

Multifunction measuring device TNM160



- Energy meter
- 2 channels / 6 conductors
- Graphical display
- WebServer
- Top hat rail mounting
- Sampling rate 1600 /s
- Supported current ranges 1 A, 5 A, 0.333 V
- Determination of harmonics"

<https://www.wachendorff-prozesstechnik.de/en/TNM160>

Description

The TNM160 is a universal multifunctional measuring device with two channels of three phases each for DIN rail mounting. Up to six single-phase or two three-phase outgoing circuits can be measured via six current transformer inputs. The use of a TNM160 two-channel multifunction measuring device eliminates the need for an additional multifunction measuring device. It includes a recording of energy consumption and supports the BACnet and Modbus protocols. The meter can be operated and configured via a web browser using the Ethernet TCP/IP interface. An indispensable aid for displaying and evaluating the min/max values, active, apparent and reactive power, as well as harmonics up to 64, and all important measured variables via additional software.

Product details

Protocols / Interfaces	BACnet MS/TP and TCP/IP, Modbus RS485 and TCP/IP
Supply voltage	90 to 250 VAC, 50 / 60 Hz, 110 to 280 VDC
Dimensions (W x H x D)	160 mm x 97 mm x 56 mm
Weight	550 g
Power consumption	9 VA
Accuracy	Active power 0.2 %, reactive power 0.2 %
Display	320 x 240 color display
IP protection class	IP20
Sampling rate	1600
Number of channels / conductors	2 / 6, 2 / 8
Harmonics	32
Operating temperature range	-20 °C to 70 °C
Storage temperature range	-20 °C to 70 °C
Application range relative humidity	0 % to 95 % RH
Current measurement	0.1 A to 6 A
Measurement current - overload (RMS constant)	50 A
Current measurement - short-term (for 1 minute)	100 A
Measurement current - load	< 0.05 VA
Neutral current measurement	Not possible
Voltage measurement L-L	0.1 to 950 V
Voltage measurement L-N	0 to 550 V

Measurement voltage L-N - maximum (RMS constant)	1000 V
Measurement voltage L-N - load	< 0,06 V
Frequency measurement	45 to 65 Hz
Power factor measurement (cap./ind.)	-1 + 1
Current display range	0.0010 A to 99999 kA
Display range neutral current	Not possible
Display range voltage L-L	0.10000 V to 999999 kV
Display range voltage L-N	0.10000 V to 999999 kV
Display range Frequency	45.001 to 65.001 Hz
Display range Power factor (cap./ind.)	-1 + 1
Display range active power total/phase	0.10000000 W to 999999999 MW
Display range reactive power total/phase	0.10000000 VAR to 999999999 MVAR
Display range Apparent power total/phase	0.10000000 VA to 999999999 MVA
Display range active energy total/phase	0.100000 WH to 9999999 MWH
Display range Reactive energy total/phase	0.100000 VARH to 9999999 MVARH
Display area Apparent work total/phase	0.100000 VAH to 9999999 MVAH
Display range Total harmonic distortion V/I	Not possible
Display range Partial harmonic distortion V/I	Not possible
Functions	Alarm memory, alarms, data logging, easy-to-use menus, built-in tariff counter, graphical display of harmonics, multilingualism, minimum/maximum determination, fast trend displays, waveform display
Normative standards	EN 55022, class A, supplements A1; A2 EN 55024, supplements A1; A2 EN 61000-3-2, class A, EN 61000-3-3, supplements A1 EN 61000-4-2 EN 61000-4-3, EN 61000-4-4 EN 61000-4-5 EN 61000-4-6, EN 61000-4-11 IEC 62052-11 IEC 62053-22, IEC 62053-23
Scope of delivery	Multifunction measuring device

Manufacturer	Celsa Messgeräte GmbH
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