SATEC
Powerful Solutions

## Quick Start Guide

# RGM180
# Display Series


CE

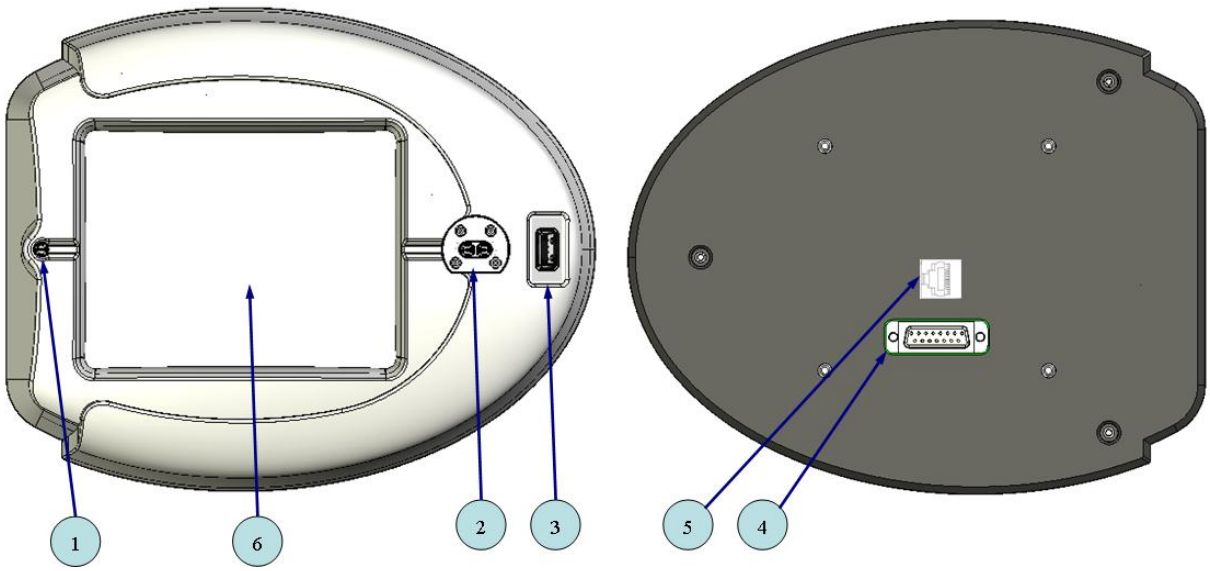
## General

The RGM180 series provides a User friendly Human interface to monitor and configure SATEC devices.

The RGM180 series includes two different models:

- Local Graphic DISPLAY RGM180-G1, the RGM180 communicates to a single host processor *expert*meter™ SATEC devices, using RS-485 interface. It is powered directly from the device.
- Network Graphic Display RGM180-G3, the RGM180 communicates to multiple host processors *expert*meter™ SATEC devices, using 10/100Base T Ethernet interface or RS-485. It is powered by Power over Ethernet (PoE) and/or external AC/DC adaptor.

## 1. Interface Description




1. LED: Red (Wh)/Green (Ethernet Link).
2. IR Communication port (for PM180 only)
3. USB Communication port
4. RS485 Communication port and PM17x/PM180 display connector
5. Ethernet Communication port (**RGM180-G3 only**)
6. Display & Touchscreen.

Note: this document prepared for the following devices: RGM180-G1 & RGM180-G3.

