

5.7" TFT TOUCH SCREEN

320 X 240 RESOLUTION

IP54 FRONT PANEL

RS-485 UP TO 480 KB/S

ETHERNET WITH POE

FULL SPEED USB

[View RGM180 manuals and datasheets on satec-global.com.au](https://www.satec-global.com.au)

RGM180

Remote Graphic Touch Screen Display for SATEC Meters

The **RGM180** is a 5.7" colour graphic touch screen that gives operators a clear, easy-to-use interface to monitor and configure SATEC meters. It shows real-time parameters, waveforms and phasor diagrams on screens that make complex power quality and energy data easy to read at a glance.

An ARM9-based controller with 64 MB RAM and 256 MB flash drives the TFT display. The RGM180 detects the connected SATEC device type automatically. Two models cover direct connection to a single meter or network monitoring of multiple meters over RS-485 or Ethernet.



RGM180-G1

Controls and monitors a single SATEC meter, with direct connection to the PM17x or PM180. Adds full speed USB to the host meter.

RGM180-G3

Monitors multiple SATEC meters over RS-485 or 10/100Base-T Ethernet as a Modbus master. Powered by PoE or an external supply.

Main Features

- 5.7" colour TFT touch screen with LED backlight
- 320 x 240 resolution with a 115 x 86 mm active area
- Real-time parameters, waveforms and phasor diagrams
- Plug-and-play detection of the connected SATEC device
- Supports most current SATEC meters
- Multi-language, programmable system and display setup
- Touch panel rated for more than 500,000 operations
- RS-485 host link up to 480 kb/s
- 10/100Base-T Ethernet with PoE (RGM180-G3)
- Full speed USB port for the host meter (RGM180-G1)
- IR port for the PM180
- IP54 front panel protection

Feature Capabilities

Graphic Touch Screen Display

- 5.7" colour graphic TFT display with touch panel and LED backlight
- 320 x 240 dot resolution, 115.2 x 86.4 mm active area
- Displays real-time parameters, waveforms and phasor diagrams
- Soft-switch parameter setting and display selection, rated for at least 500,000 touch operations
- Programmable display setup, including touch panel calibration
- Programmable screen saver
- Touch-based operation keeps meter setup and configuration simple

Plug-and-Play Device Support

- Detects the connected SATEC device type for monitoring and configuration
- Compatible with the EM132 and EM133, PM130 PLUS and PM135, PM172, PM174 and PM175, BFM136, EM720 and EM920, and the **PM180**
- Programmable system setup with multi-language support

System Architecture

- 200 MIPS system-on-chip ARM9 controller
- Up to 64 MB RAM
- Up to 256 MB NAND flash

RGM180-G1 Single Meter Display

LOCAL HOST CONNECTION

- Controls and monitors information from a single SATEC meter
- High speed UART host interface up to 480 kb/s over RS-485
- Mounts directly on the PM17x in place of the LED display, with no additional power source
- Remote connection by cable up to 10 m, or up to 1000 m at lower baud rates with a remote power supply
- Adds a full speed USB port to the host meter

RGM180-G3 Multi-Meter Display

NETWORK HOST CONNECTION

- Monitors multiple SATEC meters as a Modbus master
- Up to 32 devices over RS-485, or up to 36 devices over Ethernet
- 10/100Base-T Ethernet with auto-negotiation (IEEE 802.3) or RS-485 host interface
- Powered by Power over Ethernet (PoE) or an external AC/DC or DC/DC supply, which can be connected in parallel
- Energy pulse LED controlled by the host meter CPU

Additional Ports

- Optical IR port for the PM180 (Modbus or DNP3, up to 19.2 kb/s)
- Front panel USB Type A port, full speed 12 Mb/s, Modbus RTU/ASCII and DNP3
- DB-15 serial connector and RJ-45 Ethernet connector

Standards Compliance

EMC Immunity

- IEC 61000-4-2: electrostatic discharge, 15kV air
- IEC 61000-4-3: electromagnetic RF fields, 10V/m and 30V/m @ 80 MHz to 1000 MHz
- IEC 61000-4-4: fast transient burst, 4kV on current and voltage circuits, 2kV on auxiliary circuits
- IEC 61000-4-5: surge 4kV on current and voltage circuits, 1kV on auxiliary circuits
- IEC 61000-4-6: conducted radio frequency, 10V @ 0.15 MHz to 80 MHz
- IEC 61000-4-8: power frequency magnetic field
- IEC 61000-4-12: damped oscillatory waves, CMM 2.5kV and DFM 1kV @ 100 kHz and 1 MHz

