



ACUTEST

Test Instrument Specialists

- SUPPLY
- HIRE
- REPAIR
- CALIBRATION
- TRAINING



WE OFFER
TEST EQUIPMENT...

- ✓ SUPPLY
- ✓ HIRE
- ✓ REPAIR
- ✓ CALIBRATION
- ✓ TRAINING

- ✓ COMPETITIVE QUOTES
- ✓ EXPERT TECHNICAL ADVICE
- ✓ ON-SITE DEMONSTRATIONS
- ✓ TRUSTED AFTER-CARE SUPPORT
- ✓ A NON-PUSHY SALES APPROACH
- ✓ CONVENIENT ON-SITE CALIBRATION SERVICES

WE CAN
HELP YOU
WORK SMART

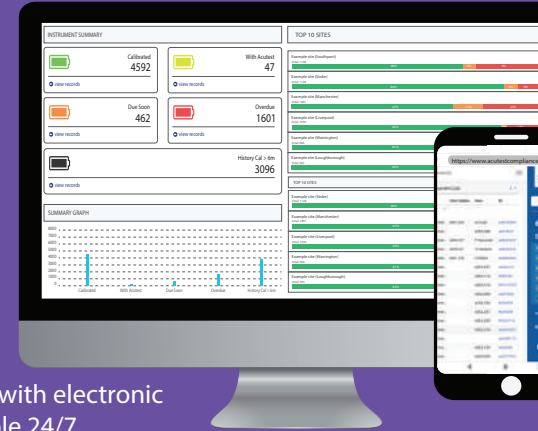
We offer a free test equipment dashboard
for your calibration and servicing requirements*

This management service saves our customers time, effort & the frustration of asset tracking. View your assets' service history in one place and...

...keep your assets in good health!

You can easily view and manage your instruments' calibration status via the user-friendly dashboard, with electronic certification at your fingertips – available 24/7.

The latest development of the portal has seen mobile functionality improve with a QR scanner which allows users to scan all calibrated devices whilst out in the field, perfect for compliance spot checks. All of the above features will help you formulate your calibration policies, so get in touch with Acutest today to arrange a demonstration, either by video conferencing, or at your premises.





HURRY, BOOK TODAY:

1.
CHOOSE
3 X COMPLETELY
FREE CALIBRATIONS



*MORE INFO...



BOOK NOW...



OR

2. FREE TRIAL OF
EITHER:

Si124
ACOUSTIC
CAMERA

BOOK NOW...



or

T1020
THERMAL
CAMERA

BOOK NOW...





VC24-24 Vacuum Test System

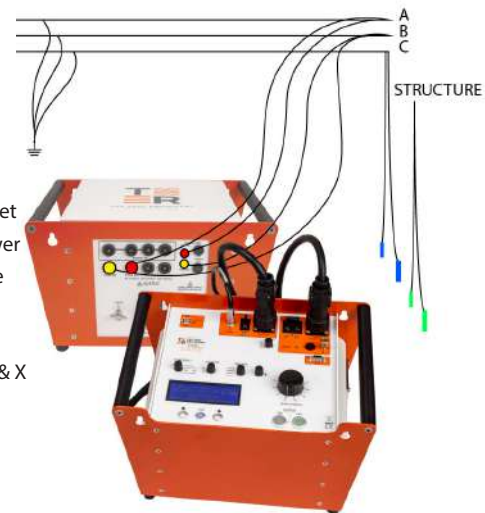
Sets ideal for wind farm commissioning & ongoing maintenance



- ✓ Ideal for Flash Testing of plant & switchgear, such as circuit breaker vacuum bottles, with voltages up to 24kV AC
- ✓ Has a light-weight design ideal for both onshore & offshore wind farms
- ✓ Easier to transport (especially on the service boat; weighing in at just 27Kg!)
- ✓ 2A 24kV @ 24mA test set for commissioning of plant
- ✓ Key operated for safety