## 2. Connection configurations

### 2.1. PM17x / RPM17x.

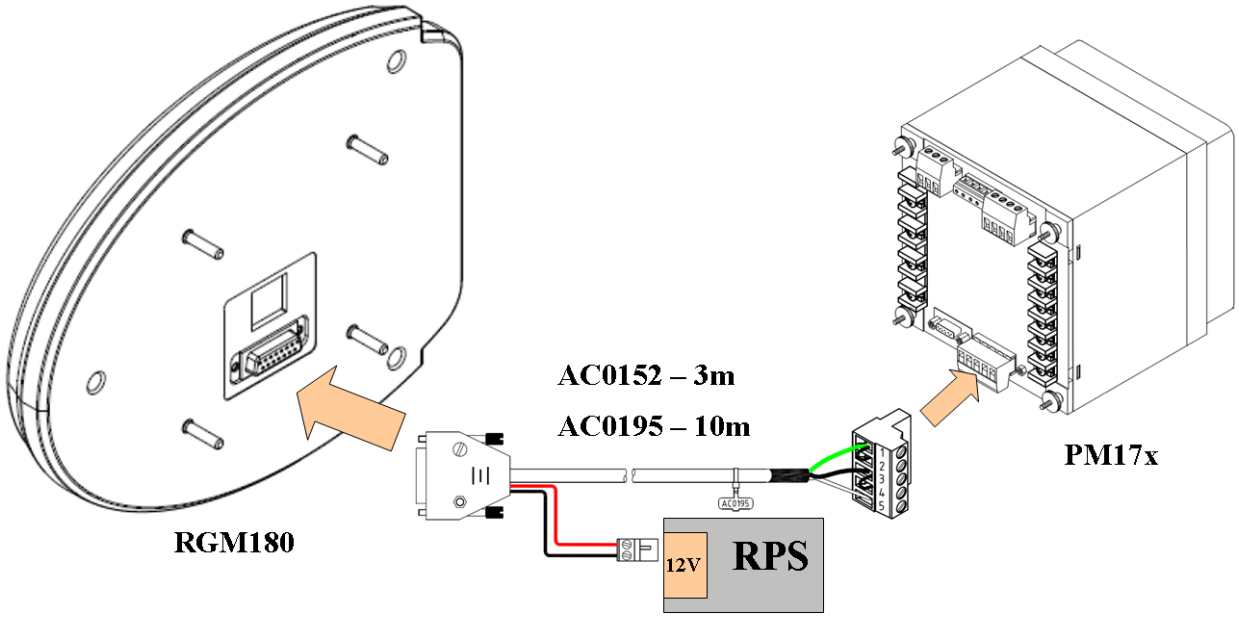



*Figure 1: PM17x connection*

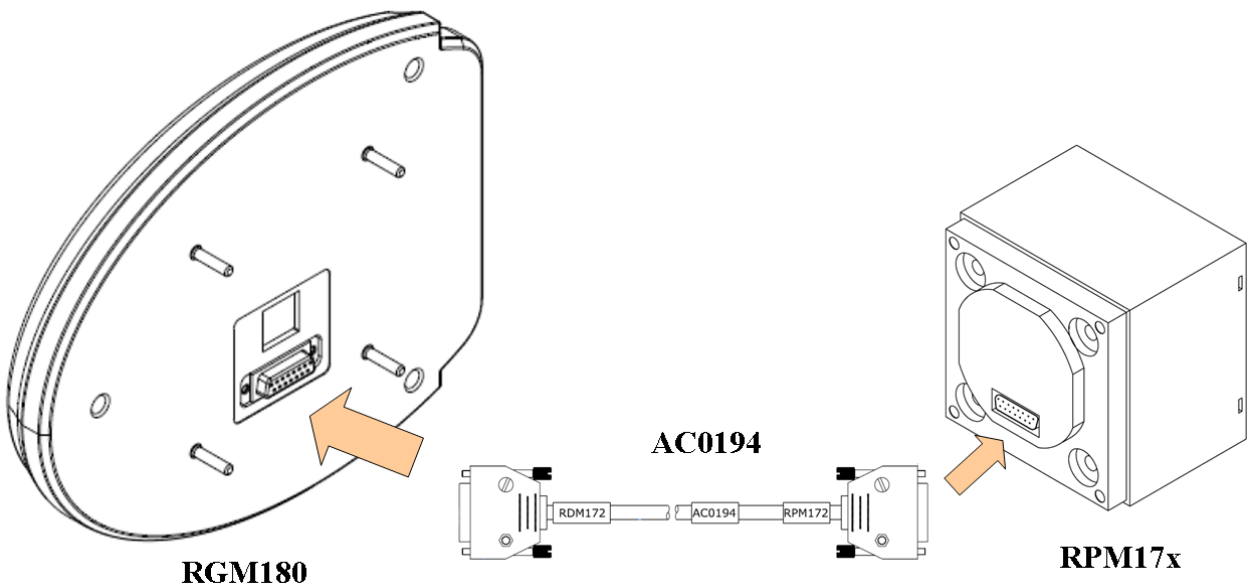



*Figure 2: RPM17x Connection*

## 2.2. ezPAC Connection

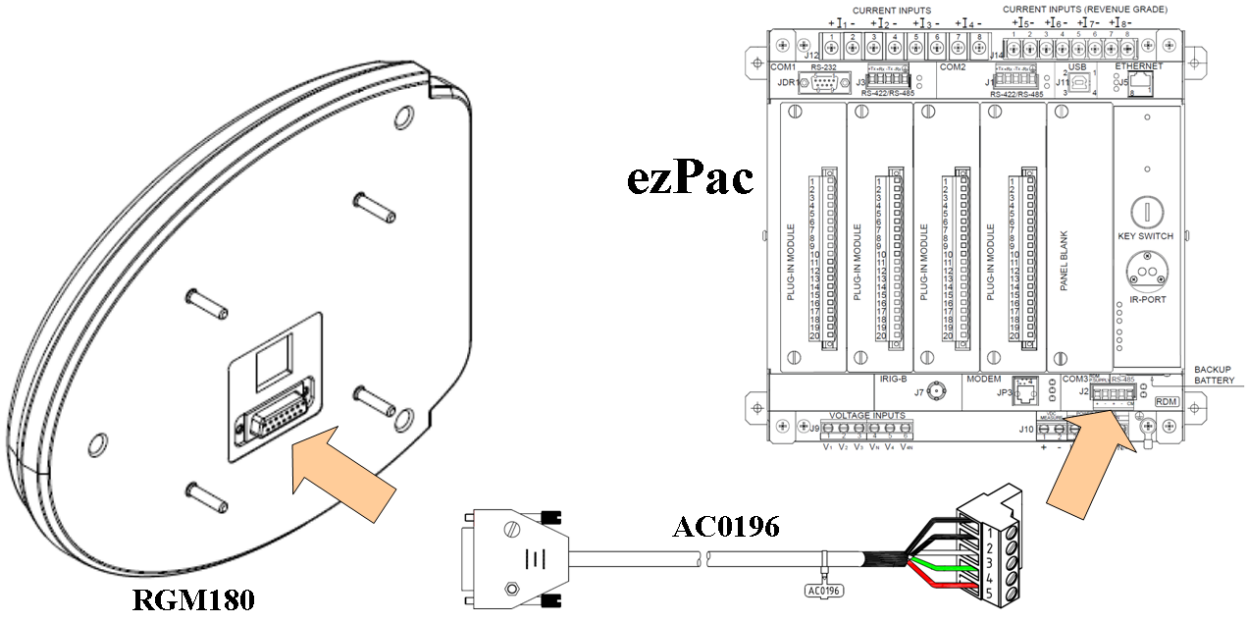



***Figure 3: ezPac Connection.***

## 2.3. EM720 Connection.

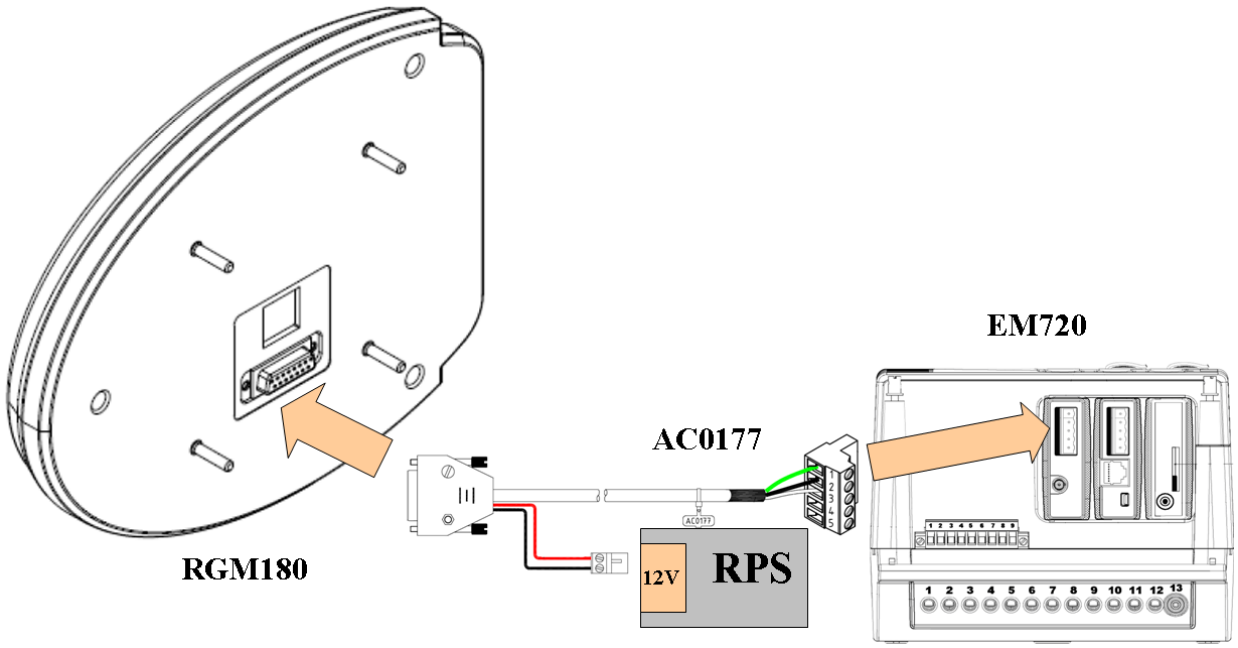



***Figure 4: EM720 Connection.***

## 2.4. PM130 PLUS Connection

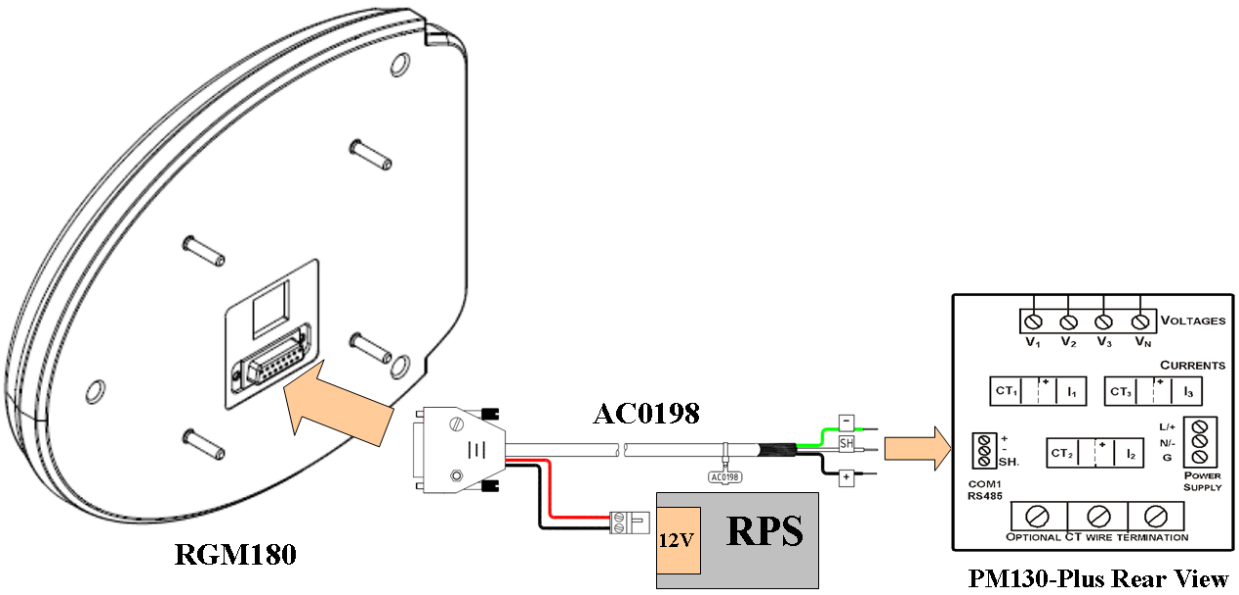



