

RISH Power / PF DPM

Size : 72x144



DPM 72 x 144 series measures system active Power (Import / Export), Reactive Power (Import / Export), Apparent Power & Power Factor of Three phase and single phase Network. It has 4 digit single line auto ranging LED display with polarity indication.

Product Range:

- Active Power (kW) DPM.
- Reactive Power (kVAr) DPM.
- Apparent Power (kVA) DPM.
- Power Factor (PF) meter.

Product Features:

***On site programmable PT/CT ratios**

It is possible to program primary of external potential Transformer (PT), primary of external Current Transformer (CT) on site via front panel keys by entering into Programming mode.

***User selectable CT Secondary 5A/1A**

The secondary of external Current Transformer (CT) can be programmed on site to either 5A or 1A using front panel keys.

***User selectable 3 phase 3W or 4W**

User can program on site the network connection as either 3 Phase 3 Wire or 4 Wire using front panel keys.

*Note: For Power Factor DPM Customer need to specify CT ratio, PT ratio & network type 3phase (3 or 4 wire) / single phase (1P2W) requirement while ordering.

User selectable Power Parameter

User can select any one of the power parameter (Active / Reactive / Apparent) on site as per its requirement, reducing inventory cost.

True RMS measurement

The instrument measures distorted waveform up to 15th Harmonic.

High brightness LED display

Single line four digit. Digit heights 26mm.

Enclosure Protection for dust and water

conforms to IP 54 (front face) as per IEC60529

Compliance to International Safety standards

Compliance to International Safety standard IEC 61010-1- 2001

EMC Compatibility

Compliance to International standard IEC 61326

Low back depth

The instrument has very low back depth (behind the panel) of less than 80 mm .

Input Voltage

Nominal input voltage(AC RMS)	Phase –Neutral 63.5 / 133 / 239.6 / 254V _{L-N} Line-Line 110 / 230 / 415 / 440 V _{L-L}
Max continuous input voltage	120% of Nominal value

Input Current

Nominal input current	5A AC RMS
CT Secondary current	5A or 1A (programmable on site)
System CT primary values	Std. values up to 9999A(1 or 5 Amp)
Max continuous input current	120% of rated value

Auxiliary Supply

AC /DC Auxiliary Supply	45 – 300 VAC /DC +/- 10% or 20-40VAC/20-60VDC
AC Auxiliary supply frequency range	45 to 66 Hz

VA Burden

Nominal input voltage burden	< 0.2 VA approx. per phase
Nominal input current burden	< 0.6 VA approx. per phase
Auxillary Supply burden	< 4 VA approx

Overload Withstand

Voltage	2 x rated value for 1 second, repeated 10 times at 10 second intervals
Current	20x rated value for 1 second, repeated 5 times at 5 min intervals

Operating Ranges

Active / Reactive / Apparent Power	5... 120% of Nominal Current & Nominal Voltage.
Frequency	40... 70 Hz
Power Factor	0.5 Lag ... 1... 0.5 Lead for kW, kVAr DPM 0.1 Lag ... 1 ... 0.1 Lead for PF DPM

Reference conditions for Accuracy

Reference temperature	23°C +/- 2°C
Input waveform	Sinusoidal (distortion factor 0.005)
Input frequency	50 or 60 Hz ±2%
Auxiliary supply voltage	Rated Value ±1%
Auxiliary supply frequency	Rated Value ±1%
Power(Power DPM)	Cos phi / Sin phi= 1 for Active / Reactive Power (50... 100% of Nominal Voltage) & (10... 100% of Nominal Current)
Power Factor(PF DPM)	0.5 Lag...1....0.5 Lead (50... 100% of Nominal Voltage) & (10... 100% of Nominal Current)

Accuracy

Active/Apparent Power(Power DPM)	±0.5% of Nominal Value
Reactive Power (Power DPM)	±1.0% of Nominal Value
Power Factor(PF DPM)	± 2°

Influence of Variations

Temperature coefficient (for rated value range of use (0...50°C))	0.025%/°C for Voltage (50... 120% of Nominal value) and 0.05%/°C for Current (10... 120% of Nominal value)
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Measurement error is normally much less than the error specified above. Variation due to influence quantity is less than twice the Error allowed for reference condition.

Display update rate

Response time to step input

1 sec approx.

Resolution

0.001 (4 digit).

