

Celsa Eine + DC Voltage / Current



Celsa Eine + Voltage / Current are specially designed to measure electrical parameters like DC Voltage or DC Current and display it in terms of any parameter or process value.

RISH Eine has been designed for industrial applications, which frequently require precise and on-site adjustment of the display range.

Application

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

Product Features

Low Back Depth

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 onfield. 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 ranges 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

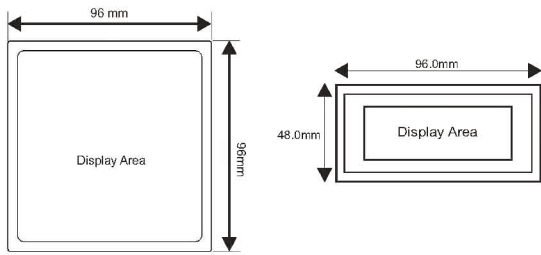
Compliance to International standard IEC 61326 Class B.

DIGITAL INSTRUMENTS

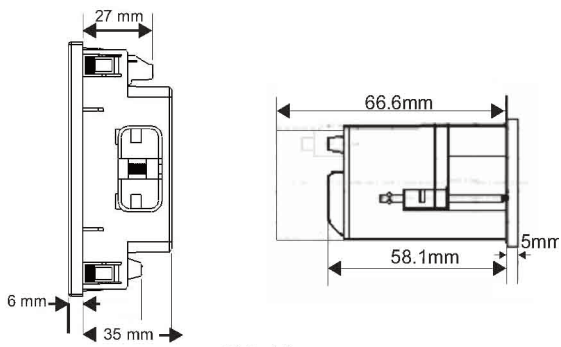
Technical Specifications	
Measuring ranges Celsa Eine + Voltage	Input mV ranges -75...0...75mV, -150...0...150mV Input Voltage range -5...0...5V, -10...0...10V, 0...500V, 0...1000V Max continuous input voltage 120% of Nominal value
Measuring ranges Celsa Eine + Current	Input Current ranges -10...0...10mA, -20...0...20mA, 4...20mA, -1...0...1A, -5...0...5A Max continuous input current 120% of Nominal value
Accuracy	Celsa Eine + Voltage <0.5% of Display End value ±1 digit (Input current < 300uA) for V/mV Celsa Eine + Current <0.5% of Display End value ±1 digit (Voltage drop < 600mV) for A/mA 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)
Auxiliary supply	External Aux 40 - 300V AC - DC 20 - 60V DC / 20-40V AC 80 - 300V AC (for model 96x96) Frequency range 45 - 65Hz VA burden < 4.5VA approx. at 240V _{LN} , 50Hz < 1VA approx. at 24V _{LN} , 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 model 96x96) 48 mm x 96 mm DIN43718 (for model 48x96) Panel cut-out 92 +0.8mm x 92 + 0.8mm (for model 96x96) 43.5 +0.6mm x 92 + 0.8mm (for model 48x96) Overall depth <40mm (for model 96x96) <75mm (for model 48x96) Weight 310 gr. approx. (for model 96x96) 250gr. approx. (for model 48x96)
Factor C (The highest value applies if calculated C is less than 1, then C=1 applies)	Linear characteristics: $C = \frac{1 - (Y0/Y2)}{1 - (X0/X2)}$ or C=1 Bent characteristics: For $X0 \leq X \leq X1$ $C = \frac{Y1 - Y0}{X1 - X0} \cdot \frac{X2}{Y2}$ or C=1 For $X1 \leq X \leq X2$ $C = \frac{1 - (Y1/Y2)}{1 - (X1/X2)}$ 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

DIGITAL INSTRUMENTS

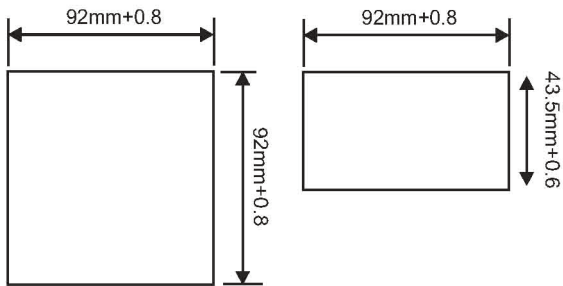
Dimensions:



