



TESTMET, Inc.

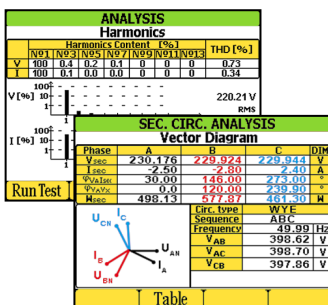
Innovation in Utility Testing Solutions™

EE Test System

Portable Three-Phase Phantom Load and Energy Standard class 0.04

EE-60A-3S-Color

EE-500V-3



NEW COLOR DISPLAY!



General

The EE Test System is used for testing of all types of electricity meters on-site or in a laboratory.

It consists of two units:

- **Unit 1: EE-60A-3S-Color – Three-Phase Current Generator to 60A and Energy Standard class 0.04;**
- **Unit 2: EE-500V-3 – Three-Phase Voltage Generator up to 500V controlled from Unit 1 via RS485.**

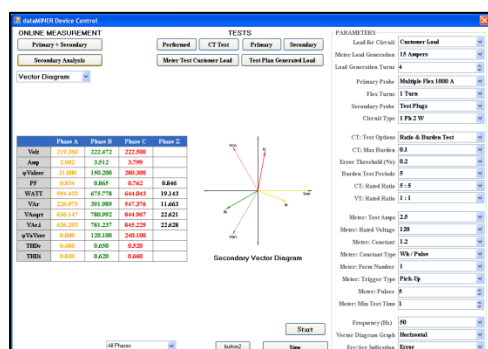
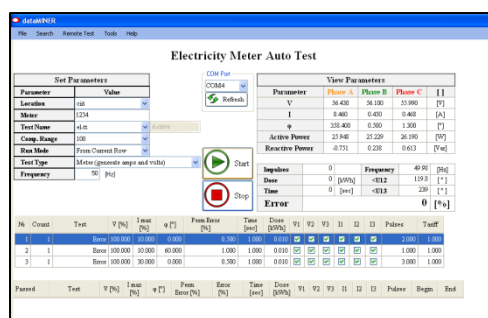
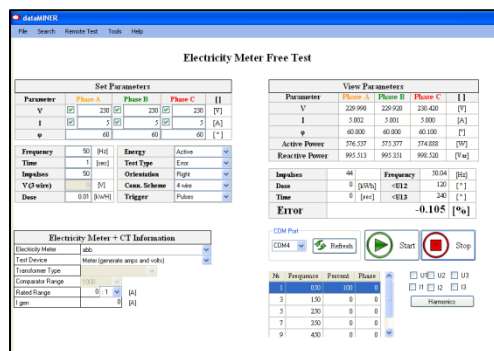
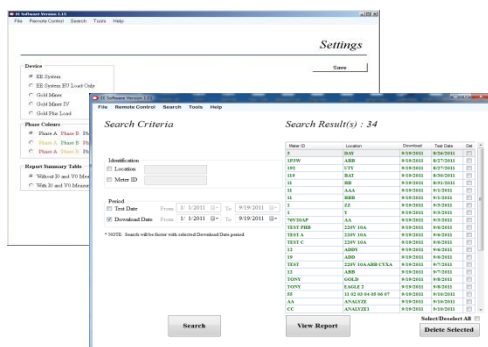
The Phantom Load is able to generate three-phase voltages and currents with unprecedented stability and accuracy. The following meter tests can be carried out with the EE Test System: **Error Test, Register Test, Maximum Demand Test**. Full **analysis** of the customer load is easily performed with current clamps to 200A. Current transformer parameters and Z-Burden on the secondary can also be measured.

The test results are saved in an internal Flash. 100 saved files can be viewed on the LCD display and transferred to a PC. The EE Software operates under Windows XP, 7, 8, 10.

Advantages

- **Flexible structure** - EE Test System works in four different modes:
 - EE-60A-3S unit is used only as a standard for analysis of the customer load, meter and CT testing;
 - EE-60A-3S unit is used for on-site meter tests, generating current synchronized with the service voltage;
 - EE-60A-3S and EE-500V-3 units are used together to test the meter with generated current and voltage;
 - Load Mode – generation of load values and indication of volts, amps, power, phase-shift, PF, THD, f.
- **Automatic Test Plans:** The Test Plans are used to perform ANSI meter tests (FL, LL, PF) automatically, without PC. The Test Plans are predefined by the Operator - maximum 100, each one with 12 load points.
- **Generation of harmonics** - up to 19th harmonic, without the need of a PC.
- **PC Control:** The EE Test System can be controlled from a PC, using EE Software.

Control from a PC via USB



Functions

Global Setup

- **Phantom Load Settings:**
Voltage, Current, Phase shift, Frequency, Circuit type.
- **Meter Test Settings:**
Energy type (Wh, Varh, Vah), Test type (Error, Register), Meter Constant Kh, Number of pulses, Test Time, Energy.

