POWERENT



POWERENT
RENTAL CATALOG

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FLUKE BT521

- Key measurements are battery resistance, DC and AC voltage, DC and AC current, ripple voltage, frequency, and battery temperature
- Sequence measurement mode for automatic or manual sequence testing of battery strings with automatic measurement storage, including voltage and resistance



MEGGER TORKEL 860

- Batteries can be tested in service
- Suitable for batteries between 12V and 480V
- 110A maximum discharge
- BVM cell monitor control integrated in the system
- Test at constant power, resistance or current



MEGGER TORKEL 930

- Batteries can be tested in service
- Suitable for batteries between 12V and 300V
- 220A maximum discharge
- BVM cell monitor control integrated in the system
- Test at constant power, resistance or current



MEGGER TORKEL 950

- Batteries can be tested in service
- Suitable for batteries between 12V and 500V
- 220A maximum discharge
- BVM cell monitor control integrated in the system
- Test at constant power, resistance or current



MEGGER BITE 2

- Enhanced printing and memory functions
- On-line testing requiring no downtime
- Measure's impedance and DC voltage values for all lead-acid and nickel-cadmium cells up to 7000Ah
- ·Stores more than 2000 sets of readings in up to 300 tests



MEGGER BITE 3

- Calculates impedance automatically and stores results for on-site review to make immediate decisions
- On-Line testing requiring no downtime
- Stores more than 1 million cells data in any string configuration

MEGGER MEGGER MGFL100



- Alarms when the real fault is identified
- Direct measurement of resistance and stray capacitance
- Direct measurement of fault current and leakage current
- Adjustable current and voltage limits
- Locates faults up to 400 kΩ
- Locate faults on AC or DC systems

MEGGER BATTERY GROUND FAULT TRACER (BGFT)



- Easily locates ground faults in ungrounded dc systems
- Operates in high electrical noise environment
- High/low switch provides the needed safety and power to locate high impedance faults
- Locates faults on systems with high capacitance

MEGGER BATTERY GROUND FAULT LOCATOR (BGL)



- Locates ground faults on floating battery systems
- Operates on live battery systems
- Multiple fault detection and tracking
- Automatic operation
- Battery operated

BATTERY (TORKEL ACCESSORY)



MEGGER BVM-600

- Automates battery voltage measurement during capacity tests
- “Daisy-chain” design allows expandability up to 120 units
- High accuracy and stability for precise data collection



MEGGER CLAMP XA 12991

- DC Current Clamp converts 1000A to 1V DC
- Measures current in external circuit
- 2 x 5m cable and power cable for 9V input



GREENLEE TV220

- Return Loss Measurements
- Multiple Event Marking
- Pinpoint the faults that can cause micro-reflections which can be damaging to digital transmissions
- High Voltage Tolerant: Will not be damaged by high voltages (up to 400V (DC + peak AC)



HV Diagnostics Digi-Bridge

- 12kV Output Capacity!
- 30µF Output Capacity!
- Very Accurate Fault Pre-Location
- Long-Lasting Battery Operation
- Ability To Test Very Long Cables
- Sunlight Visible Color LCD Display



HVI TDR/RADAR 1669

- Large 10.5" sunlight-readable LCD display
- Arc reflection method
- Current pulse method (Optional)
- 3ø comparison and difference
- Automatic cursor placement



IUP FAULT WIZARD

- Power Source: Two internal 12 V sealed rechargeable lead/acid batteries or Auxiliary Pack
- Charge Voltage: 0 to 10 kV
- Capacitance: 7 uF
- Max Energy: 350 Joules per pulse
- Output Current: 12.5 mA for Hi-Pot Mode
- Hi-Pot Voltage: 0 to 10 kV



MEGGER DIGIPHONE+

- Finds the fault with unprecedented accuracy
- Offers simple visual directions
- Possesses smart background noise reduction
- Automatically limits audio volume to 84 decibels
- Requires no user adjustments



MEGGER T3090

- 0-25,000 Ft Continuous
- Automatic Or Manual Range Selection
- Optional Sectionalizing



RADIODETECTION RD8200

- Easy to setup and use
- Sun light readable display, high performance audio system and vibration alerts for noisy environments
- Sensitive and accurate signal processing for reliable results
- Ideal for congested underground infrastructures
- Rejects strong interfering signals



RADIODETECTION A-FRAME

- Accurate Fault Location: The Sheath Fault Locator Precisely Identifies Sheath Faults On Cables And Coating Defects On Pipelines, Enabling Targeted Repairs And Minimizing Downtime
- Direction And Magnitude Display: The Locator Conveniently Displays Both The Direction And Magnitude Of The Fault Information, Allowing Users To Quickly Assess The Severity And Plan Appropriate Actions



DOBLE TDR900

- Includes four breaks per phase, three transducer connections and six events channels
- Operated by T-Doble software provided on a preconfigured laptop or Doble DUC
- Provides main contact timing, travel/motion, resistance, and capacitance measurements
- Detects main contact and resistor contact timing errors



DOBLE TR3190 LINEAR AND ROTARY TRANSDUCER

- Doble's TDR Circuit Breaker Test Equipment Can Record Even More Data When Combined With Doble Transducers, Clamps, Cable Kits, And Other Accessories Designed Specifically For The Variety Of Circuit Breakers Manufactured And In Service Today



MEGGER MS-2A

- Instantaneous current to 500A or continuous current to 240A
- Memory ammeter and seconds/cycles timer
- Lightweight and compact
- Simple operations and controls



OMICRON CIBANO 500

- 3-in-1 system: micro-ohmmeter, powerful AC/DC supply, and timing analyzer
- One system for medium- and high-voltage circuit breakers
- Low wiring effort
- One combined report for all tests



SMC PME-500TR

- Simultaneous measurement for the 3 main contacts (open/ closed) and 2 auxiliary contacts, including pre-insertion resistors (if present in the circuit breaker)
- Evaluates the synchronism between the circuit breaker poles
- Determines the maximum currents, opening and closing times, simultaneously in both coils



VANGUARD CT 7000

- Fully analyzes performance by measuring main contact and resistor contact timing, stroke, velocity, over-travel, bounce back and contact wipes
- Contact and motion/travel analyzed on all breaker operations: open, close, open-close, and close-open
- Initiates all breaker operations



VANGUARD CT 8000

- Fully analyzes performance by measuring main contact and resistor contact timing, stroke, velocity, over-travel, bounce back and contact wipes
- Integrated “on-line timing” or first trip analysis
- Initiates all breaker operations
- Trip/close coil current monitoring capabilities

CONTACT RESISTANCE



AEMC 6240

- User selectable test current and resistance ranges
- 6250 model adds internal storage of readings with data storage and analysis software included
- Includes temperature compensation and user selectable resistive or inductive materials equipment



BROMAN 210

- Test Current of 0-100A DC
- Resistance ranges of 0-50/100/500/1000/5000 microhms
- Accuracy of ± (1.5% of reading + 0.25 scale division)
- Self calibration, simple to use and portable



MEGGER DLRO10HD

- High or low output power selection for condition diagnosis
- Rechargeable battery or line power supply, continuous operation, even with dead battery
- 10 A for 60 seconds, less time waiting to cool, great for charging inductance

CONTACT RESISTANCE



MEGGER DLRO10X

- Fully automatic, selecting the most suitable test current, up to 10A dc to measure resistance from 0.1μΩ to 2000μΩ on one of seven ranges
- Auto current reversal cancels standing emfs
- Automatically detects continuity in potential and current connections



MEGGER DLRO 200

- Lightweight and compact design (32lbs)
- Stores test records in on-board memory or to USB flash drive
- 1A to 200A test current
- Heavy duty and field rugged



POWERENT CRS-100

- Light weight, portable, and battery powered for ease of use
- Quick selection of current ranges, up to 200A
- Results are displayed in seconds and are stored automatically
- Automatic measurements of low resistance from 0.01μΩ to 5Ω

CONTACT RESISTANCE



RAYTECH MC2

- Light weight, portable, and battery powered for ease of use
- Quick selection of current ranges, up to 200A
- Results are displayed in seconds and are stored automatically
- Automatic measurements of low resistance from 0.01μΩ to 5Ω



RAYTECH MICRO JUNIOR 2

- Pure, filtered DC power source for the highest accuracy readings
- Internal storage for over 2,000 test results
- On-board printer
- Automatic polarity reversal



VANGUARD AUTO-OHM 200

- Stores test records in on-board memory or to USB flash drive
- 1A to 200A test current
- Programmable current rise and fall rates
- Auto-test mode permits applying sense leads across points of interest



VANGUARD DMOM-100

- Stores test records in on-board memory or to USB flash drive
- 1A to 200A test current
- Programmable current rise and fall rates
- Auto-test mode permits applying sense leads across points of interest



OMICRON CT ANALYZER

- Evaluates CT's to the IEC or IEEE standard within seconds with push-to-test convenience
- Ideal for on-site, lab or factory testing and calibration of metering and protection CT's
- Tests run at 120V to ensure operator safety
- Rents with the CT CB2 switch box for greater productivity testing multitaps CT's



