft x 4ft and 1ft x 4ft hoods.

**Druck DP1705 Manometer 0 to 20kPa**
DRU,DPI705 (5808) AU

Handheld digital manometer range 0 to 20kPa, accuracy 0.2%. Displays all common engineering units.
**Druck DPI705-IS Manometer 0 to 20kPa Intrinsically Safe**  
DRU,DPI705-IS (5809) AU/MY/SG  
Hand held Manometer 0 to 20kPa range. Accuracy 0.2%. Displays all common engineering units Intrinsically Safe.

**Druck DP1705 Pressure gauge 7 Bar ABS**  
DRU,DPI705-7BARA (5810) AU/MY/SG  
Handheld digital pressure gauge range 0~7bar absolute, with remote sensor, accuracy 0.1%. Displays all common engineering units.

**Testo 417 100mm Vane Anemometer**  
TES,417 (5839) AU  
Vane anemometer 100mm head. Display velocity and temperature. Has averaging function to measure ducts. 0.3~20m/sec ±(0.1m/s + 1.5% mv) Temperature 0~50°C ±(0.5°C). 50Hr battery life.

**Testo 420 Air Balancing Flow Hood System**  
TES,420 (5825) AU/MY/SG  
Includes 610x610, 360x360, 305x1220, 610 x 1220 hoods and stand and 500mm pitot tube. Measures 40~4000m 3 /hr ±3%, Temperature 0~70°C ±0.5°C -20~0°C ±0.8°C, 0~100%RH ±1.8%+3%Rdg, Differential Pressure 0~120Pa ±2%Rdg+.05Pa. Kit includes a stand and an Android or iPhone app can be downloaded for one man remote operation. Kit includes 500mm pitot tube.
**TSI VelociCalc 100mm Vane Anemometer with Volume Display**  
TSI, 8324 MY/SG  
Vane anemometer with 100mm head, supplied with handle and 900mm articulated telescopic extension. Velocity measurement range 0.25 to 30m/s ±1%; temperature measurement range 0 to 80°C ±0.5°C. Volume display range 0 to 4.36 x 10⁶ m³/h with input for circular or rectangular duct dimensions. Variable time-constant; sample statistics average, max and min; and “sweep” mode for extended continuous sampling. Internal memory for single point measurements or time-based data logging, for up to 2849 samples and 1,000 test IDs, with serial interface, cable and software for data download. Direct data acquisition [polling] from PC terminal modes. Battery powered with auto-power-off, and optional AC adaptor.

**Testo 420 Differential Pressure Instrument**  
TES, 420DP (5814) AU  
Used for volume flow measurements, pitot tube measurements and pressure measurements for air conditioning and ventilation systems. Measuring ranges: Flow velocity: 0 to 14m/s, Pressure (absolute pressure): 70 to 110 kPa, Pressure (differential pressure): -120 to +120 Pa. Resolution: Flow velocity: 0.01 m/s, Volume flow: 1 m³/h. Pressure (absolute pressure): 0.1 hPa/0.1 mbar/0.01 kPa, Pressure (differential pressure) 0.00001 hPa/0.00001 mbar/0.0001mm H₂O/0.000001 in H₂O. Storage temperature: -20 to +60°C, operating temperature: -5 to +50°C.

**TSI 8710 DP-CALC Differential Micro-Manometer**  
TSI, 8710 (5813) AU  
Micro-manometer for static or differential pressure, velocity, volumetric flow, atmospheric pressure and temperature. With statistical analysis, density correction, K factor and automatic actual/standard flow calculation. Differential pressure range ±3735Pa. Velocity display to 41m/s (range depends on probe). Supplied with static tip, pitot tube, velocity matrix and temperature probe. Datalogging (1,000 point) with RS232C interface and software. Rechargeable cells or AC adaptor.
TSI 9535 Anemometer with Logging Capability
TSI,9535 (5845) AU
Includes data captured download software and USB cable. Logs velocity and temperature. Will calculate flow rates. 0 to 30m/s Accuracy 3% of reading or ±0.015m/sec whichever is greater. Temperature range -18 to 93°C ±0.3°C. Runs 4 x AA batteries.

TSI TA465A Multi-Function Ventilation Meter
TSI,TA465A MY/SG
Portable, hand held, Multi-Function Ventilation Test Instruments. It comes with differential pressure. It also comes with the 966 articulate probe which measures air velocity, temperature and humidity. Calculations include air flow, heat flow, turbulence, wet bulb and dew point temperature. Velocity Measurement Range: 0 to 9,999 ft/min (0 to 50 m/s) Accuracy: ±3% of reading or ±3 ft/min (±0.015 m/s) Resolution: 1 ft/min (0.01 m/s) Temperature Measurement Range: 14 to 140°F (-10 to 60°C) Accuracy: ±0.5°F (±0.3°C) Resolution: 0.1°F (0.1°C) Humidity Measurement Range: 0 to 95% RH Accuracy: ±3% RH Resolution: 0.1% RH.

