T.E.S
Terminal Elektronika Sekawan

PRODUCT CATALOG



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WWW.TERMINALELEKTRONIKA.COM



About Company

PT Terminal Elektronika Sekawan (PT TES) is a company specializing in Testing and Measuring Equipment and Educational Training System. The company was founded by 4 founders namely Jo Hanapi, Septinus, Suhendar & Tjung Pin. Through our dedication since 1996, PT TES has grown rapidly and become of the biggest Testing and Measuring Equipment and Educational Training Equipment suppliers in Indonesia.

Not only presenting quality products, we also present Calibration Service & Training Center with the aim of providing knowledge so that our customers can make the most of the equipment.

CALIBRATION LABORATORY

We provide calibration services for various measurin instruments.
Our Calibration Laboratory has been certified by KAN
(National Accreditation Committee) and has high capability.

OUR LAB CAPABILITY

Oscilloscope
Digital Storage Oscilloscope Up to 600 MHz
Analog Oscilloscope Up to 600 MHz

Signal Generator
Arbitrary Function Generator Up to 2.7GHz
Analog Signal Generator
Function Generator Up to 2.7GHz
LCR Meter
Resistance up to 1 GΩ
Capacitance up to 10 uF
Impedance up to 10 H

Others
DC Power Supply up to10A,10kV
Tachometer optical up to100000 RPM
Insulation up to 1 GΩ, 1kV
Frequency Counter up to 600 MHz
Thermometer indicator type J,K,T,R,S,N,B,E
AC Voltage source up to 10kV
Decade Capacitance up to 1mF
Decade Inductance up to 10H
Decade Resistance up to 90 M Ohm

TRAINING CENTER

We believe that in addition to tools, human resources are an important factor in creating perfect reliability. Therefore we also provide a Training Center so that participants can get an understanding of the use of the tools that we sell. The training center facility is open to all agencies both private agencies and government agencies including students, lecturers, observers, researchers.

OUR CLIENTS

EDUCATION

MANUFACTURER

GOVERNMENT

online shop
TES Online Store



Table of Contents

T.E.S
Terminal Elektronika Sekawan

All items in this catalogue represent only few part of our product range, please visit our website **www.terminalelektronika.com** for a complete catalogue.

GW INSTEK

GDS-2000HD	GDS-2000HG Series Digital Storage Oscilloscope	04
GDS-3102A	GDS-3104A 1 GHz Digital Storage Oscilloscope	04
GSP-9330	Spectrum Analyzer	04
GPE-x323 A	Series Multiple Output Linear D.C. Power Supply	04
MPO-2000	Series Multi-function Programmable Oscilloscope	05
AFG-4000	Series Arbitrary Function Generator	05
GPE-1205	GPE-1323 Single Channel Linear DC Power Supply	05
GDM-500	Series Handheld Digital Multimeter	05
GPT-15012	Electrical Safety Analyzer	06
GDM-9041	Dual Measurement Multimeter	06
GDM-9061	Digital Multimeter	06
GLC-10000	Leakage Current Tester	06
LCR-1010	Handheld LCR Meter	07
PEL-5000G	Series High Power DC Electronic Load	07
DAQ-9600	Data Acquisition System	07
AEL-5000	AC/DC Load	07
LCR-8200(A)	High-Frequency LCR Meter	08
GBM-3000	Battery Meter	08
ASR-6000	Series High Performance AC/DC Power Source (4.5 kVA / 6 kVA)	08
PHU Series	Autoranging (Multi-Range) High Power DC Source	08

gunt HAMBURG

Product Catalog By gunt		09

TRANSMILLE
SOLUTIONS IN CALIBRATION

8104	Precision Multimeter	10
4610M	ADVANCED MULTIPRODUCT CALIBRATOR	10
4010	Advanced Multiproduct Calibrator	10
3200C	Series Electrical Test Equipment Calibrator	10
		10



KL-710	Biomedical Measurement Data Acquisition System	11
EM-3000	Electrical Machine System	11

MI 3333 EV	TrainingVehicle	11
MI 3116 PV	Analyser XA	11
MI 3399	Electrical Safety and Quality Application Trainer	13
MI 3250	MicroOhm 10A	13
MI 2992	Power Analyser	13
MI 3155	EurotestXD	13
MI 3211	TeraOhmHP 10 kV	14
MI 3215	TeraOhmHP 15 kV	14
MI 3340	AlphaEE XA	14

TK4830	Portable Tester for AC DC EV Chargers	15
TK4710	DC Adjustable Resistance Load	16
TE3000	DC Power Energy Calibrator	16
TD4550	Portable Tester for Three-phase Energy Meter	16
TK4860E	AC EV Chargers Tester	16
TK4850E	DC EV Chargers Tester	17
TD1320	Portable Tester for DC EV Chargers	17
TE1100	AC&DC-EU EVSE Tester	17
TD1230	Verification Device for Withstanding Voltage Tester	17
TH1950	High Precision Multifunction Calibrator	17
TA1000	Transconductance Current Standard Source	18
TE1000-DC-EU	EV Charger Energy Standard	18
TD1240	Verification Load Bank for Withstanding Voltage Testers	18