***Figure 5: PM130 Plus Connection.***

## 2.5. EM133 Connection.

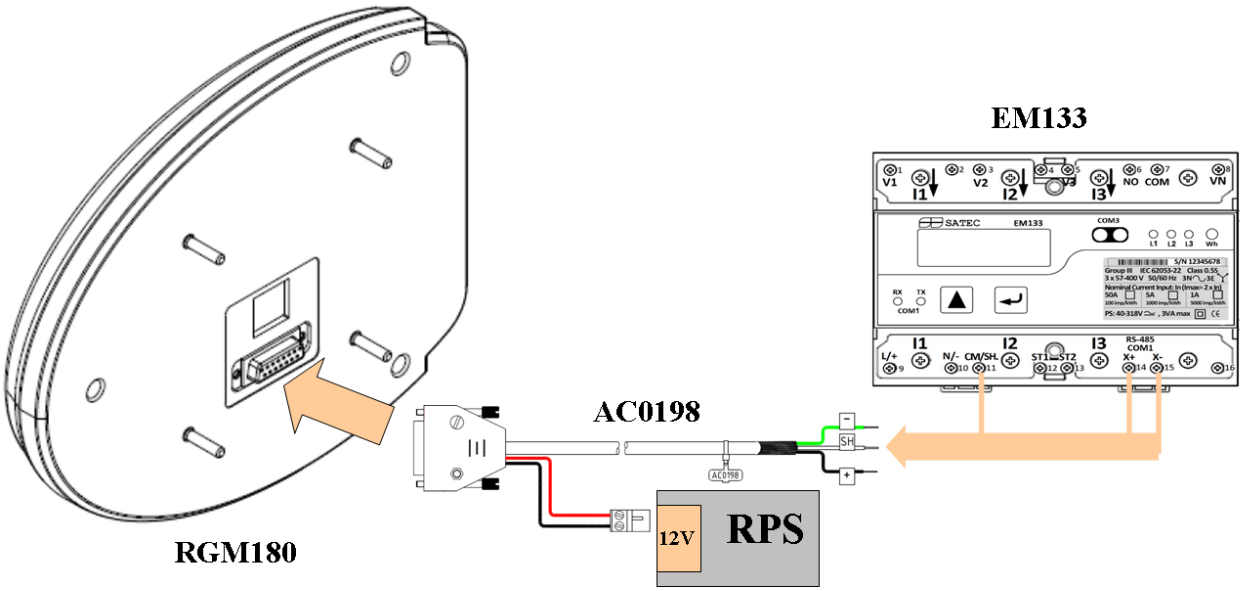



***Figure 6: EM133 Connection.***

## 2.6. Ethernet Connection.

2.6.1. Regular Ethernet connection.

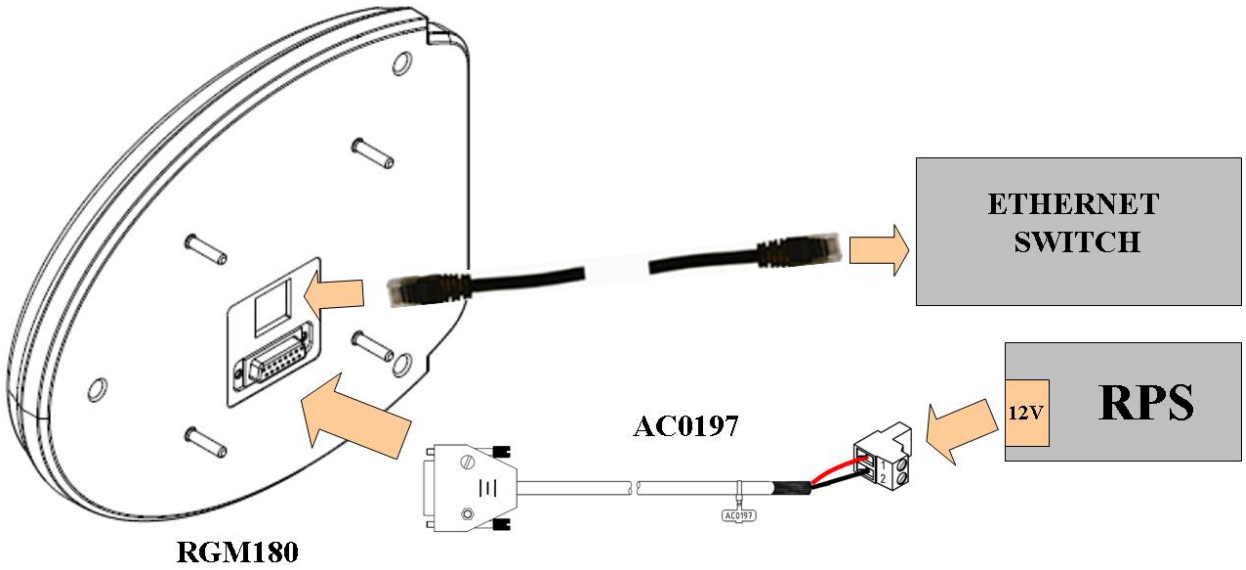



***Figure 7:Regular Ethernet Connection***

2.6.2. PoE Ethernet Connection.

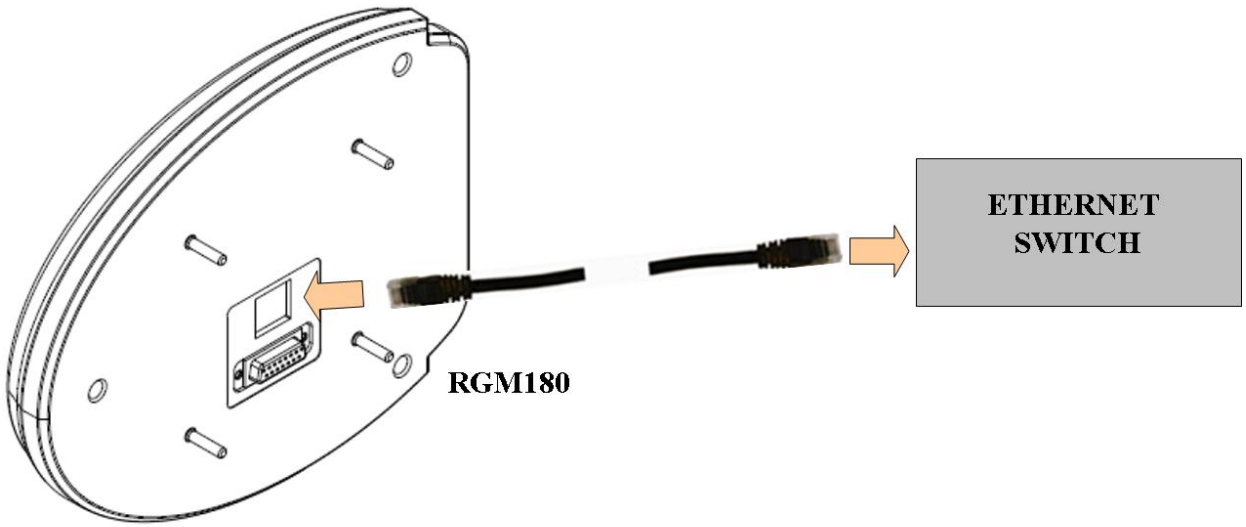



***Figure 8: PoE Ethernet Connection.***

## 2.7. Mechanical Installation

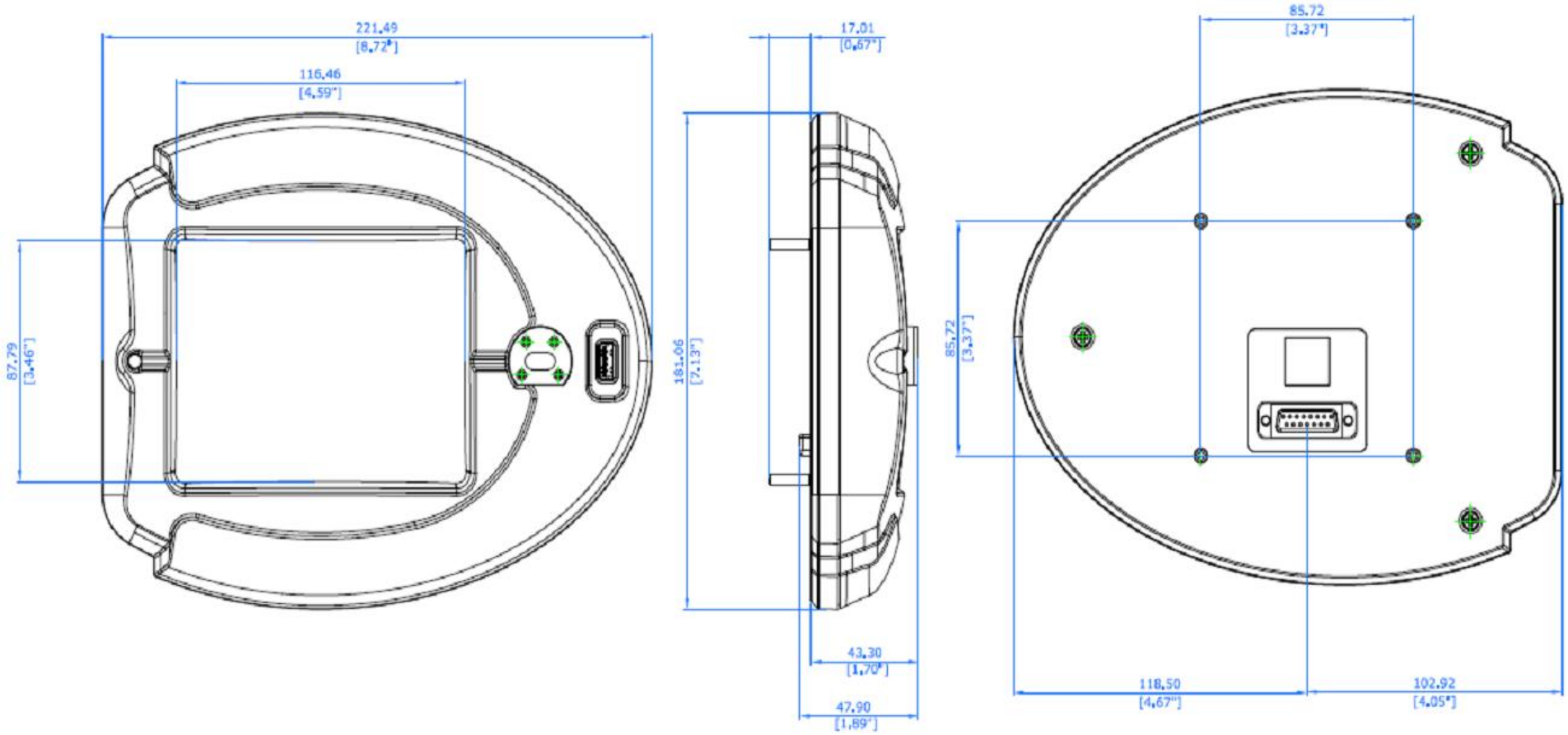



***Figure 9: Instrument Dimensions***

## 2.8. Technical Specification

| **Communication ports** | | | |
