



DPM 680 680B

Features

Measurement Parameters:

- 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

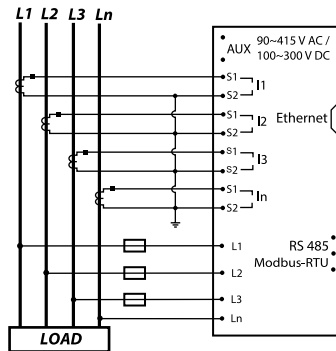
Overvoltage category : IV
Pollution degree : 2
Temperature : -10°C to 55°C
Humidity : 5% to 95%, non-condensing

MECHANICAL

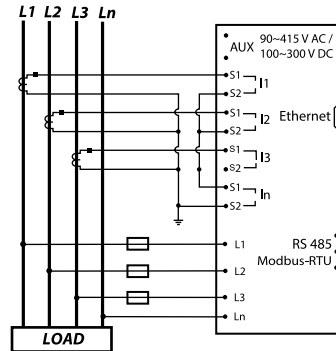
Mounting : According to DIN 43700 / ANSI C39.1
Dimension (mm) : 96(w) x 96(h) x 100(d)
Enclosure protection : IP63 at the panel
IP20 at the body
Approximate weight : 0.5 kg

Typical Application Diagrams

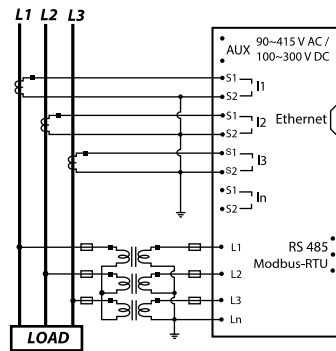
3-PHASE 4-WIRE SYSTEM : 4 CTs, Direct V Input



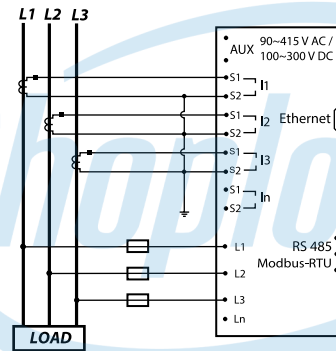
3-PHASE 4-WIRE SYSTEM : 3 CTs, Direct V Input



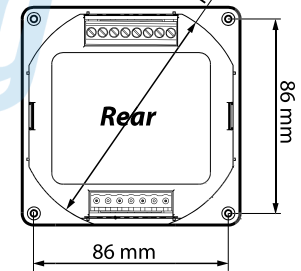
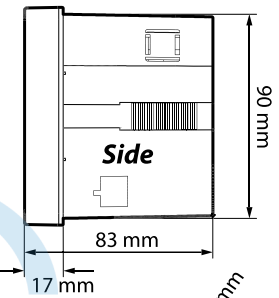
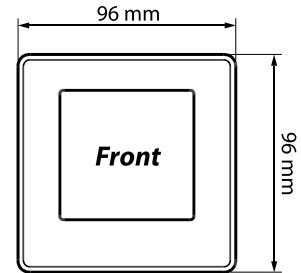
3-PHASE 3-WIRE SYSTEM : 3 CTs, 3 VTs



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



Case Dimensions



INDUSTRIAL AUTOMATION

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

DPM 680B-415AD Auxiliary Voltage 90 ~ 415 V AC or 100 ~ 300 V DC, with Modbus RS485

Cut-Out Recommendations

