



# CirCAMP-4DP

# CirCAMP-2IP



## Multi-function multiple meter with PLC communications

### Description

**CirCAMP-4DP** is a compact meter with PLC communications that can be configured to read and manage up to 4 single-phase supplies independently, or one direct three-phase supply. Likewise, **CirCAMP-2IP** can be configured to manage up to 2 indirect three-phase supplies (.../5A), all in a single enclosure.

**CirCAMP** meters can work in Pre-payment or Post-payment mode, adapting to each type of use. Having cut-off systems for each channel enables the units to disconnect the supply each time the user consumes all the credits they had previously programmed, or manually disconnect when the user leaves the facility.

**CirCAMP** meters have 4 (4DP) or 2 (2IP) impulse-metering inputs for measuring water or other supplies and 4 relay outputs to operate electrovalves (and other control elements) and to cut off the supply independently. All models have PLC communications for readouts and management, enabling a simple installation that does not require communication wiring and that adapts completely to the existing installation.

### Applications

**CirCAMP** is designed to be installed in installations that need to control energy consumption, such as:

- Campsites
- Marinas
- Student residences
- Hotels
- Sports Centres

### Technical features

<b>Power supply circuit</b>	Mode	Self-powered CH2 (terminal 4)-N
	Rated voltage	230 Vac $\pm 20\%$
	Frequency	50 Hz
	Maximum consumption	< 25 VA
<b>Voltage measuring circuit</b>	Connection	4 single-phase elements with shared neutral or 1 three-phase element
	Reference voltage	230 Vac
<b>Current measuring circuit</b>	Nominal current $I_n$	5 A
	Maximum current $I_{max}$	32 A
	Start-up current	$\leq 25$ mA
	Self-consumption of the circuit	0.56 VA @ 5 A
<b>Accuracy</b>	Active energy	Class 1 (IEC 62053-21) According to Class B (EN 50470)
<b>Impulse inputs</b>	Number of inputs	4
	Type	Self-powered at +5 V ( $V_{max} = 5.1$ , $I_{max} = 8.5$ mA)
	Operation	Calculating other supplies: Water, gas, etc.
	Input impedance	800 $\Omega$
	Impulse width	$T_{on} \geq 30$ ms, $T_{off} \geq 30$ ms
	Installation category	CAT III 300 V
<b>Relay outputs</b>	Number of outputs	4
	Maximum voltage, open contacts	230 Vac
	Maximum current $I_{max}$	3 A
	Maximum switching power	720 VA (AC1)
	Electrical working life (at full load)	$1 \times 10^5$ cycles
	Mechanical working life	$2 \times 10^7$ cycles
	Installation category	CAT III 300 V
<b>Circuit breaker</b>	Maximum current	32 A
	Number of guaranteed operations $I = 20$ A, $\cos \phi = 1$	10,000 operations
	<b>Clock</b>	
	Source	Quartz crystal oscillator
	Drift	< 0.5 seconds/day at 25°C
	Supercap	24 hours of autonomy, after 1 hour of charging

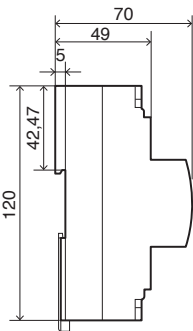
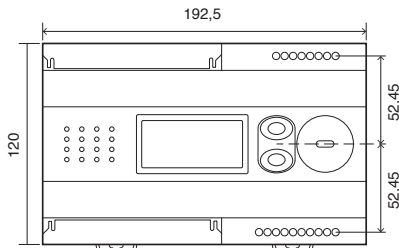
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## Multi-function multiple meter with PLC communications

### Technical features

#### Dimensions



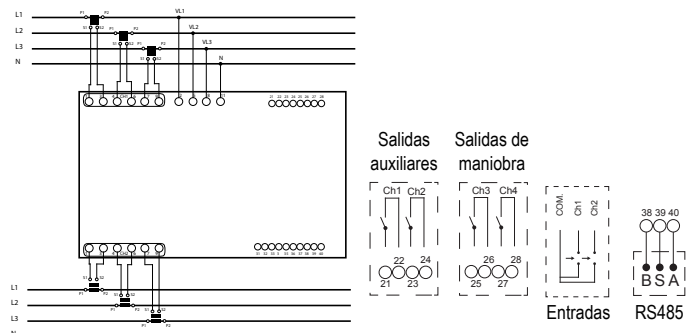
<b>Communications</b>	Port	Optical	RS-485
	Hardware	<b>EN 62056-21</b>	RS-485
	Communications protocol	DLMS	DLMS
	Speed	9600	9600
	Data bits	8	8
	Stop bits	1	1
	Parity	No parity	No parity
<b>PLC communications</b>	Installation category	-	CAT III 300 V
	Communications protocol	Encapsulated DLMS	
	Modulation	OFDM	
<b>User interface</b>	Consumption	1.2 W; 12 VA	
	Display	LCD	
	Keypad	2 silicone keys	
	LED (Status)	13 indicator LEDs	
<b>Environmental features</b>	Energy impulses LED	4 active energy: 10,000 imp/kWh	
	Operating temperature	-25 to +55°C	
	Storage temperature	-35 to +80°C	
	Relative humidity (without condensation)	5 to 95%	
	Maximum altitude	2,000 m	
<b>Build features</b>	Protection degree	IP 51 Front panel / IP 40 Terminals	
	Dimensions	192.5 x 215 x 70 mm XX DIN rail modules	
<b>Standards</b>	Weight	0.9 kg	
	Enclosure	EN 50022	
		According to: 2004/22/EC Directive, EN 50470-1, EN 50470-3, EN 62053-21.	

### References

Type	Code	No. of metering channels	Voltage measure range	Current measure range	Communications	Inputs/Outputs	Work mode
CirCAMP-4DP	QM4000	4 single-phase 1 three-phase	230 V <sub>p-n</sub>	32 A	PLC	4 / 4	Post-pay/ Prepay
CirCAMP-2IP	QM4001	2 indirect three-phase	3x127/220V... 3x230/400V	... /1.../5A	PLC	2 / 4	Post-pay/ Prepay

### Connections

#### CirCAMP-2IP



#### CirCAMP-4DP