ETT-101/C	New Generation Multi-Experiment Digital & Analog Telecoms Experiment	18
TIMS-301/C	BASIC SYSTEM	18

GDS-2000HD & GDS-2000HG Series Digital Storage Oscilloscope

GW INSTEK



Specification

- Bandwidth : 250 MHz-350 MHz-500 MHz
- Vertical accuracy : ≥ 5 mV ± 1.5 %
- Horizontal accuracy : ± 1 ppm
- Maximum Real-time sampling rate : 2.5 GS/s
- Maximum Memory depth: 500 Mpts (350/500 MHz) ; 100 Mpts(250 MHz)
- 1 Mpt FFT analysis
- Built-in digital voltmeter (DVM), 6-digit frequency counter, and digital filters.
- Thoughtful Design to Prevent Human Error
- 14 trigger types + 43 automatic measurement parameters (with statistics)
- Standard 5 serial bus trigger & decode functions: RS232/UART, I²C, SPI, CAN, or LIN
- Easy to Learn and Use : Built-in 11 languages

GDS-3102A & GDS-3104A 1 GHz Digital Storage Oscilloscope

GW INSTEK



Specification

- 1 GHz Bandwidth, 2 or 4 Input Channels
- 5 GSa/s Real-time Sampling Rate (half channels) ;
- 2.5 GSa/s Real-time Sampling Rate (all channels)
- Per Channel 200 Mpts Memory Depth
- 200,000 wfms/s of Waveform Update Rate
- 10.2 in (259 mm) 800 x 480 TFT LCD Display
- 490,000 Segments of Segmented Memory and the Waveform Search Function to Optimize the Efficiency of Record Length
- Zoom Window and Play/Pause Rapidly Navigate the Waveforms
- 38 sets of Automatic Measurement Offer Various Measurement Selections
- High resolution acquisition mode
- I²C/SPI/UART/CAN/LIN Serial Bus Trigger and Decoding Functions
- Dual Channel Spectrum Analyzer (DC to 2.5 GHz) with spectrogram
- Dual Channel 25 MHz Arbitrary Waveform Generator
- Optional 13 Sets of Power Analysis Measurements
- Optional 16 Digital Channels with a Logic Analyzer (MSO)
- Flexible Remote Control Connectivity (Standard: USB/LAN/RS-232; Option: GPIB

GSP-9330 Spectrum Analyzer

GW INSTEK



Specification

- Frequency Range: 9kHz ~ 3.25GHz.
- 0.025ppm Frequency Stability and 1ppm aging Rate.
- RBW: 1Hz ~ 1MHz (3dB), 6dB EMI Filter: 200Hz, 9kHz, 120kHz, 1MHz.
- Fastest sweep time: 204us.
- Sensitivity: -149 dBm/Hz (@PreAmp on).
- Built-in Preamplifier, 50dB Attenuator, and Sequence Function.
- Built-in EMC pretest function, Quasi-Peak/Average EMI detect mode.
- Built-in 2FSK Analysis, AM/FM/ASK/FSK Demodulation & Analysis.
- Built-in P1dB point, Harmonic, CHPW, OCBW, ACPR, SEM, TOI, CNR, CTB, CSO, N-dB bandwidth, Noise Marker, Frequency Counter, TDP, Gated Sweep.
- Built-in Spectrogram, Topographic and Split-Window Display Modes.
- Remote control EMI measurement software: SpectrumShot.
- Remote Control Interface: LAN, USB, RS-232.
- Options: Tracking Generator, GPIB Interface, Battery Pack.

GPE-x323 A Series Multiple Output Linear D.C. Power Supply

GW INSTEK



Specification

- 1 / 2 / 3 / 4 Independent Isolated Output.
- 4.3 Inch LCD Display.
- Setting & Read back Resolution 100mV / 10mA (*1).
- Output ON/OFF.
- Analog Control (Remote I/O) for Output ON / OFF.
- Set View function for checking an original V / I setting during output on.
- Key Lock Function.
- Tracking series and parallel operation.
- Smart cooling fan achieving low noise.
- Optional European Jack Type Terminal.