TSI 9565A VelociCalc Air Conditioning Efficiency Meter
TSI,9565A (5849) AU
Efficiency measurement system for HVAC and related work, with hot wire anemometer, static and differential pressure, temperature and humidity measurement with heat flow efficiency calculation. Velocity (hot wire) 0 to 50m/s, accuracy ±3%. Temperature -10 to 60°C, accuracy ±0.3. Wet bulb temperature 5 to 60°C. Relative humidity 0~95%RH, accuracy ±3%. Dewpoint -15 to 49°C. Static/differential pressure -3,735 to 3,735Pa, accuracy ±1%. Battery operated. USB & Bluetooth download.
Air Conditioner Valve Balancing

→ See also Data Loggers: Testo Temperature & Humidity Loggers on pages 115-116

Tour & Anderson Scope Balancing Meter 1000kpa
TA,SCOPE (5801) AU

Digital flow balancing instrument with color display. For cooling water valve balancing in air conditioning plants and similar applications. Allows for balancing of all hydronic valve types. Differential pressure range -0.5 to 20.5m water gauge at a total pressure of less than 200m. Resolution 0.001m. Flow resolution 0.001l/s. Battery operated.

Concrete Testing Equipment

→ See also Endoscopes, Borescopes & Visual Inspection on page 90

Elcometer 331-B Basic Cover Meter
ELC,331-B (4924) AU

Displays depth and orientation of the reo bars. Deep search head supplied. 40mm diameter bar depth 35 to 180mm depth, 8mm diameter bar depth 25 to 160mm depth. Rechargeable battery allows 32h of continuous operation (20h with backlight).

Follow TechRentals on LinkedIn and stay up-to-date on Test and Measurement news, application notes, and case studies.
Elcometer 331-SH Cover Meter with Half Cell Measurement
ELC,331-SH (4919) AU
Displays the depth and orientation of the reo bars. Standard search head. 40mm diameter bar depth 15 to 95mm. 8mm diameter bard depth 8 to 70mm. Rechargeable battery allows 32h of continuous operation (20h with backlight). Autosizing of bars or orthogonal measuring of bar sizes. Internal storage of readings of depth of cover in batches which can be downloaded to PC with supplied software. XP and Vista supported.

Hilti PS200 Ferroscan System
HIL,PS200 FERROSCAN (4920) AU/MY/SG
A portable, quick, and easy-to-use instrument for detecting rebar and other ferrous objects in concrete structures. Provides an accurate on-site rebar location, depth, and diameter using its PS 200M monitor. 2D scans shown on the monitor provide the user with a detailed layout of underlying reinforcement. Scans can be evaluated either on the monitor, or transferred to a PC or laptop for further evaluation and report generation. Wireless operation and integrated LCD display makes setting up the scan easy, whilst the Ferrosan enables fast data download via infrared beam from scanner to monitor. Features: Scans large areas quickly. Performs single scans of up to 30m in length. Simple, one person operation. Professional evaluation and documentation software provided with the instrument.

Learning to operate unfamiliar equipment costs you time and can lead to errors. Save time and reduce your real costs. Discover our Configuration and Download solutions on page 68
**Hilti PS250 Ferroscan System**
HIL,PS250 (4921) AU

Portable, quick and easy to use for detecting rebar and other ferrous objects in concrete structures. Provides accurate on-site rebar location, depth and diameter with the PSA100 monitor. Scans can be evaluated on the monitor or transferred to a PC or laptop for further evaluation and report generation. Portable wireless operation, easy integrated LCD display makes setting up the scan easy while providing information over the scan process. Fast data download via infra red beam from scanner to monitor. Convenient Scanner stores up to 9 image scans and 30m of Quickscans.

**Proceq GPR-Live Concrete Ground Penetrating Radar**
PRO,GPR-LIVE(4923) AU

Portable ground penetrating radar (GPR) for concrete testing. Conducts wide frequency spectrum measurement with Line and Area scan modes. Features a compact, wireless probe with standard rechargeable AA batteries. Proceq GPR Live Basic app supplied with iPad for easy analysis of data on-site.

**Proceq Resistivity Meter**
PRO,RESIPOD (4925) AU

Can determine the likelihood of corrosion and the corrosion rate in concrete. 0 to 1,000kΩ measurement range. USB interface, USB charging. Waterproof.

**Proceq Profoscope Rebar Locator & Cover Meter**
PRO,PROFOSCOPE (4926) AU

Rebar locator and covermeter. Short range measurements to 95mm. +/-3mm accuracy. Long range 185mm accuracy +/-4mm. The unit will determine the position of the rebars, the mid point between rebars, Concrete cover, estimation of bar diameter & the orientation of the rebar. Powered by 2 x AA batteries. Battery life 15h with backlight 55h without.
Proceq PL-200PE Ultrasonic Concrete Test System
PRO,PL-200PE (4927) AU
Can determine depth of perpendicular cracks, slab thickness from a single side and it can also locate and measure voids, pipes, cracks parallel to the surface. It will estimate the ‘internal’ compressive strength of the concrete.

Proceq SilverSchmidt UN Concrete Test Hammer
PRO,SIL-UN (4928) AU
Requires no corrections for angle of test, simple one button operation, datalogging capability with USB download with detailed reporting capability. Impact Energy 2.207Nm. Compressive strength range 10~170MPa. Battery Life >1000 Impacts before recharging is required.

Protimeter Moisture Measurement System
PRO,MMS-PLUS (4955) AU
Moisture meter for detection of moisture in non conductive solid materials such as wood and masonry. Two measurement modes, search for qualitative measurements and measure mode for precise and localised moisture content. Supplied with pin type probes, deep wall probes, hygrometer probe and extension cord for RH, ambient temperature or dew point temperature. Hygrostick probe supplied for surface temperature measurement. Logging software and RS232 computer interface supplied.