OMICRON CT-SB2 (CT ANALYZER -ADD ON)

- 6-channel secondary connection terminals
- Color-coded terminals and cables to avoid connection errors
- Automatic wiring check to help with troubleshooting
- Easy test setup using the CT Analyzer user interface



RAYTECH CT-T1

- Microprocessor-based CT test system measures CT excitation, current ratio, and winding polarity
- Single connection harness permits all taps to be tested automatically, without user intervention
- Measures ratios from 0.9 to 15,000:1
- 2,000V output with resolution of 10mV



VANGUARD EZCT-2000B

- Performs CT Excitation, Current-Ratio, Polarity, And Phase Angle Tests
- Measures Insulation Resistance And Winding Resistance Of The CT Secondary Windings
- Measures The CT's Secondary Burden
- Built-In 4.5-Inch Wide Thermal Printer
- Plot Multiple Saturation Curves
- Stores Up To 128 CT Test Plans And 140 Test Records Internally



VANGUARD EZCT-2000A

- Perform Saturation, Ratio and Polarity Tests
- Perform CT Winding. Resistance Test
- Fully Automated
- Test record header information including company, substation name, circuit ID, manufacturer, CT serial number, operator name, and test record-comments
- Plot Multiple Saturation Curves



VANGUARD EZCT-2000C

- Automatically demagnetizes CT when performing CT excitation test
- Internal storage of test plans-easy setup of test plans or quick manual testing through front panel controls
- Connects to all secondary terminals of the CT for fully automated testing without intervention



VANGUARD EZCT-2KA

- Perform Saturation, Ratio And Polarity Tests
- Perform CT Winding. Resistance Test
- Fully Automated
- Test Record Header Information Including Company, Substation Name, Circuit ID, Manufacturer, CT Serial Number, Operator Name, And Test Record-Comments.
- Plot Multiple Saturation Curves

GROUND RESISTANCE



AEMC 6471

- Test ground resistance using the 2-clamp method (no auxiliary rods needed)
- 2- and 4-Pole Bond Resistance/Continuity measurement (DC Resistance) with automatic polarity reversal
- 4-Pole Soil Resistivity measurement with automatic calculation of P and user selection of the Wenner or Schlumberger test method



AEMC 6416

- Measures ground rod and grid resistance without driving temporary ground rods or running leads
- Verifies quality of grounding connections/bonds and continuity of ground loops
- Jaw opening of 1-1/2”
- Provides ground voltage indication and warns of possible unsafe conditions



FLUKE 1625-2

- Performs earth ground loop resistances using clamps only (stake less testing), Fall-of Potential, earth resistivity, and selective testing (or attached rod technique)
- Automatic frequency control mitigates interference

GROUND RESISTANCE



FLUKE 1630-2

- Test the grounding components of equipment in hard-to-reach spaces, including areas that are indoors or fully paved and do not permit driving auxiliary test stakes.
- AC Leakage Current Measurement: Identify AC leakage without disconnecting your earth ground stake from the grounding system



MEGGER DET 2/2

- Ideal for large ground systems or applications requiring long lead runs
- High resolution (1mΩ) and high accuracy
- Performs fall-of-potential, soil resistivity, and point-to-point tests
- User adjustable test voltage to 50V (max)



MEGGER DET 2/3

- Ideal for large ground systems or applications requiring long lead runs
- High resolution (1mΩ) and high accuracy
- Performs fall-of-potential, soil resistivity, and point-to-point tests
- User adjustable test voltage to 50V (max)

OMICRON CP CU1 (CPC 100 ADD-ON)



- Measurement Is Not Affected By Mains Frequency Interference – Extremely Precise Measurement Results Are Obtained
- Compliance With The Strictest Safety Standards For Overhead Lines And Cables Connections – Diverting Currents Up To 30 KA
- Easy To Handle – Heaviest Component: 29 Kg
- Automatic Logging: Results Are Recorded Automatically By The Software

OMICRON HGT1



- Mobile solution – simplifies measurements at various locations inside and outside the substation
- Frequency-selective measurement for effective noise suppression
- Simulation of body and shoe resistance for step and touch voltage testing
- Even more powerful with Primary Test Manager™ (PTM)
- Fully automated due to GPS test point tracking and test current detection
- Real-time assessment of step and touch voltages according to EN 50522 or IEEE 80



HIPOTRONICS 880PL -DC

- VLF 20kVrms/28kV Peak output
- DC ±28kV
- Sine/Square/ DC outputs
- Cable Jacket / Sheath testing mode
- TD measurement mode
- Vacuum bottle testing mode
- Fault Conditioning/Trip
- Load independent output waveform



HV DIAGNOSTICS HVA28TD

- VLF 20kVrms/28kV Peak output
- DC ±28kV
- Sine/Square/ DC outputs
- Cable Jacket / Sheath testing mode
- TD measurement mode
- Vacuum bottle testing mode
- Fault Conditioning/Trip
- Load independent output waveform



HV DIAGNOSTICS HVA34

- Perform tests fully automatically
- Oscilloscope Display of Output Waveform
- Insulation Resistance & Cap. Measurement
- RMS Metering of Current and Voltage
- Output Frequency optimization
- Unlimited duty cycle



HV DIAGNOSTICS HVA45TD

- Auto & manual test programmable sequences
- Sinusoidal, cosine rectangular, or DC output waveform
- Digital metering displays voltage (RMS or Peak), capacitance, resistance, elapsed time, and flashover voltage
- Peak voltage of 45kV



HV DIAGNOSTICS HVA60

- Real time oscilloscope display
- Insulation Resistance & Cap. measurement
- RMS Metering of Current and Voltage Output
- Peak voltage of 60kV



HV DIAGNOSTICS HVA90

- Test up to 10µF (100,000ft/30kms)
- Output Frequency optimization
- Power supply immunity and independence
- Peak voltage of 90kV

HIPOT / VLF

HVA MODEL	PEAK VOLTAGE	RMS VOLTAGE	ACCEPTANCE	MAINTENANCE
HVA28TD	28KV	20KV	UP TO 15KV	UP TO 20KV
HVA30	30KV	22KV	UP TO 16KV	UP TO 22KV
HVA34	34KV	24KV	UP TO 15KV	UP TO 25KV
HVA34TD	34KV	24KV	UP TO 15KV	UP TO 25KV
HVA45TD	45KV	32KV	UP TO 25KV	UP TO 30KV
HVA60	60KV	44KV	UP TO 35KV	UP TO 46KV
HVA90	90KV	64KV	UP TO 46KV	UP TO 69KV
HVA120	120KV	85KV	UP TO 69KV	UP TO 69KV



High Voltage Inc (HVI)PFT-503 CM

- Convenient one-piece field portable design
- Secondary connected 2 range voltmeter: 0 to 15 / 30kV AC
- 3 range current meter: 0 to 1mA AC with x1, x10, and x100 multipliers
- Guard/ground circuit for accurate leakage current measurement



High Voltage Inc (HVI)PFT-1003 CM

- 3 Range Current Meter: 0 – 1 mA AC with x1, x10, and x100 multipliers
- Fixed overload set to 120% of variable transformer rated output current
- Transit protected meters prevent meter damage between test sites



High Voltage Inc (HVI)PTS-37.5

- 5 range current/megohm meter for accurate leakage current
- Megohm readings at any output voltage up to 3.75 tera-ohms
- Full-wave bridge rectifier
- Internal HV Shorting Solenoid with discharge resistors



High Voltage Inc (HVI)PTS-75

- 5 range current/megohm meter for accurate leakage current
- Megohm readings at any output voltage up to 7.5 tera-ohms
- Full-wave bridge rectifier
- Internal HV Shorting Solenoid with discharge resistors



High Voltage Inc (HVI)PTS-80

- 5 range current/megohm meter for accurate leakage current
- Megohm readings at any output voltage up to 8 tera-ohms
- Full-wave bridge rectifier
- Internal HV Shorting Solenoid with discharge resistors



High Voltage Inc (HVI)PTS-100

- 5 range current/megohmmeter for accurate leakage current
- Megohm readings at any output voltage up to 10 tera-ohms
- Full-wave bridge rectifier
- Internal HV Shorting. Solenoid with discharge resistors



MEGGER 220124

- Lightweight Air-Insulated High-Voltage DC Test Set
- Maximum Safety For Operator According To IEC61010
- Clear Control Panel Layout
- Intuitive And Easy-To-Follow Test Sequence
- Digital Voltage And Current Metering



VITREK V61 AC/DC HIPOT / ELECTRICAL SAFETY ANALYZER

- Fully Automated Testing at the Touch of a Button or via RS232& PLC Control
- 3 Models to choose from – Select the functions you need to get the job done
- AC Hipot to 5kV with 20mASourcing
- DC Hipot to 6kV with 7.5mASourcing
- Ground Continuity to 0.001Ω
- Built-in 160 Step Test Memory

