

# Product SPECIFICATION SHEET

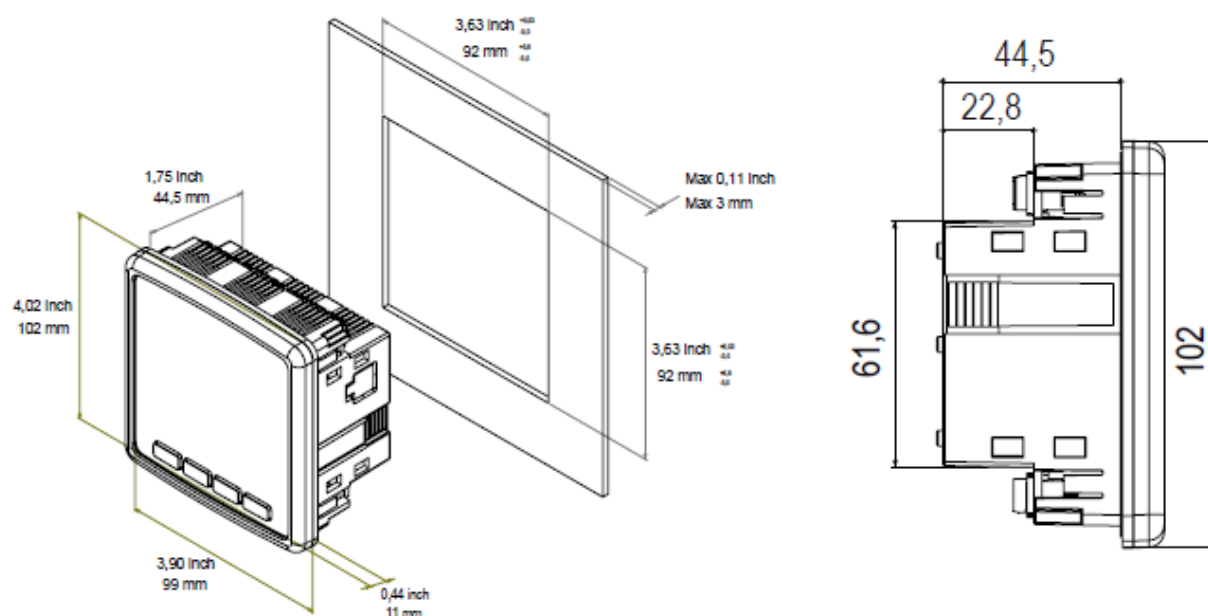


## EMR SERIES

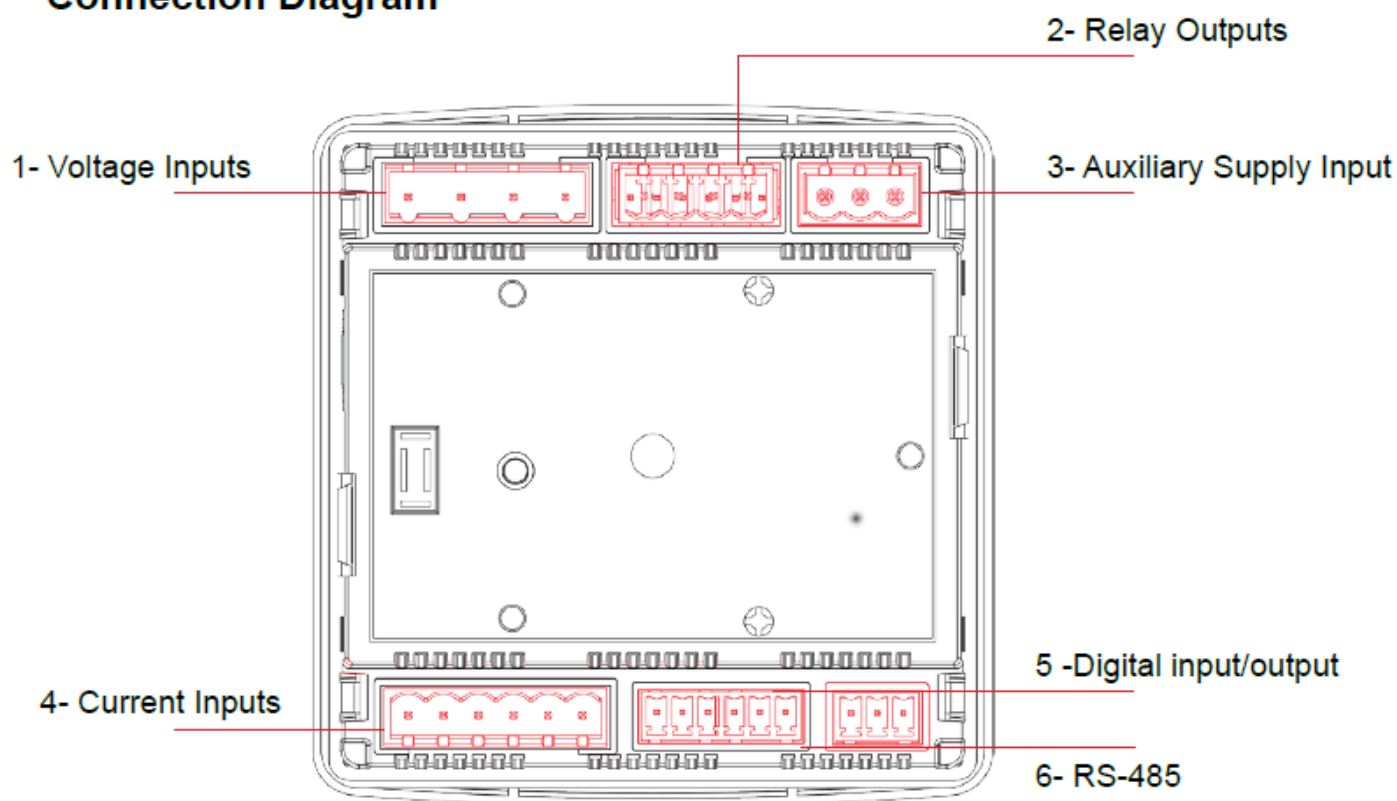
|                                    |                                                                             |
|------------------------------------|-----------------------------------------------------------------------------|
| Operating Voltage (Un)             | 100-270 VAC (-15%+10%)                                                      |
| Operating Frequency (f)            | 50-60 Hz                                                                    |
| Input Power Consumption            | <5 VA                                                                       |
| Measuring Inputs Power Consumption | <1 VA                                                                       |
| Measuring Voltage Input (Vin)      | 10-300 VAC(VLN) 10-480 VAC(VLL)                                             |
| Measuring Current Input (Iin)      | 0.05-5.5 A                                                                  |
| <b>Class</b>                       |                                                                             |
| Voltage                            | 1%                                                                          |
| Current                            | 1%                                                                          |
| Frequency                          | ±0.02 Hz                                                                    |
| cosφ                               | ± 0.02                                                                      |
| Demand Time                        | Adjustable<br>60/120/300/600/1200/1800/3600 sec                             |
| Communication (Insulated)          | 4kV                                                                         |
| Baud Rate                          | Adjustable 2400/ 4800/<br>9600/19200/38400/57600/115200                     |
| Address                            | Adjustable 1-257                                                            |
| Parity                             | Adjustable Single/Double                                                    |
| Relay Outputs                      | 2x (5A 250 VAC/ 1250VA)                                                     |
| Internal memory                    | 2MB                                                                         |
| Connection                         | 3P3W, 3P4W, Aron, 3P3W(B), 3P4W(B)                                          |
| Ambient Temperature                | -20+70°C                                                                    |
| Storage Temperature                | -30+80°C                                                                    |
| Humidity                           | 95%                                                                         |
| Indicator                          | LED Display                                                                 |
| Dimensions                         | 96x96x44.5                                                                  |
| Device Protection Class            | Protection class Inside panel: IP20<br>Protection class Outside panel: IP51 |

