



CVM-C11-MC-IN-485-ICT2, Power analyzer 96 x 96

Code: M58581.

> Protocol: Modbus/RTU | BACnet

> Communications: RS-485

> Transistor output: 2

> N° relays: 2

> Digital inputs: 2

> Measuring Channels: 4

> Harmonics: 31

> Power supply: 100...270 Vac/dc

> Input current.../250 mA

> Mounting: Pannel > Modules: 96 x 96

Description

The CVM-C11 is a power analyzer for a panel (96 x 96 mm) with power logging. Ideal for analyzing electrical and consumption quality variables, such as THD% for voltage and current, as well as individual harmonics for each phase up to the 31st. The inclusion of neutral current measurement lets users detect any imbalance, as well as detect overloads in the neutral conductor. Compact and versatile with measurements in 4 quadrants (consumption and generation), suitable for medium- and low-voltage installations. Display and interface characteristics:

- O User-defined parameter display.
- Backlit screen
- o On-screen graphic display of instantaneous active power
- o On-screen graphic display of all quadrants (Q1, Q2, Q3, Q4).
- \circ On-screen numerical indication of the value of $\cos \phi$ or PF.
- \circ On-screen indication of the status of outputs, inputs and/or active tariff.
- LED alarm indicator
- O Costs, kg of CO₂ emitted and operating time per tariff

Application

- o Discrimination of power consumption into three tariffs. Ideal for determining consumption during three different work shifts or from three different energy sources (grid, generator and photovoltaic generation), using the digital inputs.
- Generation of an impulse signal related to cost, kg of CO₂ emitted or proportional to energy consumption or generation.
- o Alarm control (2 relay outputs + 2 digital outputs) for any instantaneous parameter, whether measured or calculated. Adjustable based on maximum/minimum value, hysteresis (%), NO/NC, connection/disconnection delay and interlocks.







Power analyzer for panel

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Specifications

Installation category	CAT III 300 V					
Consumption	2,5 5,5 VA					
Frequency	50 60 Hz					
Nominal voltage	100 270 V ~ ± 10%					
Nonlina Voltage	100 270 V ~ ± 1076					
DC power supply						
Installation category	CAT III 300 V					
Nominal voltage	100 270 Vdc ± 10%					
Mechanical characteristics						
Size (mm) width x height x depth	96 x 96 x 67.2 (mm)					
Envelope	Self-extinguishing V0 plastic					
Fastening	Panel					
Weight (kg)	0,319					
Environmental characteristics						
Protection class	IP 54 (Front), IK 08					
Relative humidity (without condensation)	5 95%					
Storage temperature	-25+75 °C					
Working temperature	-25+70 °C					
Standards						
Certifications	UL 94					
Electrical safety, Maximum height (m)	2000					
Electrical safety, Installation category	CAT III 300 V					
Electrical safety, Contamination level/class	Pollution resistance 2					
Standards	EN IEC 61326-1, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-8, EN 61000-4-11, EN 61010-2-030, EN IEC 61557-12, E 61010-1, UNE-EN 60068-2-2, UNE-EN 60068-2-1, UNE-EN 60068-2-78, UL 94					
Current measurement circuit						
Installation category	CAT III 300 V					
Nominal current (In)	/250 mA					
Minimum current measurement	1 mA					
/oltage measurement circuit						
Installation category	CAT III 300 V					
Input impedance	> 1.7 MΩ					