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Protimeter Moisture Measurement System

PRO,MMS2 (4956) AU

Moisture meter for detection of moisture in non conductive solid materials such as wood and masonry. Two measurement modes, search for qualitative measurements and measure mode for precise and localised moisture content. Supplied with pin type probes, deep wall probes, hygrometer probe and extension cord, for RH, ambient temperature or dew point temperature. Hygrostick probe supplied for surface temperature measurement. Also includes IR measurement capability. Logging software and USB interface computer interface supplied.

Underground Services Location

See also Cable & Pipe Tracers and Fault Locators on page 54

C.Scope DXL4 and SGV4 Cable and Pipe Locator

CSC,DXL4-SGV4 (3719) AU

Cable and pipe avoidance and location tool with depth measurement. Simultaneous dual 33+131kHz frequency will assist in the detection of smaller buried pipes and cables such as telecoms, cast iron and street lighting spurs. 4 available power levels up to 1 watt and depth detection approximately 3 meters (depending on soil type and operating mode). Four detection modes; Power, Radio, Generator and Allscan. Features a Dynamic Swing Sensor to aid in cable and pipe location.

We offer a calibration service on selected equipment. To find out more, contact us today.
C.Scope DXL2 & SGV2 Cable and Pipe Locator
CSC,DXL2-SGV2 (3720) AU

Cable and pipe avoidance and location tool with depth measurement. Simultaneous dual 33+131kHz frequency will assist in the detection of smaller buried pipes and cables such as telecoms, cast iron and street lighting spurs. 4 level power adjust up to 1W and depth detection to 3m (depending on soil type). Four detection modes; Power, Radio, Generator and Allscan. Features a Dynamic Swing Sensor to aid in cable and pipe location.

Radiodetection RD7100(PL) Cable & Pipe Locator
RAD,RD7100  (3721) AU

Designed for use in dense infrastructures where signals from high voltage equipment and cables can be confusing or overwhelming. Dynamic Overload Protection reduces the effect of interference, while Power Filters can be used to establish if a single large power signal comes from one source or from the presence of multiple cables. Other features include Guidance Mode, StrikeAlert and is supplied with the Tx-5 transmitter - peak mode.

Vivax VLOCPRO2 Pipe & Cable Location System
VIV,VLOCPRO2 MY/SG

Pipe and cable locator with intuitive menu system, colour display, peak, null, left/right and orientation (compass) response to support your preference. Configured with 6 location frequencies, power and radio modes. 10 W transmitter can apply the location signal by connection, induction and signal clamp. Depth detection up to 6 to 9 m in broad-peak mode.
Utility Leak Detection

**UE Systems UP3000 Digital Ultrasonic Leak Detector**
UES,UP3000 (3810) AU/MY/SG
Displays dB levels. Readings can be stored and downloaded. A tone generator is supplied together with a stethoscope probe and a rubber focusing probe. Interface software to download readings is also supplied.

**UE System UP9000 Digital Ultrasonic Leak Detector**
UES,UP9000 MY/SG
A complete digital ultrasonic inspection and information storage/retrieval system. With the acoustic isolating headphones and frequency tuning, background noises such as machinery and plant are filtered out making it easier to pinpoint any leaks. The range of quickly interchangeable modules as well as the balanced pistol-grip design make the Ultraprobe 9000 useable in a wide variety of situations and perfect for many different tasks.

**Watch how-to videos using QR Codes**
To complement our highly qualified technical support team, we are creating a range of informative how-to videos for equipment in our rental inventory. If you see a QR code on your equipment, simply scan the code with a QR mobile phone app to watch the relevant video. As we are constantly adding videos and QR codes to our fleet, be sure to check our YouTube channel for all the available videos, and do not hesitate to contact our team if you have any questions.
Pipeline & Cavity Inspection

Aqua Snakeeye Video Inspection System
AQU,SNAKEEYE3 (5145) AU

Handheld video system. For remote inspection work. It is very light and compact. Includes a 12.7cm TFT-LCD display and 3cm diameter camera including illumination. Various adapters are supplied for mounting the camera to:

a) your hand,
b) a 45.7cm arm with 90 degree articulation,
c) a 9 m extension cable or
d) an arm which extends from 1.6 to 3.6m.

Includes memory card and will save images to card.

Camtek Cavity/Bore Hole Pan Tilt Camera
CAM,CAMERA PT (5127) AU

Complete with a Sony HD image sensor housed in a waterproof casing (8 bar, 80m) with 360/180 degree pan tilt capability and 120 degree FOV with LED lighting. Diameter of 50mm, length of 150mm and is attached to 100 meter soft cable specifically designed for vertical deployment. Features include a 20cm colour LCD monitor with video output, file playback, video capture (MEG4) and can be powered via mains or on board battery. The unit also has a text overlay function with built in keyboard. The GE,EVEREST CA-ZOOM to operate.