PT TERMINAL ELEKTRONIKA SEKAWAN

MPO-2000 Series Multi-function Programmable Oscilloscope



Specification

- MPO-2000P:200MHz; 4CH/2CH
- MPO-2000B:100MHz; 4CH/2CH
- Allow to use Python scripts to control for automation purpose
- Dual Channel Spectrum analyzer with Spectrogram
- I2C/SPI/UART/CAN/LIN serial bus trigger and decoding function
- MPO-2000P:CAN FD, USB 2.0(full speed), FlexRay, USB PD, I2S digital decoding
- MPO-2000B: CAN FD, USB 2.0 (full speed) digital decoding
- Data log function is able to track signal changes up to 1000 hours
- Network storage function
- Equips with a spectrum analyzer; a dual channel 25MHz AWG; DMM and power supply.
- Power Supply: Dual channel output, 1V to 20V continuously adjustable (0.1V step)

AFG-4000 Series Arbitrary Function Generator



Specification

- Provide single-channel or dual-channel output Single channel:AFG-4125E/4125AE(25MHz) Dual Channel:AFG-4225E/4235/4260/4280/4210H/4225H (25/35/60/80/100/250MHz)
- Built-in Sine, Square, Triangle, Ramp, Pulse, Noise, Harmonic wave, Arbitrary wave
- Min. resolution is 1μHz
- Arbitrary function: Sampling rate AFG-4225H: 1.25GSa/s AFG-4235/ 4260/ 4280/ 4210H: 500MSa/s AFG-4125E/ 4125AE/ 4225E: 125MSa/s
- Amplitude Resolution: AFG-4125E/ 4125AE/ 4225E: 14bits AFG-4235/ 4260/ 4280/ 4210H/ 4225H:16bits
- Memory Length: AFG-4225E/AFG-4235/ 4260/ 4280/ 4210H/ 4225H: 10M/per channel AFG-4125E/ 4125AE: 16k/per channel
- Modulation: AM, DSB-AM, FM, PM, PWM, ASK, PSK, BPSK, QPSK, FSK, 3FSK, 4FSK, OSK, SUM
- Built-in sweep, burst, counter function
- AFG-4125AE Built-in Power Amplifier function
- Communication interface: AFG-4235/ 4260/ 4280/ 4210H/ 4225H provide USB, LAN interface AFG-4125E/ 4125AE/ 4225E provide USB interface
- 8" TFT LCD Display, 800*480 resolution; Multi-Touch Display: AFG-4235/ 4260/ 4280/ 4210H/ 4225H

GPE-1205 & GPE-1323 Single Channel Linear DC Power Supply



Specification

- 2.4" TFT LCD
- Encoder switch to set up voltage and current
- Voltage setting resolution 1 mV
- Voltage readback resolution 100 μV
- Current setting resolution 0.1 mA
- Current readback resolution 10 μA
- Provided hardware protections: OVP-OCP-OTP-On/Off switch Key Lock
- Provided Remote Sense (compensates voltage up to 1 V)
- Can perform series/parallel connection of two GPE-1000 units of the same model through the rear panel Control I/O interface

GDM-500 Series Handheld Digital Multimeter



Specification

- Auto Ranging (GDM-541/533/532)
- True RMS (GDM-541/533/532)
- Analog Bar (GDM-541/533)
- USB (GDM-541/533)
- Display Backlight (GDM-541/533/532/531)
- NCV Function (GDM-541/533/532/531)
- Audible / Visual Alarm (GDM-541/533/532/531)
- AC+DC Voltage (GDM-541)
- LPF ACV (GDM-541)
- hFE Test (GDM-541)
- LoZ ACV (GDM-533)

PT TERMINAL ELEKTRONIKA SEKAWAN

GPT-15012 Electrical Safety Analyzer



Specification

- DC 12kV / IR 5kV
- Comply with IEC 61010-2-034
- 7"TFT LCD
- Manual / Auto Mode
- RMS Current Measurement
- Zero Crossing Turn-on Operation
- Controllable Ramp-up & Ramp-down Time
- Capacitive Load Testing Capability up to 47μF
- Statistics & Analysis Function
- Sweep Function for DUT Characteristic Analysis
- Convenience Listed AUTO mode easy to read result & judge
- Internal Storage & USB Storage available
- Barcode Function available
- Setting Data Export / Import
- Rear panel output available
- Interface : RS-232C, USB host/device, Signal I/O and option GPIB or LAN
- Universal power input

GDM-9041 Dual Measurement Multimeter



Specification

- 50,000 Counts
- 4.3' TFT Graphic LCD
- DCV Basic Accuracy: 0.02 %
- A. I. Measurement offers automatic identification and measurement for Voltage, Resistance, Diode, or Continuity tests without the need for manual selection
- 11 Measurement Functions: DCV, ACV, DCI, ACI, 2-wire Resistance, Frequency, Period, Diode, Continuity, Capacitance and Temperature
- True RMS (AC, AC+DC) measurements
- Dual Measurement Function to Providing Two Selected Measurement Simultaneously
- Max./Min., REL, MX+B, 1/X, Ref%, Compare, Hold, dB, dBm
- Standard Interfaces: USB Device (support USBCDC & USBTMC)
- Temperature measurement function (GDM-9042 only)
- USB storage for Data collection (GDM-9042 only)

