# Energy Meter

# EM369




96 x 96mm

## Features:

- 3Ø True RMS measurement (Voltage, Current)
- 3Ø Power (Active, Reactive, Apparent),
- 3Ø Power factor (Average, Individual, Displacement & True PF)
- Energy (Active, Reactive, Apparent)
- Modbus RTU communication (RS485)
- % THD Up to 31st level
- Max/Min demand for power
- % Unbalance for voltage and current
- Suppression current
- Programmable CT/PT (Primary / Secondary)

Certifications: CE

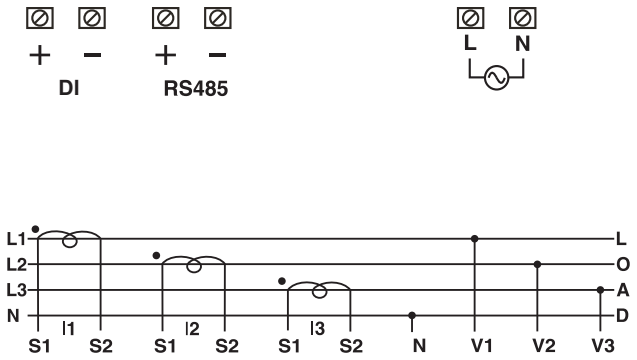
## Technical specifications

| | |
|---|---|
| **Display specifications** | |
| Display | 1 row LCD display |
| Digits | 9 |
| Digit height | 0.56" |
| Resolution | For Energy: 0.001k (auto resolution) |
| | For Power, Voltage, Current: Auto resolution |
| | For Power factor: 0.001 |
| | For Frequency: 0.01 Hz |
| **Operational characteristics** | |
| Type of measurement | True RMS |
| Sampling rate | 121 Samples / Cycle |
| Electrical connections | 3Ø - 3 wire (delta), 3Ø - 4 wire (wye), 2Ø - 3 wire, 1Ø - 2 wire (L - N) |
| Data update rate | 1 sec |
| **Input-Voltage** | |
| PT primary | 100V to 500kV (programmable for any value) |
| PT secondary | 100V to 500V (programmable for any value) |
| Voltage nominal | 240V AC (L-N) / 415V AC (L-L) |
| Measured V with full range | 19V to 480V AC L-L (277V AC L-N) (CAT III), 520V AC L-L (300V AC L-N) (CAT II) |
| Impedance | ≥0.8M Ohms |
| Frequency range | 45 - 65Hz |
| VA burden | 0.5VA Per phase |
| **Input current** | |
| CT primary | 1 / 5A to 32760A (programmable for any value) |
| CT secondary | 1A / 5A (programmable) |
| Current nominal | 5mA to 6A |
| Withstand continuous | 120A for 1 sec |
| Frequency range | 45-65 Hz |
| VA burden | 0.5VA per phase |
| **Measurement accuracy** | |
| Accuracy | Voltage (L-N / L-L): ±0.5% of full scale |
| | Current: ±0.5% of full scale |
| | Power factor: ±0.01 |
| | Frequency: ±0.1% For L - N Voltage >20V, For L - L Voltage >35V |
| | Power (Active - ±0.5%, Reactive - ±2%, Apparent - ±0.5%) |
| | Energy (Active - Class 0.5S, Reactive - Class 2, Apparent - Class 0.5) |