Power analyzer for panel

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Frequency measuring range		
Minimum measurement voltage (Vstart) 10 V Maximum value 300 VF-N /520 VF-F User interface LED 2 LED Keyboard 3 keys Display type LCD Custom CDG Digital inputs Input/output insulation 2000 V Quantity 2 Type NPN Digital relay outputs Electrical life (at maximum load) 60x10² cycles Maximum switching capacity 625 VA / 75 W (ACI) Digital transistor outputs Pulse width 30 ms a 400 ms (Programmable) Quantity 2 Type NPN Maximum requency 16 imp / s Maximum requency 16 imp / s Maximum current 50 mA Maximum current 50 mA Maximum voltage 24 Vdc Measurement accuracy Phase current measurement (KW) 0.5% ± 1 digit, without/sin MC Reactive power measurement (KW) 0.5% ± 1 digit, without/sin MC Phase voltage measurement (KW) Phase voltage measurement (KW) Phase voltage measurement (CV) Protocol ModBus RTU[BACnet	Frequency measuring range	45 65 Hz
Maximum value 300 VF-N /520 VF-F User interface LED 2 LED Keyboard 3 keys Display type LCD Custom COG Digital inputs Input/output insulation 2000 V Quantity 2 Type NPN Digital relay outputs Electrical life (at maximum load) 60x10² cycles Mechanical life 10x10² cycles Maximum switching capacity 625 VA / 75 W (AC1) Digital transistor outputs Pulse width 30 ms a 400 ms (Programmable) Quantity 2 Type NPN Maximum frequency 16 imp / s Maximum outrent 50 mA Maximum voltage 24 Vdc Measurement accuracy Phase current measurement (kwr) 0.2% (10 120% In), without/sin MC Active power measurement (kWr) 0.5% ± 1 digit, without/sin MC Phase voltage measurement 0.2% (5 120% Vn) Serial communication Protocol ModBus RTU[BACnet	Nominal voltage	230V Ph-N, 380V Ph-Ph
LED 2.LED Keyboard 3 keys Display type LCD Custom COG Digital inputs Input/output insulation 2000 V Quantity 2 Type NPN Digital relay outputs Electrical life (at maximum load) 60x10² cycles Maximum switching capacity 625 VA / 75 W (AC1) Digital transistor outputs Pulse width 30 ms a 400 ms (Programmable) Quantity 2 Type NPN Maximum frequency 16 imp / 5 Maximum current 50 mA Maximum voltage 24 Vdc Measurement accuracy Phase current measurement (kvar) 196 ± 1 digit, without/sin MC Reactive power measurement (kwr) 0.2% € 1.120% Vn) Serial communication Protocol ModBus RTU BACnet	Minimum measurement voltage (Vstart)	10 V ~
LED 2 LED Keyboard 3 keys Display type LCD Custom COG Digital inputs Input/output insulation 2000 V Quantity 2 Type NPN Digital relay outputs Electrical life (at maximum load) 60x10² cycles Mechanical life 10x10² cycles Maximum switching capacity 625 VA / 75 W (ACT) Digital transistor outputs Pulse width 30 ms a 400 ms (Programmable) Quantity 2 Type NPN Maximum frequency 16 imp / s Maximum current 50 mA Maximum voltage 24 Vdc Measurement accuracy Phase current measurement (kvar) 19½ ± 1 digit, without/sin MC Active power measurement (kW) 0.5% ± 1 digit, without/sin MC Phase voltage measurement 0.2% (5 120% Vn) Serial communication Protocol ModBus RTU BACnet	Maximum value	300 VF-N /520 VF-F
Keyboard 3 keys Display type LCD Custom COG Digital inputs Input/output insulation 2000 V Quantity 2 Type NPN Digital relay outputs Electrical life (at maximum load) 60x10° cycles Mechanical life 10x10° cycles Maximum switching capacity 625 VA / 75 W (AC1) Digital transistor outputs Pulse width 30 ms a 400 ms (Programmable) Quantity 2 Type NPN Maximum frequency 16 imp / s Maximum current 50 mA Maximum voltage 24 Vdc Measurement accuracy Phase current measurement (kvar) 1% ± 1 digit, without/sin MC Active power measurement (kvar) 0.5% ± 1 digit, without/sin MC Active power measurement (kW) 0.5% ± 1 digit, without/sin MC Phase voltage measurement 0.2% (5 120% Vn) Serial communication	User interface	
