

## Technical Information

<b>Power supply</b>	<ul style="list-style-type: none"> <li>Power supplied from the voltage circuit</li> <li>Nominal measurement voltage <math>\pm 20\%</math></li> <li>Maximum consumption: 1.5VA - 1W</li> <li>Nominal frequency: 50/60Hz</li> </ul>
<b>Voltage and frequency (Nominal values)</b>	230V 50/60Hz
<b>Current</b>	<ul style="list-style-type: none"> <li>Maximum value (<math>I_{max}</math>): 40A</li> <li>Reference value (<math>I_{ref}</math>) (<math>I_b</math>): 5A</li> <li>Transition value (<math>I_{tr}</math>): 500mA</li> <li>Minimum value (<math>I_{min}</math>): 250mA</li> <li>Starting value (<math>I_{st}</math>): 20mA</li> </ul>
<b>Accuracy</b>	<ul style="list-style-type: none"> <li>Active energy class 1 according to IEC/EN 62053-21 (NO MID)</li> <li>Active energy class B according to EN50470-3 (MID)</li> <li>Reactive energy class 2 according to IEC/EN 62053-23</li> </ul>
<b>SO output</b>	<ul style="list-style-type: none"> <li>Passive optoisolated</li> <li>Maximum values: <math>27V_{cc} - 27mA</math></li> <li>Meter's constant: 1,000 pulses/kWh<sup>(*)</sup></li> <li>Pulse length: <math>100 \pm 0.5ms</math></li> </ul>
<b>Metrological LED</b>	<ul style="list-style-type: none"> <li>Meter constant: 5,000 pulse/kWh</li> <li>Pulse length: <math>4 \pm 0.1ms</math></li> </ul>
<b>Working conditions</b>	<ul style="list-style-type: none"> <li>Operative: <math>-25^{\circ}C \div +55^{\circ}C</math></li> <li>Warehousing: <math>-40^{\circ}C \div +75^{\circ}C</math></li> <li>Relative humidity: 80% maximum without condensation</li> </ul>
<b>Sealing</b>	IP51 frontal - IP20 terminals
<b>Dimensions</b>	90 x 64 x 18mm



### 40A monophasic, two wires energy meter.

The **EC1-40** is a one DIN module energy meter for energy measurement in industrial and civilian applications, available with MID certification and suitable for billing.

In addition to energy, meter measures the most important electrical parameters and makes them available on display and if available also on the onboard COM port.

The COM port allows meter's management if connected to a remote station and data are transmitted on the RS485 or M-Bus line depending on the instrument model.

Meter is built according EN 50470-1 standard. Active energy is compliant to IEC/EN 62053-21 class B. MID device fulfill active energy EN 50470-3 class B requirements. Accuracy of reactive energy is compliant to EN 62053-23 class 2.

Wide backlighted LCD display with clear graphic symbols comprehensible at a glance.

Metrological LED on front panel and sealable terminal covers.

The analysis of the MTBF values, the accurate selection of components and the reduction of the internal working temperatures together with strict production and control standards guarantee a product with an excellent quality and a long lasting reliability.

## Applications

- Totalization of the electric energy in the industry for each single line or machine.
- Measurement of energy generated by renewable sources such as solar, eolic, etc..
- Accounting and billing of consumptions in camp sites, malls, residential areas, naval ports, etc.
- Totalization of the electric consumption in hotels, congress centers, exhibition fairs.
- Accounting of the consumptions in buildings with executive office services.
- Internal allocation of the consumptions in timeshare civilian and industrial buildings.
- Realization of energy monitoring systems.
- Remote survey of the consumptions and compute of the costs.

## Benefits

- Up to 7 instantaneous measurements, complete set of energy counters with partial counters. Moreover partial counters can be started, stopped or reset.
- Remote management using a committed software according to device model (RS485 Modbus, M-Bus).
- Available in MID version according to swiss market (MID S): device doesn't shows reactive energy on display.

<sup>(\*)</sup> unit of measurement (pulses/kWh, pulses/kvarh, pulses/kVAh) changes according to energy meter linked (kWh, kvarh, kVAh)

The features shown may be subject to change without notice.

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