

RISH DPM 196 Hz



Operating Manual

The *RISH DPM 196Hz* is a digital standard instrument for measurement of frequency of AC voltage up to 199.9 / 500 Hz. Three 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 span adjustment potentiometer provided on the rear side of the meter.

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

Technical data

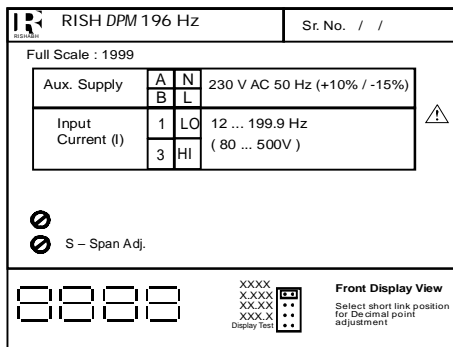
Display	Display range	0.... 1999.	
	Decimal point position	Selectable by rear jumper position.	
	Negative display indication	" - ".	
	Digit height	14 mm / 7-segment digits.	
	Overload indication	" 1... ", if display > 1999.	
For Frequency	Input voltage	80.....500V.	
	Measuring range	12.....199.9 Hz. or	
		12.....500 Hz.	
	Calibration	Meters are precalibrated to a standard value.	
Range adjustment span	Fine adjustment possible.		
Digital Input	Display hold	Selectable by rear jumper position.	
	Segment test	Selectable by rear jumper position.	
Accuracy	After exact calibration	$\pm(0.25 \% \text{ of max. display} + 5 \text{ digits})$.	
Additional error	Temperature drift	<190 ppm/ °C.	
	Zero drift	<0.2 digits/ °C.	
	(only for devices with shift zero point)		
Power supply	Direct voltage DC	24V (21...30V)	max. 5.5 W (isolated).
	Alternating voltage (50 - 60 Hz)	110 V +10 %, -15 %	max. 5.5 W (isolated).
		230 V +10 %, -15 %	max. 5.5 W (isolated).
A/D Converter	System	Dual slope.	
	Integration time	Approx. 100 ms.	
	Sampling rate	Typ. 3 per sec.	
Test voltages (Test duration 2 sec.)	UH (Auxiliary supply)	230 / 110V AC	24V DC
	Supply - input signal	2 kV	0.5 kV
	Supply - housing	2 kV	0.5 kV
	Input signal - housing	2 kV	2 kV
Dimensions and weights	Front bezel size	96 mm x 96 mm (DIN 43 718).	
	Panel cut-out	92 +0.8 mm x 92 +0.8 mm	
	Overall depth	55 mm.	
	Weight	400 gm. approx.	
Sundry	Connections	Plug-in screw terminal blocks.	

Environmental conditions

Operating temperature
Storage temperature
Climatic class
Safety class
Protection class
front
Overvoltage category
Device safety
EMC immunity
EMC radiated interference

0 ... 50 °C
-20 °C ... +70 °C
Class 2 to VDE / DIN 3540
II to IEC 348 / VDE 0411
IP 20 to IEC EN 60 529
IP 50
II
According to IEC EN 61 010
According to DIN EN 61 000-4-1 to 4
According to IEC EN 61326 class B

SAMPLE STICKER

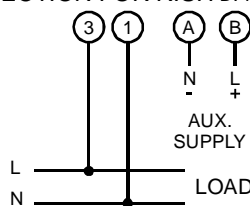


Measuring Input

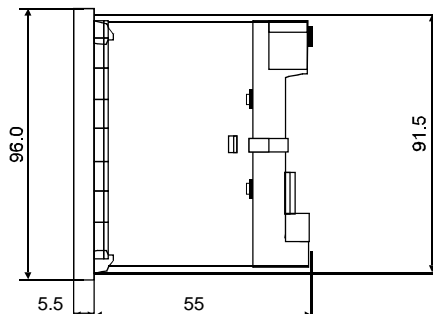
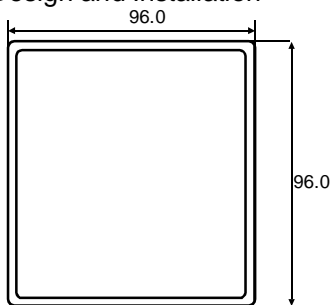
Input
Auxiliary Supply
Display adjust (with external Calibrator)
Decimal point adjustment

Terminals 1 and 3
Terminals A(-/N) and B(+/L)
With span pot at rear of the meter
With short links at front on Display

CONNECTION FOR RISH DPM 196 Hz



Design and Installation



Installation Cut-out

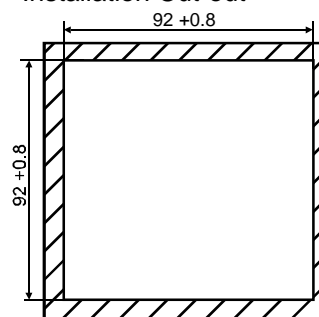
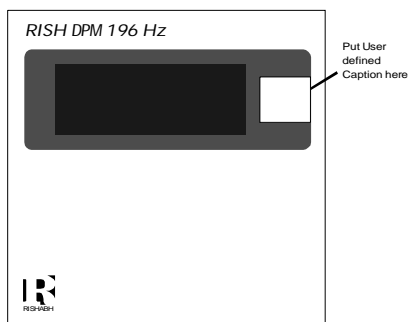
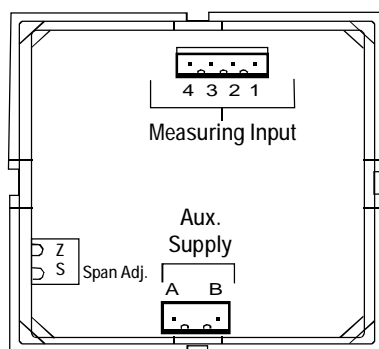


Figure A



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
	Display Test



Caution : Do not change the Short links on Display (For Decimal point Adjustment) when input is applied to the DPM !



RISHABH INSTRUMENTS

Measure, Control & Record with a Difference

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