# Circutor

# eManager Pro 4G ActIO 22172 Energy
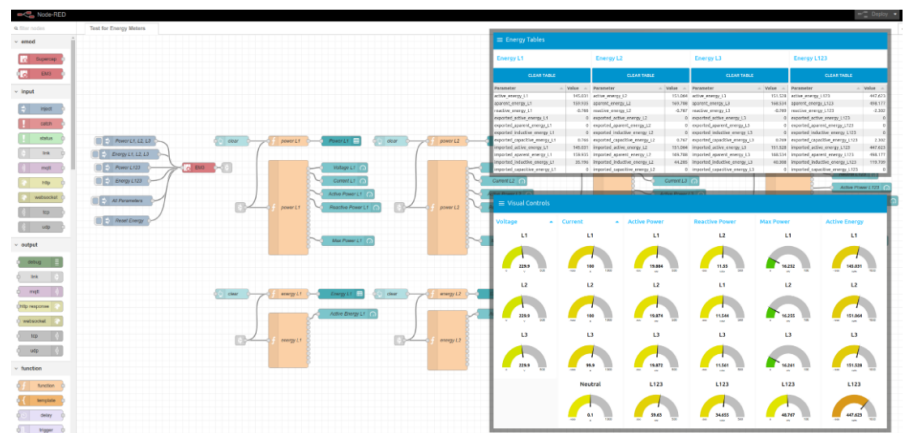
eManager Pro 4G ActIO 22172 Energy, ARM controller

Code: D303200026700

> Memory: 512 MB | 8 GB eMMC

> Analogue Inputs: 7

> Módules: 9

> Communications: RS232/485 | Ethernet | Wi-Fi | 4G EMEA

> Nº 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 mesure 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.

## eManager Pro 4G ActIO 22172 Energy

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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) |
| Weight (kg) | 1 |

### 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 / Interface | Ethernet 10/100 Mbps |

### Control Unit

| | |
|---|---|
| Clock | RTC |
| CPU | ARM Cortex A7 800 MHz |

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Page 2 of 4

# eManager Pro 4G ActIO 22172 Energy

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| | |
|---|---|
| PSRAM Memory | 512 MB |
| SPI Flash Memory | 8 GB eMMC |

### Standards

| | |
|---|---|
| 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 |

### Electrical safety

| | |
|---|---|
| Insulation | 3 kVac |

### Analogue inputs

| | |
|---|---|
| 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 |

### Digital inputs

| | |
|---|---|
| Quantity | 2 |
| Type | 0...24 Vdc |

### Digital relay outputs

| | |
|---|---|
| Quantity | 2 |
| Type | NO |
| Maximum current | 6 A |
| Maximum open contact voltage | 250 Vac |

### Measurement accuracy

| | |
|---|---|
| Reactive energy measurement (kvarh) | Class 2 |
| Active energy measurement (kWh) | Class 1 |

### Radio communication

| | |
|---|---|
| Band | LTE-FDD B1/B3/B7/B8/B20/B28A, WCDMA B1/B8 & GSM/EDGE B3/B8 |
| Technology / Type | 4G EMEA |

### Serial communication

| | |
|---|---|
| Technology / Type | RS-232 (full-duplex) / RS-485 (half-duplex)Galvanic isolation |

### Wireless communication

| | |
|---|---|
| Band | 802.11 b/g/n (2.4 GHz.) |
| Technology / Type | Wi-Fi |

# eManager Pro 4G ActIO 22172 Energy

Code: D303200026700

### eManager ActIO Energy

IoT programmable controllers with integrated energy metering and inputs and outputs

| CODE | TYPE | CPU | Memory | Analogue Inputs | Digital inputs | N° 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 EMEA | 85 ... 264 V~ |

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Page 4 of 4