INFRARED CAMERAS



FLIR E60

- 3.5” touchscreen display with auto-orientation
- Measurement Modes: Auto Hot/Cold Spot, Isotherm (above/below/interval), and Delta-T
- 60Hz Frame Rate
- Manual focus lens with 4x continuous digital zoom
- Scalable Picture-in-Picture



FLIR E76

- Voice annotation and GPS tagging to images and video
- Wide temperature range -20 to 120°C (-4 to 248°F) / 0 to 650°C (32 to 1200°F)
- Continuous laser distance meter (LDM), one-shot LDM, one-shot contrast, manual
- 5 MP, fixed focus, with built in LED light
- 320 × 240 pixels



FLUKE TI400

- High performance, 320x240 thermal imaging camera for maintenance professionals
- Features LaserSharp® Auto Focus to produce consistently in-focus images
- Includes rechargeable, field replaceable smart batteries with five-segment LED display to show charge levels

INSULATION RESISTANCE



AEMC 6505

- Test voltage combination of 500V, 1000V, 2500V and 5000V
- Insulation measurements from 30kΩ to 10TΩ
- Adjustable and programmable test voltage (40 to 5100V)
- Automatic calculation of DAR and PI values



AEMC 6555

- True Megohmmeter®
- Fixed Or Programmable Test Voltage From40 V To 10 KV/15 KV
- Wide Measurement Range From 10 KΩto 25 TΩ/30 TΩ
- 5 MA Short Circuit Current· Step And Ramp Voltage Testing
- Automatic Calculation Of DAR / PI / DD / ΔR(Ppm/V) Ratios



FLUKE 1550C

- Tests up to 5kV
- Selectable test voltages in 50 V steps from 250 V to 1000 V, and 100 V steps above 1000 V
- Ramp function for breakdown testing
- Resistance measurements up to 2 TΩ

INSULATION RESISTANCE



FLUKE 1555

- Test voltages to up 10 kV
- Warning function alerts the user that line voltage is present and gives the voltage reading up to 600 V AC or DC for increased user safety
- Selectable test voltages in 50 V steps from 250 V to 1000 V, and 100 V steps above 1000 V
- Resistance measurements up to 2 TΩ



MEGGER MIT 1025

- Maximum test voltage of 10kV
- Auto IR, DAR, PI, Step Voltage, DD and Ramp
- Measures up to 20TΩ
- Improved productivity – operate from line power/mains if battery dead



MEGGER MIT 1525

- Maximum test voltage of 15kV
- Auto IR, DAR, PI, Step Voltage, DD and Ramp
- Measures up to 20TΩ
- Improved productivity – operate from line power/mains if battery dead



MEGGER MIT 515

- Industry best guard terminal accuracy
- Smaller size and lightweight allows easier transport and use without compromising performance
- Compact and lightweight for easy transport and use
- Auto IR, DAR and PI
- Unique dual case design provides additional user protection
- Lithium-ion battery - extended capacity, rapid charge
- Advanced memory with time/date stamp
- CATIV 600V safety rating on all terminals



AEMC BR07

- Rotary switch selector
- Stop position to prevent accidental switching from 10 to 0
- Seven decades: 1 to 10MΩ
- Max Current: 0.1mA
- Male ground (earth) terminal with safety jack
- Outputs on Ø 4mm safety terminals



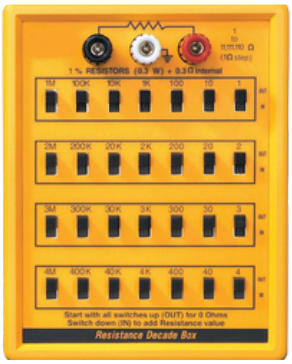
EASY-LASER XT660

- Align The Machine
- Check Base Twist
- Check Bearing Play
- Check Soft Foot
- Document And Share The Results



EMERSON TREX

- Enables HART or Fieldbus module communications
- Configure and test valves inline
- Configure and test instruments inline
- Touchscreen display is easy to use with bulky work gloves



Extech 380400

- 1 to 11,111,110 ohm, 1 ohm per step
- Wattage : 1W
- Slide switches that allow the user to simply add or subtract for desired value
- With seven decades of resistance
- ABS plastic housing case, rugged components



FLUKE 1587

- Safety first. Connect the insulation tester then keep yourself out of harm's way by monitoring your test measurements remotely
- Prove your job is done right by quickly seeing and sharing insulation resistance test results wirelessly with your smartphone
- Quickly find problems by saving and comparing measurements over time on a wireless device



FLUKE 190-204

- 200 MHz bandwidth model
- 2.5 GS/s
- Deep memory: 10,000 samples per channel waveform capture
- Dedicated 5000 Count digital multimeter
- ScopeRecord roll mode, capture waveform sample data for up to 48 hours



FLUKE 289

- True RMS Datalogging Multimeter
- AC Bandwidth Specified To 100 KHz
- Min/Max/Avg And Peak Capture
- Low Impedance Voltage Function
- AC/DC Voltage Range: 50.000 MV To 1000.0 V
- AC/DC Current Range: 500.00 MA To 10.000 A



FLUKE 376

- iFlex® Flexible Current Probe expands the measurement range to 2500 A AC
- CAT IV 600 V, CAT III 1000 V
- True RMS AC voltage and current for accurate measurements on non-linear signals
- Integrated low pass filter and state-of-the-art signal processing allows for use in noisy electrical environments while providing stable reading



FLUKE 725

- Calibration of both temperature and pressure transmitters
- Measure/source/simulate mA loop parameters
- Measure and source mA, Volts DC, frequency, and resistance
- Built-in 24 V loop power supply



FLUKE 754

- Handles Fast Pulsed RTD Transmitters And PLCs, With Pulses As Short As 1 Ms
- Measures/Sources Pressure Using Any Of 29 Fluke 700Pxx Pressure Modules
- Creates And Runs Automated As-Found/As-Left Procedures To Satisfy Quality Programs Or Regulations, And Records And Documents Results



FLUKE 789

- True RMS Datalogging Multimeter
- AC bandwidth specified to 100 kHz
- Low impedance voltage function
- AC/DC voltage range: 50.000 mV to 1000.0 V
- AC/DC current range: 500.00 µA to 10.000 A
- Resistance range: 500.00 Ω to 500.0 MΩ
- Capacitance range: 1.000 nF to 100 mF



FLUKE 9040

- Indication of field rotation in three-phase networks
- Fast, clear indication
- Clear, LCD screen
- Fused test leads
- Three crocodile clips and three test probes



FLUKE 805 FC

- Reliable, Repeatable, Accurate Device For Checking Bearings And Overall Vibration
- Features Innovative Sensor Design That Minimizes Measurement Variations Caused By Device Angle Or Contact Pressure
- Provides Consistent Data Quality At Both Low And High Frequency Ranges
- Offers Four-Level Severity Scale To Assess Urgency Of Problems And Bearing Condition



SOL METRIC PVA-1500

- Measures and displays I-V and P-V curves and key parameter values
- Advanced built-in PV models provide immediate PV performance checking
- Accurately measures high-efficiency modules and strings
- Database of more than 70,000 modules, with automatic updates

MOTOR ANALYZERS



FLUKE MDA-550

- Key measurements: inverter output voltage, DC bus voltage and ripple voltage
- Three powerful test tools in one: motor-drive analyzer, waveform analyzer and recording data logger all in one
- Conduct guided measurements for motor-drive input, DC bus, drive output, motor input and shaft measurements



MEGGER BAKER AWA-IV

- Range includes 2 kV, 4 kV, 6 kV and 12 kV models
- Testing capabilities include: surge, winding resistance, Megohm, PI, DA, continuous ramp DC step-voltage, and DC hipot tests
- Surge waveform comparison by the patented Pulse to Pulse Error Area Ratio (PP-EAR) technique



PdMA MCEmax 5552

- Monitors power circuit insulation, stator, rotor and air gap
- Equipped with a fully functional laptop computer and loaded with MCEGold®
- Variable test voltage from 250V to 5,000V
- Automatic IR, PI, DAR and Step Touch voltages
- Measure's capacitance and inductance

OIL DIELECTRIC



BAUR DPA75C

- Test voltages up to 75 kVrms
- Easy creation of user-specific test sequences
- Built-in sensor for measuring the temperature of the insulating liquid
- Precise adjustment of standard electrode distances
- High voltage safety shutdown through hood contacts



BAUR DPA100C

- Test voltages up to 100 kVrms
- Easy creation of user-specific test sequences
- Built-in sensor for measuring the temperature of the insulating liquid
- Precise adjustment of standard electrode distances
- High voltage safety shutdown through hood contacts



HIPOTRONICS OC60D

- Lightweight, portable design
- Output voltages to 60 kV or 90 kV
- Tests insulating oils per ASTM and IEC specifications
- Automatic HV shutdown at breakdown
- Test cells available for ASTM D877 testing, or ASTM D1816 & IEC 156 testing