GE Everest PTZ-70 Camera Head
GE,EVEREST PTZ-70 (5130) AU

70mm in diameter (fits through a 76mm opening) and features 10x optical zoom and 4x digital zoom for a total of 40x zoom. Eight 5-watt LED lights with variable intensity control, 360° continuous pan direction and 270° tilt capability. Waterproof to 45m or 4.5 bar (65 psi). Requires the GE,EVEREST CA-ZOOM to operate.
GE Everest Ca-Zoom
GE,EVEREST CA-ZOOM (5131) AU
Ca-Zoom and hand-held controller is a portable, case-mounted, camera controller with real-time, multitasking software operating system which supports file storage on 64MB of internal flash memory and CompactFlash removable storage media. Provides for integrated image capture and full motion video recording capabilities, on-board file manager and annotation. Includes connectors for camera, handheld controller, video input/output, USB streaming, and keyboard for text generation. Supplied with 30m camera head cable and extension pole 1.8 to 3.6m. Camera heads must be chosen separately, see model GE,EVEREST PT-70 and GE,EVEREST PTZ-140.

GE Everest PTZ-140 Camera Head
GE,EVEREST PTZ-140 (5129) AU
140mm diameter colour camera module (fits through a 140mm opening) and features a 360° pan, 234° tilt, 36x optical and 12x digital zoom, high-intensity lighting and waterproof packaging to 45m or 4.5 bar (65 psi). Requires the GE,EVEREST CA-ZOOM to operate.

Vivax vCam-5 Pipeline Camera Inspection System 60 meters
VIV,VCAM5-60M (5134) AU
Vivax 60 meter pipeline inspection system with self-levelling camera D34 (without camera skid diameter is 34mm, with skid it’s 44mm). The push rod has a 512Hz/640Hz sonde which can be located by the ‘VM-540 Camera and Sonde Locator’ supplied. The push rod can also become a Tracer Rod with the connection of a utility locator transmitter (not supplied) to energize the entire rod length. Records video(AVI) and still images direct to HDD, USB or SD card. The vCam-5 has a 4x digital zoom and includes a full text writer with the ability to change font and background colors, internal/external voice-over, built-in rechargeable battery, camera test port, and Wi-Fi interface. Camera submersion depth up to 11 bar/110m.
**Wohler VIS340 Service Camera Visual Inspection System 30m**

WOH,VIS340-PT (5143) AU
WOH,VIS340 MY/SG

Compact colour video inspection system with 26mm forward facing and 40mm Pan Tilt colour cameras. Viewing angle 120 degree, waterproof according to IP68(3 bar-30m) and IP67(2 bar-20m) respectively. Bright white LEDs on 30m of flexible push rod with metric markings. Battery powered 7” high resolution colour screen with removable monitor and SD video recording. Applications incl damage analysis in water / drainage / sewer pipes, inspection of hollow spaces, ventilation, machines, control panels, exhaust systems and production surveillance.

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**Wohler VIS-350 Service Camera Visual Inspection System 30m**

WOH,VIS350-PT (5142) AU/MY/SG

30 meter compact colour video inspection system with 26mm forward facing and 40mm Pan/Tilt colour cameras. Waterproof according to IP 68 and IP 67 respectively. Adjustable illumination, camera orientation/gravity and degree of inclination display, 8.9kHz sonde in each camera detectable with the L-200 locator down to approximately 1.5 meters (depending on soil type). Memory storage 1 hr/Gb. Applications include damage analysis in water/drainage/sewer pipes, inspection of hollow spaces, ventilation, machines, control panels, exhaust systems and production surveillance.
Sensor Zone Proximity Warning System

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The Sensor Zone Proximity Warning System reduces the risk of on-site collisions and promotes a stronger safety culture. The system is designed to increase the safety and efficiency of operations by alerting drivers when pedestrians are within an unsafe distance to a vehicle.

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✓ Safety zone detection range of 2m to 10m
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✓ Mute button enables drivers to communicate with pedestrians

SYSTEM INCLUDES:

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- Sensor Unit
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Mapping

See also Light Meters, UVA/B/C Measurement on page 174

ikeGPS Precision GPS and Laser Distance and Camera System
IKE,300PRO (5301) AU

Integrated precision GPS (1.5m), laser based range finder (300m), Precision compass, precision inclinometer and camera system. Used to geolocate and document. It can be used to remotely dimension cable and buildings, etc.
Laser Levels

Topcon RL-H5A Construction Laser
TOP,RL-H5A (5310) AU

This high quality Topcon rotating laser is an easy-to-use, long-range high accuracy laser with a long battery life and all-weather dependability. It is ideal for flat and single grade applications. With electronic self-levelling, you press the power button and go right to work in seconds. If the RL-H5A gets disturbed on the job it re-levels itself automatically. A tripod and staff are included if you need.

Topcon RL-SV2S Dual Grade Laser
TOP,RL-SV2S (5311) AU

This high quality dual grade laser is ideal for grading carparks and trenches with 1 or 2 slope directions. Designed for a wide range of tasks, the RL-SV2S can be used for horizontal, sloping and vertical laser applications. Slopes up to 5% can be used in either the X or Y axis. Turn it on its side and use it for alignment and layout tasks as well! With an operating range of more than 800 metres diameter the Topcon RL-SV2S will cover every task.

Topcon TP-L5BG Pipe Laser
TOP,TP-L5BG (5312) AU

Topcon’s TP-L5 alignment laser offers a combination of features and technology that are proven to meet the demands of contractors more than any other alignment laser on the market. With Topcon’s GreenBeam technology, it gives you a four times brighter beam than conventional lasers! Place the TP-LS inside or on top of the pipe for easy and accurate laying of pipe on the grade of your choice.
**GNSS Systems**

**Leica 18 T GNSS Rover with CS20 Controller**  
LEI,GS18 AU  
You no longer need to hold the pole vertical to level the bubble with the new Leica GS18 T, the fastest and easiest to-use GNSS smart antenna and RTK rover. Measure hard to reach points such as pipe inverts, building corners, posts etc. Survey and Stakeout with far greater speed than ever before for up to 20% quicker operation.

