



DATASHEET

Issue 1



Multifunction Meters

Transducers & Isolators

Temperature Controllers

Converters & Recorders

Digital Panel Meters

Current Transformers

Analogue Panel Meters

Shunts

Digital Multimeters

Clamp Meters

Insulation Testers

UNO+ DC DIGITAL PANEL METERS 96x96 / 48x96

Features

- Low Back Depth
- Rescalable Display range
- Function keys
- Bent Characteristics
- Power Factor Display
- Ambient Temperature Indication
- Auxillary Supply
- 4 Full digits Ultra Bright LED display
- Wide Input Range
- Enclosure Protection for dust and water
- Compliance to International Safety standards
- EMC Compatibility

SUBJECT TO CHANGE WITHOUT NOTICE

This datasheet superseded all previous versions – please keep for future reference

Applications

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

UNO+ DC DIGITAL PANEL METERS 96x96 / 48x96



UNO+ 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.

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.

Auxiliary Supply

The Auxiliary 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.

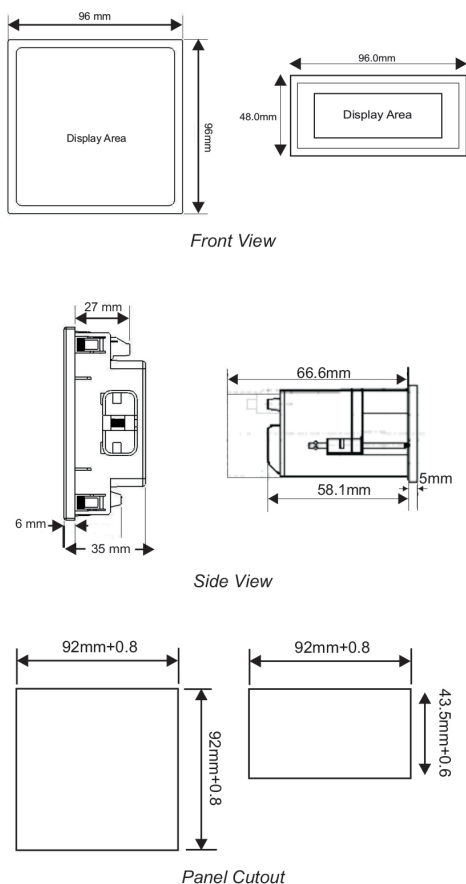
Compliance to International Safety standards

Compliance to International Safety standard
IEC 61010-1- 2010.

EMC Compatibility

Compliance to International standard IEC 61326
Class B

Dimensional Details



Technical Specifications

| Measuring Ranges | |
|--|--|
| Model | UNO+ 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 | UNO+ 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 | |
| UNO+ Voltage (Input current < 300uA) for V/mV | <0.5% of Display End value ±1 digit |
| UNO+ 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:

$$C = \frac{1 - \frac{Y_0}{Y_2}}{1 - \frac{X_0}{X_2}} \text{ or } C=1$$

Bent characteristics:

For $X_0 \leq X \leq X_1$

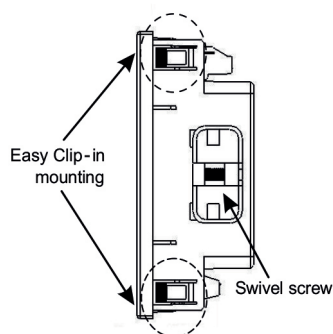
$$C = \frac{Y_1 - Y_0}{X_1 - X_0} \cdot \frac{X_2}{Y_2} \text{ or } C=1$$

For $X_1 \leq X \leq X_2$

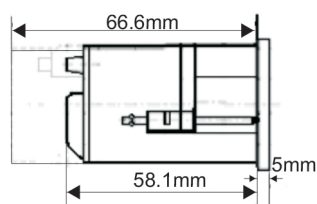
$$C = \frac{1 - \frac{Y_1}{Y_2}}{1 - \frac{X_1}{X_2}} \text{ or } C=1$$

X_0 = Start value of input, Y_0 = Start value of display, X_1 = Elbow value of input, Y_1 = Elbow value of display, X_2 = End value of input, Y_2 = End value of display

Installation

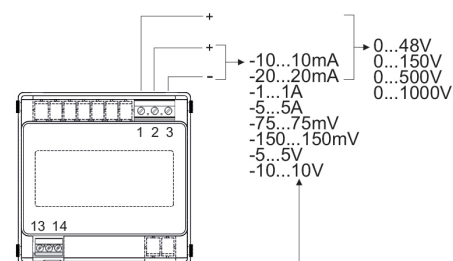


96x96 model



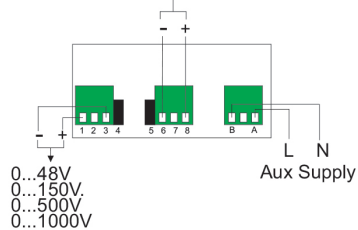
48x96 model

Electrical Connections



L N
Aux Supply

96x96 model



48x96 model

Technical Specifications

| | |
|--|---|
| Auxiliary Supply | |
| External Aux | 40 - 300V AC-DC 20 - 60V DC/20-40V AC 80 - 300V AC (For 96x96 model only) |
| 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 | 0000ST |
| 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 0.5 | | | | | | 5 | | | |
| Class | | | | | | | | | | |
| IP Protection | Standard IP50 | | | | | | | 0 | | |
| | Optional IP54 (On request-chargeable) | | | | | | | 1 | | |
| Test | Not Required | | | | | | | | 0 | |
| Certificate | Required (On request-chargeable) | | | | | | | | 1 | |

Contact



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