HV DIAGNOSTICS BA75

- Output voltage: 0-75 kVrms
- Scope display of voltage breakdown
- Ultrafast, low-energy switch-off (<5µs)
- Viewable, screened HV test chamber
- Compatible with mineral, silicon, and ester-based oils



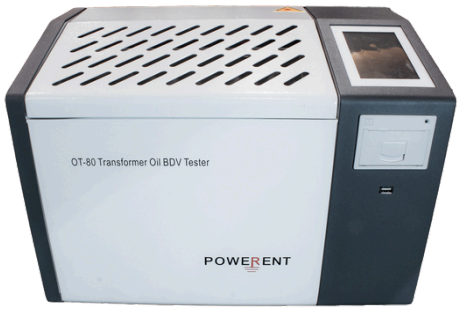
HV DIAGNOSTICS BA100

- Output voltage: 0-100kVrms
- Scope display of voltage breakdown
- Direct, precise voltage and current measurement
- Ultrafast, low energy switch-off (< 5 µs)
- Viewable, screened HV test chamber
- Automatic PDF generation of results
- Compatible with mineral, silicon, and ester-based oils



MEGGER OTS60/80

- Lightest - minimum weight 16 kg - portable instruments for measuring insulating oil breakdown voltage
- Lock in precision
- Suitable for mineral, ester and silicon oils
- Trip detection circuit with direct measurement of voltage and current



POWERENT OT-80

- Output voltage: 0-80KV
- Voltage distortion rate: <3%
- Booster capacity: 1.5KVA
- Measuring accuracy: ±3%
- Power: 200W
- Applicable humidity: <75%RH



HV DIAGNOSTICS PD60-2/TD

- Detection of PDIV and PDEV
- Rated at 62kV Peak (ideal for 35kV Acceptance and Maintenance testing and below rated cables)
- Includes PD Calibration Instrument (acc. to IEC 60270)
- While mainly used for testing cables, can also be used for testing switchgear, motors, coils, transformers etc



HV DIAGNOSTICS PD90-2/TD

- Flexible Separate standalone coupling capacitor and filter for ease of setup and portability
- Battery or AC shore power operation
- HVD Suite Software – for control and display
- Rugged and portable
- Automatic and Manual Control of gain, trigger, and filtering options
- Ergonomic process driven menu guided user interface



ADDITEL 680

- Pressure Ranges To 60,000 Psi (4,200 Bar)
- 0.05%FS, 0.1%FS Or 0.25%FS Accuracy
- Fully Temperature Compensated Accuracy
- IP67 (Submersible In 1 Meter Of Water)
- Optional Data Logging And Wireless (680W)



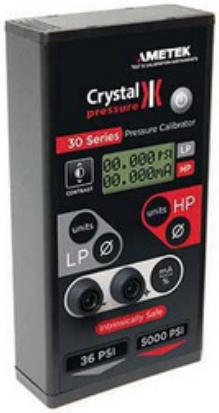
BAKER B1800

- 0 To 18 Psig
- Squeeze-Bulb Design
- Accurate To ±1.5%
- Check-Valve Thumb Screw Provides Pressure Lock And Relief
- Threaded Fitting Allows For Quick And Easy Connection To Unit Being Tested



CRYSTAL XP2I

- Submersible: Sealed Against Dust And Water
- Shock-Resistant: Survives Falls With No Affect On Accuracy
- Marine-Grade Construction: Patented Nickel-Plated Housing
- Includes Calibration Reminders And Alerts
- Weather-Proof Enclosure Resists Corrosion
- Temperature Compensated From 14 To 122°F (-10 To 50°C)



CRYSTAL IS33

- Wide Pressure Range Can Measure Vacuum And Pressure Up To 5000 Psi (300 Bar)
- Indicates Milliamps To Calibrate Transmitters
- Ultra Compact And Light
- Very Easy To Learn And Use
- Battery Operated



FLUKE 750P

- More Than 50 Pressure Modules To Choose From
- A Complete Family Of Precision Pressure Modules
- Covers Workloads From 1 InH20 To 10,000 Psi (2.5 MBar To 690 Bar)
- 8 Intrinsically Safe Models For Use With Fluke 718EX Or 725EX



GAST 123-101Q

- Flow @ 50hz: 8.5 Cfm (14.44 M3h)
- Flow @ 60hz: 10 Cfm (16.99 M3h)
- Max Pressure: 10 Psi (0.69 Bar)
- Max Pressure @ 50hz: 10 Psi (0.69 Bar)
- Max Pressure @ 60hz: 10 Psi (0.69 Bar)
- Max Vacuum @ 50hz: 26 In-Hg (880.46 Mbar)
- Max Vacuum @ 60hz: 26 In-Hg (880.46 Mbar)



QUALITROL KIT-013-1

- Portable Verification Of Proper Rapid Pressure Rise Relay Operation
- Allows Simple “Go/No-Go” Field Testing Of All Qualitrol RPRRs
- Rugged Case With Shoulder Strap For Carrying Unit Into The Field



RALSTON DPPV-0000

- Generate Either +125 PSI (8.6 Bar) Pressure Or -23 InHg (584 Mm Hg) Vacuum With The Same Pump
- Unique Design Allows The User To Convert From Pressure To Vacuum By Simply Twisting A Knob, Even With Gloves On



RALSTON NITROPAK

- Pressure Reference: LC10 pressure gauge, 3000 psi / 200 bar / 20 MPa, 1/4" Male NPT bottom connection
- Reference Connection: 1/4" female NPT x female Quick-test, no check-valve, brass
- Process Connection 1: 1/4" male NPT x male Quick-test, no check-valve, brass
- Process Connection 2: 1/4" male NPT x male Quick-test, no check-valve, brass



RALSTON QTHP-0000

- Lightweight And Easy To Use — Weighs Only 1.4 Kg, And With The Pressurized Section Located Below The Reservoir, It's Well Balanced And Easy To Hold And Pump With One Hand
- Extremely Durable — The Liquid Reservoir Is Highly Resistant To Shock, Extreme Temperature, And Chemical Exposure, And It's Far Less Prone To Shattering. Sturdy Metal Handles Won't Wear Out Or Break When Dropped



RALSTON XTHP-1MSA

- Easy To Disassemble And Repair With Standard Hand Tools
- Machined From Solid, Stainless Steel Preventing Pressure Leaks Common In Housings Made From Cast Material And Ensuring Consistent, Stable Pressure

PRIMARY INJECTION



ETI PI-1600

- 240V input with optional autotransformer for 480V input
- Will test low-voltage, molded-case and metal-clad, direct acting AC circuit breakers from various manufacturers
- Consists of PI-800 test set plus PI-AUX output unit to double output capacity



OMICRON COMPANO 100

- Accurate output of desired value Run complex predefined sequences and ramps
- Polarity check signal generation for quick setup of wiring tests
- Runs without main power supply for several hours



OMICRON CP CB2 (CPC 100 ADD-ON)

- Primary current injection for current transformer test
- High current injection for relay test
- The CP CB2 is connected to the busbars via a short, high-current cable, and to the CPC 100 via the long control cable



SMC RAPTOR

- Suitable for numerous test and measurement functions involving medium to moderate current
- Output frequency can be varied between 20Hz and 400Hz
- Auxiliary output, binary input and measurement functions are automatically configured by the standard set of test templates

PRIMARY INJECTION CHARTS

ETI PI-1600B DUTY CYCLES

4.2V SERIES / PARALLEL	8.5V SERIES	OVERLOAD	DUTY	ON TIME	OFF TIME	MAX INPUT @240V
1,600A	800A	1X	100%	24HR	N/A	38A
2,250A	1,125A	1.4X	50%	15 MIN	15 MIN	53A
3,200A	1,600A	2X	25%	5 MIN	15 MIN	75A
4,800A	2,400A	3X	10%	2.5 MIN	20 MIN	112A
6,800A	3,200A	4X	6%	75 SEC	20 MIN	150A
8,800A	4,000A	5X	4%	4 SEC	2 MIN	187A
11,200A	5,600A	7X	2%	2 SEC	2 MIN	262A
16,000A	8,000A	10X	1%	0.6 SEC	1 MIN	375A

RAPTOR HV

HIGH VOLTAGE POWER OUTPUT (240VAC, 50HZ)

OUTPUT AC VOLTAGE	MAX OUTPUT AC CURRENT	DUTY CYCLE
0..2 KV	1A	CONTINUOUS
0..2 KV	2A	3 MIN
0..2 KV	2.5A	2 MIN
0..1 KV	2A	CONTINUOUS
0..1 KV	4A	3 MIN
0..1 KV	5A	2MIN
OPEN CIRCUIT RESOLUTION	1 VAC	

OUTPUT FREQUENCY — 20-400 HZ (POWER REDUCTION APPLIED WHEN OUTSIDE THE 50 -60 HZ RANGE)