This unit is the lightweight version of the KV30-40D

Z-OVR Cable Impedance Test Set



- ✓ Ideal for impedance measurements to accurately set up relays within the Wind Power Industry (application: distance relay measurements)
- ✓ Direct readout of cable Z & X
- ✓ Phase angle display
- ✓ Voltage up to 300V
- ✓ Current up to 80A

- ✓ Stackable units prove useful where space is tight →





750 ADM Primary Current Injection Test Set

Test sets designed for easy transportation; ideal for the offshore commissioning & maintenance



- ✓ Ideal for ideally suited to all low power primary injection tasks requiring up to 750A for short periods
- ✓ The only way to truly test the whole system
- ✓ Compact & one of the lightest primary test sets on the market
- ✓ 750A/4V Ac main output. 16v/40 A secondary output
- ✓ Multiple timing options
- ✓ Thermal & overload protection

50ADM-P Secondary Current Injection Test Set

Test sets designed for easy transportation; ideal for the offshore commissioning & maintenance



- ✓ Ideal for commissioning & maintenance engineers
- ✓ A flexible system for testing protective systems
- ✓ 3- phase injection system
- ✓ Lighter weight & more compact secondary injection set
- ✓ Same as the 200ADM-P but offers 50A & 18V AC
- ✓ Same 2nd aux channel
- ✓ Weighing in at just 13Kg!

← Backpack option available for easier transportation



200 ADM-P Secondary Injection Test Set

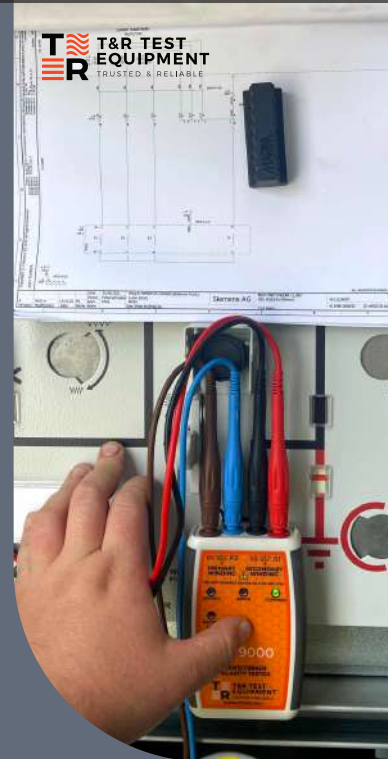
Designed for relay testing



- ✓ Ideal for testing a wide range of relays
- ✓ Two channel set main & aux (both channels offer both AC V & I)
- ✓ Main channel: 200A or 240V AC and 3A and 240V DC
- ✓ Second aux channel: 10A AC or 260V AC
- ✓ Aux channel phase shifting (res 0.1°) from main and frequency adjustment from 45 to 100 Hz
- ✓ Can also carry out CT mag curve test

TPT9000 – Handheld CT / VT Polarity Tester

Handheld & lightweight; ideal for offshore use



- ✓ Ideal for commissioning work
- ✓ Designed for instant polarity verification of both VT's & CT's
- ✓ Smart detection of incorrect connection
- ✓ Small, lightweight & easy to use
- ✓ Powered by a single 9v battery
- ✓ Built-in battery monitor
- ✓ Fused leads included for safety



←
Checkbox/
Proving Unit
included to
check for
correct
operation



Stay Safe In High Voltage Environments

The importance of ensuring a system is dead prior to being worked upon can never be underestimated.



LLT Test Kits Complete HV Test Solution

Best suited for:

- ✓ Proving a HV system is live/dead
- ✓ Maintenance of HV systems
- ✓ For use on both lines & switchgear
- ✓ Phasing & voltage measurements

Supplied with proving unit



0-15Kv Compact High Voltage Indicator

Best suited for:

- ✓ Proving a HV system is live/dead to 15Kv AC or DC
- ✓ Offshore wind farm use due to its compact design
- ✓ Anyone who is HV testing & requires a compact light-weight kit

Supplied with proving unit



Capacitive Test Point Voltage Detectors (11 or 33Kv variants)

Best suited for:

- ✓ Safer testing of transformers live/dead status
- ✓ Easy testing of transformer at the capacitive test point
- ✓ Automatic arming

Supplied in a kit with suitable handle & proving unit



Wind Turbine Install, Service, Repair & Troubleshoot

Troubleshooting wind turbine generators / Servicing complex hydraulic systems & electrical control machinery / Electro-mechanical installation & maintenance

Electrical Installation, Maintenance & Repair

Power installation support & reworks / Troubleshooting sensitive power equipment / Power quality analysis for consistent & efficient delivery



393 FC Clamp Meter

Best suited for:

- ✓ Verifying voltage up to 1500 V DC/1000 V AC; presence of load current & continuity
- ✓ Measuring 1000 A ac/dc (2500 A ac with iFlex) in motors, pumps, compressors, fans, blowers, vaults & bus bars
- ✓ Measuring loads & line frequency in circuits



279 FC / 87V DMMs

Best suited for:

- ✓ Electrical system installation & troubleshooting
- ✓ Quick voltage detection
- ✓ Environments with both ac & dc (autoVolt) or ghost voltages



1587 Insulation Tester

Best suited for:

- ✓ Wide range of tests including simple spot checks, timed tests & breakdown tests
- ✓ Insulation resistance testing up to 10 kV
- ✓ Use with switchgear, motors, generators & cables



Reliable Operations, Monitoring & Reporting Under Normal Conditions

Ensure maximum asset uptime / Monitoring & evaluating performance & service issues / Troubleshooting emergent issues



Ti480 PRO Thermal Imagers

Best suited for:

- ✓ Inspection of electrical panels & detection of "hot spots" on breaker panels & bus work
- ✓ Monitoring cooling fluid levels such as dielectric oils for transformers
- ✓ Steam traps, motors & VFDs



1625-2 Earth Ground Tester

Best suited for:

- ✓ Testing the earth resistance
- ✓ Confirming the earth ground system is working correctly in case of a potential fault
- ✓ Capable of doing a stake-less test



805 / 810 / 820-2 Vibration Testers

Best suited for:

- ✓ Verifying voltage up to 1500 V
- ✓ Predictive & condition-based maintenance
- ✓ Identifying root cause diagnosing severity of a machine's condition
- ✓ Prioritising critical repair & replacement options for motors, pumps, fans, compressors, belt/ chain drives, gearboxes & spindles



Fluke Connect

Simplifying preventive maintenance programs / Seamlessly integrating tool data into software / Diagnosing asset health in the field / Cloud-based data sharing



1777 Power Quality Analyser

Best suited for:

- ✓ Troubleshooting & preventing problems in power generation, transmission & distribution systems
- ✓ Conducting load studies to reduce energy usage
- ✓ Use with motors, pumps, generators, transformers, compressors & electrical panel



ii910 Precision Acoustic

With an expanded frequency detection of range up to 100 kHz the FLUKE ii910 Precision Acoustic Imager enables you to visually see partial discharge problems, even in their earliest stages.

- ✓ Spot problems before they occur to minimise downtime, save on energy costs & prevent catastrophic failures
- ✓ Safely detect PD from up to 120 m in distance



125B Oscilloscope

Utilised by Site Managers & Site Performance Engineers to optimise energy & power system performance



MTR105 Hand-Held Static Motor Tester

Checks every important parameter of generators & electric motors in the wind power plant



- ✓ 3-phase insulation diagnostics with temperature correction & measurement
- ✓ Guard terminal ensures precise measurement results even in contaminated enclosures (a very useful function in, for example, older wind turbines located near coasts, where salt-containing crusts form on the enclosures)
- ✓ Voltage meter AC, DC, TrueRMS
- ✓ 4-wire low-ohm measurement (Kelvin)
- ✓ Continuity & diode test
- ✓ Motor rotation direction with phase sequence
- ✓ Distinguishes between capacitive, inductive & resistive charging states
- ✓ Detects live lines & immediately blocks the measurement for safety reasons
- ✓ The outer case is almost indestructible & is weatherproof according to IP54, including the battery & fuse compartments

