



# Stephen P. Wales Ltd

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## CRN100DR\_ME162 100amp 2-tariff single-phase meter

ME162 electronic kWh-meter is intended for electric energy measurement in single-phase two-wire multi-tariff networks.

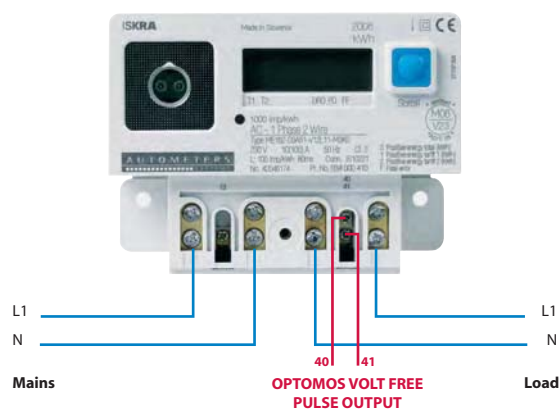
## Introduction



The ME162 single-phase electronic meters are intended for electric energy measurement and registration in single-phase two-wire networks in household. The meter is approved and manufactured in compliance with the IEC 62052-11, IEC 62053-21 (IEC 61036) standards and ISO 9001. They are designed according to even more severe internal standards that are the result of our more than 50-year experiences of meter manufacturing and fifty million meters installed worldwide.



## Connection Diagram



## Casing Dimensions



# Functional and Technical Data

ME162 is a single-phase meter for residential and small commercial users, for revenue measuring of active power in two wire systems.

## Measuring and Registration:

Standard (as a mechanical meter)

- Other Options:
- Double direction
  - Always positive (absolute)

**Accuracy/Calibration:** Due to the long-term stability there is no need for recalibration in meters life-time.

## Indications:

- LED1 (red): kWh impulses (k=1000 imp/kWh)  
Illuminated: Meter is powered, no load current.  
Pulsating: Load current is higher than starting value.  
Not Illuminated: Meter is not powered.

**Communication:** Opto-port (IEC 62056-21): for local meter reading and programming.

## Real time clock:

- 32 kHz quartz oscillator
- The real time clock generates: a tariff program, season changeover, transition to day light saving period and vice-versa.

**Inputs – Tariff:** Two tariff inputs for 2-4 tariff energy registration.

**Outputs:** S0 (DIN 43864) or opto-MOS-relay.

Option: Two separate S0 or optomos outputs for bi-directional energy flow direction (kWh - import, kWh - export).

## Local metering data display (LCD):

- Automatic scroll mode
- Manual scroll (by button)
- Programmable data set and sequence
- LCD back-light (option)
- Data display on LCD in voltage-free state (option).

## Scroll key:

- LCD test
- Scrolling data on LCD

**Enclosure:** Polycarbonate, Self-extinguishable;

**Protection against water and dust:** IP 53

**It is essential that any electricity meter is installed by a competent and qualified electrician. The meter must be fitted in full compliance to the regulations concerning electricity meters.**

**When removing a meter from the supply it is essential that the meter is fully isolated from the mains, both voltage and current circuits must be isolated.**

|  |  |
|--|--|
| <b>Accuracy Class</b>                              | <b>2 or 1</b>                                      |
| <b>Rated Current In</b>                            | <b>5, 10, 20 A</b>                                 |
| <b>Max Current I<sub>max</sub></b>                 | <b>85, 100 A</b>                                   |
| <b>Min Current</b>                                 | <b>0.05 In</b>                                     |
| <b>Starting Current</b>                            | <b>0.004 I<sub>b</sub></b>                         |
| <b>Reference Voltage U<sub>n</sub></b>             | <b>120, 220, 230, 240 V</b>                        |
| <b>Voltage Range</b>                               | <b>0.8 U<sub>n</sub> &gt; 1.15 U<sub>n</sub></b>   |
| <b>Reference Frequency</b>                         | <b>50, 60 Hz</b>                                   |
| <b>Meter Constant</b>                              | <b>1000 imp/kWh</b>                                |
| <b>Clock Accuracy (25°C)</b>                       | <b>≤ 6 ppm or ≤ ± 3 min/year</b>                   |
| <b>RTC Control</b>                                 | <b>32 kHz crystal</b>                              |
| <b>Operating Temp. Range</b>                       | <b>-25°C &gt; +60°C</b>                            |
| <b>Extended Temp. Range</b>                        | <b>-40°C &gt; +70°C</b>                            |
| <b>Storage Temperature</b>                         | <b>-40°C &gt; +85°C</b>                            |
| <b>Current Circuit Burden</b>                      | <b>&lt;25 mW / 25 mA</b>                           |
| <b>Voltage Circuit Burden</b>                      | <b>&lt;0.8 W / 10 VA</b>                           |
| <b>Dielectric Strength (burst test)</b>            | <b>4 kV, 50 Hz, 1 min</b>                          |
| <b>Impulse Voltage</b>                             | <b>6 kV, 1.2/50 μs</b>                             |
| <b>Short Circuit Current</b>                       | <b>30 I<sub>max</sub></b>                          |
| <b>EMC: High Frequency Disturbances</b>            | <b>6 kV (IEC 1000-4-4)</b>                         |
| <b>Optical Port</b>                                | <b>IEC62056-21 (IEC 61107)</b>                     |
| <b>Impulse Outputs:</b>                            |  |
| <b>S0</b>  | <b>t<sub>i</sub> = 40 ms (10, 20, 30...160 ms)</b> |
| <b>opto-MOS</b>                                    | <b>t<sub>i</sub> = 80 ms (10, 20, 30...160 ms)</b> |
| <b>Switching power</b>                             | <b>25 VA (100 mA, 250 V)</b>                       |
| <b>OPTOMOS VOLT FREE PULSE OUTPUT PROGRAMMABLE</b> |  |
| <b>Dimensions</b>                                  | <b>97 x 130 x 43 mm</b>                            |
| <b>Mass</b>  | <b>Approx 0.380 kg</b>                             |