



DPM 680

- Phase & Line Voltages (L-N, Max. and Min.)
- Phase Current & Neutral Current (Max. and Min.)
- Bidirectional kW, kVAR & kVA
- Bidirectional kWh, kVARh & kVAh
- Frequency
- Total & Displacement Power Factor
- Voltage Total Harmonic Distortion
- Current Total Harmonic Distortion
- Avg. and Max. Thermal Current Demand
- Avg. and Max. Power (kW, kVA, kVAR) Demand
- Current Sequence Components
- Voltage Sequence Components

TFT Colour LCD Display
 Serial RS-485 Modbus RTU
 Modbus TCP/IP
 Built-in Webserver
 Voltage & Current Waveform Display
 Voltage & Current Harmonics Display

Technical Data

WIRING SYSTEMS

3-phase 4-wire system
 3-phase 3-wire system

CURRENT MEASUREMENT (TRMS)

Nominal current : 5 A
 Min. measurement : 5 mA
 Accuracy : 0.2% of full scale
 Burden : < 0.05 VA at 5 A
 Measurement range : 10 A
 Pulsed withstand : 100 A for 1 sec
 CT primary : 5 ~ 50,000 A

VOLTAGE MEASUREMENT (TRMS)

Nominal phase voltage : 0 ~ 300 V AC
 Minimum measurement: 10 V
 Accuracy : 0.2% at full scale
 Phase voltage via VT : 60 ~ 50,000 V

POWER MEASUREMENT

Real power, apparent power, reactive power
 Accuracy : 0.5%

POWER FACTOR MEASUREMENT Total
 and displacement power factor
 Accuracy : 0.5%

POWER & THERMAL CURRENT DEMAND

Interval : 1 ~ 30 mins

VOLTAGE AND CURRENT SEQUENCE COMPONENTS

Positive, negative and zero sequence

FREQUENCY MEASUREMENT

Measurement range : 45 ~ 65 Hz
 Accuracy : 0.2%

ENERGY MEASUREMENT ACCURACY

Active : IEC 62053-22 class 0.5
 Reactive : IEC 62053-23 class 2

HARMONICS DISPLAY

Fundamental up to 32nd order

VOLTAGE & CURRENT WAVEFORM DISPLAY

Simultaneous 3-phase voltage or current waveforms

COMMUNICATION

Protocol : Modbus RTU
 Interface : Isolated RS485
 Protocol : Modbus TCP/IP
 Interface : Ethernet 10M/100M BaseT
 Protocol : HTTP Server
 Interface : Ethernet 10M/100M BaseT

AUXILIARY POWER SUPPLY

AC voltage : 90 ~ 415 V AC
 Frequency : 50 / 60 Hz
 DC voltage : 100 ~ 300 V DC
 Power consumption : 3W typical
 Sustained overload : 500 V AC

ENVIRONMENTAL CONDITIONS

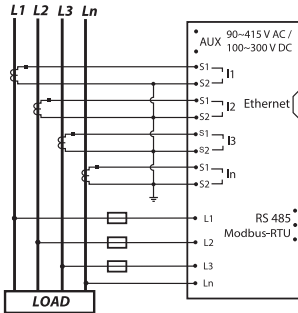
Overtoltage category : IV
 Pollution degree : 2
 Temperature : -10°C to 55°C
 Humidity : 5% to 95%, non-condensing

MECHANICAL

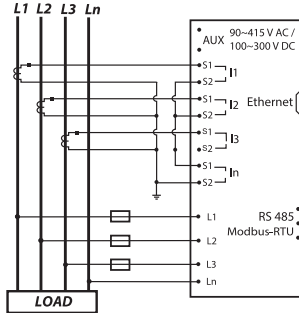
Mounting : According to DIN 43700 / ANSI C39.1
 Dimension (mm) : 96(w) x 96(h) x 100(d)
 Enclosure protection : IP63 at the panel
 IP20 at the body
 Approximate weight : 0.5 kg

Typical Application Diagrams

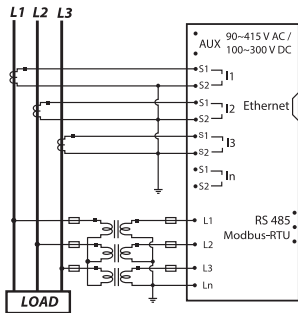
3-PHASE 4-WIRE SYSTEM : 4 CTs, Direct V Input



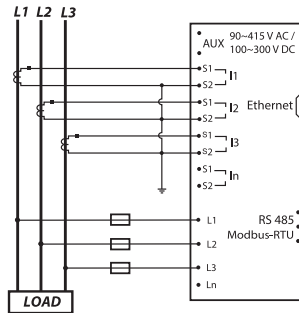
3-PHASE 4-WIRE SYSTEM : 3 CTs, Direct V Input



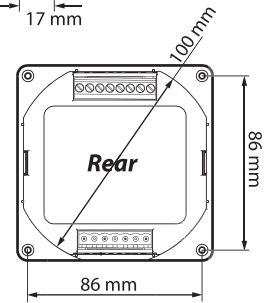
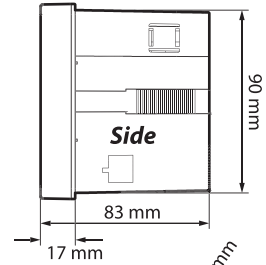
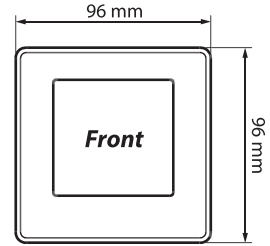
3-PHASE 3-WIRE SYSTEM : 3 CTs, 3 VTs



3-PHASE 3-WIRE SYSTEM : 3 CTs, Direct V Input



Case Dimensions



Test Standards

IEC 61010-1

Safety requirements.

IEC 61326-1

EMC requirements.

Ordering Information

MODEL	DESCRIPTION
DPM 680-415AD	Auxiliary Voltage 90 ~ 415 V AC or 100 ~ 300 V DC, with Modbus TCP/IP and Modbus RS485

Cut-Out Recommendations