|---|---|---|---|
| **COM1** | **IR Communication port** | | **PM180 device Only** |
| Optional | Optical Communication port | | |
| | Max. Baud rate | | 19.200 kb/s |
| | Protocols | | Modbus or DNP3.0 |
| | Isolation | | 2500 $V_{AC}$ @ 1 mn |
| **COM2** | **Serial Communication port** | | **Device COM port** |
| basic | RS-485 Max. Baud rate | | 115.2 to 480 kb/s |
| | Isolation | | 4000 $V_{AC}$ @ 1 mn |
| | RS-485 Maximum length cable | | 1000m |
| | Protocols | | Modbus RTU |
| | Connection | | DB-15 |
| **ETHERNET** | **Multiple device Communication port** | | **RGM180-G3 only** |
| 10/100Base-T Basic | Built-in network communication port with PoE ability | | |
| | Wired LAN communication port with auto-negotiation | | IEEE 802.3 |
| | Ethernet port Baud rate | | 10/100 Mb/s |
| | Protocols | | Modbus/TCP |
| | ETH port Isolation | | 1.5 KVAC @ 1mn |
| | ETH connector | | Standard RJ-45 |
| **USB** | **Built-in USB Communication port** | | **DISPLAY Panel** |
| | Basic - Device (default) | USB communication port | Full speed Device |
| | | USB port Baud rate | 12 Mb/s |