Display type CCD Custom COG	LED	2 LED
Digital inputs Input/output insulation Quantity 2000 V Quantity 27ye NPN Digital relay outputs Electrical life (at maximum load) Mechanical life 10x10° cycles Maximum switching capacity 625 VA / 75 W (AC1) Digital transistor outputs Pulse width 30 ms a 400 ms (Programmable) Quantity 2 Type NPN Maximum frequency 16 imp / s Maximum current 50 mA Maximum current 50 mA Maximum outrent 50 mA Maximum voltage Measurement accuracy Phase current measurement (kvar) Active power measurement (kvar) Phase voltage measurement (kW) 0.5% ± 1 digit, without/sin MC Phase voltage measurement 0.2% (10 120% Vn) Serial communication	Keyboard	3 keys
Input/output insulation 2000 V Quantity 2 Type NPN Digital relay outputs Electrical life (at maximum load) 60x10° cycles Mechanical life 10x10° cycles Maximum switching capacity 625 VA / 75 W (ACI) Digital transistor outputs Pulse width 30 ms a 400 ms (Programmable) Quantity 2 Type NPN Maximum frequency 16 imp / s Maximum current 50 mA Maximum voltage 24 Vdc Measurement accuracy Phase current measurement (kvar) 1% ± 1 digit, without/sin MC Reactive power measurement (kW) 0.5% ± 1 digit, without/sin MC Phase voltage measurement 0.2% (5120% Vn) Serial communication Protocol ModBus RTU BACnet	Display type	LCD Custom COG
Quantity 2 Type NPN Digital relay outputs Electrical life (at maximum load) 60x10³ cycles Mechanical life 10x10° cycles Maximum switching capacity 625 VA / 75 W (AC1) Digital transistor outputs Pulse width 30 ms a 400 ms (Programmable) Quantity 2 Type NPN Maximum frequency 16 imp / s Maximum current 50 mA Maximum voltage 24 Vdc Measurement accuracy Phase current measurement (kwr) 0.5% ± 1 digit, without/sin MC Reactive power measurement (kW) 0.5% ± 1 digit, without/sin MC Active power measurement (kW) 0.5% ± 1 digit, without/sin MC Phase voltage measurement (kW) 0.5% ± 1 digit, without/sin MC Measurement accuracy Phase voltage measurement (kW) 0.5% ± 1 digit, without/sin MC Measurement accuracy No	Digital inputs	
Type NPN Electrical life (at maximum load) 60x10³ cycles Mechanical life 10x10⁴ cycles Maximum switching capacity 625 VA / 75 W (AC1) Digital transistor outputs Pulse width 30 ms a 400 ms (Programmable) Quantity 2 Type NPN Maximum requency 16 imp / s Maximum current 50 mA Maximum voltage 24 Vdc Measurement accuracy Phase current measurement (kvar) 1% ± 1 digit, without / sin MC Reactive power measurement (kW) 0.5% ± 1 digit, without / sin MC Active power measurement (kW) 0.5% ± 1 digit, without / sin MC Phase voltage measurement (V) Serial communication Protocol ModBus RTU BACnet	Input/output insulation	2000 V
Digital relay outputs Electrical life (at maximum load) 60x10³ cycles Mechanical life 10x106° cycles Maximum switching capacity 625 VA / 75 W (AC1) Digital transistor outputs Pulse width 30 ms a 400 ms (Programmable) Quantity 2 Type NPN Maximum frequency 16 imp / s Maximum current 50 mA Maximum voltage 24 Vdc Measurement accuracy Phase current measurement (kvar) 1% ± 1 digit, without/sin MC Reactive power measurement (kW) 0.5% ± 1 digit, without/sin MC Phase voltage measurement 0.2% (5 120% Vn) Serial communication Protocol ModBus RTU BACnet	Quantity	2