**Trimble R10 GNSS with TSC7 Controller**  
TRI,R10_TSC7 (5343) AU  
Collect more accurate data faster and easier - no matter what the surveying job or the environment, with the Trimble R10 GPS / GNSS System. Trimble’s xFill allows you to continue working without interruption during short drop outs of mobile phone or radio links. The system includes Trimble’s new TSC7 Controller with a large 7 inch screen and Trimble Access software.

**Topcon HiPerSR Network GPS / GNSS Rover**  
TOP,HIPERSR (5344) AU  
Topcon’s HiPer SR receiver is a lightweight and completely integrated GNSS receiver (GPS plus Glonass) for real-time cm level accuracy anywhere within a GPS network where there is mobile signal. It is our most lightweight, economical and easy to use network rover and ideal for construction or simple measurement or stakeout positioning tasks.
Robotic Total Stations

**Trimble S7 3” Robotic with TSC7 Controller**  
TRI,S7_3SEC_TSC7 (5332) AU  
The Trimble S7 Robotic Total Station combines scanning (15 pts per sec), imaging and surveying into one powerful solution. Create 3D models, high accuracy visual site documentation, point clouds, and more using the Trimble S7.

**Leica VIVA TS16 P Robotic Total Station with CS20 Controller**  
LEI,TS16 AU  
The Leica TS16 is the benchmark for surveying accuracy. Whether you want to stake-out an object on a construction site, need accurate measurements of a tunnel or a bridge, or survey a parcel of land, you need reliable and precise data. Automatically adjusting to any environmental conditions, the Leica Viva TS16 locks onto your, and only your, target.

Digital Levels

**Leica LS10 Digital Level**  
LEI,LS10 AU  
Leica LS10 digital level alleviates demanding levelling tasks on any site. Automated functions and industry-leading 0.2mm accuracy allow users to easily demonstrate their measuring skills while effectively completing any project.
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- Noise & Sound Analysers
- Radiation Monitoring & Protection
- Water Quality, pH Meters & Electrochem
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Radiation Monitoring & Protection
Water Quality, pH Meters & Eletrochem
Light Meters, UVA/B/C Measurement
Weather Stations

→ See also Combustion, Flue & Industrial/Gas Analysers on page 123

**Aeroqual Logging Ozone Monitor - Indoor Air Quality Use**

AER,500L (5958) AU/MY/SG

Portable ozone monitor fitted with low concentration-range detection head. Operating range 0–0.5ppm ozone with display in ppm or mg/m³. Gas sensitive semiconductor (GSS) sensor for accurate low-level measurements, T90 response approximately 100s. Operation from mains power supply or battery pack (4h operation). Internal data logging for 8000 points with software and cable for download to PC, or data logging direct to PC. Application for indoor air quality measurements.
**Geotech Landfill Gas ExMonitor**  
GEO,GEM5000 (5940) AU

Measures CH₄, CO₂, O₂, CO & H₂S. Designed for spot measurements. Intrinsically safe and has a built in GPS system. It can also measure flow rates from bore holes and perform landfill gas energy calculations.

**Ion Science Gascheck Helium, Butane & SF6 Detector**  
ION,GASCHECKG3 (5907) AU/MY/SG

Microthermal conductivity gas detector. Reading in cc/s, g/yr, mg/m³ or ppm. Detects most gases however particularly suited to ammonia, argon, butane, helium, hydrogen & SF6. Calibrated against Helium. Battery Life 40h. Sensitivity (cc/s) He 1x10⁻⁵, CH₄ 5x10⁻⁵, R12 5x10⁻⁵, Ar 1x10⁻⁴. Accuracy 5% of displayed reading + 1 digit. Response 1s. Flow rate 2cc/min. Operating -20 to 60 °C. Data logging, stores 10 readings.

**PPM HTV-M Formaldehyde Meter**  
PPM,HTV-M MY/SG

Portable Formaldehyde meter for measuring airborne formaldehyde in the workplace. Electrochemical sensor, with internal pump for rapid response. Operating range 0 to 10 ppm with readout on 4 digit LCD display. Kit includes field calibration standard. Operates from 9V alkaline battery or dc adapter if used as a continuous data logger. The mini USB allows data to be downloaded to PC using the htV-m software.

**RAE Systems PPB PID VOC**  
RAE,PPB3000 (5928) AU

Handheld volatile organic compound (VOC) gas monitor. Its Photoionization Detector’s (PID) extended range of 1 ppb to 10,000 ppm makes it an ideal instrument for applications from HazMat/Homeland Security, industrial hygiene, to Indoor Air Quality and military applications.
RH Systems 973-SF6 Analyser
RH,973-SF6 (5910) AU

Measures the purity of SF6 gas and the level of humidity in gas insulated switchgear systems. Uses a gas recovery system that stores sampled gas during the measurement process, which can be pumped back into the original compartment after analysis. Will measure humidity and SF6 volume (by %) both independently and simultaneously. Measurement data can be easily transferred to a PC for storage and analysis, and system accuracy can be checked at any time using the built-in Ice Test calibration function.

