RISHABH

Data Sheet

RISH Eine+ DC DPM

96X96/48X96

RoHS CE

Measure Control Record Analyze Optimize

Data Sheet

RISH Eine+ DC DPM

RISH Eine+ has been designed for industrial applications, which frequently require precise and on-site adjustment of the display range. It measures electrical DC parameters like DC voltage and DC current.

Applications

- Distribution and Control Panels
- Electrical load monitoring
- In Laboratories
- In Industrial automation

Product Features

Low Back Depth (For 96x96 model)

The instrument has very low back depth (behind the panel) of less than 40 mm.

Rescalable Display range

The meter is completely programmable and user can easily scale the values as per his requirements on-field. Setting for '-ve' sign and decimal point position is also provided.

Function keys

Using 2 function keys it becomes easy and convenient for user to program the meter without any difficulty.

Bent Characteristics

The meter supports bent characteristics. Hence user can configure the meter as per requirement.

Power Factor Display

The meter can be configured to display power factor also.

Ambient Temperature Indication

The meter gives an accurate indication of the ambient temperature in °C and °F.

Auxillary Supply

The Auxillary supply 40-300V AC-DC and 20-60V DC / 20-40V AC are supported.

4 Full digits Ultra Bright LED display

14mm full range display possible of 4 digits having maximum count - 9999.

Wide Input Range

Wide range of voltages and currents to choose from.

Enclosure Protection for dust and water

Conforms to IP 50 (front face) as per IEC 60529.

Compliance to International Safety standards

Compliance to International Safety standard

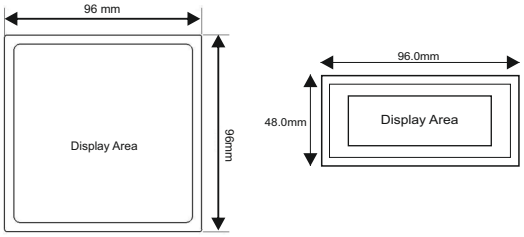
IEC 61010-1- 2010.

EMC Compatibility

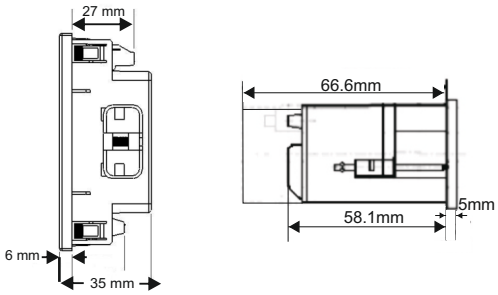
Compliance to International standard IEC 61326

Class B

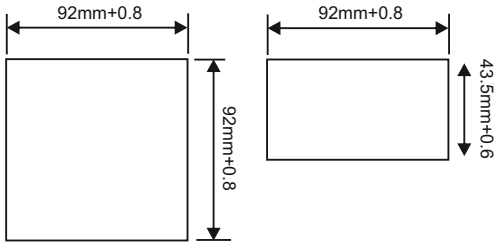
Dimensional Details



Front View



Side View



Panel Cutout

Technical Specifications

Measuring Ranges

Model	**RISH Eine+ Voltage**
Input mV ranges	-75...0...75mV, -150...0...150mV
Input Voltage range	-5...0...5V, -10...0...10V, 0...48V, 0...150V, 0...500V, 0...1000V
Max continuous input voltage	120% of Nominal value
Model	**RISH Eine+ Current**
Input Current ranges	-10...0...10mA, -20...0...20mA, 4...20mA, -1...0...1A, -5...0...5A
Max continuous input current	120% of Nominal value
Accuracy	
RISH Eine+ Voltage (Input current < 300uA) for V/mV	<0.5% of Display End value ±1 digit
RISH Eine+ Current (Voltage drop < 600mV) for A/mA	<0.5% of Display End value ±1 digit
Ambient Temperature	±3 °C
Influence of Variations	
Temperature coefficient	0.05% / °C, plus
Zero point drift	0.025% / °C
Display	
Type	1 line 4-digit LED display
Display Count Setting	-9999...-10 or +10...+9999 counts
Digit Height	14mm
Decimal point position	Configurable
Negative Display indication	'-'
Overload Indication	" - oL - " (above 125% of nominal value)

Factor C (The highest value applies if calculated C is less than 1,then C=1 applies)

Linear characteristics:

$$C=\frac{1-\frac{Y0}{Y2}}{1-\frac{X0}{X2}} \text{ or } C=1$$

Bent characteristics:

For $X0 \le X \le X1$

$$C=\frac{Y1-Y0}{X1-X0}\cdot\frac{X2}{Y2} \text{ or } C=1$$

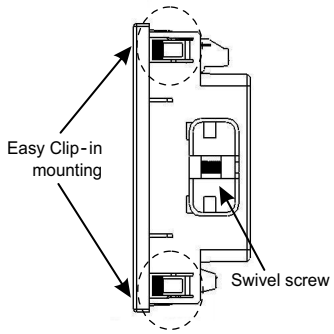
For $X1 \le X \le X2$

$$C=\frac{1-\frac{Y1}{Y2}}{1-\frac{X1}{X2}} \text{ or } C=1$$

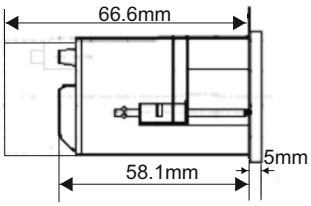
X0 = Start value of input, Y0 = Start value of display ,X1 = Elbow value of input ,Y1 = Elbow value of display

X2 = End value of input ,Y2 = End value of display

Installation

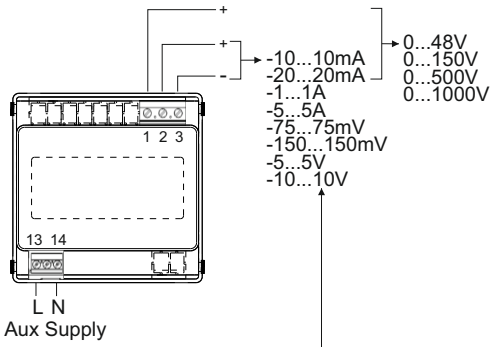


96x96 model

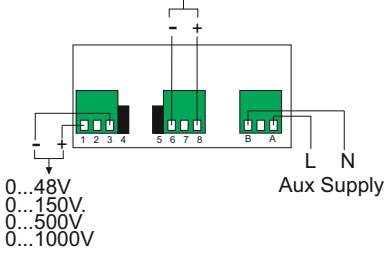


48x96 model

Electrical Connections



96x96 model



48x96 model

Technical Specifications

Auxiliary Supply

External Aux	40 - 300V AC-DC 20 - 60V DC/20-40V AC
Frequency range	45 - 65Hz
VA burden	< 4.5VA approx. at 240VLN, 50Hz < 1VA approx. at 24VLN, 50Hz

Reference Conditions for Accuracy

Reference Temperature	23°C ± 2°C
Auxiliary Supply Voltage	Rated Value ±1%
Auxiliary Supply Frequency	Rated Value ±1%

Applicable Standards

EMC	IEC 61326-1:2005
Immunity	IEC 61000-4-1 up to 4. Level 3 industrial Low level
Safety	IEC 61010-1:2010, Permanently connected use
IP for water & dust	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 +70°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

Dimensions and Weight

Bezel size	96 mm x 96 mm DIN43718(For 96x96 model) 48 mm x 96 mm DIN4371 (48x96 model)
Panel cutout	92 +0.8mm x 92 + 0.8mm(For 96x96 model) 43.5+0.6mm x 92+0.8mm(For 48x96 model)
Overall depth	<40mm(For 96x96 model) <75mm(For 48x96 model)
Weight	310 gm. approx.(For 96x96 model) 250 gm. approx.(For 48x96 model)

Approbations

CE, RoHS

Ordering codes

Ordering Information		EI99-	X	1	X	XX	X	X	X	X	000000
Size	96X96		G								
	48X96		E								
Type	DC Voltmeter				C						
	DC Ammeter				D						
Input	75 mV					11					
	150 mV					12					
	5 V					21					
	10 V					22					
	500 V					23					
	1000 V					24					
	48V					49					
	150V					50					
	10 mA					31					
	20 mA					32					
	4-20 mA					33					
	1A					41					
	5A					42					
Power Supply	40-300V AC/DC						M				
	20-40VAC/20-60V DC						D				
Accuracy Class	Class 0.5							5			
IP Protection	Standard IP50								0		
	Optional IP54 (On request-chargeable)								1		
Test Certificate	Not Required									0	
	Required (On request-chargeable)									1	

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RISHABH INSTRUMENTS LIMITED
Domestic (India): +91 253 2202099 | marketing@rishabh.co.in
International: +91 253 2202004/06/08/99 | global@rishabh.co.in
www.rishabh.co.in