DATA SHEET

NTPM 100D / 110D - Smart Energy Sensor

Features

- Measures over 100 electrical energy parameters
- Three-phase and single-phase installations
- Power quality analysis
- Full internet connectivity through standard Ethernet interface
- Embedded rule engine for event driven control
- Digital outputs for control functions
- Integrated alarm system
- Internal memory holds years of data
- Integrated webserver
- Web-based user interface
- DIN rail mount
- DC Power Supply
- LVD and EMC compliat

Overview

Unique solution that combines monitoring of electrical energy consumption, power quality analysis and management of electrical energy use in a single powerful instrument.

NTPM devices can be easily installed and use in any energy management scenario.

Built in Web server enables easy remote control and configuration, as well as real-time monitoring of measured parameters.

Real-time readings

Daily, weekly, monthly trends and graphs

www.netico-group.com/ntpm-100-series

Electrical characteristics

Power supply

Voltage	9 – 48 V DC
Power consumption	Max 2.5 W

Voltage inputs

Measured voltage (Un)	Up to 400 V L-N / 690 V L-L (Wye) or 600 V L-L (Delta) UL listed up to 347 V L-N / 600 V L-L
Measurement by voltage transformer	Supported external VT with ratio up to 350
Measurement category	CAT III 600 V per IEC 61010-2-030
Frequency range(configurable)	47 – 53 Hz (50 Hz nominal)
	57 – 63 Hz (60 Hz nominal)
Network type	Single-phase / Two-phase / Two-phase with neutral / Three-phase / Three-phase with neutral
Impedance	5 MΩ
Overload	1.15 Un

Current inputs

Maximum CT primary	5000 A
Rated input current (Ib)	5 A
Supported CT	Supported external CT with ration up to 1000
Measured current	Up to 5000 mA
Starting current	0.001 Ib
Permissible current overload	6A continuous
	20 A 10 sec
	50 A 1 sec
Frequency range (configurable)	47 – 53 (50 Hz nominal)
	57 – 63 (60 Hz nominal)

Measuring characteristics

Accuracy class	0.5
Active power measurement precisions class	0.5
Reactive power measurement precision class	0.5
Power factor (PW) precision class	0.5
Frequency measurement precision class	0.5
Voltage harmonics	up to 31st harmonic
Current harmonics	up to 31st harmonic
Sampling rate	64 samples / cycle

Relay outputs

Number of outputs	2
Type	General purpose
Maximum load voltage	250 V AC / 30 V DC
Maximum load current	1 A

Digital outputs

Number of outputs	1
Type	Form A solid state relay
Maximum load voltage	30 V AC / 60 V DC
Maximum load current	125 mA
ON resistance	8 Ω
Isolation	2500 V RMS for 1 minute

Communication

Interfaces	**10/100Mbps Ethernet**	1 port
		Modbus TCP, ICMP server, DHCP client, Lan Discovery, Web server
	RS 485	1 port
		Modbus RTU
		2.5 kV RMS, double isolated
Protocols		Modbus TCP
		Modbus RTU

Mechanical characteristics

Dimensions		88 x 94 x 58 mm (5 modules)
Net weight		300 g
Case	**Material**	Plastic, PC (UL 94 V-0)
	Mounting	35 mm DIN rail
	IP degree of protection	<IP40

Environment

Operating temperature	-25 to 70 C°
Storage temperature	-40 to 80 C°
Relative humidity	5 to 95 % non-condensing
Altitude	<2000 m
Pollution degree	2

EMC (Electromagnetic compatibility)

Harmonic emissions	IEC 61000-3-2	class A
Flicker limitations	IEC 61000-3-3	Compliant
Immunity to ESD	IEC 61000-4-2	Level 4
Immunity to radiated fields	IEC 61000-4-3	Level 3
Immunity to fast transients	IEC 61000-4-4	Level 4
Immunity to surges	IEC 61000-4-5	Level 4
Conducted RF disturbances	IEC 61000-4-6	Level 3
Immunity to magnetic fields	IEC 61000-4-8	Level 3
Immunity to voltage dips and interruptions	IEC 61000-4-11	Compliant
Radiated RF emissions	EN 55011 + EN 55016-2-3	Class A
Conducted RF emissions	EN 55011 + EN 55016-2-1	Class A

Safety

CE	Compliant to Low Voltage Directive 2014/35/EU and EMC Directive 2014/30/EU
Standards	EN 61010-1:2010
	EN 61010-2-030:2010
	EN 61326-1:2013
	EN 61000-6-2:2005 + AC:2005
	EN 61000-6-4:2007 + A1:2011
Protection class	Class II according to EN 61010-1:2010 Double insulated for user accessible parts

Sustainability

EU RoHS Directive	Compliant
Toxic heavy metal free	Yes
Mercury free	Yes
WEEE	At its end of service life, the product must be disposed of and recycled following specific waste collection regulations on EU markets.

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