GDM-9061 Digital Multimeter



Specification

- 6 1/2 Digit Display:1,200,000 Counts
- 4.3 TFT Craphic LCD
- DCV Basic Accuracy:0.0035%(GDM-9061)/0.0075%(GDM-9060)
- 12 Measurement Functions: DCV, ACV, DCI, ACI, 2-wire and 4-wire Resistance, Frequency, Period, Diode, Continuity, Temperature and Capacitance
- Sampling Rate up to 10k SPS (GDM-9061)
- Dual Measurement Function to Providing Two Selected Measurement Simultaneously
- Offer Graphical Capabilities Including Histogram, Bar Meter and Trend
- Temperature Measurement Support RTD, Thermistor as Well as Thermocouple
- Standard Interfaces: USB Host/Device, RS-232C, LAN, Digital I/O
- Optional Interface: GPIB

GLC-10000 Leakage Current Tester



Specification

- Suitable for Medical Electrical & General Electrical of Leakage Current Measurement
- 7" Touch Pane with Color LCD
- 12 Different Measurement Network to Simulate the Resistance of Human Body (Including IEC 60601-1:2020 3.2rd)
- The Measurement of Maximum Allowable Leakage Current is Up to 50mA
- External Terminal for Extension MD Connection
- MD OUT Terminal can be Connected to an Oscilloscope for Convenient Comparison of Measured Waveforms
- 30 Sets Memories for Test Parameter; 1000 Sets Memories for Measured Data
- Test Parameter Export/Import Function Through USB Host
- USB Storage for Measurement Data/Screen Capture
- Various Standard Interfaces: RS-232C, USB Host & Device, LAN, Signal I/O and GPIB (Optional)

LCR-1010 Handheld LCR Meter

GW INSTEK



Specification

- 2.8" TFT Touch LCD
- 50,000 Counts Resolution on Primary and Secondary Display
- 0.2% Basic Accuracy
- Six or Eight Selectable Test Frequencies Depends on Model
- 15 Kinds Measurement Combinations Available
- Test Level Selectable : AC 0.3V/0.7V/1Vrms and DC +/- 1V
- Selectable measurement Speed : Fast 10 Times/s, Slow 2.5 Times/s
- Auto LCR Mode for Automatic Component Type Identification and measurement
- Data Hold
- USB (Virtual COM) Interface for Remote Communication
- Software for Datalogging is Avaible

PEL-5000G Series High Power DC Electronic Load

GW INSTEK



Description

GW Instek PEL-5000G series single-channel electronic load provides 150 V/ 600 V/ 1200 V models with a power range of 4 kW to 6 kW. PEL-5000G has a total of 9 models featuring different combinations of power, voltage, and current. It can test and verify the specifications of batteries, electric vehicle chargers/charging stations and electric vehicle batteries. PEL-5000G supports parallel connection for same voltage specification and different power models. PEL-5000G can support up to 8 units connected in parallel to provide a maximum power of 48 kW.

DAQ-9600 Data Acquisition System

GW INSTEK



Description

The DAQ-9600 data acquisition system is a modularized data acquisition system with high flexibility and higher performance. The mainframe is equipped with 3 module slots and a built-in precision 6 1/2 digital DMM is the core of its test and measurement. 7 modules are available to meet different measurement needs. For the research and development of analyzing product characteristics or the production and manufacturing of system testing or fault diagnosis, a data acquisition system with flexibility and high performance can effectively fulfill different measurement requirements by expansion and change that make the overall test simpler, faster and more reliable.

AEL-5000 AC/DC Load

GW INSTEK



Features

- CC, Linear CC, CR, CV, CP and AC Rectifier Load Mode
- Frequency Range : DC, 40~440Hz
- Turbo Mode for 2 Times the Current and Power of Electronic Load within 1 Second
- Eight Units Parallel up to 180 kW and Three-phase or Y Load Connection Can be Synchronized Control by One Master Unit
- Loading and Unloading Angle Control; 0~359 Degree is Settable
- Positive Half-cycle or Negative Half-cycle Loading
- Supports SCR/TRIAC Current Phase Modulation Waveforms,90 Degree Trailing Edge and Leading Edge
- Optional Interface : GPIB RS232 USB LAN

PT TERMINAL ELEKTRONIKA SEKAWAN

LCR-8200(A) High-Frequency LCR Meter

GW INSTEK



Specification

- Wide Test Frequency
- -- LCR-8200A:DC, 10Hz~50/30/20/10/5 MHz
- -- LCR-8200:DC, 10Hz~30/20/10/5/1 MHz
- 7" LCD color Display
- 0.08% Basic Accuracy
- Displaying Four Measurement Results Simultaneously From 17 Selectable Measurement Parameters Freely
- 15 Steps List Measurement
- Two Curves Sweep Mode
- Equivalent Circuit Model Analysis (LCR-8200A only)
- Internal DC Bias Voltage ±12V
- USB Storage Available
- ALC Function Available
- Standard Interfaces: RS-232C, USB Host/Device, LAN, GPIB and Handler
- Universal Power Input

