

PM180

UNIVERSAL IED AND CONTROLLER



SATEC eXpertMeter PM180 is a high performance analyzer that allows versatile uses. The high performance of the eXpertMeter, together with the unique flexible design of the expansion cards, enables its use in large variety of applications, in which it can substitute several other devices which saves costs, space and complexity.

Examples of Applications

- IED with IEC 61850 protocol
- Substation and industrial automation controller
- High accuracy power quality analyzer (PQA)
- Check meter
- Fault recorder
- Protection relay
- Sequence of Events (SoE)

Features

Each function of the PM180 uses cutting edge technologies to provide maximum performance and flexibility while keeping it cost-effective:

Various Measurement and Protection Channels

- 4 voltages (4th voltage AC/DC), 4 currents
- Optional additional 4 or 8 current channels for fault analysis
- Transient recording (option) of 2kV at 1024 samples per cycle (16/20 μ S at 60/50Hz)
- Digital fault recorder option – up to 50/100A current

Measurement to the Highest Available Standards

- Power measurements– IEC 61000-4-30 Class A
- Energy measurements – IEC 62052-22 Class 0.2S / 0.05%
- Power Quality Analysis – EN 50160, IEEE 1159, GOST R 54149-2010

Fault Protection and Data Recording

- 256 MB on board memory
- 4 Simultaneous waveform loggers
- Pre- and post-fault waveform logging
- Standard and programmable thresholds

Multiple Communication Ports and Protocols

- Standard communication: Ethernet, USB, RS-232/422/485
- Optional communication: IR, front USB, 2G/3G Modem, Fiber Optic Ethernet, Dialup Modem, Profibus and WiFi
- Standard protocols: Modbus RTU, ASCII, Modbus/TCP, DNP 3.0, DNP3/TCP
- Optional protocols: IEC 61850, MMS and GOOSE Messaging, Profibus

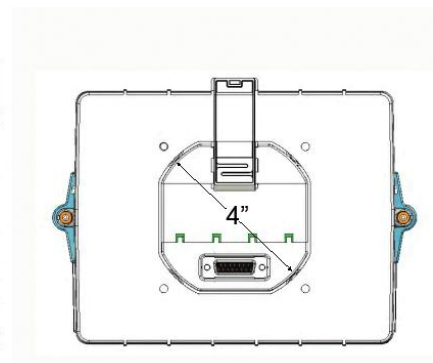
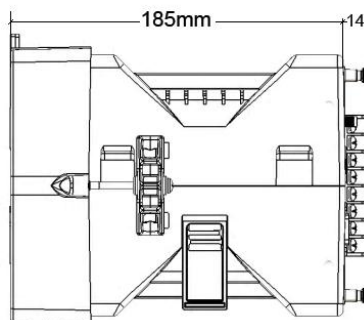
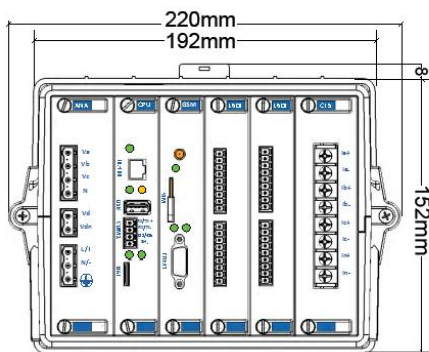
Advanced Automation and Control Capabilities

- Up to 48 digital inputs
- Up to 24 relay outputs
- Up to 12 analog I/O
- 1ms sampling rate
- Comprehensive programming logic
- Accurate time synchronization (SNTP, DI, IRIG-B)

Robust Construction and Design

- 3 hot-swap expansion cards
- Optional redundant power supply and Ethernet port
- Compact half 19" 3U high