Wika GA-15 SF6 Leak Detector
WIK,GA-15 (5909) AU

A fast response SF6 leak detector which will detect concentrations of SF6 down to 3ppmv. Only detects SF6 and is unaffected by moisture and wind.

Personal Gas & Vapour Monitors

Alcolizer Wall Mount Alcohol (BAC) Breath Tester
ALC,WM3 (5980) AU

Wall mount Alcohol Breath Tester (BAC or breathalyzer). Automatic recalibration every 24hrs. Very simple to use. Australian Standards Certified - AS 3547 Type III Low cost maintenance and consumables (standard drinking straws).
**BW Bump & Logging Download for BW,MICROCLIP**

BW,BUMP (5938) AU/MY/SG

Automatic calibration testing and data management system for the BW microclip gas detection equipment. Carries out fully automatic “hands-free” calibration and functional bump test. It also enables data collected during operation of the BW microclip to be downloaded.

**BW Gas Alert Micro Clip Confined Space 4 Gas Detector**

BW,MICROCLIP (5937) AU/MY/SG

Continuous LCD shows real time gas concentrations. Simple 1 button operation. Measures: H₂S 0 to 100ppm (1ppm resolution), CO 0 to 500ppm (1ppm resolution), O₂ 0 to 30% (0.1% resolution) and Combustible gases 0 to 100% LEL (1% resolution), 0 to 5% v/v (0.1% resolution). Alarms: visual, vibrating and audible (95dB), Low, High, STEL, TWA and OL (over limit). Lithium polymer battery life 12hrs (typical) recharge time <3hrs.

**BW Sampling Pump for BW,MICROCLIP**

BW,GA-SPAK (5939) AU

Motorised sampling pump that provides 300ml/min for remote sampling up to 18m away. Runs continuously for 30hrs on batteries. Includes 3m sampling hose. Includes built in water traps and particulate filter.

**BW GasAlertExtreme Single Gas Ammonia NH3 Detector**

BW,GA-NH3-KIT (5935) AU

Single gas sensor for NH₃ (Ammonia). There are two in the kit including a bump station with 50ppm gas.
**BW GasAlertMax XT II Confined Space Monitor includes Pump**

BW,GASALERTMAX (5936) AU

Includes built-in sampling pump. Will sample at upto 20m. Simple 1 button operation. Measures:- H2S 0 to 200ppm (0.1ppm resolution), CO 0 to 1000ppm (1ppm resolution), O2 0 to 30% (0.1% resolution) and combustible gases 0 to 100% LEL (1% resolution Methane), 0 to 5% v/v (0.1% resolution). Alarms: visual, vibrating and audible (95dB), Low, High, STEL, TWA and OL (over limit). Lithium polymer battery life 13hrs (typical) recharge time 6hrs.

**RKI Eagle2 Gas Detector, Confined Space plus Photoionisation (PID)**

RKI,EAGLE2 (5930) AU


**Airborne Dust & Particle Meters**

**TSI 8530 Aerosol Monitor and Logger**

TSI,8530 (5873) AU/MY/SG

Portable dust and particle monitor, light scatter photometer. Measure concentrations corresponding to PM1, PM2.5 & PM10. Aerosol concentrations 0.001 to 150mg/m³. Used for industrial/occupational hygiene surveys, indoor air quality monitoring, outdoor environmental monitoring, baseline trending and screening, etc.
**TSI Environmental Enclosure for the TSI,8530 Dusttrak II**

TSI,8530-ENC-S (5876) AU

Enclosure to suit the TSI,8530. Includes two additional batteries and charger. Includes waterproof enclosure.

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**Pinssar DPM Reader**

PAN,DPM-READER (5872) AU

The Pinssar DPM reader is a continuous online diesel particulate monitor. Calibrated for diesel particulates <800nm. This system is a low maintenance monitor designed for long term particulate logging. Concentration range 0~2,500ug/m3. IP64 rated.

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**TSI 8533 Aerosol Monitor and Logger**

TSI,8533 (5870) AU

Portable dust and particle monitor, light scatter photometer. Measure concentrations corresponding to PM1, PM2.5 and PM10. Aerosol concentrations .001 to 150mg/m³. Used for industrial/occupational hygiene surveys, indoor air quality monitoring, outdoor environmental monitoring, baseline trending and screening etc. Will size particles in three sizes PM1, PM2.5 and PM10.

---

**TSI 9306 Handheld Airborne Particle Counter**

TSI,9306 MY/SG

Particle size range 0.3 to 25 micron with 6 channel size simultaneous measurement at 0.3, 0.5, 1.0, 3.0, 5.0, and 10.0 micron. 3.6” colour touch screen interface. Suitable for particle contamination monitoring. Generates Pass/Fail reports for ISO 14644-1, EU GMP Annex 1, and FS209E. Includes PC software TrakPro™ Lite Secure and USB cable. Li-ion battery for 6h operation.
Air Quality & Heat Stress

Fluke 975 AirMeter Indoor Air Quality Monitor
FLU,975 MY/SG
Indoor Air Quality (IAQ) monitoring, measure temperature, humidity, CO₂ and CO concentrations. Humidity range 10 to 90%, temperature range -20 to 50°C. CO measurement range 0 to 500 ppm and CO₂ range 0 to 5000 ppm. Dew point temperature and wet bulb temperature is calculated. Data logging for 25,000 data point with 1min to 1h interval. Comes with USB cable for download interface and software viewing and reporting. Battery operated.

