

# RISH DPM 196 A/V



## Operating Manual

The RISH DPM 196 A/V is a Digital Panel Meter (DPM) for measurement of Single phase AC current and AC Voltage in 96x96 DIN quadratic size. Six ranges for power supply are available.

### Operation :

By changing short links on the front side of Display [Accessible after removing Front Glass and Black frame], decimal point can be adjusted as shown in sticker on page 2. Display can be adjusted from 5 % to 100 % of range by means of the span adjustment potentiometer provided on the rear side of the meter. If required zero can be adjusted with the help of zero adjustment potentiometer.

The DPM comes with a set of pre - printed captions (eg kA, kV,...) User can put the caption as per their application in the pocket provided on the front panel sticker. Refer Fig A

RISH DPM 196 A/V series is available in following versions.

RISH DPM 196 A Instrument for Single Phase AC Current measurement.  
RISH DPM 196 V Instrument for Single Phase AC Voltage measurement.

### Technical data

<b>Display</b>	Display range	1999	
	Decimal point position	selectable by short links at the front side	
	Negative display indication	“-“	
	Digit height	14 mm / 7-segment digits	
	Overload indication	last 3 digits blank	
<b>Measuring ranges</b> (Max. overload 20 % of full-scale value)	Accuracy	<0.5 % + 1 digit	
	Voltage AC (Input current <600mA)	0...500 VL-N (45...60Hz) or 400 Hz or	
	Current AC (Voltage drop <600mV)	0...1 A (45...60Hz) or 400 Hz or 0...5 A (45...60Hz) or 400 Hz	
	Range adjustment span	from 5 % to 100 % of range	
	Temperature coefficient Zero point drift	300 ppm / °C 200 ppm / °C	
<b>Power supply</b>	Direct voltage DC	12 V ± 10 %	max. 5.5W, isolated.
		24 V ± 15 %	max. 5.5W, isolated.
		48 V ± 10 %	max. 5.5W, isolated.
		110 V ± 10 %	max. 5.5W, isolated.
	Alternating voltage (47 - 60 Hz)	110 V +10 %, -15 % 230 V +10 %, -15 %	max. 5.5W, isolated. max. 5.5W, isolated.
<b>Environmental conditions</b>	Operating temperature	0...55 °C	
	Storage temperature	-25 °C...+70 °C	
	Protection class Front	IP 20 to IEC EN 60 529 IP 50	
	Device safety	According to IEC EN 61 0 10	
	EMC immunity EMC radiated interference	According to IEC / EN 61 000-4-1 up to 4 According to IEC / EN 61326 class B	
<b>Dimensions and weight</b>	Front frame	96 mm x 96 mm to DIN 43 700	
	Panel cut-out	(92 + 0.8) mm x (92 + 0.8) mm	
	Overall depth	55 mm	
	Weight approx.	500 gm.	
<b>Sundry</b>	Connections	Plug-in screw terminal blocks	

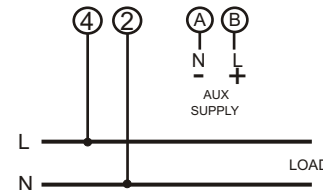
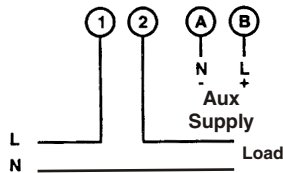
**SAMPLE STICKERS :**

<b>RISH DPM 196 A</b>		Sr. No. / /	
Aux. Supply	A N B L	230V AC,50Hz(+10%/-15 %)	
Input Current (I)	1 HI	1 A AC	
	2 LO	Common	
<input type="checkbox"/> Z - Zero Adj. <input type="checkbox"/> S - Span Adj.			
		<b>Front Display View</b> Select short link position for decimal point adjustment	

<b>RISH DPM 196 V</b>		Sr. No. / /	
Aux. Supply	A N B L	230V AC,50Hz(+10%/-15 %)	
Input Current (I)	4 HI	0...500 V AC	
	2 LO	Common	
<input type="checkbox"/> Z - Zero Adj. <input type="checkbox"/> S - Span Adj.			
		<b>Front Display View</b> Select short link position for decimal point adjustment	

**CONNECTION FOR RISH DPM 196 A**

**CONNECTION FOR RISH DPM 196 V**

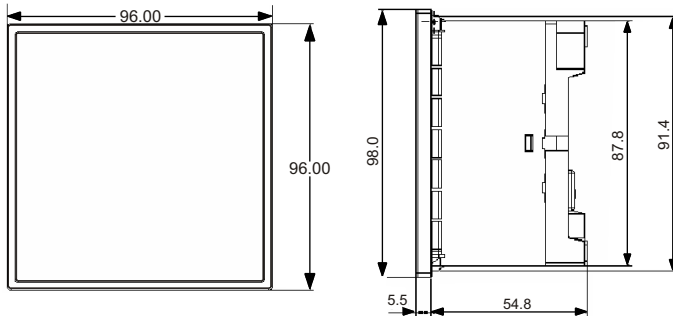


Measuring input

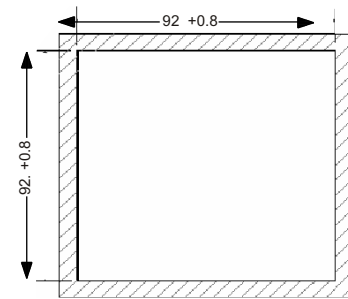
Voltage input  
 Current input  
 Auxiliary Supply  
 Display adjust (with external calibrator)  
 Decimal point Adjustment

Terminals 2 and 4  
 Terminals 1 and 2  
 Terminals A(-N) and B (+L)  
 with zero and span pots at rear of meter.  
 With short links at front on Display.

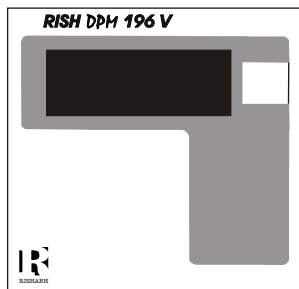
**Design and Installation**



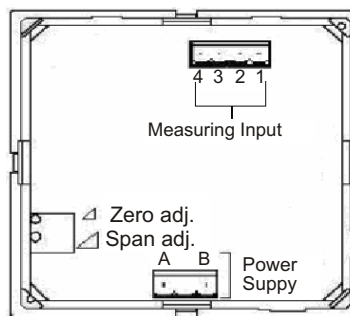
**Installation Cut-out**



**Figure A**



**Connection Diagram:**



**Decimal point Adjustment :**

Decimal point position is selectable by short links at the front side of display. Decimal point adjustment is accessible after removing front glass and Black frame

Short Link Position	Decimal point position on Display
	XXXX
	X.XXX
	XX.XX
	XXX.X



**Caution : Do not change the short links on display (For Decimal point Adjustment) When input is applied to the DPM !**