GBM-3000 Battery Meter

GW INSTEK



Specification

- 3.5' TFT LCD (320x240)
- Measurement items: DC voltage and AC resistance
- Voltage measurement: 1000V (GBM-3100H) or 300V (GBM-3300) or 80V (GBM-3080)
- Resistance measurement: 0mΩ~ 3.2kΩ(max.)
- Basic accuracy for voltage measurement: 0.01%
- Basic accuracy for resistance measurement: 0.5%
- Measurement resolution up to 0.1μΩ and 10μV, suitable for single-cell measurement
- Independent GO/NOGO determination function for voltage and resistance respectively
- The judgment mechanism of test lead (probe) disconnect/contact failure is to ensure the measurement reliability
- Standard interfaces: USB host/device, RS-232C and Handler

ASR-6000 Series High Performance AC/DC Power Source (4.5 kVA / 6 kVA)

GW INSTEK



Description

The Inception of ASR-6000 High Performance AC/DC Power Source Development

From the very moment Alpha Go defeated the human chess champion with its ultra-high-speed computing capability, artificial intelligence technology (AI) has developed rapidly around the world. Today, servers with advanced AI functions process tremendous amounts of data under the high-speed computing architecture of 2 CPUs + 8 GPUs.

PHU Series Autoranging (Multi-Range) High Power DC Source

GW INSTEK



Description

Prestige / **H**armony / **U**niversal

The PHU Series is a single-channel programmable DC power supply with a autoranging (multi-range) output feature which offers a wide range of voltage and current combinations for greater flexibility. The circuit design adopts SiC (silicon carbide) components to achieve high power density characteristics which can generate 15 kW of high output and keep the compact size at just 3U height.

PT TERMINAL ELEKTRONIKA SEKAWAN

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PHOTOVOLTAICS
SOLAR LINE



SCAN
PRODUCT CATALOG

8104 Precision Multimeter



Description

The 8100 Series from Transmille is the most advanced multimeter available on the market. Featuring a full-color screen, the 8100 Series offers a wide range of functionality and covers a wide range of input parameters while achieving breakthrough performance. The 8100 is a significant improvement on previous technologies and remains at an affordable price point.

4610M ADVANCED MULTIPRODUCT CALIBRATOR



Specification

- 0 – 1000V DC
- 1mV – 1000V AC, 10 Hz to 1 MHz
- Variable Resistance 0 Ohms to 1GOhms
- Variable Capacitance 1nF to 100mF
- 10 Hz to 1 MHz Frequency Output

4010 Advanced Multiproduct Calibrator



Specification

- AC current maximum frequency 30kHz
- Variable Resistance up to 1GOhm
- Variable Capacitance to 100mF
- USB and GPIB interface fitted as standard
- Options to calibrate oscilloscopes to 6.4Ghz
- Range of external accessories to increase workload
- Removable Handles

3200C Series Electrical Test Equipment Calibrator



Specification

- Fastest and safest solution for calibration of Loop, RCD, PAT and Insulation Testers
- Dedicated, localised mains socket
- Short warm up time
- Calibration time reduced to under 15 minutes
- Test uncertainty ratio of 4:1 when calibrating electricians test tools
- Portable and lightweight

PT TERMINAL ELEKTRONIKA SEKAWAN

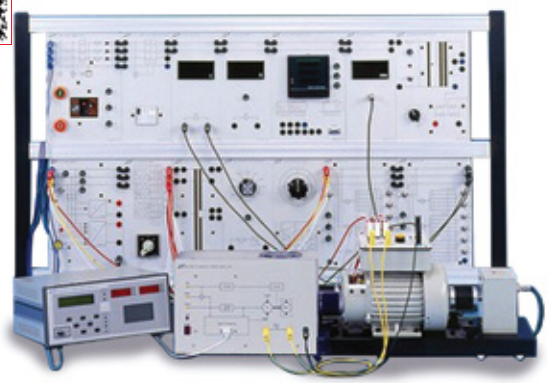
KL-710 Biomedical Measurement Data Acquisition System



Description

KL-710 is a complete data acquisition system that includes both hardware and software for acquisition and analysis of life-science data. The hardware uses the DAQ interface cards from National Instrument. As for the software, it is written in LabVIEW. KL-710 system uses PC to acquire, analyze and store data.

EM-3000 Electrical Machine System



Description

The electrical machines system leads students to distinguish the mechanical similarity and difference among all electrical machinery. Students study and turn all kind of electrical machinery into circuit models for the foundation. Moreover, it enhances students ability for further application and control. Besides facilitating teaching, it makes students be familiar with a different kind of electrical mechanical test.

MI 3333 EV TrainingVehicle



Description

The MI 3333 EV TrainingVehicle is a versatile e-mobility training platform with several exercises for training personnel coming into contact with electric vehicles and their safety devices. It is used for training in safety precautions and procedures, supported with exercises, presentations, video material, and test and measurement activities with real-world examples. As such it supports simulation of errors and failures on AC sockets, cables, engine, inverter, batteries and on the car body. Pass and fail parameters can be adjusted by 11 switches in different parts of the vehicle (training platform).