Front View

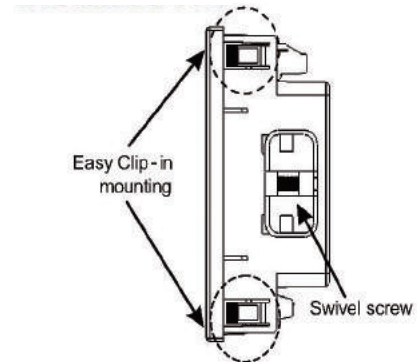


Side View

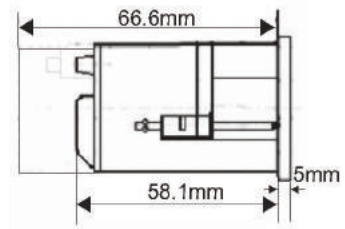


Panel Cutout

Installation:

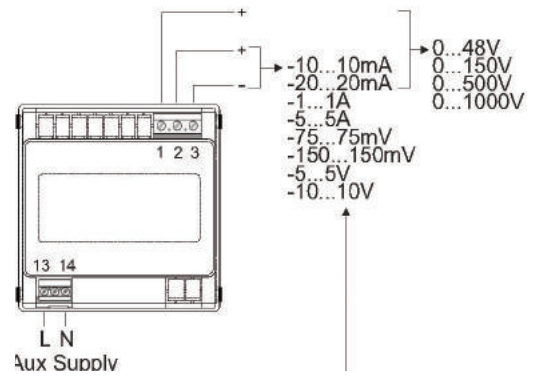


96x96 model



48x96 model

Electrical connections:



Ordering information for model 96x96:

Ordering Information	Ordering Code
Celsa Eine + Voltage	1
Input Voltage	
75 mV	75M
150 mV	150M
0 - 5V	5
0 - 10V	10
0 - 48V	48
0 - 150V	150
0 - 500V	500
0 - 1000V	1000
Auxiliary Supply	
40 - 300V AC - DC ($\pm 5\%$)	HA
80 - 300V AC	LA
20 - 60V DC / 20-40V AC ($\pm 5\%$)	L

Ordering Information	Ordering Code
Celsa Eine + Current	1
Input Current	
0 - 10 mA	10M
0 - 20 mA	20M
4 - 20 mA	20MZ
0 - 1A	1A
0 - 5A	5A
Auxiliary Supply	
40-300V AC - DC ($\pm 5\%$)	HA
80-300V AC	LA
20-60V DC / 20-40V AC ($\pm 5\%$)	L

Order Code Example:

- Celsa Eine + Voltage - 1 - 500 - L : Celsa Eine + Voltage , VDC, 500 V input voltage, 80-300V AC auxiliary supply
- Celsa Eine + Current - 2 - 20M - HA: Celsa Eine + Current , ADC, 20 mA input current, 40-300 V AC-DC auxiliary supply
- Celsa Eine + Voltage - 1 - 500 - L: Celsa Eine + Voltage, VDC, 500 V input voltage, 20-60V DC / 20-40V AC auxiliary supply
- Celsa Eine + Current - 2 - 20M - L: Celsa Eine + Current , ADC, 20 mA input current, 20-60V DC / 20-40V AC auxiliary supply

Ordering information for model 48x96:

Ordering Information	Ordering Code
Celsa Eine + Voltage	148
Input Voltage	
75 mV	75M
150 mV	150M
0 - 5V	5
0 - 10V	10
0 - 48V	48
0 - 150V	150
0 - 500V	500
0 - 1000V	1000
Auxiliary Supply	
40 - 300V AC - DC ($\pm 5\%$)	HA
80 - 300V AC	LA
20 - 60V DC / 20-40V AC ($\pm 5\%$)	L

Ordering Information	Ordering Code
Celsa Eine + Current	248
Input Current	
0 - 10 mA	10M
0 - 20 mA	20M
4 - 20 mA	20MZ
0 - 1A	1A
0 - 5A	5A
Auxiliary Supply	
40-300V AC - DC ($\pm 5\%$)	HA
80-300V AC	LA
20-60V DC / 20-40V AC ($\pm 5\%$)	L

Order Code Example:

- Celsa Eine + Voltage - 148 - 500 - LA : Celsa Eine + Voltage , VDC, 500 V input voltage, 20-60V DC / 20-40 AC auxiliary supply
- Celsa Eine + Current - 248 - 20M - HA: Celsa Eine + Current , ADC, 20 mA input current, 40-300 V AC-DC auxiliary supply