Testo 635-2 Humidity, Temperature & Dewpoint Meter
TES,635-2 (5859) AU
Portable humidity meter fitted with robust stainless probe with sintered filter-cap for general or duct measurements to 120°C, and fast-action K-type surface temperature probe. Displays relative humidity, absolute humidity, dew point, degree of humidity, enthalpy, temperature, and differential temperature (dewpoint~surface). Operating range 2~98%RH (±2%). Air temperature -20~120°C (±0.2/0.5). Surface temperature -60~300°C (±0.1). Internal memory for 10,000 values with USB interface, cable and software for download and presentation. Battery operated.

Testo 635-2 Temperature & Dewpoint Meter for Compressed Air Systems
TES,635-2-HPD (5912) AU/MY/SG
Portable humidity meter fitted with 0636 9836 HPD pressure dewpoint probe for measurements in compressed air systems, -60 to +50°C tpd, 0~100%RH. Internal memory for 10,000 values with USB interface, cable and software for download and presentation. Battery operated.
**TSI Q-TRAK IAQ Monitor CO₂, CO Temperature & Humidity Logger**

TSI, 7565 (5861) AU

Measures CO₂ 0 to 5,000ppm ±3%, temperature 0 to 60°C ±0.6°C, humidity 0 to 95% ±3%, CO 0 to 500ppm ±3% and barometric pressure 517.15 to 930.87mmHg ±2%. Calculates dew point, wet bulb and percent outside air. Displays 5 measurements simultaneously. User selectable logging interval and start stop times. Stores 39 days data at 1min intervals 56,035 data points. This unit also has external thermocouple measurements.

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**Moisture & Humidity Meters**

**GE Panametrics PM880 Industrial Moisture Analyser**

PAN, PM880 (5911) AU

Intrinsically safe moisture analyser for compressed air systems, non-corrosive gases & hydrocarbons such as natural gas (IS certification to ATEX and CSA). Displays dew point, moisture concentration, pressure & temperature. Dew point calibrated measurement range -80 to 20°C with data to -110°C. Pressure range 7 to 69 Bar limited by sensor, gauge and safety-valve (operating range from 5µHg). Temperature range -30 to 70°C. Gas flow operating range from static to 10,000cm/s velocity. Supplied with compact sample system with gauge, safety-valve, sampling valves and fittings (¼” Swagelok). Data logging of up to 100K moisture points, with infrared port and software for download. Battery powered only (15-24h operation) with second battery and charger (note charger is not IS).
Noise & Sound Analysers

See also Vibration Analysers on page 131

ARL NGARA Environmental Noise Logger
ARL,NGARA (5690) AU

An environmental noise logger that offers full measurement flexibility. Can be configured to record all sound continuously so noise data can be post-processed. Also capable of providing logged data, WAV data, and alarm/triggered details. Can be set to wake up automatically, and either begin a new logging session or power on its network interface. The on-board LCD and push-button interface makes for simple control and configuration of the logger.

Features: Type 1 microphone provided, 20 to 120dB measurement range, A and C frequency response and capable of storing raw audio data to hard disk.

NTI XL2+M2210 Sound Level Meter
NTI,XL2+M2210 MY/SG

Sound Level Meter comes with Class 1 microphone, acoustical analyser options and audio analyser options. Applications in sound installations, live sound, studio, broadcast and environmental noise measurements. Logging all data or subsets in selectable intervals. Recording of wav-files (ADPCM), a new wav-file starts every 12 hours (max. wav-file size 512 MB). Real time analyzer with frequency resolution: 1/3 octave, 1/1 octave, wide band and frequency range: 6.3Hz to 20kHz. Frequency weighting: A, C, Z. USB interface with PC analysis tool.
Rion NL52EX SLM with NX42RT Octave and 1/3 Analyser
RIO,NL52EX-NX42RT (5670) AU/MY/SG

Type 1 Sound Level Meter, including the Octave and 1/3 Octave measurement option NX42RT. Can be used to check NC levels for compliance checking. Includes a NATA calibrated calibrator. All data is saved to an SD card.

Radiation Monitoring & Protection

See also E & H Field Strength Meteres on page 27

Fluke 481 Radiation Survey Meter
FLU,481 (5580) AU

Provides exposure measurements in mR/hr to 50R/h (0.5Sv/hr). Detects skin-dose, deep-dose and X-ray radiation. Measures dose & dose rate.

HPI Cypher 5000 Digital Radiation Alert Monitor
HPI,CYPHER5000 (5583) AU

Alpha, Beta, Gamma and X-ray radiation monitor. Meter, LED, audible indication and detachable probe. Range 0.1 to 1,000,000 CPM; Accuracy 1% or 2 digits.

New items are being added to the inventory constantly, so if you can’t see what you’re looking for, please call us on 1800 632 652.
Narda RadMan Personal RF Field Radiation Monitor
NAR,RADMAN (5557) AU/MY/SG

Personal occupational limit monitor and leakage detector for monitoring RF signals in mobile, telecom, broadcast and industrial applications. Frequency range H field 27MHz to 1GHz; E field 1MHz to 40GHz.

Water Quality, pH Meters & Electrochem

DKK TOA RC-24P Portable Residual Chlorine Meter
DKK,RC-31P-DP (6046) AU

Portable, direct-reading residual chlorine meter for water analysis. Range 0~2mg/L [ppm]. Reagent-free measurement with electrode, 3m cable, float and sample container for in-situ or grab-sampling. Compatible with direct chlorination, hypochlorite or dichloroisocyanurate dosing. Calibration data stored in electrode with correlation with DPD methods. Waterproof to IP67. ISO validation functions, storage of 300 measurements and RS232 printer output. Battery operated.