OMICRON COMPANO 100

OUTPUT - IOUT				
RANGE	CURRENT	T MAX	VMAX	POWER MAX
100A AC (15 ... 500 HZ)	80 ...110 A	2.2 s	9.0 V	600 W
	40 ...80 A	4.2 s	12.5 V	600 W
	0 ...40 A	20 s	15.0 V	600 W
20A AC (15... 500HZ)	80 ...110 A	10 MIN	20.0 V	400 W
	40 ...80 A	20 MIN	20.0 V	300 W
	0 ...40 A	>2 H	4.0 V	50 W
100A DC	80 ...110 A	2.2 S	9.0 V	600 W
	40 ...80 A	4.2 S	12.5 V	600 W
	00 ...40 A	20 S	15.0 V	600 W
20 A DC	15 ...20 A	10 MIN	20.0 V	400 W
	00 ... 15 A	20 MIN	20.0 V	300 W
	00 ... 12 A	>2H	4.0 V	50 W



DOBLE M4100

- Power Factor and Tan-Delta testing
- HV turns ratio testing to detect shorted turns or winding damage
- Leakage reactance / short circuit impedance testing
- Single phase excitation current testing
- Capacitor bank testing



DOBLE M4110

- Leakage reactance module used in conjunction with the Doble M4000/4100 to help indicate transformer winding deformation
- Can measure and calculate both single phase and three-phase equivalent leakage reactance and loss for transformers
- Supports both IEEE-62 and IEEE C57.152 test standards



MEGGER DELTA4000

- Power factor test set
- Automatic and manual operation
- Accurate and repeatable measurement results with high noise suppression
- Lightweight, rugged two-piece design



MEGGER CB100

- Lightweight and portable
- 100 Hertz test frequency
- 28 volt test voltage
- Test mode selector switch
- Direct reading of capacitance and dissipation factor
- Perform tests in UST and GST configuration



OMICRON CPC100

- Performs electrical tests on power transformers, current transformers, voltage transformers and rotating machines
- Multifunction unit saves cost for transportation and cuts down testing time
- TD12 module enables power/dissipation factor measurements



OMICRON CP TD 1 (CPC 100 ADD-ON)

- Current amplifier for the CPC 100
- Current output can be increased to 2000A using the CP CB2
- CP CB2 is connected to the busbars via a short, high-current cable and to the CPC 100 via the long control cable



OMICRON CP TD12 (CPC 100 ADD-ON)

- Includes a high-voltage source, reference capacitor and measurement electronics
- Generates output voltages up to 12kV, currents up to 300mA
- Accessory for the Omicron TESTRANO 600, CPC 100 or CPC 80



RAYTECH CAPO 2.5

- Measure's dissipation factor, power factor, capacitance, inductance, quality factor and power
- Battery-operated making it convenient to use
- Very light & portable, complete system weighs less that 22 kg
- Test frequency 10Hz to 400Hz
- Internal storage of 10,000 test results



RAYTECH CAPO 12

- Battery-operated, making it convenient to use
- Very light and portable
- Built-in standard capacitor
- Power factor cos/dissipation factor tan δ reading
- Test frequency 10 Hz to 400 Hz
- Internal storage for over 10,000 test results
- External safety switch and safety ground detect for safe operation
- Temperature channel with user-selectable correction



BONITRON M3628PCF

- Charges, discharges, and forms capacitors
- Manually variable output voltage: 0 - 1100 VDC
- Digital voltage and current displays
- Tough impact and weather resistant case
- Reforming capacitors can prevent catastrophic failure
- Up to 100,000 µF
- Operates from standard 120-240VAC supply



MEGGER B10E

- Reliable and stable power supply for circuit breaker testing
- Continuously variable 24-250 V AC or DC output Separate outputs for close coil, trip coil and spring charging motor voltage
- Direct triggering for minimum trip voltage testing Operate with a breaker analyzer for efficiency in testing sequence

POWER SUPPLY



POWERENT PS-15

- 140V 15 A AC accuracy 1%
- 140V 15 A DC accuracy 0.5%
- 2.1 kVA



POWERENT VPS

- 120/240/480 V AC/DC
- 10/5/2.5 A
- 1.2 kVA
- Accuracy 0.1%

AEMC PEL 103



- Can be installed inside a load center panel allowing the door to close on most panels
- Measures and records three True RMS voltage inputs and current inputs, Watts, VARS, VA and Energy (kWh and kVA)
- Power Factor (PF), Displacement Power Factor (DPF), Crest Factor, Frequency and THD are calculated and recorded

ARBITER 928A



- 0.1 % Accuracy
- Power and Energy
- Flicker per IEC 61000-4-15
- Harmonics I, V to 50th, THD
- Phase Angle I-I, V-V, I-V
- Waveform Display

ELSPEC G4500



- Configurable report module
- No Thresholds/ No Missed Events, continuous 1+ year logging of all network parameters
- Captures Everything, cycle by Cycle RMS values, frequency, harmonics, and trends
- Sampling rate: voltage up to 1024 Samples per cycle. Current up to 256 Samples per Cycle



FLUKE 435-II

- Measures three-phases with neutral at 200kS/s on each channel simultaneously
- Available with a wide variety of current probes from 5A (for monitoring secondary's) to 5,000A flexible current probes
- Inter-harmonics, advanced energy, transient and inrush are available on Fluke 435



FLUKE 1750

- Quick communications and configuration using Bluetooth-enabled device
- Five voltage and five current inputs enable separate ground and neutral motoring
- Monitors all power, energy, distortion, and power quality parameters with harmonic measurement to the 50th order



FLUKE 1777

- Automatically measure power and power quality parameters
- At-a-glance power quality health for faster troubleshooting
- Easily view V/A/Hz, power, dips, swells, and harmonics data
- Capture high-speed transients up to 8 kV
- Power directly from measurement circuit without a line cord



FLUKE 3210 PR TF

- Flex Thin Flex Current Probe (24 Inch/60cm)
- The Fluke3210PRTF Probe Is Designed For Use With The Fluke 1750 Power Recorder And Measures Current From Very Low Frequencies Up To The 50th Harmonic Of A 50/60 Hz Power Supply



FLUKE I40S

- The Fluke I40s-EL Current Clamp-On Transformer Is Used For Low Current Measurement
- Suitable For Making Measurements Up To 40A, And Also Measures Accurately On 1A And 5A Secondary Current Transformers
- The I40s-EL Jaw Is Capable Of Being Clamped On Current Conductors Up To 15mm In Diameter



FLUKE I17XX-FLEX3KIP

- The Flexible IFlex Current Clamps Fluke I17XX With A Sensor Length Of 61 Cm Expand The Measuring Range Of The Energy Or Power Logger Fluke 17XX To 3000 A AC
- The IFlex Current Clamps Are Connected Directly To The Loggers
- Current Measured Values Are Displayed Without Error-Prone Scaling Factors



MEGGER PMM-1

- Simultaneous measurement and display of all three-phase system parameters
- Accurate phase angle measurement at low current levels
- Versatile, menu-driven instrument with a built-in timer and data-logging



Doble F6150SV

- Performs standard relay calibration and verification testing of high burden and microprocessor relays
- Analog testing of 1 A and 5 A protection devices
- Performs state simulation and transient testing
- Tests 0.2-class metering CTs and transducers
- Implements end-to-end testing of communications-based schemes with GPS time syncing



DOBLE F6895

- The F6895 Option Includes A GPS Antenna/Receiver With 100ft. Cable. It Is Used With The F6885 GPS Receiver Interface To Provide A GPS Signal To The Test Instrument



DOBLE F8300

- Differential Testing With 3 Phases Of 300 V L-N & 6 Currents
- Generation Station Testing With 4 Phases Of 150 V L-N
- Robust Transmission Scheme Testing And Transformer Differential With 4 Phases Of 150 V L-N, 8 Programmable Logic I/O, 6 Currents
- Ph-Ph Transformer Protection Testing With 12 Logic I/O, 4 Voltages At 150 V, 4 Currents



MANTA MTS-5100

- Large 10.1” display
- Six AC/DC Currents
- Four AC/DC Voltages
- 12 Contact / 0-250Vrms Voltage inputs
- Four contact outputs
- Transducer voltage/input



MEGGER SVERKER 780

- The engineer’s toolbox for all single-phase relay testing
- Standalone functionality
- Rugged and reliable for field use



OMICRON ARCO 400

- Plug-and-play solution for quick and easy testing of any recloser control
- Rugged design and usable in harsh weather conditions
- GPS synchronized automated distribution scheme tests
- Easy-to-use software to wirelessly control ARCO 400, no special training required



OMICRON CMC 356

- Highly versatile test set for all generations of relays and protection schemes
- Ten binary inputs
- Six current outputs
- IEC 61850 capable
- Provided with Test Universe Software



OMICRON CMGPS 588

- Control one OMICRON test set at a predetermined point in time (triggering the starting point of a test process)
- Synchronize the starting point of a test process of two or more OMICRON test sets
- Accurately time-stamp data captured by an OMICRON test set