MOM2 Handy Micro-Ohmmeter

With up to 220 A test current



All contact connections within the turbine must be low-resistance enough to prevent devastating fires after heat formation

- ✓ The 220 A test current means you will learn much more about the fault than with the 100 A required by the standard
- ✓ Weighing in at just under 1 kg it's perfect when working at higher altitudes (such as in the nacelle of a turbine), on load isolating switches, on busbars or when working in confined spaces
- ✓ Work for a full day without having to connect to the mains, thanks to the long-life battery
- ✓ Efficient measurement memory; collects your results during the day (evaluate later, comfortably & safely with MOM2 Win Software back at base!



DET24C Handy Earth Clamps

Earth resistance measurement is a fundamental test in every wind turbine



ETK - Earth Test Kit

Earth test spikes on reels | Multiple lengths to meet all needs

- ✓ Earth resistance measurement is the only way to prove the effectiveness of the foundation earth electrode
- ✓ Induces a voltage into the loop & measures the current that flows in the earthing system
- ✓ The resistance of the earth loop can be determined from this & allows you to measure the resistance in earthing or lightning protection systems
- ✓ The novel, elliptical design of the jaw & the short jaw body allow you to safely cover round or even flat earth connections
- ✓ The use of flat jaws prevents dirt build-up on the clamp & ensures measurement accuracy & reliability in practice
- ✓ CAT IV 600 V measurement category

DLRO10HD / DLRO10HDX Micro-Ohmmeter

With up to 10 A test current



Wind turbines stand high up on hills or in open spaces and this means lightning strikes are a concern!

- ✓ Lightning strikes are not a problem if the resistance of the lightning protection system is low enough. DLRO10HD is specifically designed for this important test
- ✓ With a 10 A test current (& up to 100 m test lead for long blades) it's perfect for low-resistance testing on the lightning conductors
- ✓ Suited to many other applications too (testing welding connections or the winding resistance of large motors & transformers)



S1 Series High-End Insulation Resistance Tester

Ideal for energy suppliers



The insulation on each electrical conductor begins to age immediately after the system is installed (heat, frost, saltwater or pests accelerate this process).

The systematic testing & diagnosis of the insulation with direct current in the generator, in the transformer &, of course, in all electrical LV lines is therefore the most important test for every electrical component of a turbine!

- ✓ This class of devices offers you special properties that perform particularly well in environments with very high interference, such as substations & switchgears (anywhere where transformers are located)

TDR2050 Time Domain Reflectometer

Fault locator for power applications



Whether you are locating cable faults or testing the integrity of power, or control cables, TDRs from Megger provide fast and accurate results.

A safe, low-voltage tester that can be used on virtually all cable types, whatever their power rating.

- ✓ 'Auto Setup' mode for instant, easy use
- ✓ 'AutoFind' and 'FindEnd' functions helps find the fault fast
- ✓ Trace tagging facility that allows a name to be saved with the trace
- ✓ Distance dependent gain to counteract signal attenuation
- ✓ Step function to improve detection of near end faults



SVERKER 900

The test box for substation 3-phase testing



Megger

- ✓ An extremely successful protection testing system used world-wide!
- ✓ Efficiently test the current transformer's functional unit, protective relay & power switch pertaining to switchgear within wind turbines & substations
- ✓ The repeat tests carried out on digital protection devices discover faults which cannot be determined via the self-regulation process
- ✓ Simulates secondary variables, designed to test all protective functions within protective relay systems
- ✓ Can simulate a frequency change in the network
- ✓ Standalone functionality
- ✓ 3 currents & 4 voltages
- ✓ Generation of 900 V & 105 A in single phase mode
- ✓ Secondary & primary testing

EGIL 200 Circuit Breaker Tester

Compact base unit for circuit breaker testing



- ✓ Measure circuit breakers in wind turbines in a more compact, simple & versatile way, plus the price point makes it attractive for small energy producers! *(In addition, it's the ideal tool for operation departments at large energy suppliers)*
- ✓ Easy-to-use & intuitive operation offers final measurement results with a minimal user interaction
- ✓ Instrument & accessories designed for the most demanding field conditions



TELEDYNE
FLIR



T1020 HD Thermal Camera

Maintenance teams utilise thermography to check electrical connections

Anemometers: critical to understanding wind speed & direction, & by extension, optimising a wind turbine's energy output (these can be mounted at various heights to collect accurate wind speed data, transmitting rotation data to a control centre that's responsible for positioning the turbine into the wind for maximum efficiency).



