

Celsa Eine + DC Voltage / Current



Celsa 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.

Low back depth (for model 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 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

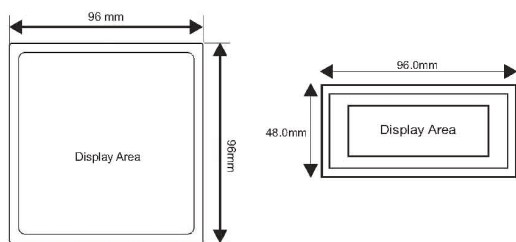
Compliance to International standard IEC 61326 Class B.

DIGITAL INSTRUMENTS

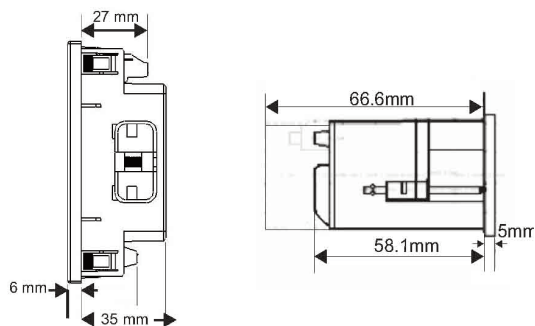
| Technical Specifications | | | | | | | | | | | | | |
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| Measuring ranges Celsa Eine + Voltage | Input mV ranges -75...0...75mV, -150...0...150mV Input Voltage range -5...0...5V, -10...0...10V, 0...500V, 0...1000V Max continuous input voltage 120% 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) | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> Linear characteristics: $C = \frac{1 - (Y0/Y2)}{1 - (X0/X2)}$ </td> <td style="width: 10%; text-align: center; vertical-align: middle;">or</td> <td style="width: 5%; text-align: center; vertical-align: middle;">C=1</td> <td style="width: 50%; vertical-align: top;"> Bent characteristics: For $X0 \leq X \leq X1$ $C = \frac{Y1 - Y0}{X1 - X0} \cdot \frac{X2}{Y2}$ </td> <td style="width: 10%; text-align: center; vertical-align: middle;">or</td> <td style="width: 5%; text-align: center; vertical-align: middle;">C=1</td> </tr> <tr> <td style="vertical-align: top;"> $1 - (X0/X2)$ </td> <td></td> <td></td> <td style="vertical-align: top;"> For $X1 \leq X \leq X2$ $C = \frac{1 - (Y1/Y2)}{1 - (X1/X2)}$ </td> <td></td> <td style="text-align: center; vertical-align: middle;">C=1</td> </tr> </table> <p>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</p> | 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 | $1 - (X0/X2)$ | | | For $X1 \leq X \leq X2$ $C = \frac{1 - (Y1/Y2)}{1 - (X1/X2)}$ | | C=1 |
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DIGITAL INSTRUMENTS

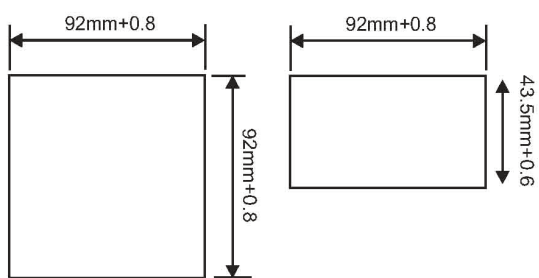
Dimensions:



Front View

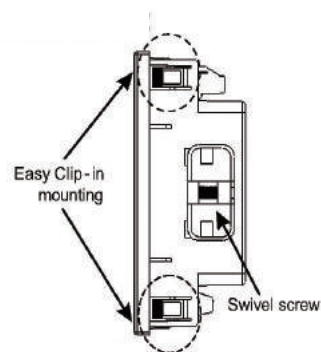


Side View

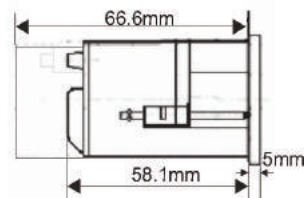


Panel Cutout

Installation:

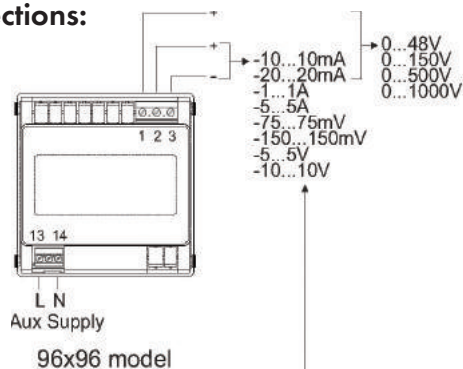


96x96 model

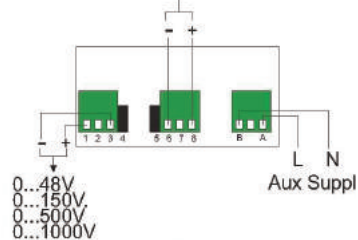


48x96 model

Electrical connections:



96x96 model



48x96 model

Order example:

- Eine + Voltage , VDC, 500 V input voltage, 80-300V AC auxiliary supply, Dimensions: 96x96 mm
- Eine + Current , ADC, 20 mA input current, 40-300 V AC-DC auxiliary supply, Dimensions: 96x96 mm
- Eine + Voltage , VDC, 500 V input voltage, 20-60V DC / 20-40 AC auxiliary supply, Dimensions: 48x96 mm
- Eine + Current , ADC, 20 mA input current, 40-300 V AC-DC auxiliary supply, Dimensions: 48x96 mm