Applicable Standards

EMC

IEC 61326

Immunity

IEC 61000-4-3. 10V/m min – Level 3 industrial low level

Safety

IP for water & dust

IEC 61010-1-2001 , Permanently connected use

IEC60529

Pollution degree

2

Installation category

III

High Voltage Test

2.2 kV AC, 50Hz for 1 minute between all electrical circuits

Environmental

Operating temperature

-10 to +55°C

Storage temperature

-20 to +65°C

Relative humidity

0... 90% non condensing

Warm up time

Minimum 3 minute

Shock

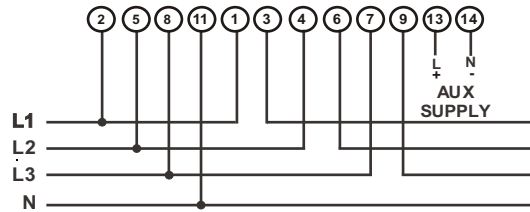
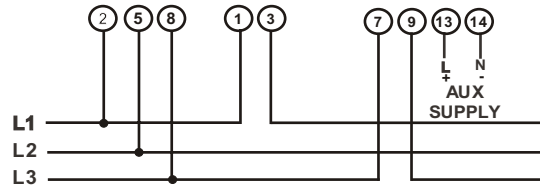
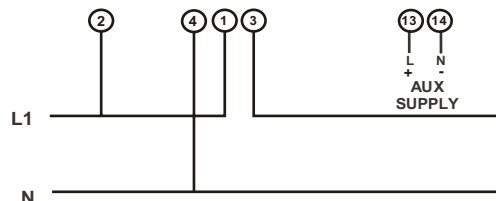
15g in 3 planes

Vibration

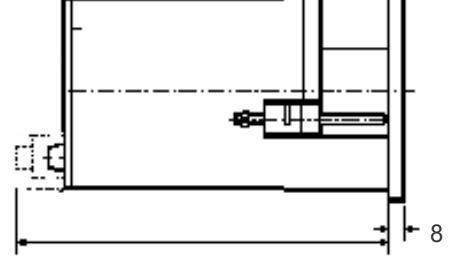
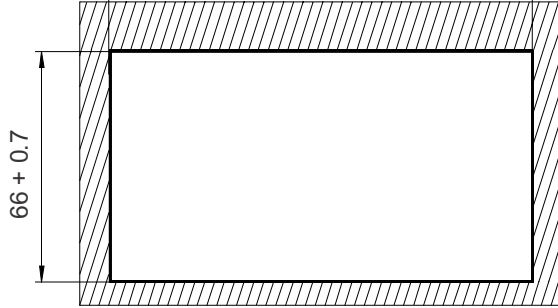
10... 55 Hz, 0.15mm amplitude

Enclosure

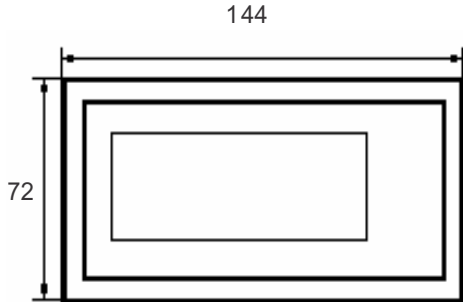
IP54 (front face only)

Electrical Connections:**For 3 Phase 4 Wire Unbalanced Load****For 3 Phase 3 Wire Unbalanced Load****For Single Phase**

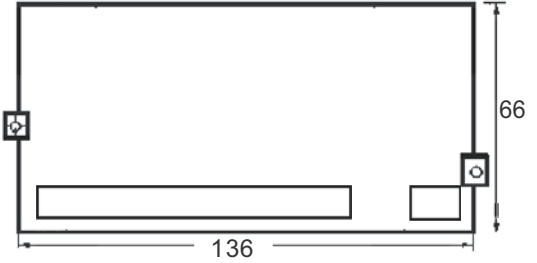
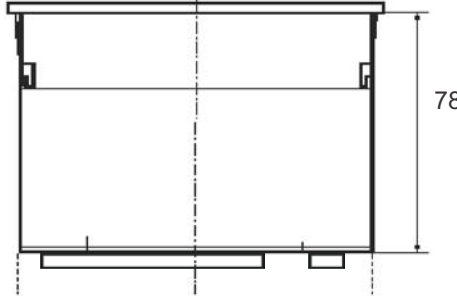
It is recommended that the wires used for connections to the instrument should have lugs soldered at the end. That is, the connections should be made with Lugged wires for secure connections.



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Mounting Position



Installation cut-out



Ordering information:

	Ordering Code
	<i>RISH DPM PF/PW</i>
Parameter	
Power Factor	PF
Power (Active / Reactive / Apparent)	PW
System Type (Connection network)	
3 Phase 3 Wire	3
3 Phase 4 Wire	4
1 Phase	1
Input Voltage	
110V L-L (63.5V L-N)	110
230V L-L (133V L-N)	230
415V L-L (239.6V L-N)	415
440V L-L (254V L-N)	440
Input Current	
1 Amps	1
5 Amps	5
Auxiliary Supply Voltage	
45V... 300 V AC/DC -10% / +10 %	ADH
20V... 40 V AC/20-60VDC	ADL

* Any one of the parameter can be selected to be displayed on site .

**CT ratio / PT ratio / Network type (3wire / 4wire) programmable on site only for power DPM (S / P / Q).

Order Code Example:

DPM PF 3 415 5 ADH

DPM, Power factor , 3 phase 3wire, 415VAC L-L nominal voltages, 5Amp, 45-300 V AC/DC auxiliary supply

Rishabh Instruments always tries for innovation and therefore product specifications are subject to change without notice



RISHABH INSTRUMENTS
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RISHABH INSTRUMENTS PVT.LTD.
F-31, MIDC, Satpur, Nashik-422 007,India.
Tel.: +91 253 2202028, 2202202 Fax : +91 253 2351064
E-mail : India :- marketing@rishabh.co.in
International :- exp.marketing@rishabh.co.in
www.rishabh.co.in