Emission

- EN 55022:1994 Class A (CISPR 22), radiated and conducted
- FCC Part 15 Class A

Environmental and Mechanical

- IEC 68-2-3: long-term damp heat withstand <95%, +40°C
- IEC 60068-2-6: vibration
- IEC 60068-2-27: shock

Enclosure Protection

- IEC 60529: IP54 (NEMA type 13)

Specifications

COM1 · IR PORT (PM180 ONLY, OPTIONAL)

Port	Optical communication port
Maximum baud rate	19.2 kb/s
Protocols	Modbus or DNP3
Isolation	2500V AC @ 1 min

COM2 · SERIAL PORT (STANDARD)

Interface	RS-485 or RS-232
Baud rate	115.2 to 480 kb/s
RS-485 cable length	Up to 1000 m
Protocols	Modbus RTU
Isolation	4000V AC @ 1 min
Connector	DB-15

ETHERNET (RGM180-G3 ONLY)

Interface	10/100Base-T with PoE, auto-negotiation (IEEE 802.3)
Baud rate	10/100 Mb/s
Protocols	Modbus TCP
Isolation	3kV AC @ 1 min
Connector	Standard RJ-45

USB (DISPLAY PANEL)

Port	Full speed USB device port
Baud rate	12 Mb/s
Protocols	Modbus RTU/ASCII and DNP3
Isolation	2.5kV AC @ 1 min
Connector	USB Type A, vertical mount

PANEL DISPLAY

Type	TFT colour LCD with touch panel and LED backlight
Size	5.7"
Resolution	320 x 240 dots
Display module (W x H x D)	131 x 102 x 14.5 mm
Active area (W x H)	115.2 x 86.4 mm
Indicators and ports	1 Wh energy pulse LED, IR port, USB Type A connector

MEMORY

RAM	Up to 64 MB
Non-volatile memory	256 MB NAND flash

POWER SUPPLY

12V DC (standard, from device)	Rated input 10.8-13.2V DC; insulation 4000V DC @ 1 min
24V DC (option, PM180 aux. PS)	Rated input 9.5-24V DC; insulation 3000V DC @ 1 min
48V DC PoE (option)	Rated input 37-58V DC; insulation 1500V DC @ 1 min
Output	+12V DC $\pm$ 1%, 2W
Terminals	Detachable, wire size up to 6 mm ² ; 7.5 mm pitch; RJ-45 for PoE

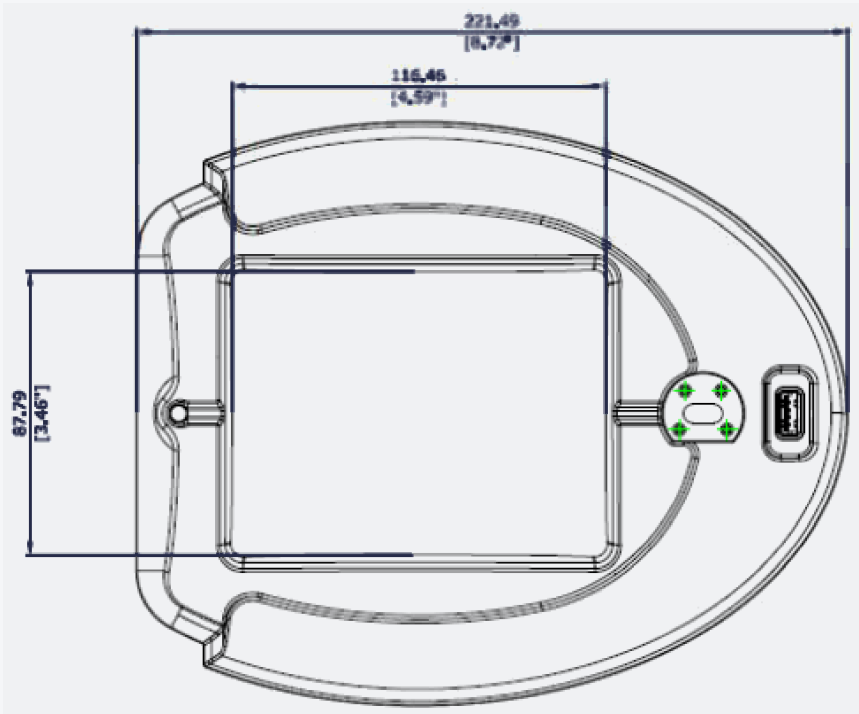
ENVIRONMENTAL

Operating temperature	-30°C to +70°C
LCD operating temperature	-20°C to +70°C
Storage temperature	-30°C to +80°C
Humidity	Damp heat withstand per IEC 68-2-3 <95%, +40°C