MI 3116 PV Analyser XA



Description

MI 3116 PV Analyser XA adalah alat uji instalasi fotovoltaik dan listrik canggih yang dirancang untuk efisiensi dan presisi maksimum. Alat ini menggabungkan pengukuran insulasi dan I/U sistem PV 1500 V dalam satu perangkat sekaligus memastikan pengujian modul PV efisiensi tinggi yang akurat. Unit jarak jauh nirkabel (Wi-Fi) memungkinkan pengukuran dan pencatatan iradiasi dan suhu sel secara real-time, sehingga meningkatkan pengumpulan data. Fungsi Uji Otomatis untuk pengujian Kategori 1 menyederhanakan pengoperasian, sementara fitur koreksi inovatif memungkinkan pengguna untuk menyesuaikan parameter yang sebelumnya salah pada pengukuran yang telah selesai atau seluruh kelompok pengujian, memastikan akurasi dan keandalan yang lebih tinggi dalam diagnostik sistem PV.

METREL®

MI 2992
Power Analyser





MI 3399 Electrical Safety and Quality Application Trainer



Description

The MI 3399 Electrical Safety & Quality Application Trainer is a 3D simulator of real-life safety and quality situation's with many adjustable risks and errors. The model is designed as a stand-alone unit for demonstrations, trainings and educational purposes. The MI 3399 is ideally suited for training and education of larger groups of people as well as for independent practice. Due to various integrated electrical elements the model enables complete testing and troubleshooting of power quality analysis as well as LV electrical installations, lightning systems, earthing systems, PV systems, appliances, equipment, machines or switchboards by using modern methods, testing procedures and instruments.

MI 3250 MicroOhm 10A



Description

The MI 3250 MicroOhm 10 A is portable low resistance ohmmeter for measuring low resistances of breakers and switches, busbars, cable joints, small to medium sized transformer and motor windings for industrial application, etc., with test current up to 10 A. The used 4-lead Kelvin testing method together with automatic bidirectional procedure ensure very high accuracy of test results (0,25%). The instrument can be powered by mains or internal rechargeable batteries. Test results can be stored on the instrument and with PC software HVLink PRO that is supplied as a part of standard set enables transfer of measured results to PC where they can be analysed or printed.

MI 2992 Power Analyser



Description

The MI 2992 Power Analyser is a handheld, three-phase power quality analyser featuring a large 10.1" TFT colour touchscreen display. Its intuitive step-by-step wizard allows users to quickly detect power quality parameters without complex setup. It is designed for both long-term recording and troubleshooting and supports various distribution system configurations. The new platform enables comprehensive data analysis directly on the device, including live measurements and historical data review. Users can access trends for all recorded parameters, as well as events, transients, RVCs, inrush currents, and more. For more advanced reporting and analysis, the MPVision PC software provides local or remote data transfer, automated post-processing, and report generation. Additionally, remote access via VNC Viewer allows full control of the instrument from any computer, regardless of location.

MI 3155 EurotestXD



Description

MI 3155 EurotestXD adalah produk unggulan terbaru dari lini instrumen pengukuran multifungsi tercanggih Metrel dan dirancang khusus untuk pengujian di industri. Yang membedakan instrumen ini dari yang lain adalah desain ergonomis dan antarmuka pengguna yang intuitif, dilengkapi pengatur memori dan AUTO SEQUENCE yang dapat diprogram sepenuhnya, yang dikelola melalui layar sentuh berwarna yang besar. Instrumen ini sepenuhnya mematuhi standar fungsionalitas (misalnya IEC/EN 61557) dan standar referensi pengujian lainnya (misalnya IEC/EN/HD 60364-4-41,...) sebagaimana disyaratkan untuk instrumen apa pun yang melakukan pengukuran arus TRMS, uji RCD, uji impedansi saluran dan loop dengan 3 (dan 4) kabel, serta pengukuran resistansi pentanahan. Selain itu, instrumen ini mendukung berbagai macam pengujian dan fungsi pengukuran, termasuk pemantauan tegangan daring, pengujian urutan fasa, pengujian varistor, perhitungan PI/DAR, pengukuran luminansi, pengujian waktu pengosongan, pengukuran ISFL, uji IMD, serta inspeksi fungsional dan visual.

PT TERMINAL ELEKTRONIKA SEKAWAN

MI 3211 TeraOhmHP 10 kV



Description

The MI 3211 TeraOhmHP 10 kV is a high power, portable, battery or mains powered test instrument with excellent IP protection (IP65), designed for analysing insulation resistance by using high DC test voltages of up to 10 kV. Because of its robustness (CAT IV measuring category) and high immunity to radiated EM fields, it is best suited for demanding industrial environments. Touch screen or key manipulation via menu-driven LCD enables easy and transparent selection of different measurement methods and easy entry of data. Newly designed test leads have coded banana connectors for proper connection and locking to protect them against unwanted or accidental removal.