OMICRON CMLIB A

- Connection of third-party devices to the CMC low level signal outputs
- Connection of OMICRON amplifier units to any signal sources
- Easy access to the low level signals between the CMC and a CMS 356



Powerent SPRT

- Fully isolated and adjustable AC & DC voltage, current output, short circuit, overload, and over-range automatic protection
- DC:0-220V Amplifier output, short circuit, overload, over-range automatic protection
- AC:0-120V Amplifier output, short circuit, overload, over-range automatic protection；0-8A Amplifier output, short circuit, overload, over-range automatic protection
- Maximum output current:0-150A
- LCD screen. AC and DC voltage and current values, stopwatch, potential, contact status



SCHWEITZER SEL4388

- Highly versatile test set for all generations of relays and protection schemes
- Ten binary inputs
- Six current outputs
- IEC 61850 capable
- Provided with Test Universe Software

BIERER PD800W



- The Meter Probe features a Large Easy-to-Read Digital Display with Backlight
- Requires No Interconnecting Cable between Probes
- Cordless Phasing Tool Direct Contact from 120V - 69kV, Distribution Systems

GAS CLIP MGC SIMPLE PLUS



- No charging ever, no calibration necessary
- Large, easy-to-read screen
- Simple one button operation
- Compatible with MGC Simple Dock or MGC Simple Wall Mount Dock

HASTINGS 6722



- The Phase-Tell III is a battery powered, two-piece wireless phasing tool
- communicate up to three hundred feet apart
- Both units are identical, no need to identify transmitter or receiver
- Voltage range from URD test points to 500KV



HDE TAG 5000

- Range of operation is more than 33' through the air - over 1,000' along overhead conductors
- Built-in universal splines for hotstick attachment
- Rugged and lightweight design
- Both transmitter and receiver powered by 9V lithium or alkaline battery
- All-Check self-test feature for verifying proper operation prior to use



HDE DVM-25T

- Range 0-25
- Length with OH Probe 18"
- Capacitive test point mode
- Hotstick required
- RMS voltage measurements up to 80kV AC/DC
- Back lit display for low light conditions



GROUND CLUSTER

- Pfisterer multi-purpose clamps (P5)
- Max short circuit current is 29.6kA for 1sec
- Clamping range 2-25mm
- for Ball pin 25mm diameter
- for Flat conductors 5-25mm



HASTINGS 6702 WIRELESS PHASING METER

- Instrument For Measuring Overhead And Underground Voltages.
- Three Modes Of Operation AC, Hi-Pot, And DC.
- 0-40KV Meter Up To 240KV With Resistors.
- Automatically Adjust Voltage Display To Match Resistors If Used.
- Hi-Pot Mode For Testing URD Cable.
- In Hi-Pot Mode Bar Graph Marks The Peak Voltage While Cable Is Being Charged.
- 0-4KV DC
- Large Easy To Read Digital Meter And Analog Bar Graph.
- Meter Reads To Nearest 100 Volts

SECONDARY TEST SETS



ABB PR010/T

- Monitors both HW and SW components
- Performs trip test by means of SACE TT1 unit
- Protection functions test
- Communication functions test



ABB EKIP T & P

- Monitor the state of the circuit-breakers connected and record information.
- Execute operations, resets, signalling, etc.
- Configure the protection releases with customized parameters.
- Download information from releases equipped with Data logger



ALLEN BRADLEY 140G-ELBU

- 140GELBU
- Circuit Breaker Accessory
- Frame-N
- Battery Unit



ALLEN BRADLEY 140G-ELTT

- Allen-Bradley 140G-ELTT Trip Test Unit Features:
- Padlocking Hasp
- Lock-OFF Only
- Standards: UL489, CSA22.2 Number 5, IEC 60947-2, CE, CSA Certifed, UL Listed



EATON/CUTLER-HAMMER 70C1056 (DIGITRIP)

- Can test the Digitrip 520, 520i, 520M, 520Mi, 520MC and 520MCi
- Can also test the Digitrip1150 family consisting of the Digitrip 1150, 1150i, the Digitrip 1150V and 1150Vi, and the Digitrip 1150+ and 1150i+
- Changeable nameplates for ease of testing



EATON/CUTLER-HAMMER 140D481G03 (AMPTECTOR)

- Used to test and verify the pickup levels and time delay settings of a breaker's Trip Unit
- Test Amptector, Digitrip, RMS or Optim Trip Units
- Lightweight and portable



EATON/CUTLER-HAMMER 8779C02G03 (DS & DSII ADAPTOR)

- Will enable the 140D481G03 test set to test DS breakers with Digitrip trip units manufactured after May 1993
- DSII Air Circuit breakers are equipped with the new test port



EATON/CUTLER-HAMMER 8779C02G04 (MAGNUM ADAPTOR)

- For Magnum DS Digitrip Trip Units
- Converts the 11-pin banana plug on test kit to a 14-pin plug
- 14 pin plug required to plug into the trip test unit test port located on the face of the trip unit



EATON/CUTLER-HAMMER 1287C56G02 (SELTRONIC STK2)

- Used For Testing Digitrip310 Trip Units
- CAT STK2 Seltronic Secondary Injection Test Set
- For Seltronic And Series C Circuit Breakers



EATON/CUTLER-HAMMER MTK2000

- test and verify the pickup levels and time delay settings of a breaker's trip unit
- 520 Digitrip Units: supports the 520 curves accept the short delay I2T and ground I2T
- 1150 Digitrip Units: does not support the Long Delay I4T Short Delay Flat curve



EATON DIGITRIP OPTIMIZER

- EATON Breaker Hand Held Programmer, For Use With OPTIM 550/750/1050 Electronic Trip Unit
- Plug In Mount
- Monitor/Display Parameters, Configure Setting Function



FEDERAL PIONEER DDT-USRC

- The Federal Pioneer DDT-USRC Field Test Unit is a battery powered portable test unit designed for the convenience of field testing of Type USR and USRC family of overcurrent relays
- Use as either as a stand-alone unit or as a component of the air circuit breaker



FEDERAL PIONEER DDT-USD

- Battery Powered, Portable Test Unit
- Field Testing Of Type USR And USRC Family Of Overcurrent Relays
- Can Be Used As A Stand Alone Or As A Component Of The Air Circuit Breaker



GE GTUTK20 (ENTELLIGUARD)

- Operation from a 100-240VAC 50/60 Hz
- Provides power to the trip unit for viewing and setting set- points with less than 15% load on the breaker or if the replaceable Trip Unit Battery needs replacing
- Ground Fault Testing with Ground Fault Trip Indication



GE TVRMS 2

- Operation from 120 Vac or six D-cell batteries.
- Trip Unit testing without de-energizing the breaker or removing the Trip Unit from the breaker.
- Verification of switch settings on Power+, RMS-9 and Epic Trip Units

SECONDARY TEST SETS



SCHNEIDER S33595 (SQUARE D)

- The Square D function test kit designed to perform tests on Micrologic, NT, and STR Trip units
- Zone-Selective Interlocking Test
- Ground-Fault Inhibit
- Thermal-Imaging Inhibit



SCHNEIDER STRV00910 (UTA TEST KIT)

- Test a single intelligent modular unit with a PowerPact H-, J-, or L-frame circuit breaker and the associated ULP modules
- Light-weight and compact with a hard carrying case
- USB interface



SCHNEIDER UTS3

- Perform operational tests and diagnosis of Square D Micrologic Series B electronic trip units on circuit breakers
- Includes rating plug adapter



SCHNEIDER / MERLIN GERIN 34547 (MASTERPACT STR)

- Test a sequence of settings for the Schneider Masterpact STR, Compact STRF and NS Range Circuit Breakers via the front-end connector
- NSX Maintenance module can test for Thermal Protection Trip and time, Instantaneous trip and Ready LED function check



SIEMENS EPSP18V (VL POWERSTICK DG-PG)

- Siemens Breaker Power Stick for use with LCD Trip Unit
- Handheld unit
- Battery powered (two 9 VDC batteries)



SIEMENS PTS-4

- Input - 120 Volts, 50 or 60 Hz, 15 Amps Maximum
- Output - 0 to 120 Volts, 15 Amps Maximum
- Maximum continuous current on high scale 1.0 Amp
- Maximum continuous current on low scale 0.75 Amp

SECONDARY TEST SETS



SIEMENS PTS-5

- Testing of the Static Trip III (STIII) overcurrent tripping system utilized on the RL breaker
- Self-contained briefcase, requiring 120VAC to operate
- Microprocessor controlled constant current source which enables rapid verification



SIEMENS TS-31

- Designed to be user friendly
- User is prompted step-by-step program
- Test results visibly displayed to the user



SIEMENS WLTS

- The Siemens WLTS is a test device for WL Breaker Electronic Trip Units (ETU)
- Handheld device is used to verify the proper operation of the trip unit, the energy transformers and current transformers as well as the tripping solenoid F5 and the measured value display



