

# RISH Eine<sup>+</sup>

DC Digital Panel Meter

## Technical Datasheet



### Programmable DC DPM

*RISH Eine<sup>+</sup> is specially designed to measure electrical parameters like DC Voltage or DC Current and display it in terms of any parameter or process value.*

- ▼ Onsite Scalable Display
- ▼ Power Factor Display
- ▼ Bent Characteristics
- ▼ 4-Digit Ultra Bright LED Display
- ▼ Programmable Decimal Point
- ▼ Ambient Temperature Indication



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Measure, Control & Record with a Difference

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# RISH Eine<sup>+</sup>

## DC Digital Panel Meter



**RISH Eine<sup>+</sup>** has been designed for industrial applications, which frequently require precise and on-site adjustment of the display range.

### Applications:

- 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 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:

- ▶ A wide Auxillary supply range of 40-300V AC-DC is 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.



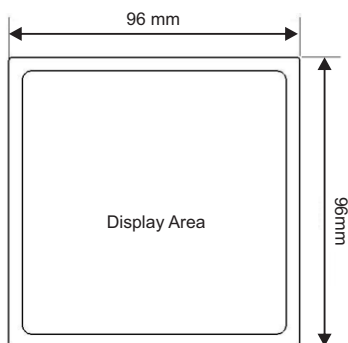
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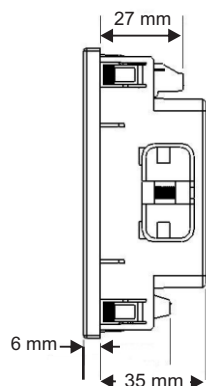
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## DC Digital Panel Meter

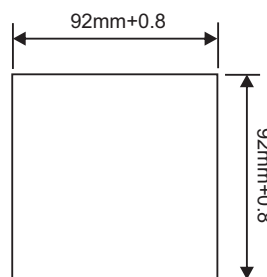
### Dimensions Details:



Front View



Side View



Panel Cutout

### Technical Specifications:

#### Measuring Ranges:

| Model                        | RISH Eine <sup>+</sup> 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                           |

| Model                        | RISH Eine <sup>+</sup> 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 <sup>+</sup> Voltage<br>(Input current < 300uA) for V/mV | <0.5% of Display End value ±1 digit |
| Temperature coefficient  | 0.05% / °C                          |
| Zero point drift   | 0.025% / °C                         |

|   |                                     |
|---|-------------------------------------|
| RISH Eine <sup>+</sup> Current<br>(Voltage drop < 600mV) for A/mA | <0.5% of Display End value ±1 digit |
| Temperature coefficient   | 0.05% / °C                          |
| 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 - "<br>(above 125% of nominal value) |



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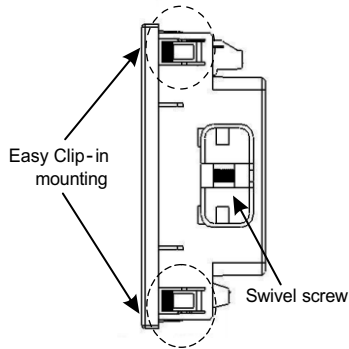
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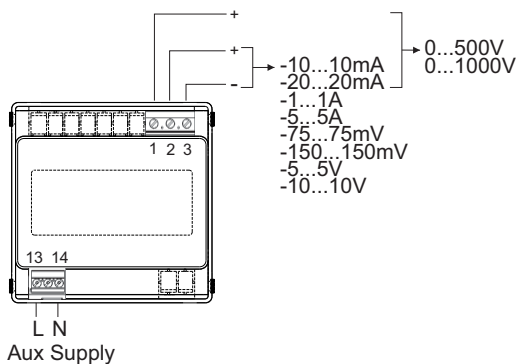
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## DC Digital Panel Meter

### Installation:



### Electrical Connections:



### Technical Specifications:

#### Auxiliary Supply:

|                 |  |
|-----------------|--|
| External Aux    | 40 - 300V AC-DC                            |
|                 | 80 - 300V AC                               |
| Frequency range | 45 - 65Hz                                  |
| VA burden       | < 4VA approx. at 240V <sub>LN</sub> , 50Hz |

#### Applicable Standards:

|                        |  |
|------------------------|--|
| EMC                    | IEC 61326-1:2005   |
| Immunity               | IEC 61000-4-1 up to 4. Level 3 industrial<br>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<br>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 |
| Panel cut-out | 92 +0.8mm x 92 + 0.8mm |
| Overall depth | 40mm                   |
| Weight        | 310 gm. approx.        |



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### Ordering Information:

| Ordering information           | Ordering Code<br>RISH Eine <sup>+</sup> |
|--------------------------------|---|
| <b>Model</b>                   |   |
| RISH Eine <sup>+</sup> Voltage | 1                                       |
| <b>Input Voltage</b>           |   |
| 75mV                           | 75M                                     |
| 150mV                          | 150M                                    |
| 0 - 5V                         | 5                                       |
| 0 - 10V                        | 10                                      |
| 0 - 500V                       | 500                                     |
| 0 - 1000V                      | 1000                                    |
| <b>Model</b>                   |   |
| RISH Eine <sup>+</sup> Current | 2                                       |
| <b>Input Current</b>           |   |
| 0 - 10mA                       | 10M                                     |
| 0 - 20mA                       | 20M                                     |
| 4 - 20mA                       | 20MZ                                    |
| 0 - 1A                         | 1A                                      |
| 0 - 5A                         | 5A                                      |
| <b>Auxiliary Supply</b>        |   |
| 40-300 V AC-DC (±5%)           | AD                                      |
| 80-300V AC                     | L                                       |

### Order Code Example:

RISH Eine<sup>+</sup> – 1 – 500 – L

RISH Eine<sup>+</sup>, VDC, 500 V input voltage, 80-300V AC auxiliary supply.

RISH Eine<sup>+</sup> – 2 – 20M – AD

RISH Eine<sup>+</sup>, ADC, 20 mA input current, 40-300 V AC-DC auxiliary supply.



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