MI 3215 TeraOhmHP 15 kV



Description

The MI 3215 TeraOhmHP 15 kV is a high power, portable, battery or mains powered test instrument with excellent IP protection (IP65), designed for analysing insulation resistance by using high DC test voltages of up to 15 kV. Because of its robustness (CAT IV measuring category) and high immunity to radiated EM fields, it is best suited for demanding industrial environments. Touch screen or key manipulation via menu-driven LCD enables easy and transparent selection of different measurement methods and easy entry of data. Newly designed test leads have coded banana connectors for proper connection and locking to protect them against unwanted or accidental removal.

MI 3340 AlphaEE XA



Description

The new cutting-edge AlphaEE XA, is designed with an innovative housing that redefines the ease and comfort of electrical equipment testing. The instrument is engineered for robust performance and perfect balance, the AlphaEE XA ensures effortless one-handed operation, making it an indispensable tool for professionals on the go. The user-friendly interface provides the flexibility of a touch screen or function keys catering to your preferred method of operation. This dual option enhances usability, ensuring a seamless experience whether you're conducting routine checks or detailed diagnostics.Designed with service organizations in mind, the AlphaEE XA boasts specialized measuring functions that cater to a wide range of applications. It offers both periodic testing and testing after repair with pre-defined AutoSequences and single measurements for on-the-spot servicing, providing unparalleled versatility. AlphaEE XA boosts the future of electrical equipment testing, with its unparalleled convenience, advanced functionality, and exceptional performance, all encapsulated in a sleek, user-centric design.

PT TERMINAL ELEKTRONIKA SEKAWAN



TK4830 EVSE Tester

Verification Ability

Working Error: The working error test can be completed in real time during the charging process through the pulse method or the accumulated energy method. It supports two methods of testing:
1. Test with electric vehicle 2. with programmable resistiveloads.

Specifications

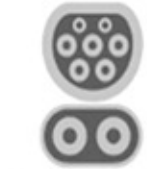
DC Measurement Function			
DC Voltage	Measuring Range		30 V~1150 V
	Measurement Uncertainty (k=2)		0.05%*RD
DC Current	Measuring Range		1 A~300 A[1]
	Measurement Uncertainty(k=2)	5 A ≤ I ≤ 300 A	0.05%*RD
		1 A ≤ I <5 A	0.1%*RD
Power/Energy	Measurement Uncertainty(k=2)	5 A ≤ I ≤ 300 A	0.1%*RD
		1 A ≤ I <5 A	0.15%*RD
AC Measurement Function			
AC Voltage	Measuring Range		Phase voltage 30 V~300 V
	Measurement Uncertainty (k=2)		0.05%*RD
AC Current	Measuring Range		Three-phase 0.1 A~80 A[1]
	Measurement Uncertainty(k=2)	Three-phase 0.1 A~80 A	0.05%*RD
Power/Energy	Measurement Uncertainty(k=2)	Three-phase 0.1 A~80 A	0.1%*RD
Clock Function			
Clock	Timing mode		GPS Clock timing
	Time Error		≤ 1 s
Temperature Function			
Temperature	Measurement Range		-30 ℃~60 ℃
	Maximum Permissible Error		0.5 ℃

Note [1]: If the gun line output Max. Current is lower than measurement range, the maximum measurement current will be based on the output current of the gun line.

General Specifications

Power Supply Mode	（1）Utility power: support 90 V~264 V，47 Hz~63 Hz； （2）Charging gun head takes power; （3）Removable built-in lithium battery.
Communication Interface	USB, LAN, Bluetooth or WIFI
Temperature Performance	Operating temperature: -25°C~55°C; Storage temperature: -30°C~70°C.
Humidity Performance	Operating humidity: < 80% @ 30°C, < 70% @ 40°C. < 40% @ 50°C; Storage humidity: <80% R·H, non-condensing.

Charging Interfaces



European Standard
CCS2



European Standard
Mennekes (IEC Type2)



Japan Standard
CHAdeMO

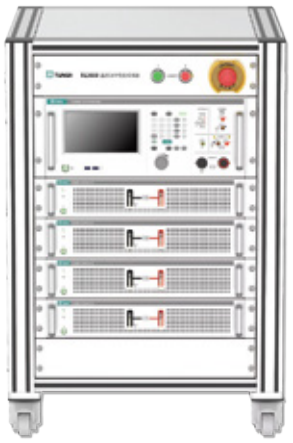
TK4710 DC Adjustable Resistance Load



Description

TK4710 is a DC adjustable resistive load box with optional rated power of 20kW, 30kW and 60kW. The panel is equipped with a standard DC charging socket and can be used with DC charger field testers to achieve on-site calibration of DC chargers for electric vehicles.

TE3000 DC Power Energy Calibrator



Description

The TE3000 is designed based on TUNKIA's latest IPMA technology. The complete system consists of a main unit, a current range expander (optional), and supporting software. The main unit is comprised of a main control board, an I/O board (optional), a standard voltage source board, a current source and small-signal voltage source board, and a small-signal measurement board (optional). The accuracy for DC voltage and DC current is of Class 0.005 / 0.01.

