

# CVM-C10

## Power analyzer for panel



### Description

The **CVM-C10** is a panel mounted (96 x 96 mm) power analyzer that records energy values. Compact and versatile, with 4-quadrant measurement (consumption and generation). Suitable for Medium or Low voltage installations, in both 3 or 4-wire three-phase circuits, two-phase circuits with or without neutral, single-phase circuits or ARON connections.

Display features and interface:

- Backlit touch-screen (capacitive)
- Analogue display of instantaneous parameters (power, maximum power reached and  $\cos \varphi$  or PF)
- Backlit display
- Alarm LED indicator.
- Tariff cost
- Operating hour indicator for preventive maintenance

### Applications

- Record the energy consumption from three different sources: network, generator set or photovoltaic energy generation system.
- Generation of an impulse signal associated with the cost, kgCO<sub>2</sub> emissions or savings, according to the consumption or generation of energy.
- Selection of tariffs with digital inputs. Perfect to calculate costs in three different work shifts.
- Programs alarms on any instantaneous parameter measured or calculated. Configurable parameters: Low/High, hysteresis (%), NO/NC, connection/disconnection delay and interlocking.

### Technical features

<b>Power circuit</b>	Power supply voltage	85...265 Vac / 95...300 Vdc 20...120 Vdc (SDC model)
<b>Measurement circuit</b>	Voltage	300 V ac Ph-N / 520 V ac Ph-Ph
	Frequency	50...60 Hz
	Current	<b>ITF</b> ... /5 A or .../1 A <b>MC</b> .../250 mA .../333 mV
<b>Accuracy class</b>	Sampling	64 samples/cycle
	V, A, Power	0,5%
	Active Energy	Class 0,5S ( $\geq 0,1 I_n$ ) acc. to <b>IEC 62053-22</b>
<b>Display of harmonics, up to the</b>	Reactive Energy	<b>Class 1</b> ( $\geq 0,1 I_n$ ) acc. to <b>IEC 62053-24</b>
	V, A	31 <sup>st</sup>
<b>Communications</b>	Protocol	Modbus RTU / BACnet (RS-485)
	Speed	9600, 19200
<b>Outputs</b>	Bit, parity, stop	8, n, 1
	2 digital outputs	S0 Interface Configurable, up to 1000 impulses 2 NPN Transistors (Only in version 3 TS) (24 Vdc max, 50 mA, 16 imp/s, Max $T_{on}/T_{off}$ configurable)
	2 relay outputs	Max. / Min / NO/NC / Hysteresis / Interlocking 250 Vac, 6 A
<b>Inputs</b>	2 digital inputs	Tariff selection or external alarms NPN, optocoupled
<b>Build features</b>	Enclosure	VO self-extinguishing plastic
	Protection Degree	Front panel: IP 51 (IP 64 with accessory) Rear: IP 21
	Dimensions	96.7 x 96.7 x 63.4 mm
<b>Environmental conditions</b>	Operating temperature	-5...+45 °C
	Relative humidity	5 ... 95%
	Maximum altitude	2000 m
<b>Safety</b>	CAT III 300 V according to <b>EN 61010</b> Double-insulated electric shock protection, Class II	
<b>Standards</b>	<b>BS EN 61000-6-4, BS EN-61000-6-2, IEC 61000-6-2, IEC 62053-22 (Class 0,5S), IEC 62053-24 (Class 1), IEC 61000, IEC 61000-4-3, IEC 610004-11, IEC 61000-4-4, IEC 610004-5.</b> Measurement according to <b>MID, UL</b> certification	

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### Other features:

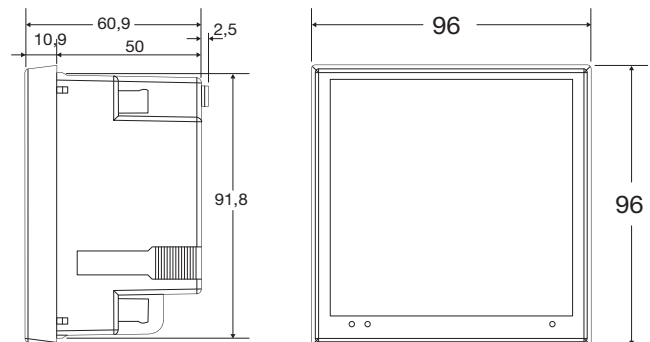
- Modbus RS-485 serial communications
- 2 transistor outputs, configurable for impulses or alarms
- 2 relay outputs, configurable for alarms
- 2 digital inputs for selecting three tariffs or detecting logical states
- Allows for tariff selection through communications
- Precision class 0.5% in voltage, current and power.
- Class 0,5S in active energy and Class 1 in reactive energy.

### References

Transistor output	Current measurement channels	Current input	Type	Code
2	3	.../5 or .../1 A	CVM-C10-ITF-485-ICT2	M55911
2	3	.../250 mA	CVM-C10-MC-485-ICT2	M55921
-	4	.../5 or .../1 A	CVM-C10-ITF-IN-485-IC2	M55942
2	2	.../333 mV	CVM-C10-mV-485-ICT2	M559210000V
2	3	.../5 or .../1 A	CVM-C10-SDC-ITF-485-ICT2*	M5591100F0000
IP 64 sealing joint			IP64-C10-96	M5ZZ5T

\* Power Supply 20...120 Vdc

### Dimensions



### Connections

Three-phase + neutral connection  
with or without voltage transformers

Single-phase connection  
with or without voltage transformers

