



144 x 144mm

**Features:**

- 3 CT Sensing
- LCD Type with dual colour backlight
- Supports Intelligent Algorithm
- Automatically switches between various capacitive bank
- 12 / 14\* steps
- Configurable Alarm Settings
- Alarm Indication on Display
- Programmable fan control
- ModBus - RTU communication
- Dual Password Protection

Certifications: **CE**

**Display Specifications**

|        |  |
|--------|--|
| Type   | LCD with dual color backlight                  |
| Digits | 3 lines 4 digits to show electrical parameters |

**Input Specifications**

|                              |   |
|------------------------------|---|
| Rated Input Voltage          | 11 to 300V AC (L-N)<br>50 to 520V AC (L-L)  |
| Rated Input Current          | Nominal 5A AC (Min- 11mA, Max – 6A)   |
| Frequency                    | 45 - 65Hz   |
| Burden                       | 20 mOhms  |
| Wiring input                 | 1Ø2W / 2Ø2W / 3Ø3W / 3Ø4W   |
| Accuracy                     | Voltage (L-N/L-L), Current: ±0.5% of full scale<br>Frequency: ±0.1% of full scale<br>Power (kW, kVA, kVAR): ±1%<br>Energy (kWh, kVAh, kVAh): Class 1                                |
| Resolution                   | For Energy: 0.01k, 0.1k, 1k, 0.01M, 0.1M, 1M<br>For Power Factor: 0.001<br>For Temperature: 0.1<br>For Voltage, Current, Power: Auto resolution                                     |
| Display scrolling            | Auto/ Manual/ Default (Programmable)<br>Scrolling Time: 5 Sec   |
| Measurements                 | Power Factor, Power (kW, kVA, kVAR),<br>Energy (kWh, kVAh, kVAh), Phase voltage and<br>Phase current, Frequency, Temperature,<br>Up to 31 <sup>st</sup> order Harmonics measurement |
| <b>Measurement Range</b>     |   |
| Power Factor                 | 0.8 lag - 0.8 lead  |
| <b>Alarm Indications</b>     |   |
|                              | Over Voltage, Under Voltage, Under Compensate,<br>Over Compensate, CT Polarity Error,<br>Current Absent indication  |
| <b>Resettable Parameters</b> |   |
| CT Primary                   | 1A / 5A to 9999A<br>(Programmable for any value)  |
| CT Secondary                 | 1A / 5A (Programmable)  |
| PT Primary                   | 100V to 500kV<br>(Programmable for any value)   |
| PT Secondary                 | 100V - 500V (Programmable for any value)  |

**Output Specifications**

|                 |  |
|-----------------|--|
| Output Contacts | NO, One common point Max fuse 6A   |
| Steps           | 1 to 12/14*  |
| Relay Contact   | 5A@250V AC<br>Note*: When 14 relay option selected, fan & alarm relay will be used to control PF |

**Communication**

|                         |                    |
|-------------------------|--------------------|
| Communication Interface | RS485 & Modbus RTU |
|-------------------------|--------------------|

**Auxiliary Supply Specifications**

|                     |              |
|---------------------|--------------|
| Input voltage range | 90 - 550V AC |
| Consumption         | 15VA Max.    |
| Frequency           | 50 - 60 Hz   |

**Control Specifications**

|                     |                                 |
|---------------------|---------------------------------|
| Target PF           | 0.8 lag - 0.8 lead              |
| Switching program   | Automatic / Linear / Rotational |
| Control Sensitivity | 55 to 100%                      |
| Step Time           | 1 to 999 sec                    |
| Discharge Time      | 1 to 9999 sec                   |
| Control Mode        | Automatic / Manual              |
| Auto initialization | Yes / No                        |

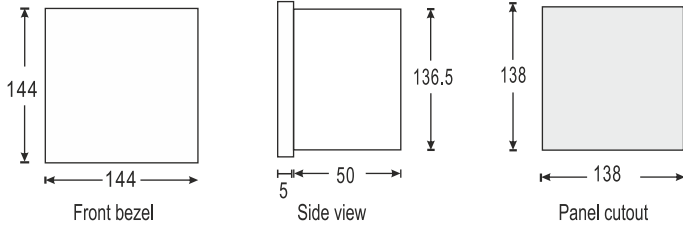
**Environmental Specifications**

|             |  |
|-------------|--|
| Temperature | Operating : 0 °C to 60 °C<br>Storage : -20 °C to 60 °C |
| Humidity    | Up to 95% RH without moisture consideration            |