TD4550 Portable Tester for Three-phase Energy Meter



Description

TD4550 is an intelligent and highly integrated test system for calibrating three-phase energy meter and other AC electrical apparatus. It is built-in 3PH standard source. It can complete intrinsic error test, constant test, standard deviation test, starting current test, test of no-load of electric energy meter.

TK4860E AC EV Chargers Tester



Description

The TK4860 series is a series of high-efficiency testing instruments specially developed to address the problems of complex wiring, difficult handling, low testing efficiency, and high cost during the on-site testing of AC charging stations. TK4860E is one of the all-in-one portable instruments specially designed for on-site metrological testing of AC charging stations for electric vehicles. It is available in single-phase and three-phase options. Among them, the single-phase TK4860E-S instrument integrates a single-phase 8kW load internally. In addition to the single-phase 8kW load integrated inside the single-phase TK4860E-T instrument, it can also be connected to an external high-power AC resistive load or electric vehicle.

TK4850E DC EV Chargers Tester



Description

TK4850E is one of the all-in-one portable instruments specially designed for on-site testing of off-board chargers of electric vehicles. The instrument integrates a small DC load, supports load expansion, and supports using new energy vehicles as loads. The instrument is operated through a wireless tablet. A single device can complete the working error and clock time error test of the off-board chargers. It is easy to carry and a single person can easily complete the on-site verification of the off-board chargers.

TD1320 Portable Tester for DC EV Chargers



Description

TD1320 is a portable instrument dedicated to on-site testing of DC EV(Electric Vehicles) chargers with DCV measurements up to 1150 V, DCI measurements up to 300A, and DC electrical energy available in class 0.05 / 0.1. The instrument can be combined with TK4710 DC resistive load to complete the metrology characteristic test.

TE1100 AC&DC-EU EVSE Tester



Description

TE1100-AC/DC-EU is an integrated AC/DC EV charger tester designed for the verification of EV chargers. It provides both AC and DC energy measurement with an accuracy of Class 0.05 and Class 0.1, enabling operating error testing of AC and DC EV chargers.

TD1230 Verification Device for Withstanding Voltage Tester



Description

TD1230 is designed based on TUNKIA's latest Integrated Precision Measurement Architecture (IPMA) (1). It is suitable for the calibration of Class 1, Class 2, and lower accuracy AC/DC withstand voltage testers. It can also be used to calibrate the withstand voltage test section of electrical safety multifunction testers and insulation withstand voltage testers.

TH1950 High Precision Multifunction Calibrator



Description

The TH1950 is a next-generation top-tier multifunction calibrator featuring an extended calibration range and higher accuracy. It provides high-performance AC/DC voltage and current outputs, and integrates highly stable standard resistors.

TA1000 Transconductance Current Standard Source



Description

TA1000 is a high-precision and high-stability wideband current source. It can output wideband current with the built-in signal generator directly. It can also be used as a wideband transconductance amplifer to accept AC/DC Voltage/current signals from any calibrator, signal generator or power supply.

TE1000-DC-EU EV Charger Energy Standard



Description

TE1000-DC-EU is a standard instrument designed for real-time electrical energy measurement during EV charger operation, with power and energy accuracy of Class 0.05 / 0.1. This device, used with an EV as the load, performs metrological verification and energy checks on European-standard off-board chargers with CCS2 interfaces (per IEC 62196-3 Configuration EE). Compared with conventional solutions, it offers superior portability, ease of use, and higher testing efficiency.

TD1240 Verification Load Bank for Withstanding Voltage Testers



Description

TD1240 is a resistive load bank with 14 sets fixed resistance, rated voltage for 15 kV, rated current for 200 mA, load power up to 500 VA.
It can help calibrate Withstanding Voltage Testers with cooperation of **TD1230**, and also can be use to calibrate breakdown alarm current and leakage current.

ETT-101/C New Generation Multi-Experiment Digital & Analog Telecoms Experiment



Description

The most cost effective experimenter to help you teach Signals & Systems and Modern Communications Systems Theory.

Flexible and expandable experimenting
Extensive Experiment Coverage

BASIC EXPERIMENTS
ADVANCED EXPERIMENTS
SDR EXPERIMENTS
SIGNALS & SYSTEMS HANDS-ONHARDWARE EXPERIMENTS
FIBER OPTICS EXPERIMENTS

TIMS-301/C BASIC SYSTEM



Description

The TIMS-301 and TIMS-301C kit includes:

- The TIMS-301/C System Unit.
- 13 plug-in modules of the BASIC Module SET (see BASIC module list below).
- User Manuals.
- Student Text experiment manuals.
- LabSheet experiment manuals.
- Modules Storage Box.
- Standard accessories.

TIMS-301 and TIMS-301C
TIMS-301C has an in-built PC-Based, 2 channel scope and spectrum display (FFT) multi-instrument. Complete with PC software and cables. Requires an external PC (not included in TIMS-301C price).

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