

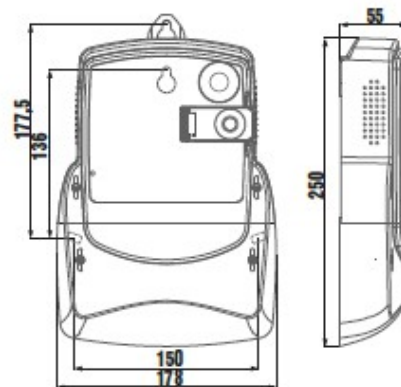


|   |  |
|---|--|
|    | Active, Reactive and Apparent Energy     |
|   | DIN housing                              |
|    | Multiple connection types                |
|    | Direct or current transformer connection |
|    | Ingress protection                       |
|    | Load profile                             |
|    | Optical port                             |
|    | Real-time clock                          |
|    | Event log                                |
|    | RS485 interface                          |
|    | Multi-rate registration                  |
|     | Accuracy class                           |
|    | Magnetic field detection                 |
|    | Photovoltaic ready                       |
|    | Maximum demand                           |
|    | 4 Quadrant measurement                   |

With a future-proof design the Polyphase MT174 is ready to suit many diverse customer requirements. High quality manufacturing process enables the meter to deliver the performance, expected in residential and small commercial environments. It includes a wide variety of functionalities:

- Extensive anti-tampering features
- Photovoltaic friendly design
- RS communication interface (RS485)
- Up to four tariff schemes
- Extended load profile
- Time-of-use (TOU) – internal tariffication

### Meter dimensions



## BASIC MT174 Polyphase multi-tariff meter

### Type overview

|                               |                       | MT174-D1<br>DIN | MT174-D2<br>DIN | MT174-T1<br>DIN |
|-------------------------------|-----------------------|-----------------|-----------------|-----------------|
| <b>Network</b>                | Low voltage           | ●               | ●               | ●               |
| <b>Connection type</b>        | 1P2W                  | ●               | ●               |                 |
|                               | 3P3W                  | ●               | ●               |                 |
|                               | 3P4W                  | ●               | ●               | ●               |
| <b>Communication</b>          | RS485                 | ●               | ●               | ●               |
|                               | Optical interface     | ●               | ●               | ●               |
| <b>Input - output options</b> | Output 50             | ●               | ●               | ●               |
|                               | Output OPTOMOS        | ●               | ●               | ●               |
|                               | Tariff input (1 or 2) | ●               | ●               | ●               |

### Basic functionality

#### Measurement features

- Two way ("energy") measurements
- Active, Reactive and Apparent energy and demand in 3-phase 4- and 3-wire networks
- Measurement by phases and polyphase, quantities of measurement: Voltages by phases, Currents by phases, Power factors by phases, Frequency
- Measurement of instantaneous power

#### Tariff functions

- Time-of-use (TOU) measurement of active energy and maximum demand (up to 4 tariffs, 10 seasons, 10 weekly programs, 10 daily definitions, 10 tariff change over inside individual daily tariff programs, 46 holidays)

#### Load profiles

- Load profile recorder with up to 8 channels
- Possibility to set the recording period on 5, 10, 15, 30, 45 or 60 minutes

#### Communication

- IEC 1107 compliance
- Two communication interfaces:
  - Optical port
  - RS485

#### Real-time clock (RTC)

- Compliant with IEC 62054 - 21 standard
- RTC with calendar, based on 32 kHz quartz crystal
- RTC accuracy: better than  $\pm 3$  min/year, operation reserve: 5 years, expected Libattery life time: 20 years
- Counter of elapsed time of RTC operation
- Libattery enables data display on LCD when meter is in no-power state

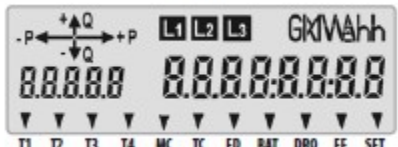
#### Specifics

- Backlit LCD display
- Detection of opening main and terminal cover
- External magnetic field detector
- Photovoltaic ready
- Secured communication channels
- Change of set parameters protected with a sealed pushbutton
- Indication of low Libattery

#### Optional

- RTC
- Load profile
- RS485 interface
- Inputs/Outputs

### Technical specifications

|  |                           | MT174-D1<br>DIN   | MT174-D2<br>DIN | MT174-T1<br>DIN          |
|--|---------------------------|---|-----------------|--------------------------|
| <b>Nominal voltage</b>                     | $U_n$                     | 3 x 120 V, 3 x 230/400 V, 3 x 230 V, 230 V, 3 x 400 V                               |                 | 3 x 230/400 V, 3 x 230 V |
| <b>Voltage range</b>                       |                           | 0.8 – 1.15 $U_n$  |                 |                          |
| <b>Reference frequency</b>                 |                           | 50 Hz or 60 Hz  |                 |                          |
| <b>Current</b>                             | Base current $I_b$        | 5A or 10A   |                 | 1 A                      |
|  | Starting current $I_{st}$ | 5A => Class 2: 0.025A, Class 1: 0.02A<br>10A => Class 2: 0.05A, Class 1: 0.04A      |                 | 20 mA                    |
|  | Maximal current $I_{max}$ | 85 A, 120 A   |                 | 6 A                      |
| <b>Accuracy class</b>                      | Active energy             | Class 2 or Class 1 (IEC 62053 - 21 or IEC 62053 - 23) A or B (EN 50470 - 3)         |                 |                          |
|  | Reactive energy           | Class 3 or Class 2  |                 |                          |
|  | Apparent energy           | Class 3 or Class 2  |                 |                          |
| <b>Real-time clock</b>                     | Accuracy                  | Better than $\pm 3$ min/year at 23 °C   |                 |                          |
|  | Back-up power supply      | Li battery: 5 years life time up to 20 years  |                 |                          |
| <b>Temperature ranges (IEC 62052 - 11)</b> | Operation                 | -40 °C ... +60 °C; extended -40 °C ... +70 °C                                       |                 |                          |
|  | Storage                   | -40 °C ... +80 °C   |                 |                          |
| <b>Ingress protection IEC 60529</b>        |                           | IP54  |                 |                          |
| <b>Liquid Crystal Display</b>              |                           |  |                 |                          |

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