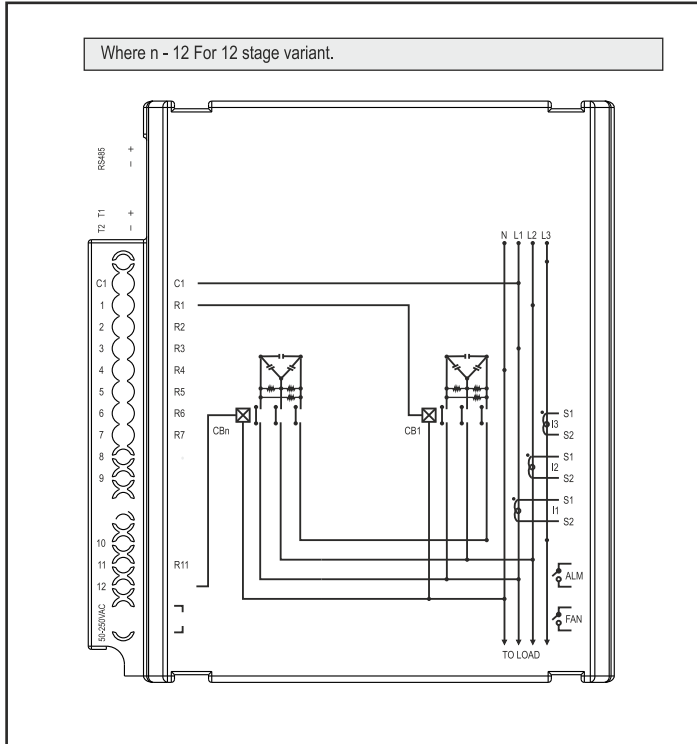
**Mechanical Specifications**

|          |   |
|----------|---|
| Mounting | Panel mount   |
| Weight   | 528gms (For 12 stage variant)<br>508gms (For 8 stage variant) |

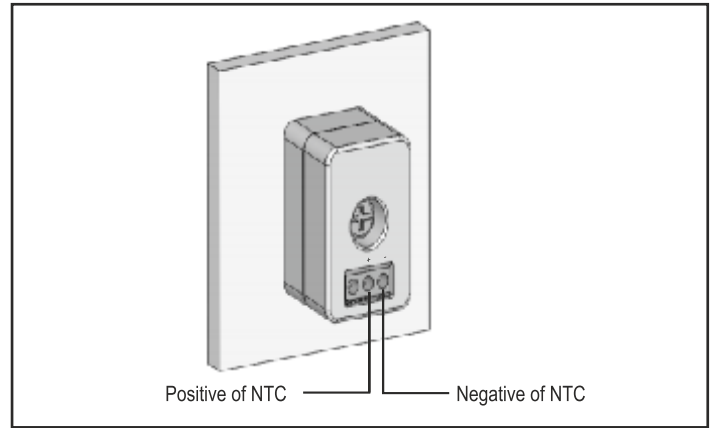
### Dimensions (in mm)



### Terminal Connections



### NTC Temperature Sensor



### Ordering Information

| Product Code           | Supply Voltage        | No. of stages | Certification |
|------------------------|-----------------------|---------------|---------------|
| APFC148-312-90/550V-CE | 90 - 550V AC, 50/60HZ | 12            | CE            |

### Compliance

| Applicable EMI / EMC Standards |                |   |
|--------------------------------|----------------|---|
| Product Standard : IEC 61326-1 |                |   |
| Category                       |                | Standards Compliance  |
| ESD Immunity                   | IEC 61000-4-2  | Level IV (Air discharge : 15kV), (Contact Discharge : -8kV)   |
| Surge Immunity                 | IEC 61000-4-5  | +/- 2kV common mode, (Line to ground)<br>+/- 1kV differential mode, (Line to Line)  |
| Radiated Susceptibility        | IEC 61000-4-3  | Level III, 80 to 1000MHz (10V/m)<br>Level II, 1.4GHz to 2GHz (3V/m)<br>Level I, 2GHz to 2.7GHz (1V/m)   |
| Conducted Susceptibility       | IEC 61000-4-6  | Level II (3V/m)   |
| Voltage Dips and Interruptions | IEC 61000-4-11 | <b>Dips</b> : 0% residual voltage / 1 cycle (Criteria B), 40% residual voltage / 10 cycles 50Hz / 12 cycles 60Hz (Criteria C)<br>70% residual voltage / 25 cycles 50Hz / 30 cycles 60Hz (Criteria C)<br><b>Interruptions</b> : 0% residual voltage / 250 cycles 50Hz / 300 cycles 60Hz (Criteria C) |
| Conducted Emission             | CISPR-11       |   |
| Radiated Emission              | CISPR-11       |   |
| Electrical Fast Transient      | IEC 61000-4-4  | Level III (2kV)   |