

Moving Test – MT500

Three Phase Current and Voltage Source



Current Generation up to 12 A
Voltage Generation up to 300 V

System Concept

While testing of metering installations on-site you can meet the problem, that you cannot make a proper testing because of insufficient load conditions.

The three phase MT500 system is a lightweight and portable current and voltage source based on newest technology and serves for solving this problem by simulating the required load conditions.

The MT500 system is offering a user friendly menu guided operation via built-in soft-keys and 6.4" LCD-Display.



Features

- Three phase portable current-/voltage source up to 12 A and 300 V
- All test values are generated synthetically.
- Powerful unit with single phase mains supply
- Easy user guidance
- User friendly menu guided operation via built-in soft-keys
- External control via PC possible
- Clearly arranged indication of test values via 6.4" LCD Display

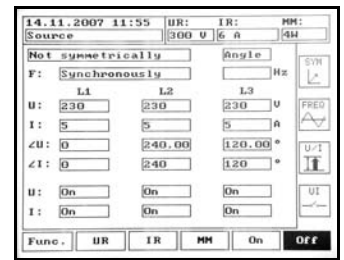
Functions

- Individual load point setting
- Adjustable phase shifting from 0 ... 360°
- Adjustable power factors
- Configuration of balanced and unbalanced load points
- Simulation of load conditions via adjustable currents, voltages and angles

Load Point Adjustment

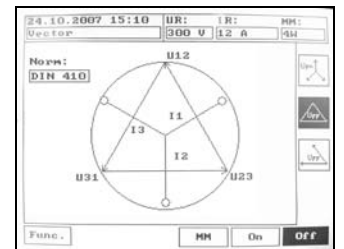
Easy simulation of load conditions via individual load point adjustment.

- The voltage phases are independently adjustable
- The current phases are independently adjustable
- Adjustable power factors or phase angles from 0 to 360° between voltage- and current circuit
- Adjustable test frequency synthetically and synchronized to the mains



Vector Display

The vector diagram display makes it very easy to detect wiring faults in the voltage and current circuits of a meter installation.



Actual Value Display

Simultaneous and instantaneous display of all generated and measured values.

- RMS values of every current and voltage phase
- Phase angle between current and voltage
- Active, reactive and apparent power
- Frequency and phase rotation
- Power factor

	L1	L2	L3
U _{eff}	227.89	7.10	6.93
I _{eff}	227.35	0.17	227.36
I	5.0001	5.0002	5.0004
φ _U	0.13	84.89	84.88
φ _{IU}	0.13	-35.10	-155.11
λ	0.9998	0.8097	-0.8978
P	1.1393	0.0288	-0.0311
Q	0.0025	-0.0202	-0.0144
S	1.1395	0.0355	0.0346

Optional Features

- Stable trolley transport case with wheels
- Quick-connecting cable set for current and voltage circuit

Technical Data

MT500 Current and Voltage Source

General

<i>Power supply</i>	85 ... 265 V, 47 ... 63 Hz
<i>Power consumption</i>	~ 210 VA
<i>Temperature range, operation</i>	-10° ... + 50° C
<i>Temperature range, storage</i>	-15° ... + 65° C
<i>Relative humidity (not condensing)</i>	max. 95 %
<i>Dimensions (DxWxH)</i>	330 x 330 x 230 mm
<i>Weight</i>	~ 12 kg
<i>Max. height above sea level</i>	2000 m

Safety

<i>IP class according to DIN EN 60529</i>	IP40
<i>Declaration of conformity</i>	CE conform
<i>Protection class according to DIN EN 61140</i>	I
<i>Overvoltage category voltage measurement</i>	CAT I 300 V
<i>Overvoltage category current measurement</i>	CAT I 300 V

Source

<i>Phase angle setting resolution</i>	0.01°
<i>Phase angle accuracy</i>	0.1°
<i>Frequency setting accuracy</i>	0.01 Hz
<i>Frequency accuracy</i>	0.01 Hz
<i>Frequency range</i>	45 ... 65 Hz
<i>Phase angle setting range</i>	0.00 ... 359.99°
<i>Voltage min. max.</i>	20 V ... 300 V
<i>Voltage max. output power 2)</i>	15 VA
<i>Voltage range(s)</i>	75 V, 150 V, 300 V
<i>Voltage resolution</i>	5 Digits
<i>Voltage accuracy</i>	< 0.2 %
<i>Voltage stability</i>	< 0.02 %
<i>Voltage distortion</i>	< 0.5 %
<i>Current min. max.</i>	4 mA ... 12 A
<i>Current max. output power 3)</i>	15 VA
<i>Current range(s)</i>	12 A, 6 A, 3 A, 1.2 A, 0.6 A, 0.3 A, 0.12 A, 0.06 A, 0.03 A
<i>Current setting resolution</i>	5 Digits
<i>Current accuracy</i>	< 0.2 %
<i>Current stability</i>	< 0.02 %
<i>Current distortion</i>	< 0.5 %

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1: Stability over 1 hour (every minute one measurement with $t_i = 10$ s)

2: at maximum voltage and ohmic load

3: at maximum current and ohmic load