ISCO 6700 Series Water Sampler
ISCO,6712 (6057) AU

Advanced water sampler for fully programmed collection. Samples are collected in up to 24 disposable plastic containers based on time, flow, and/or parameter set points. Fitted with NEMA 4X,6 (IP67) sealed controller featuring an exclusive, built-in pump.
TPS 90FL-T Multi-function Water Quality Meter & Logger
TPS,90FL-T (6028) AU

Field meter and logger for water quality measurements. Configured with independent probes for pH, conductivity/salinity (TDS)/temperature, dissolved oxygen (DO) and turbidity. Cables 5m with probe holder and safety harness. LCD display readout with simultaneous display of all measurements. Manual, “notepad” storage or automated data logging for up to 1,808 sets of readings by time and date. RS232C interface, with WinTPS software included. Supplied with rechargeable battery, and clip-lead for operation from a 12V source such as a car battery.

The TPS 90FL-T Multi-function Water Quality Meter & Logger is the piece of equipment used in the Site Monitoring Kit.

If you have any technical problems or need assistance evaluating your work site, call our friendly technical team today on 1800 632 652.

TPS WP-80 pH and Temperature Meter for Testing Meat
TPS,WP-80M (6002) AU

Portable hand-held meter for pH, mV and temperature. The instrument is capable of applying Bendalls equation to the pH reading for Meat Standards Australia grading requirements. Supplied with combination pH electrode and separate temperature sensor on 1m cables. Operating ranges 0~14pH and -10~120ºC [automatic sensor recognition with auto pH correction 0~100ºC]. Case water resistant to IP67, connectors to IP65. Menu driven, with alphanumeric display. Auto storage of time and date of last calibration for GLP. Memory for 2400 readings of data, time and date, for Notepad results collection, or for AutoLog with logging intervals between 1s and 90h. Fitted with RS232C interface and supplied with download-software, charger and solutions. Rechargeable NiMH battery gives up to 50h operation.
Light Meters, UVA/B/C Measurement

**Hagner EC1-X Lux Meter NATA Calibrated**

HAG,EC1-X (5600) AU

Digital illuminance meter with NATA certification. Measures from 0.1~200,000 lux. Has a remote measurement head on 2m cord. Accuracy +/- 3% of range +/- last digit. Battery Operated.

**Hioki FT3424 Digital Lux Meter**

HI0,FT3424 MY/SG

Digital Lux Meter with manual and auto ranging capability. 4 digit LCD (“2000”) for 5 measuring ranges: 20/200/2,000 lux in 1-count steps, 20,000 lux in 10-count steps, and 200,000 lux in 100-count steps with accuracy of +/-3% of reading. Response time in autorange mode is 5s, and in manual mode it is 2s. Features autozero, hold, and backlight functions with delay for taking readings in low light. Memory function with 99 storage can be downloaded to a PC via USB connection. Analogue output - 2V/range FS. Connection cable to allow separation of sensor unit and meter provided. Battery powered.

**ILI 1400ABC Radiometer for UV Measurements**

ILI,1400ABC (5614) MY/SG

International Light model 1400 radiometer with backlit LCD display, autozero and autoranging. Continuous reading with hold function, or integrated “dose” measurement up to 24h. Smart detectors with storage of units and detector-calibration data. Analogue recorder output. Mains adaptor or battery power. Supplied with three sensors: UV actinic hazard (UVC with B & A components matched to OSHA requirements), range 2.50e-7 to 2.50e-3 W/cm² eff. UVB + A (total “solar” radiation), range 1.16e-7 to 4.07e-1 W/cm². UVB, range 1.54e-6 to 1.54e-2 W/cm².
Topcon IM-2D Lux Meter NATA Calibrated
TOP,IM-2D-NATA (5606) AU

Digital illuminance meter with NATA certification. Measuring range from 0.1~19,999lx. Accuracy 5%, ±1 digit. Autoranging with silicon sensor. Battery operated.

Weather Stations

Weather Station based on the Vaisala WXT520
DEC,ATMOS41-KIT (5885) AU

Completely solid state measurement of rainfall to 0.1mm, rain intensity 0.1mm/hr, rainfall duration, hail duration and intensity, barometric pressure 600 to 1100hPa, relative humidity 0 to 100%, wind speed 0 to 60m/s, wind direction and temperature -52°C to 60°C. The instrument is logged using a Datataker DT80M and at a press of a button the data can be downloaded to a memory stick. Daily summary reports are email once per day.

Watch how-to videos using QR Codes

To complement our highly qualified technical support team, we are creating a range of informative how-to videos for equipment in our rental inventory. If you see a QR code on your equipment, simply scan the code with a QR mobile phone app to watch the relevant video. As we are constantly adding videos and QR codes to our fleet, be sure to check our YouTube channel for all the available videos, and do not hesitate to contact our team if you have any questions.
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TechRentals vast fleet of equipment offers a range of solutions to many markets. These include the Aviation, HVACR, Defence, Electrical, Mining, Mechanical and Telco markets. If you can’t find the equipment you are looking for, our international partner network gives you access to an even larger and diverse inventory to help satisfy your requirements.

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