



DPM 680

Features

Measurement Parameters:

- Phase & Line Voltages (L-N)
- Phase Current & Neutral Current
- 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

Overvoltage category : IV

Pollution degree : 2

Operating temperature : -10°C ~ +55°C

Storage temperature : -20°C ~ +70°C

Humidity : 0 ~ 95%,
non condensing

MECHANICAL

Mounting : according to DIN 43700 /
ANSI C39.1

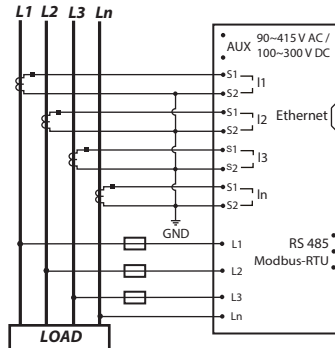
Dimension (mm) : 96(w) x 96(h) x 100(d)

Enclosure protection : IP63 at the panel
IP20 at the body

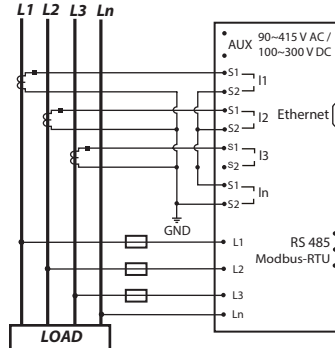
Approximate weight : 0.5 kg

Typical Application Diagrams

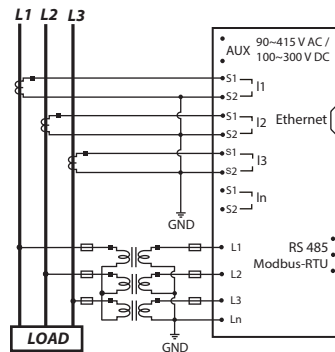
3-PHASE 4-WIRE SYSTEM : 4 CTs, Direct V Input



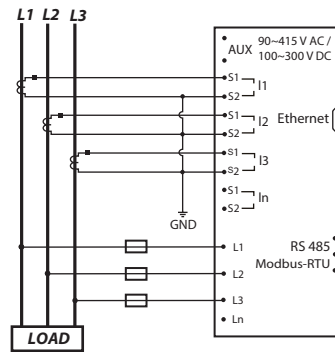
3-PHASE 4-WIRE SYSTEM : 3 CTs, Direct V Input



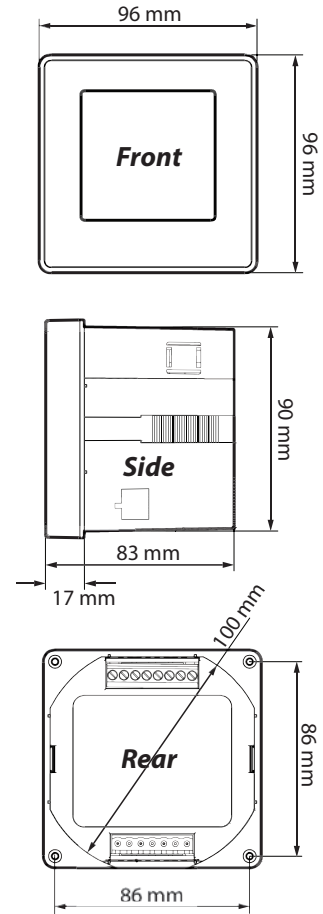
3-PHASE 3-WIRE SYSTEM : 3 CTs, 3 VTs



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



Case Dimensions



Test Standards

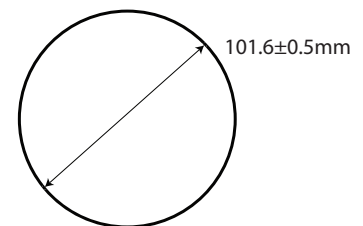
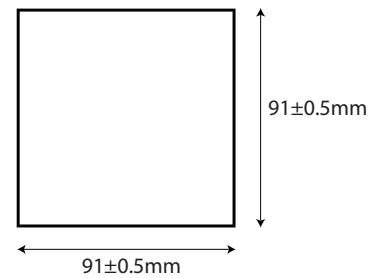
IEC 61010-1

Safety requirements.

IEC 61326-1

EMC requirements.

Cut-Out Recommendations



Ordering Information

MODEL	DESCRIPTION
DPM 680-415AD	Auxiliary Voltage 90 ~ 415 V AC or 100 ~ 300 V DC