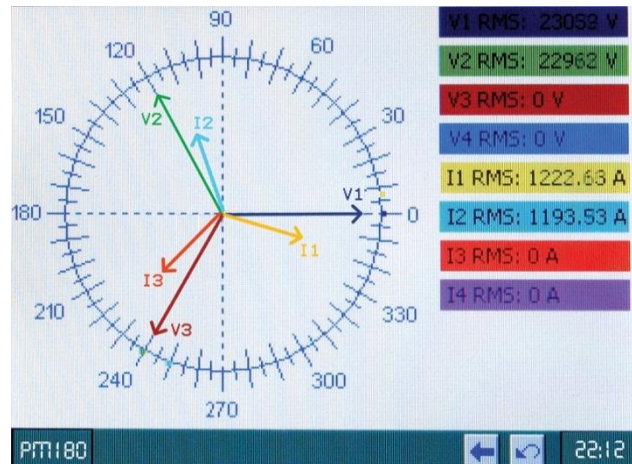
Mechanical size



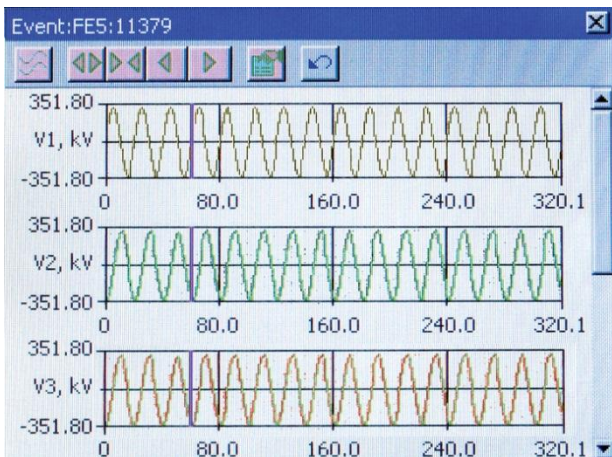
PM180 Screen Shots



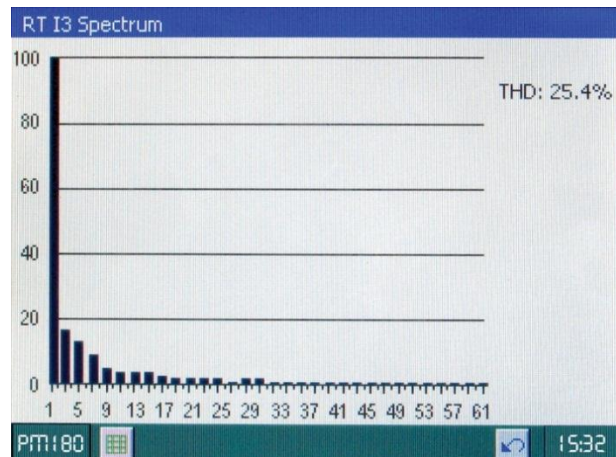
3-Phase



Phasor



Event



Spectrum

Order String

MODELS

6 in 1 device for Substation and industrial automation:

- 1- Precise Energy/Revenue meter (IEC 62053 Class 0.2S)
- 2- Advanced Power Quality Analyzer (IEC 61000-4-30)
- 3- Fault recorder PM180
- 4- Sequence Of Event
- 5- Bay Controller capabilities
- 6- Transient Recorder (optional)

PM180 with 5.7" touchscreen graphic color display	PM180-TFT
PM180 with 3 line LED display	PM180-LED
PM180 with 12 window LED display	PM180-LD12

OPTIONS

Voltage Inputs

690V AC Nominal Voltage Input	-
120V AC Nominal Voltage Input	U

Current Inputs

5 Ampere	5
1 Ampere	1
100A Split Core HACS (Calibrated to 5A)	CS1S

Frequency

50 HZ	50Hz
60 HZ	60Hz

Accuracy and Power Quality standard

ANSI C12.20 - USA Standard IEEE1159 Full Power Quality	A
IEC 62053-22 - European Standard EN50160 Full Power Quality	E
GOST13109 - Russian Standard	G

Power Supply - MAIN

85-265V AC and 88-290V DC (Default)	ACDC
-------------------------------------	------

Communication Standard

IEC61850 (SISCO)	850
------------------	-----

OPTIONAL PLUG-IN MODULES

PLUG-IN MODULES - Add Plug-In Modules

Maximum 3 modules

Digital Inputs (Max. 48 Digital Inputs)

DI 16 Dry Contacts	DI-DRC
DI 16 24V DC	DI-24V
DI 16 125V DC	DI-125V
DI 16 250V DC	DI-250V

Relay Outputs (Max. 24 Relay Outputs)

8 Relays	RLY-R8
----------	--------

Auxiliary POWER SUPPLY (Max. 1 modules per Instrument)

AUX. P.S. AC/DC	ACDC
-----------------	------

