E3METER® Intelligent Power Monitor
IPM 1303 Datasheet

General Description

The E3METER® IPM 1303 panelboard power meters can measure 9 channels up to 65 A directly or, with additional current transformers, hundreds of amps indirectly.

Energy monitoring of all channels is handled by our E3METER® Intelligent Power Monitor (IPM) that can be swapped during operation (hot-plug). Indicators on the module frontplate summarize the power load of individual power groups.

Measurement data is available via SNMP, HTTP and Telnet through the built-in Fast Ethernet port or optionally via Powerline Communication.

Time synchronization is guaranteed by using NTP servers.

Two dedicated extension ports can be used to measure temperature and humidity through E3METER™ remote sensors.

Features

- Metal chassis for panelboard installation
- 9 highest precision current transformers (0.1% accuracy)
- Energy and power measurements (active, reactive, apparent, power factor)
- Voltage, current measruement of three 3-phase groups (9 channels)
- 0.2% active power & energy accuracy
- Factory calibrated
- 2x extension ports for external temperature/humidity sensors
- Fast Ethernet (SNMP, HTTP, Telnet, NTP)
- Powerline Communication (optional) (requires E3METER® Data Concentrator)

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Technical Specification

Number of channels	9 (3 x 3 phase)
CT accuracy (in chassis)	0.1%
Active Power / Energy accuracy (module)	0.2% over dynamic range 1:1000
Nominal Voltage	9 x 230 V / 400 V rms
Power consumption per phase	60 mW
Module Supply (seperate input)	230 V rms / 1 W
Nominal Frequency	50 Hz
Max. Current (direct)	65 A rms
Max. Current (indirect)	5 A rms
Measurement interval	1 second (real-time readout via SNMP)
Startup time of module	2 seconds

Physical

Width	45 mm (front)
Height	200 mm chassis (260mm with fixation)
Depth	185 mm (without handles)
Weight	1.1 kg (including module)

Communication

Ethernet 10/100 Mbit	HTTP, SNMP, Telnet, NTP
Serial	Console on COM 1
Powerline	Reliable narrowband PLC (optional) (requires E3METER® Data Concentrator)

Measurements / Alarms

All values are measured per phase every second (real-time readout via SNMP).
Power and energy results are also aggregated per power group.

P	[W]		Real power
Q	[VAR]		Reactive power
S	[VA]		Apparent power
Ep	[kWh]		Real energy
Eq	[kVARh]		Reactive energy
Es	[kVAh]		Apparent energy
Urms	[V]		Phase voltage
Irms	[A]	Alarm	Phase current
Upk	[V]	Alarm	Peak line voltage
f	[Hz]	Alarm	Line frequency
PF	N/A		Power factor
Ti, T1, T2	[°C]	Alarm	Internal temperature and values from external temperature sensors
H1, H2	[%]		Humidity values from external sensors