| Parameter  | Unit | Description                       | Range           | Sensitivity | Maximum Value   |
|------------|------|-----------------------------------|-----------------|-------------|-----------------|
| Voltage    |      |                                   |                 |             |                 |
| V1, V2, V3 | V    | Phase-Neutral, Rms Voltage        | 30-300 VAC      | 1%          | 6 MV            |
| U1, U2, U3 | V    | Phase-Phase, Rms Voltage          | 30-480 VAC      | 1%          | 9.6 MV          |
| Frequency  | Hz   | Voltage Frequency                 | 50-60 Hz        | ±0.02 Hz    | 60              |
| Current    |      |                                   |                 |             |                 |
| I1, I2, I3 | A    | Phase Current                     | 0.05-5.5 A      | 1%          | 10kA            |
| Power      |      |                                   |                 |             |                 |
| Cosφ       |      | Cos Phi                           | -1.000 - +1.000 | ± 0.02      | -1.000 - +1.000 |
| PF         |      | Power Factor                      | -1.000 - +1.000 | ± 0.02      | -1.000 - +1.000 |
| P1,P2,P3   | W    | Phase Active Power                |                 | 1%          | 9999 M          |
| ΣP         | W    | Total Active Power                |                 | 1%          | 9999 M          |
| Q1,Q2,Q3   | VAr  | Phase Reactive Power              |                 | 2%          | 9999 M          |
| ΣQ Ind.    | VAr  | Total Inductive Reactive Power    |                 | 2%          | 9999 M          |
| ΣQ Cap.    | VAr  | Total Reactive Capacitive Power   |                 | 2%          | 9999 M          |
| ΣQ         | VAr  | Total Reactive Power              |                 | 2%          | 9999 M          |
| S1,S2,S3   | VA   | Phase Apparent Power              |                 | 2%          | 9999 M          |
| ΣS         | W    | Total Apparent Power              |                 | 2%          | 9999 M          |
| Harmonic   |      |                                   |                 |             |                 |
| THDV       | %    | Total Harmonic Voltage Distortion | 0 – 200%        | 1%          | 1000%           |
| V Harmonic | V    | Harmonic L-N Voltage Amplitude    | 2-31.           | 1%          | 1MV             |
| U Harmonic | V    | Harmonic L-L Phase Voltage        | 2-31.           | 1%          | 1.71 MV         |
| THDI       | %    | Total Current Harmonic Distortion | 0 – 200%        | 1%          | 1000%           |
| I Harmonic | A    | Harmonic Current Amplitude        | 2-31.           | 1%          | 10kA            |
| Energy     |      |                                   |                 |             |                 |
| +Ea        | Wh   | Active Import Energy              |                 | 1%          | 9999999.9 M     |
| +Er        | VArh | Inductive Reactive Energy         |                 | 2%          | 9999999.9 M     |
| -Er        | VArh | Inductive Capacitive Energy       |                 | 2%          | 9999999.9 M     |
| ES         | VAh  | Apparent Energy                   |                 | 2%          | 9999999.9 M     |
| Esg        | VAh  | Generator Energy                  |                 | 2%          | 9999999.9 M     |

## Technical Drawing



## Connection Diagram



**Terminal Structure;**

|   | Connection             | Range                         | Klemens Tipi                                                       |
|---|------------------------|-------------------------------|--------------------------------------------------------------------|
| 1 | Voltage Inputs         | 3 x 10 – 480 VAC 50/60Hz      | 4 x 7.62 mm socket<br>2.5 mm <sup>2</sup> , 4 mm <sup>2</sup> TD   |
| 2 | Relay Outputs          | 2 x 250 VAC 5A 1250 VA        | 4 x 5.08 mm socket<br>2.5 mm <sup>2</sup> / 4 mm <sup>2</sup> TD   |
| 3 | Auxiliary supply input | 100-270 VAC / 50-60 Hz        | 3 x 5.08 mm socket<br>2.5 mm <sup>2</sup> / 4 mm <sup>2</sup> TD   |
| 4 | Current Inputs         | 3 x 0.05 – 5.5A / AC 50-60 Hz | 6 x 5.08 mm socket<br>2.5 mm <sup>2</sup> / 4 mm <sup>2</sup> TD   |
| 5 | Digital input/output   | 5-24 VDC / Max 30 VDC         | 6 x 3,81 mm / 1,5 mm <sup>2</sup> /<br>2,5 mm <sup>2</sup> TD      |
| 6 | RS-485                 | Max. $\pm 12V$                | 3 x 3.81 mm socket<br>1.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup> TD |