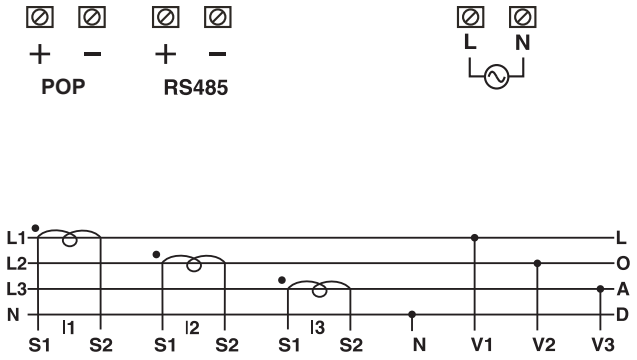
| | |
|---|---|
| **Input specifications** | |
| Digital input | 24V DC (±10%) |
| **Output specifications** | |
| Pulse output | Voltage range: External 24V DC max |
| | Current capacity: 100mA max |
| | Pulse width: 50ms |
| | Configurable pulse weight from 1 to 9999000 pulses / k_h(kWh, kVAh, or kVARh) |
| Device ID & Parity | 1 to 255 & None, Odd, Even |
| Protocol & Interface | RS485 and MODBUS RTU |
| Baud rate | 300, 600, 1200, 2400, 4800, 9600, 19200, 38400 (in bps) |
| Transmission mode | Half duplex |
| Transmission distance | 500m maximum |
| Data types | Float, Integer and Hex |
| Stop bits | 1 or 2 |
| Isolation | 2KV RMS |
| **Mechanical specifications** | |
| Weight | 303 gm approx |
| Material | Polycarbonate |
| IP degree of protection | Front IP65, Back IP20 |
| Torque at terminals | 0.68 N-m to 0.79 N-m |
| Wire gauge at terminals | 14 to 20 AWG; 75 °C |
| Mounting position | Vertical |
| **Auxiliary supply specifications** | |
| Supply voltage | 40 to 300V AC/DC, 50-60 Hz |
| Power consumption | 6VA max |
| **Environmental characteristics** | |
| Operating temperature | -10 °C to 55 °C (14 °F to 131 °F) |
| Storage temperature | -20 °C to 75 °C (-4 °F to 167 °F) |
| Humidity | 85% (non - condensing) |
| Altitude | Up to 2000m |
| Measurement category | CAT III |
| Pollution degree | 2 |

## Terminal connections

**EM369-C-D-CE-CL05**

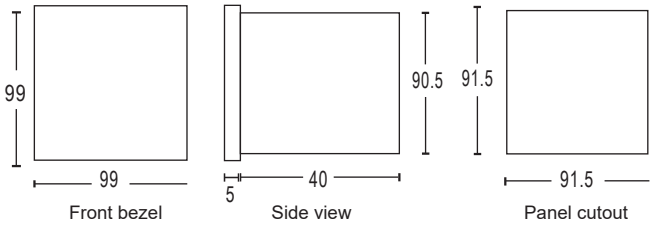



**EM369-C-CE-CL05**




Cable Size (mm2): 0.5 to 2.5 ; Tightening Torque (N-m): 0.68 to 0.79

## Dimensions (All are in mm)




## Compliance

| Applicable EMI / EMC Standards | |
|---|---|
| **Product standard :** IEC 61326-1 Edition 3.0 | |
| **Category** | **Standards compliance** |
| Electrostatic discharge | IEC 61000 - 4 - 2 |
| Immunity to electromagnetic RF fields | IEC 61000 - 4 - 3 |
| Conducted immunity | IEC 61000 - 4 - 6 |
| Immunity to magnetic fields | IEC 61000 - 4 - 8 |
| Immunity to voltage dips and interruptions | IEC 61000 - 4 - 11 |
| Fast transient | IEC 61000 - 4 - 4 |
| Immunity to surge waves | IEC 61000 - 4 - 5 |
| Conducted and radiated emissions | CISPR-11 |
| **Safety standards** | |
| IEC61010 Edition 3.0 CAT III, Protection class II | |

## Ordering information

| Product code | Supply voltage | Input | Comm. (RS485) | Certification |
|---|---|---|---|---|
| **EM369-C-D-CE-CL05** | 40 to 300V AC/DC 50/60 Hz | DI | YES | CE |
| **EM369-C-CE-CL05** | 40 to 300V AC/DC 50/60 Hz | POP | YES | CE |