VS80-IR21 Videoscope Kit

See into the cramped bearing casings

Rotor Bearings: Wind turbine components are susceptible to wear & can break down, especially the rotor bearings: a series of bearings within the rotor shaft that connect the wind turbine blades to the gearbox. Ensuring proper operation is critical to maintaining operational efficiency & asset health. An IR videoscope probe allows you to see signs of overheating. A vibration meter or remote vibration monitoring system could detect signs of mechanical failure via vibration analysis.



E96 Thermal Imager & IM75 Insulation/DMM

Verify the health of mechanical and electrical components

Si124-PD Acoustic Imaging

Find problems before failure

Wind Turbine's Generator: takes output from the gearbox & produces electric power. These complex systems can include commutators, slip rings, coils, cooling systems, & more - all of which require regular inspection to ensure proper operation & asset health. Acoustic imager: inspects electrical systems to detect problems before breakdowns occur. Thermal cameras & digital multimeters: verify the health of mechanical & electrical components.



TELEDYNE
FLIR



DM285 Industrial Multimeter

Check voltage levels & find electrical hot spots

Si124-PD Acoustic Imaging

Find problems before failure

Pitch control systems: control a blade's angle, matching it to the direction of the wind in order to adjust speed of rotation, allowing optimal efficiency (this reduces mechanical load). The pitch control systems include VFDs ensuring a gradual start/stop preventing shock loads. The VFD, motors, & hydraulic components of this system should be checked frequently

T800-Series & T1020 Thermal Camera

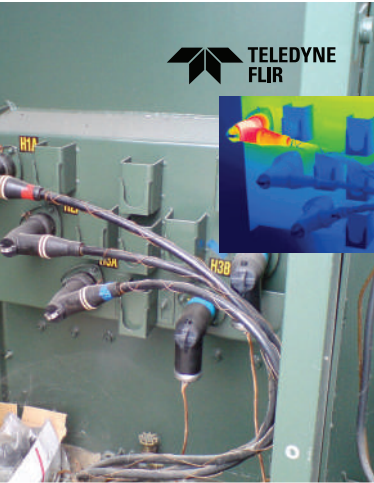
Essential to check temp./condition of gearbox bearings, gears & components

Gearbox: connects the rotor shaft to the power generator & increases the rotations per minute (RPMs) to optimise power generation. The gearbox must function efficiently in demanding weather conditions & under loads, vibrations, & temperatures that continuously change. Temperature & condition of bearings, gears & components is essential to operational efficiency & asset health.

DM285 & E96 / E8-XT Thermal Imagers

Regular inspections with thermal cameras & DMMs help avoid failure/downtime

Gearbox cooling systems: maintain a consistent temperature within the nacelle to ensure the life expectancy of all the components. The process of energy conversion along with solar radiation can generate heat that could damage the components. Regular inspections with a thermal camera, as well as electrical inspections with a digital multimeter, can provide several months of warning time before failure, avoiding costly downtime.



TELEDYNE
FLIR



IR Windows & E96 / E8-XT Thermal Imagers

Find hot spots that indicate overheating parts or signs of electrical resistance & mechanical wear so you can begin repairs immediately

If a transformer overheats & fails, it can lead to expensive repairs & potential power outages. Regular monitoring using advanced diagnostic thermal imaging cameras can help you easily inspect & monitor the temperature distribution on the outside surface of each transformer to catch impending failures before they occur.

