



## eManager Pro 4G ActIO 22172 Energy

eManager Pro 4G ActIO 22172 Energy, ARM controller

Code: D303200026700

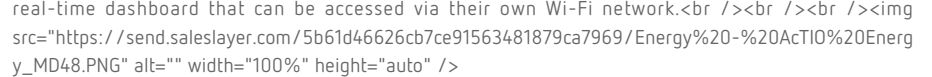
- > Memory: 512 MB | 8 GB eMMC
- > Analogue Inputs: 7
- > Módulos: 9
- > Communications: RS232/485 | Ethernet | Wi-Fi | 4G EMEA
- > N° relays: 3 (6 A)
- > Digital inputs: 2
- > Power supply: 85 ... 264 V~
- > CPU: ARM Cortex A7 800 MHz

### Description

eManager Energy is an industrial IoT controllers product range with integrated three-phase energy metering. eManager Energy centralizes power network analyzer features with datalogging and communications.

The energy module is able to measure up to one three-phase circuit or three single-phase circuits. It integrates 4 quadrant monitoring, including the main electrical parameters for single-phase and three-phase. Measurement accuracy is Class 1 Active and Class 2 Reactive; and the secondary current is 1 A.

In addition, a custom Node-RED node is available to facilitate the data collecting and displaying with a local real-time dashboard that can be accessed via their own Wi-Fi network.





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## Specifications

### AC power supply

|                 |                 |
|-----------------|-----------------|
| Consumption     | 8,8 ... 10,5 VA |
| Frequency       | 47 ... 63 Hz    |
| Nominal voltage | 85 ... 264 V~   |

### DC power supply

|                 |                 |
|-----------------|-----------------|
| Consumption     | 6,4 ... 6,5 W   |
| Nominal voltage | 120 ... 300 Vdc |

### Electrical characteristics

|                 |                |
|-----------------|----------------|
| Isolation level | 3 kVac         |
| Sensor          | PT100 & PT1000 |

### Mechanical characteristics

|                                  |  |
|----------------------------------|--|
| Size (mm) width x height x depth | 158 x 89 x 48 (mm)                         |
| Envelope                         | Polycarbonate UL94 - Self-extinguishing V2 |
| Fastening                        | DIN rail 46277 (EN 50022)                  |

### Environmental characteristics

|  |              |
|--|--------------|
| Protection class                         | IP 20        |
| Relative humidity (without condensation) | 5...95 %     |
| Working temperature                      | -20...+50 °C |

### Current measurement circuit

|                               |                |
|-------------------------------|----------------|
| Installation category         | CAT III 300 V  |
| Nominal current (In)          | ... / 1A       |
| Phase current measuring range | 2...120% de In |

### Voltage measurement circuit

|                         |                       |
|-------------------------|-----------------------|
| Installation category   | CAT III 300 V         |
| Voltage measuring range | 5 ... 120 % Un        |
| Nominal voltage         | 285V Ph-N, 480V Ph-Ph |

### Communication Network

|                   |                      |
|-------------------|----------------------|
| Technology / Type | Ethernet 10/100 Mbps |
|-------------------|----------------------|

### Control Unit

|              |                       |
|--------------|-----------------------|
| Clock        | RTC                   |
| CPU          | ARM Cortex A7 800 MHz |
| PSRAM Memory | 512 MB                |



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|  |   |
|--|---|
| SPI Flash Memory                             | 8 GB eMMC   |
| <b>Standards</b>                             |   |
| Electrical safety, Maximum height (m)        | 2000  |
| Electrical safety, Installation category     | CAT III 300 V   |
| Electrical safety, Contamination level/class | Double-insulated electric shock protection class II (IEC 61010) |
| Standards                                    | UNE EN 61010-1, UNE-EN 61000-6-2, UNE-EN 61000-6-4              |
| <b>Electrical safety</b>                     |   |
| Insulation                                   | 3 kVac  |
| <b>Analogue inputs</b>                       |   |
| Quantity                                     | 7   |
| Nominal range                                | 0...10 V / 0...20 mA o 4...20 mA                                |
| Nominal input range                          | 0...10 V / 0...20 mA or 4...20 mA                               |
| <b>Digital inputs</b>                        |   |
| Quantity                                     | 2   |
| Type   | 0...24 Vdc  |
| <b>Digital relay outputs</b>                 |   |
| Quantity                                     | 2   |
| Type   | NO  |
| Maximum current                              | 6 A   |
| Maximum open contact voltage                 | 250 Vac   |
| <b>Measurement accuracy</b>                  |   |
| Reactive energy measurement (kvarh)          | Class 2   |
| Active energy measurement (kWh)              | Class 1   |
| <b>Radio communication</b>                   |   |
| Band   | LTE-FDD B1/B3/B7/B8/B20/B28A, WCDMA B1/B8 & GSM/EDGE B3/B8      |
| Technology / Type                            | 4G EMEA   |
| <b>Serial communication</b>                  |   |
| Technology / Type                            | RS-232 (full-duplex) / RS-485 (half-duplex)Galvanic isolation   |
| <b>Wireless communication</b>                |   |
| Band   | 802.11 b/g/n (2.4 GHz.)   |
| Technology / Type                            | Wi-Fi   |

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IoT programmable controllers with integrated energy metering and inputs and outputs

| CODE                  | TYPE                               | CPU                   | Memory             | Analogue<br>Inputs | Digital<br>inputs | Nº relays | Communications                              | Power supply  |
|-----------------------|------------------------------------|-----------------------|--------------------|--------------------|-------------------|-----------|---|---------------|
| eManager ActIO Energy |                                    |                       |                    |                    |                   |           |   |               |
| D303200026700         | eManager Pro 4G ActIO 22172 Energy | ARM Cortex A7 800 MHz | 512 MB   8 GB eMMC | 7                  | 2                 | 3 (6 A)   | RS232 / 485   Ethernet   Wi-Fi   4G<br>EMEA | 85 ... 264 V~ |