URC B291 AC-PRO-MP

- Test pick-up and time delays of the various protection functions by driving current into the trip unit on the secondary side of the CT circuit
- Will test 60, 50, 40, or 25Hz AC-PRO trip units
- Current output of 0-13A, single phase



URC B292 AC-PRO

- Designed for testing the operation of the AC-PRO-MPTM microcontroller-based trip units
- Plug-in replacement trip unit for the STR trip units on the Merlin Gerin and Square D Masterpact MP breakers

SECONDARY TEST SETS

MANUFACTURER	MODEL	BREAKER TYPE	TRIP UNIT BRAKER REFERENCE
ABB	504	Power Shield Trip Units (ITE)	K-600 through K-4000
ABB	505	Test LSS Trips on LK Series	LK-800, 1600, 2500, 3200, 4000, 4200
ABB	606	MPS Trip Units	LK-800, 1600, 2500, 3200, 4000, 4200
ABB	607	Micro Power-Shield (MPS-C)	MPS-C-3, MPS-C-3G, MPS-C-4, MPS-C-4G, MPS-C-5, MPS-C-5G
ABB	PR010/T	EMax/SACE Trip Units	SACE (PR111, PR112, PR113, PR121, PR122, PR123, PR212, PR222, PR223, Top 25, Emax)
ABB	BTSB	MPS, MPSC and MPSC 2000 Trip Units	
ABB	EKIP	Emax 2 and Tmax XT	SACE, ALL, Emax, Emax DC, Emax 2, ISOMAX, New Emax, VF, New Megamax HF1,2,3,4 T7/T8/X1, Tmax, Tmax XT, X1
ABB	PR 030/B	SACE Breaker Battery Unit	
Allen-Bradley	140G-ELTT / ELBU	140G and 140MG Circuit Breakers	140G/140MG-G, H, I, J, K, L, M and 140G-N, NS R
Eaton	Digitrip Optimizer	OPTIM 550/750/1050	

SECONDARY TEST SETS

MAKE	MODEL	BREAKER TYPE	TRIP UNIT BREAKER REFERENCE
Eaton/Cutler-Hammer	1232C50G05	Seltronic, Series C, Digitrip RMS 310, SPB Digitrip RMS 210	
Eaton/Cutler-Hammer	1232C50G10 (STK2)	Seltronics and digitrip RMS Breaker	Seltronic, Series C, Digitrip RMS 310, Digitrip RMS 310 mining, SPB Digitrip RMS 210
Eaton/Cutler-Hammer	1287C56G02	Seltronic Test Kit	
Eaton/Cutler-Hammer	140D481G03 (Amptector)	DS Breaker	Amptector, Digitrip RMS 500, 510, 600, 610, 700, 800, 810, 910, Optim 750, 1050 **SPB with RMS must be primary injection tested
Eaton/Cutler-Hammer	8779C02G04	Magnum DS Digitrip Adapter	
Eaton/Cutler-Hammer	8779C02G03	DS/ DS II Digitrip Adapter	Adapter for 140D481G03
Eaton/Cutler-Hammer	70C1056	Magnum Breakers with Digitrip trip sets	Digitrip 520 Series, 1150 Series
Eaton/Cutler-Hammer	70C1056G54	Magnum Breakers with Digitrip trip sets	Digitrip 520 Series, 1150 Series
Eaton/Cutler-Hammer	MTK1000	Magnum Breakers trip unit (Upgraded)	Digitrip 520 Series, 1150 Series

SECONDARY TEST SETS

MAKE	MODEL	BREAKER TYPE	TRIP UNIT BRAKER REFERENCE
Federal Pioneer	DDT-USRC	USR and USRC overcurrent Relay	
GE	GTUTK20	EntelliGuard TU test set	
GE	TVRMS2	MicroVersa Trip, MVT+, MVT PM Trip Units	Power+, RMS9, Epic, MVT Plus and MVT PM or Spectra RMS MicroVersaTrip Plus and MicroVersaTrip PM (TT and A, B or C types)
GE	DEH-233	Entellisys	
GE	DEH-503	Entellisys	
GE	MPRO	GE M-PACT Plus Breakers	
GE	PST-1-1	Power Sensor Trip Devices Types PS-1, PS-1A, PS-1A-1 used on low voltage power circuit breakers Types AK-25/50/T50/75/100 and AKR-50	
GE	TAKTS1	ECS/SST and VersaTrip Trip Units	
GE	TTS1	VersaTrip pre-model 2, Including breaker types TJS, TKS, TPSS, and THSS	
GE	TAKTS2	ECS/SST and VersaTrip Model 2 Trip Units	

SECONDARY TEST SETS

MAKE	MODEL	BREAKER TYPE	TRIP UNIT BRAKER REFERENCE
GE	TVTS1	MicroVersaTrip Programmers, TP4VT, TP9VT, T4VT, T9VT, TAVT, TP4VT20/25/30 and TP9VT20/25/30/40	
MadTest	DSM4i1	DS Magnum 4-in-1 adapter. Substitute for the 8779CO2G03, 8779C02G04 and PRTAAPM	
MadTest	DSM5i1	DS Magnum 4-in-1 adapter. Substitute for the 8779CO2G03, 8779C02G04 and PRTAAPM	
Satin America	ETC-PTS	ETC Trip units	
Schneider / Merlin Gerin	34547 (Square D 53391)	Masterpact and compact, MicroLogic and STR Trip Units	
Schneider	S33594	MicroLogic, ET and STR Trip Units	
Schneider	S33595	Micrologic (Masterpact, PowerPact, Compact NS) Series 2.0, 3.0, 5.0, 6.0, 7.0 and ET trip units	
Schneider	Square D UTS3	MicroLogic Trip Units	
Schneider	Square D STRV00910	UST Test Adaptor, Micrologic 3.2, 3.3, 5.2, 5.3, 6.2 and 6.3 Trip Unit Test Kit (UTA Tester)	

SECONDARY TEST SETS

MAKE	MODEL	BREAKER TYPE	TRIP UNIT BRAKER REFERENCE
Schneider	VAP 6	VIP300 Relays	
Siemens	PTS-3	Limitrip, Static Trip I (Dual Trip), Static Trip III	
Siemens	PTS-4	LA and RL Line/ Limitrip & static trip Static Trip, Static Trip II and Static Trip III Trip Units	
Siemens	PTS-5	Limitrip, Static Trip I (Dual Trip), Static Trip III (only RL and MLA type Static III) (Not 3VA)	
Siemens	TS-31	JD, LD, MD, PD, SB and STD breakers, Sensitrip III	
Siemens	ELTPHB	VL ETU Breaker	
Siemens	EPSP18V	Power Supply for VL Circuit Breakers	
Siemens	SBAPM	Auxiliary power module for SB breakers	
Siemens	Westrip Adapter	RMS-2000, RMS-2007AF, RMS-2012AF	
Siemens	WLTS	WL Sentron Breakers, ETM trip units, ETU trip units (ETU7 Only)	
Siemens	TD400	ETU Trip	
Siemens	TD500	3VA Circuit Breakers with ETU Trip Units	

SECONDARY TEST SETS

MAKE	MODEL	BREAKER TYPE	TRIP UNIT BRAKER REFERENCE
Square D	55391 ME	ME Test Kit (MasterPact STxx8, STRx8, Compact ST2x4, ST205-3x5, STRx5, STCM2, STCM3, Compact NS STR22, STRx3	
Square D	CBTM1	SE module for UTS-3	
Square D	CBTM3	ME-NE-PE module for UTS-3	
Square D	CBTM4A	(Series A) M-N-P-S module for UTS-3	
Square D	CBTMB	(Series B) module for UTS-3	
Square D	UTS-3	Micrologic full function Series B	
Square D	UTA Tester	Compact NSX 100-250, NSX 400-630, Micrologic 2.2M, 2.3M, 3.2, 3.3, 5.2, 5.3, 6.2, 6.3 trip units	
Utility Relay	B-290	Zero-Hertz DC trip units	
Utility Relay	B-292	AC-PRO and AC-PRO-II	
Utility Relay	B-291-MP	AC-PRO-MP	
Westinghouse	12552C48G02	SCB II breakers operation test set	
Westinghouse	SPBPTK (1272C61G02)	Pow-R Breaker, Pow-R Trip, Pow-R Trip7	
WESTRIP	SURE-TRIP CON1111	WESTRIP Amptector Adapter Plug	



DILO 3-038R-R (SF6)

- No gas emissions during the measuring process
- Modular interchangeability of all sensors
- Operation with or without battery (external power supply)
- Exchangeable battery (replacement and separate shipping is possible)
- Easy and user-friendly menu navigation via high quality 7“ capacitive color touch screen



DILO SF6 LEAK POINTER / SNIFFER

- Microprocessor control with Advanced Digital Signal Processing
- Tri-Color LED visual display of SF6 leak intensity
- Seven (7) levels of sensitivity provide an increase of up to 64x
- Tactile keypad controls
- Real-time SF6 sensitivity adjustment
- Battery voltage indication