| | | Protocols | Modbus RTU/ASCII and DNP3.0 |
| | USB device port Isolation (Remote display) | | 1500 KVAC @ 1mn |
| | USB device port Isolation (Local display) | | 4000 KVAC @ 1mn |
| | USB connector DISPLAY Panel | | USB type A, vertical mount, straight |
| **DISPLAY** | **Panel Display** | | |
| | Touch-Panel LCD graphic display, 1 Wh pulse led, IR port and USB Device/Host connector Type A | size | 5.7” |
| | | resolution | 320 x 240 dots |
| | | Type | TFT – color with Touch Panel |
| | | Outline dimensions | 131mm (W) x 102mm (H) x 14.5mm (D) |
| | | Active area | 115.2mm (W) x 86.4mm (H) |
| | | Operating temperature | -20°C - +70 °C |
| | | Storage temperature | -30°C - +80 °C |
| Non-volatile memory | For energy and tariff registers logging, EV-PQ-DATA-WV log | | Basic 256MB |

| **Power supply** | **Low DC power supply** | |
|---|---|---|
| 12VDC – Device PS standard | Rated Input | 10.8 – 13.2V DC |
| | Dielectric withstand insulation | 4000 $V_{DC}$ @ 1mn |
| | Power Consumption | 2W |
| 24VDC - Device PS option (PM180 Aux. PS) | Rated Input | 9.5 – 24V DC |
| | Dielectric withstand insulation | 3000 $V_{DC}$ @ 1mn |
| | Power Consumption | 2W |
| 48VDC – PoE option | Rated Input | 37 – 58V DC |
| | Dielectric withstand insulation | 1500 $V_{DC}$ @ 1mn |
| | Power Consumption | 2W |
| All models | Detachable Terminals for wires size<br>Header pitch<br>PoE connection | 3 x 2.5 up to 6 $mm^2$<br>7.5 mm<br>RJ45 |
| **Temperature limit range** | Operational temperature | -30 °C to 70 °C |
| | LCD Operational temperature | -20 °C to 70 °C |
| | Storage temperature | -30 °C to 80 °C |