Load Generation

- **Manual Mode (Table)**
The parameters of the load are displayed in a table – V , I , φ , P , Q , S , $PF (\cos\varphi)$, THD , f .
Changes - in Setup menu.
- **Test Plan Mode**
The load is changed easily within 12 predefined values in a Test Plan.

Meter Tests

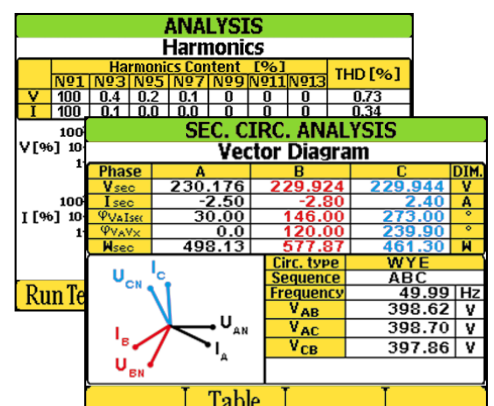
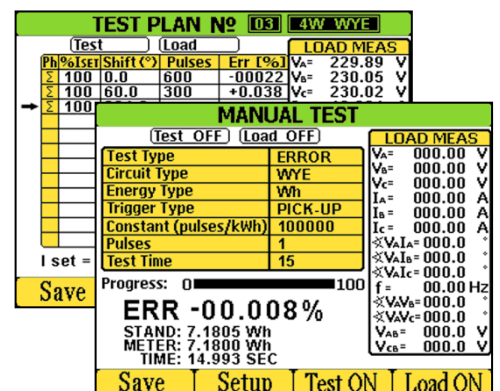
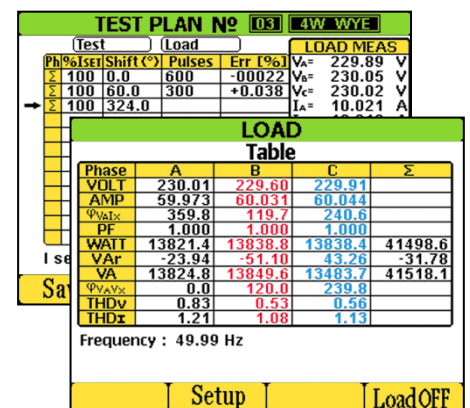
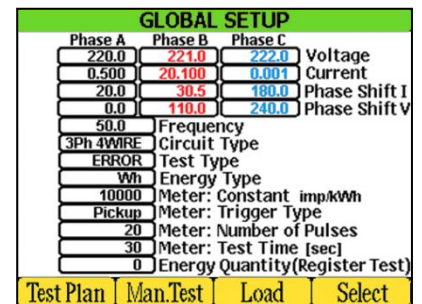
- **Manual mode:**
Meter Test – Wh, VARh, VAh;
Error Measurement, Register
Test, Maximum Demand.
- **Automatic mode**
Meter Error Tests with
predefined Test Plans (FL, LL,
PF) are fully automatic.

Analysis of Customer Load

- Vector diagram drawing;
- Table with display of $V, I, \varphi, P, Q, S, \cos\varphi, THD, f$;
- Harmonics display in graphics and tables
- Wave-form display
- CT Ratio and Z-Burden

EE TEST SYSTEM

Control from the panel



Technical Data

General

Power Supply:
Power Consumption:
Dimensions WxDxH:
Weight:
Housing:
Operation temperature range:
Color 5" LCD Display:
Relative humidity:
Safety Tests:
Degree of protection:
Overvoltage Category:

EE-60A-3S (Current Source)

85...265Vac, 47...63Hz
max 300VA
18.3"x14"x7"
30 lbs
Rugged plastic Pelican case
14°F...122°F
640 x 480 pixels
<95 % non condensing
IEC61010-1-2002
IP-20 (opened), IP-65 (closed)
300V, Cat III (600V Cat II)

EE TEST SYSTEM

EE-500V-3 (Voltage Source)

85...265V AC, 47...63Hz
max 150VA
15.8"x13"x6.3"
22 lbs
Rugged plastic Pelican case
14°F...122°F
-
<95 % non condensing
IEC61010-1-2002
IP-20 (opened), IP-65 (closed)
300V, Cat III (600V Cat II)

Three-Phase Load

Ranges (per phase):

Output Power (per phase):
Accuracy (100%...0.3% of range):
Resolution:
Stability:
Harmonic Distortion:
Phase Shift (for each phase):

EE-60A-3 (Current Source)

10mA...60 A (max.1.0V)
60 VA max.
<±0.04 % (of measured value)
1 mA
<0.1 % (in 1 hour)
<0.8 %
0.0°...359.9° (step 0.1°)

EE-500V-3 (Voltage Source)

500V (0.06A); 300V (0.12A)
150V (0.24A); 75V (0.48A)
36 VA max.
<±0.04 % (of measured value)
0.1 V
<0.1 % (in 1 hour)
<0.8 %
0.0°...359.9° (step 0.1°)
(V_A is always 0.0°)