GASQUIP SF6 LEAK DETECTOR

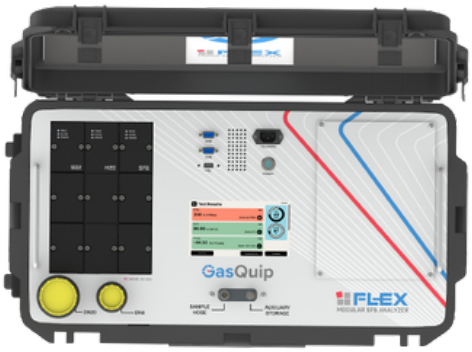
- Handheld SF6 leak detector that contains a robust Infrared sensor to accurately detect even the smallest SF6 leaks

GASQUIP SF6 FITTINGS KIT



- RECTUS 21 Male Quick Disconnect To ¼” Female JIC
- RECTUS 21 Male Quick Disconnect To 3/8” Female JIC
- RECTUS 21 Male Quick Disconnect To ½” Female JIC
- RECTUS 21 Male Quick Disconnect To 1 1/4” Female JIC
- RECTUS 21 Male Quick Disconnect To 1/4” Male NPT (3pcs)
- RECTUS 21 Male Quick Disconnect To DN20 Female
- RECTUS 21 Male Quick Disconnect To Aeroquip
- RECTUS 21 Male Quick Disconnect To Malmquist Female
- RECTUS 21 Male Quick Disconnect DN8 Female
- SF6 Sampling Regulator With RECTUS 21M QD

Gasquip SF6 Flex



- Portable SF6 Analyzer With Swappable Modules For Quick Calibration And Maintenance
- The “FLEX” Features Emission-Free Operation With The Ability To Pump Back Gas After Measurement
- The High Contrast Touch Screen Display Is Easy To See In Sunlight And Intuitive Navigation Makes Operation Simple



SMC SF6 6100-4

- Provides SF6 gas analysis in accordance with environmental regulation
- Charging is possible on any voltage (90-260VAC)
- 7” (180mm) full-color touch screen interface with soft menu keys
- Pre-programmed with test configurations, with the ability to create customized test parameters

SWEEP FREQUENCY RESPONSE ANALYZERS



DOBLE M5400

- Instrument Sends Excitation Signals To Transformer And Measures The Returning Signals Across A Broad Frequency Range
- Provides A Frequency Response Measurement From 10 Hz To 25 MHz
- Measures Frequency Response At Logarithmically Spaced Intervals Of 1.2%



DOBLE M5500

- Lightweight And Rugged Portable Test Instrument
- Typical Sweep Speeds Between 15 And 30 Seconds For Reducedoverall Testing Time
- Default Frequency Range Of 20 Hz To 2 MHz, Expanded Range From 10 Hz To 25 MHz
- Includes New SFRA V6 Software For Control And Analysis



MEGGER FRAX 101

- High Dynamic Range To Cover All Your Testing Needs
- Fulfills International Standards For SFRA Measurements
- Advanced Analysis And Decision Support Built Into The Software.
- Wireless Communication
- Battery Operated
- Continuity Control Of Ground Connections



FLUKE 9009

- Temperatures From –15 °C To 350 °C In One Unit
- Two Wells In Each Block For Simultaneous Comparison Calibrations
- Rugged, Lightweight, Water-Resistant Enclosure



FLUKE 9144

- Lightweight, Portable, And Fast
- Built-In Two-Channel Readout For PRT, RTD, Thermocouple, 4-20 MA Current
- True Reference Thermometry With Accuracy To ±0.01 °C
- On-Board Automation And Documentation
- Metrology Performance In Accuracy, Stability, Uniformity, And Loading



FLUKE 1551EX

- Intrinsically-Safe, Battery Operated, Portable Reference Thermometer
- Provides Accuracy Of ±0.05°C (±0.09°F) Over Full Range
- Features Intrinsically-Safe Operation (ATEX And IECEx Compliant)
- Measures -50 °C To 160 °C (-58 °F To 320 °F)
- Provides User-Configurable Temperature With Trend/Stability Indicator



POWERENT DB-150

- Temperature Range Can Be From -35°C To 150°C Range
- Touch Screen Operation, One-Key Heating, Automatic Temperature Control Is Convenient To Use
- Multi-Stage Temperature Control, Rapid Temperature Rise, Zero Overshoot, Fast And Stable



POWERENT DB-650

- The temperature range can be from 50℃ to 660℃
- Touch screen operation, one-key heating, and automatic temperature controls are convenient to use
- Multi-stage temperature control, rapid temperature rise, zero overshoot, fast and stable



VAISALA DM70

- Get data quickly – Fast response time enhanced by sensor purge function ensures quick and accurate data
- Reliable measurements
- Intuitive user interface – Easy-to-use user interface, a clear graphical LCD display, and data-logging capability

TRANSFORMER TURNS RATIO



Doble TTR Capacitor

- The DobleTTR Capacitor Performs High Voltage Stress Tests Of The Turn To Turn Insulation While Measuring The Turns-Turn Ratio Of Transformers.
- Supports The IEEE C57.152 Standard. (M4100 Only)



MEGGER TTR20-1

- Used with Omicron CPC-100 and TD-1
- Provides connections for three-phase winding resistance and three-phase TTR measurements
- Primary Test Manager (PTM) software provides automated (sequential) testing of all phases and each tap charger position



OMICRON TESTRANO 600

- Tests include TTR, exciting current, DC winding resistance, dynamic resistance, vector group check, cool down test, short-circuit impedance, demagnetization, and power/dissipation factor
- Powerful device with 3Ax33A DC or 400VAC
- Automatic tap changer control and measurement

TRANSFORMER TURNS RATIO



OMICRON CP SB1 (CPC 100 ADD-ON)

- Used with Omicron CPC-100 and TD-1
- Provides connections for three-phase winding resistance and three-phase TTR measurements
- Primary Test Manager (PTM) software provides automated (sequential) testing of all phases and each tap charger position



RAYTECH TR-1

- Lightweight and battery operated (7lbs)
- Measure's transformer, PT or CT ratio and polarity
- Raytech TR-1P includes on-board printer
- Ratio measurement from 0.8 to 4,000 turns



RAYTECH TR-MARK III 250V

- Extended test voltage measurement range of up to 250V
- Automatic measurements of voltage, turns ratio, current, and phase displacement
- Automatic test voltage range
- Displays deviation from a nominal ratio
- Measures power transformers PTs and CTs

TRANSFORMER TURNS RATIO



RAYTECH mini-ATOS

- Winding Resistance Measurements, Dual Power Supply
- Turns Ratio, Excitation Current And Phase Displacement Measurements
- Transformer Winding Connection And Vector Group Detection
- Automatic Multiplexer For Primary And Secondary Side
- Demagnetization With Raytech SPP



RAYTECH T-REX

- Fully automatic with seamless integration to Raytech TR-Mark II
- Measure phase relationships of transformer windings while applying test voltage
- Especially useful when measuring ratio of zig-zag type transformers



VANGUARD ATRT-03

- Measures turns-ratio, excitation current and phase angle readings
- Built-in transformer detection automatically identifies 130 different transformer configurations
- Measures ratios from 0.8 to 15,000:1
- Stores up to 112 sets of test results in on-board memory

UV CAMERAS



OFIL LUMINAR HD

- TFT LCD
- Recording & Playback
- Hi-Resolution
- Visible & UV Zoom
- Manual And Auto Focus
- Light Weight, Slim
- LED & Backlit Keyboard
- Temp. & Humidity Sensor



OFIL MICROM HD

- Wide FOV
- Low Power Consumption
- Communication Protocols
- UV Noise Reduction
- Electromagnetic Shielding
- Easy Integration On UAS
- Gimbal Options W/Integration Support



OFIL UVOLLÉ

- TFT LCD
- Recording & Playback
- Hi-Resolution
- Visible & UV Zoom
- Manual And Auto Focus
- Light Weight, Slim
- LED & Backlit Keyboard

WINDING RESISTANCE



RAYTECH mini-ATOS

- Winding Resistance Measurements, Dual Power Supply Turns Ratio, Excitation Current And Phase Displacement Measurements Transformer Winding Connection And Vector Group Detection Automatic Multiplexer For Primary And Secondary Side Demagnetization With Raytech SPP



RAYTECH WR14

- 15A output for testing most transformers with repeatable readings
- Automatically demagnetizes winding upon test completion
- Two measurement channels and on-board printer
- Color coded connections and simple interface for fast familiarization



RAYTECH WR50-12

- 50A Output for testing the largest transformers with repeatable readings
- Automatically demagnetizes winding upon test completion
- Two measurement channels and on-board printer
- Optional Heat Run Test Software and three RTD inputs



VANGUARD TRM-403

- Connects to all three-phases (one winding) simultaneously: one test for primary, one test for the secondary
- Provides individual Delta or Wye (with no neutral) winding resistance values
- Automatic discharge upon completing the test