DM285 Industrial Multimeter

IR Windows & E8-XT Thermal Imager

Frequent inspections: checking for loose or damaged connections

Medium voltage (MV) circuit breakers connect the low voltage wind generated power through a step-up transformer to the bus of a high voltage/medium voltage substation & can be installed either above or below ground. While above-ground MV circuits are easier to access, they require frequent inspections with a thermal camera & test & measurement tools to ensure none of the connections are loose or damaged. Below-ground MV circuits are costlier to install but require less maintenance. Inspectors may need to check these breakers occasionally for splice failure or ground faults. The visual inspection of poles & mounting equipment is also need to ensure the collection system is in good working order.



E96 / T-Series *(FlexView Dual FOV Lens)* Thermal Imagers IR Windows

Electrical inspections with thermal imaging cameras

Substations contain the most typical equipment found at a wind farm, including transformers, breakers, switches, & relays. If any of these systems fail, the entire transformer will shut down, costing millions in added overtime pay for workers & expenses to expedite repairs. Regularly scheduled electrical inspections with thermal imaging cameras along with surveys for SF6 insulation leaks with a gas detection camera will ensure equipment keeps working & wind farm operators meet safety regulations governing their equipment. Most wind farms perform these tasks during the low-wind season to reduce their loss of generation & revenue.

T1020 / T-Series *(FlexView Dual FOV Lens)* Thermal Imagers Get the full picture of potential problems

Si124-PD Acoustic Imaging Find problems before failure

Unplanned transmission line repairs can easily cost millions, so it's important to regularly inspect every connection to ensure that they are in working order. Every system has a lot of small connections, often located high up out of reach. Connections get hot before they fail. Conducting regular surveys of substations & transmission lines using a thermal imaging camera can give you a full picture of potential problems. You can visualise partial discharge or measure the temperature of overheating connections & diagnose problems before outages occur - minimising the cost of repairs, maximising equipment life, & keeping the power on for customers.



UltraTev Plus² Partial Discharge (PD) Instrument

Check the health of your switchgear & cable insulation as part of your predictive maintenance routine



Insulation degradation can lead to catastrophic failure of your assets, resulting in a danger to life & significant operational disruption.

Taking regular partial discharge measurement provides a good indication of the health of your switchgear & cable insulation; this can be achieved easily using EA Technology's state of the art UltraTEV Plus² handheld instrument.

This multi-sensor device detects both internal & surface discharge, providing actionable information on which to base any necessary follow-up remedial work.

UTP2-WPR Phase Reference Accessory

Ensures the perfect phase reference / phase-lock every time



UltraTev Plus² & UP2-WPR work together to...

- ✓ Distinguish true PD from noise & other interference
- ✓ Ensures perfect phase reference / phase-lock every time, through multiple methods (mains power connection, e-field, Rogowski coil and photo-sensor)
- ✓ Aids connection wirelessly. UP2-WPR communicates with UltraTev Plus² (up to 40 metres away). The long-life battery allows up to 16 hours operation

Connecting to EA Technology's *Managed Survey Cloud-Based Platform* turns the UltraTev Plus² from a periodic inspection tool to a fully managed asset condition assessment solution.



CELLTRON ADVANTAGE System

Check the health of your batteries as part of your predictive maintenance routine



All wind turbines contain batteries & wind farms contain batteries as part of their uninterrupted power supply systems (UPS).

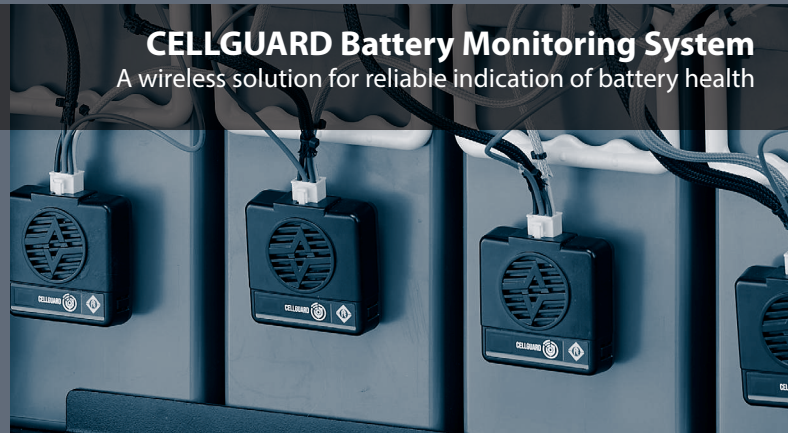
Battery management & testing are critical for maintaining power integrity. The demand placed on these systems has increased dramatically in the past decade; service providers, operations & maintenance teams need to gain an advantage over this mounting responsibility.