Frequency (for all phases):

Bandwidth:

45...100Hz (step 0.1Hz)

30...2000Hz

45...100Hz (step 0.1Hz)

30...2000Hz

Three-Phase Standard

Measuring Quantities:

Measuring Modes:

Pulse Inputs:

BNC Pulse output:

Flash Memory:

Volts, Amps, Phase Shift, P, Q, S, Wh, VARh, VAh, PF, f, CT Ratio, Z-Burden

1Ph 2W, 1Ph 3W, 3Ph 3W Delta, 3Ph 3W Net, 3Ph 4W Delta, 3Ph 4W Wye

Universal Pickup, Infrared Pickup, Manual Button, High Frequency BNC Input

50 000 imp/kWh (Isolated, TTL level or open collector up to 50V)

100 files are saved, reviewed on the LCD display and transferred to a PC

Standard Measurement Accuracy

Quantity	Error	Range (12A)	Range (60A)
Voltage	≤ ±0.04 %	30...500Vac	30...500Vac
	≤ ±0.04 % **	5...29Vac	5...29Vac
Current (direct)	≤ ±0.04 %	50mA...12A	100mA...60A
	≤ ±0.04 % **	1mA...49mA	10mA...99mA
Current (with current clamps)	≤ ±0.2 %	--	100mA...120A
Wh / VAh (direct)	≤ ±0.04 %	50mA...12A	100mA...60A
VARh (direct)	≤ ±0.06 % *	50mA...12A	100mA...60A
Wh (with current clamps)	≤ ±0.2 % *	--	100mA...120A
Phase shift	0.01°	0.00°...359.99°	0.00°...359.99°
Power Factor	0.002	-1.000...+1.000	-1.000...+1.000
Frequency	0.01Hz	40Hz...400Hz	40Hz...400Hz
Temperature coefficient	≤ 30ppm/°K	30°F...110°F	30°F...110°F

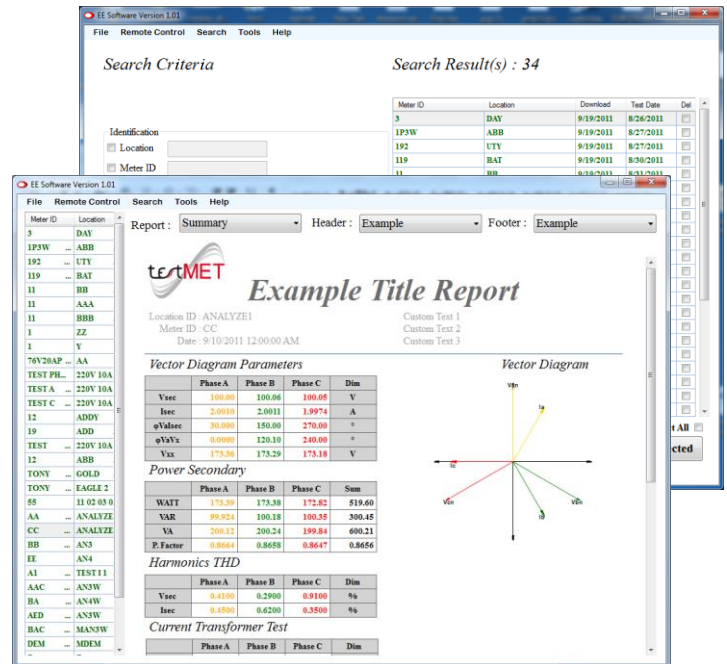
* Error related to apparent power (to be divided by the power factor);

** Error related to the maximum value of the range

EE Software - Features

MySQL Database

- Transfer of 100 saved files from EE-60A-3S to a PC via USB
- Store all tests in MySQL Database
- Search by Meter ID, Location, Date
- Create and Print Various Professional Reports
- Control of EE Test System from a PC via USB
- Generation and saving harmonics up to the 19th
- Update your Software, free of Charge, via Internet



Accessories

- Universal Pickup with clamping device
- Infrared Pickup
- Manual Button
- Current Cables 60A – 6pcs x 5 feet
- Voltage Cables – 4pcs x 5 feet, 4pcs x 3 feet
- Alligator clips – 5pcs
- Power Cord Cable – 2pcs
- Neutral Cable – 1pc x 5 feet
- Phase Adapters - 3pcs
- User's Manual and Calibration Certificate
- Carrying case for the Accessories

Optional Accessories

- 120A Current Clamps
- 1000A Current Clamps
- 2000A / 3000A Flexible Current Probes
- High Voltage Current Probe to 2000A



TESTMET Inc.

www.testmet.com; E-mail: support@testmet.com

85 Hawks Landing Cir, Unit 304, Verona, WI 53593

Phone (952) 486-7653 Fax: (952) 486-8131