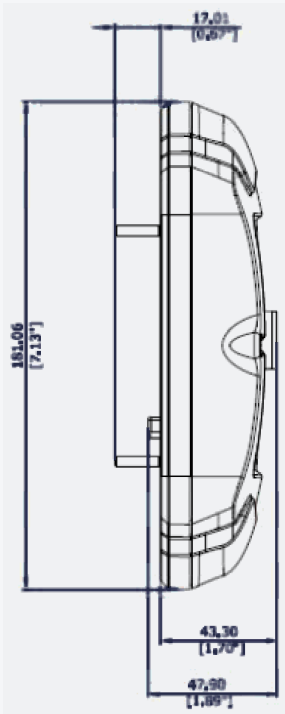
CONSTRUCTION

Dimensions (W x H x D)	221 x 181 x 48 mm
Weight	0.7 kg
Protection	IP54 (NEMA type 13) per IEC 60529

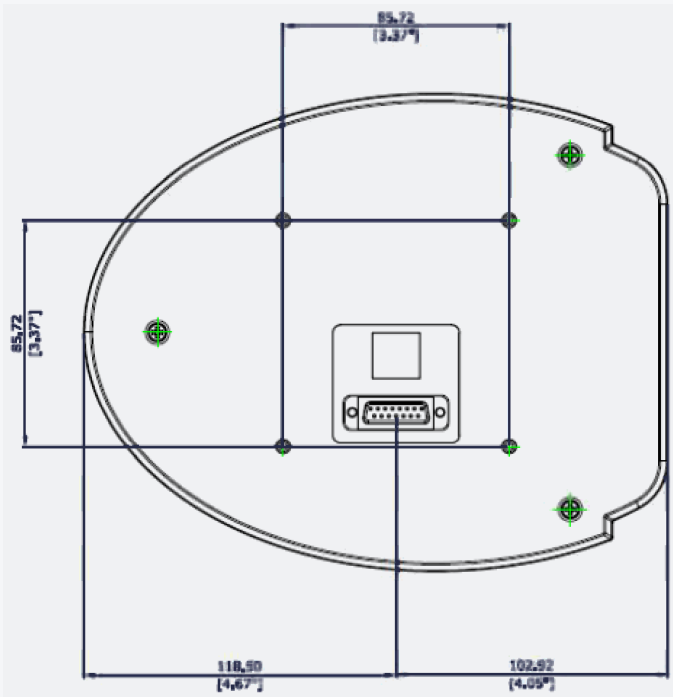
Dimensions



FRONT VIEW



SIDE VIEW



REAR VIEW

KEY DIMENSIONS · MM [INCHES]	
Overall width	221.49 [8.72"]
Overall height	181.06 [7.13"]
Overall depth	47.90 [1.89"]
Depth behind panel	43.30 [1.70"]
Front bezel depth	17.01 [0.67"]
Screen opening (W x H)	116.46 x 87.79 [4.59 x 3.46"]
Mounting hole pattern	85.72 x 85.72 [3.37 x 3.37"]
DB-15 connector position	118.50 [4.67"] from left edge, 102.92 [4.05"] from right edge (rear view)

Ordering Information

MODEL	DISPLAY	CABLE	POWER SUPPLY
MODEL		CABLE	
RGM180 graphic touch screen display	RGM180	No cable (direct connection to PM17x or PM180, or RJ-45 connection)	C00
DISPLAY		10 m cable for PM130, EM133 or EM920. Requires power supply	C01
Direct connection to PM17x, 15-pin D-type connector	G1	10 m cable for PM17x or PM180. Requires power supply	C02
Remote connection, 15-pin D-type and RJ-45	G3	3 m cable for PM17x or PM180	C03
POWER SUPPLY		10 m cable for EM720. Requires power supply	C04
None	-	10 m cable for ezPAC	C05
85-265V AC and 88-290V DC (standard)	ACDC		
12V DC (9.6-19V DC)	1DC		
24V DC (19-37V DC)	2DC		
48V DC (37-72V DC)	3DC		



Place an Order or Get Support

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DOCUMENT VERSION	
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