CELLTRON ADVANTAGE provides...

- ✓ Efficient & economical tools
- ✓ User-customisable systems
- ✓ Flexible, time-saving solutions

CELLGUARD Battery Monitoring System

A wireless solution for reliable indication of battery health



CELLGUARD Wireless Battery Monitoring System (BMS) provides

- ✓ Accurate & reliable indication of battery state-of-health through monitoring
- ✓ Analysis of battery voltage, temperature, and conductance.
- ✓ Solid noise immunity

DISCOVER CELLTRON...



WHY PARTNER WITH ACUTEST?

We offer a streamlined approach to test equipment purchasing / hire / training / calibration / repair

Our 30+ years industry knowledge can help you select the correct test equipment for your application

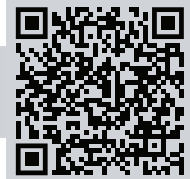
Our impressive calibration statistics demonstrate the scale of our services

11,000+ component-level repairs annually - *keep your equipment in good health with our dependable service*

Our trusted after-care service means your account manager is only a phone call away - *to help with any product enquiries*

We offer UK-wide coverage so if you have multiple depots / locations - *we have you covered!*

Get in touch to discuss how we can save you money and operational downtime - *without the fear of pushy follow-up calls!*



ISO 9001
Quality
Management
Systems
CERTIFIED

FS 673489

ISO 14001
Environmental
Management
CERTIFIED

EMS 644616

ISO 45001
Occupational
Health and Safety
Management
CERTIFIED

OHS 642358



BOOK EXTRA FREE DEMONSTRATIONS



HIGH VOLTAGE INSTRUMENTS LTD
T&R Test (Holdings) Ltd. Company

FLUKE®



VC24-24



200 ADM-P



1587



810



125B



T800-Series



Z-OVR



TPT9000



Ti480



820-2



VS80



E8-XT



750 ADM



393 FC



1625-2



1777



E96



IR Windows



50ADM-P



279 FC



805 FC



ii910



DM285



T-Series



BOOK EXTRA FREE DEMONSTRATIONS

Megger



MTR105



DLRO10HD



S1-Series



UltraTev Plus²



Celltron Advantage



MOM2



DLRO10HDX



TDR2050



UTP2-WPR



CELLGUARD SYSTEM



DET24C



DLRO2



SVERKER 900



DET2/3



DLRO2X



EGIL 200



Scotland
Service Centre

2 Jubilee Court
Montrose Avenue
Hillington
Glasgow
G52 4LB

Northern
Service Centre

Unit 4
Evans Business Centre
Newton Aycliffe
Durham
DL5 6ZF

Central
Service Centre

4 Century Road
High Carr Business Park
Newcastle-under-Lyme
Staffordshire
ST5 7UG

Southern
Service Centre

61 Macrae Road
Eden Office Park
Ham Green
Bristol
BS20 0DD

ACUTEST

Test Instrument Specialists

SUPPLY

HIRE

REPAIR

CALIBRATION

TRAINING

01782 563030



www.acutest-ukti.co.uk

www.acutestdirect.co.uk

sales@acutest-ukti.co.uk



STAY CONNECTED

We are exhibiting at Floating Offshore Wind 2023

P&J LIVE - ABERDEEN (STAND: L24) Register here: <https://events.renewableuk.com/fow23-registration>



 #FloatingWind23

FLOATING OFFSHORE WIND 2023

4 & 5 OCT | ABERDEEN