Electrical life (at maximum load) Mechanical life 10x10° cycles Maximum switching capacity 625 VA / 75 W (AC1) Digital transistor outputs Pulse width 30 ms a 400 ms (Programmable) Quantity 2 Type NPN Maximum frequency 16 imp / s Maximum current 50 mA Maximum voltage 24 Vdc Measurement accuracy Phase current measurement 0.2% (10 120% In), without/sin MC Reactive power measurement (kwr) Active power measurement 0.2% (5 120% Vn) Serial communication Protocol ModBus RTU BACnet	Туре	NPN
Mechanical life 10x10 ⁵ cycles Maximum switching capacity 625 VA / 75 W (ACI) Digital transistor outputs Pulse width 30 ms a 400 ms (Programmable) Quantity 2 Type NPN Maximum frequency 16 imp / s Maximum current 50 mA Maximum voltage 24 Vdc Measurement accuracy Phase current measurement (kvar) 19 ± 1 digit, without/sin MC Reactive power measurement (kW) 0.5% ± 1 digit, without/sin MC Active power measurement 0.2% (5 120% Vn) Serial communication Protocol ModBus RTU BACnet	Digital relay outputs	
Digital transistor outputs Pulse width 30 ms a 400 ms (Programmable) Quantity 2 Type NPN Maximum frequency 16 imp / s Maximum current 50 mA Maximum voltage 24 Vdc Measurement accuracy Phase current measurement (kvar) 1% ± 1 digit, without/sin MC Active power measurement (kW) 0.5% ± 1 digit, without/sin MC Phase voltage measurement 0.2% (5 120% Vn) Serial communication Protocol ModBus RTU BACnet	Electrical life (at maximum load)	60x10 ³ cycles
Maximum switching capacity 625 VA / 75 W (AC1) Digital transistor outputs Pulse width 30 ms a 400 ms (Programmable) Quantity 2 Type NPN Maximum frequency 16 imp / s Maximum current 50 mA Maximum voltage 24 Vdc Measurement accuracy Phase current measurement 0.2% (10 120% In), without/sin MC Reactive power measurement (kvar) 1% ± 1 digit, without/sin MC Active power measurement (kW) 0.5% ± 1 digit, without/sin MC Phase voltage measurement 0.2% (5 120% Vn) Serial communication Protocol ModBus RTU[BACnet	Mechanical life	10x10 ⁶ cycles
Pulse width 30 ms a 400 ms (Programmable) Quantity 2 Type NPN Maximum frequency 16 imp / s Maximum current 50 mA Maximum voltage 24 Vdc Measurement accuracy Phase current measurement (kvar) 1% ± 1 digit, without/sin MC Active power measurement (kW) 0.5% ± 1 digit, without/sin MC Phase voltage measurement 0.2% (5 120% Vn) Serial communication Protocol ModBus RTU BACnet	Maximum switching capacity	
Quantity 2 Type NPN Maximum frequency 16 imp / s Maximum current 50 mA Maximum voltage 24 Vdc Measurement accuracy Phase current measurement 0.2% (10 120% In), without/sin MC Reactive power measurement (kvar) 1% ± 1 digit, without/sin MC Active power measurement (kW) 0.5% ± 1 digit, without/sin MC Phase voltage measurement 0.2% (5 120% Vn) Serial communication Protocol ModBus RTU BACnet	Digital transistor outputs	
Type NPN Maximum frequency 16 imp / s Maximum current 50 mA Maximum voltage 24 Vdc Measurement accuracy Phase current measurement 0.2% (10 120% In), without/sin MC Reactive power measurement (kvar) 1% ± 1 digit, without/sin MC Active power measurement (kW) 0.5% ± 1 digit, without/sin MC Phase voltage measurement 0.2% (5 120% Vn) Serial communication Protocol ModBus RTU BACnet	Pulse width	30 ms a 400 ms (Programmable)
Maximum frequency Maximum current 50 mA Maximum voltage 24 Vdc Measurement accuracy Phase current measurement Reactive power measurement (kvar) Active power measurement 0.2% (10 120% In), without/sin MC 1% ± 1 digit, without/sin MC Active power measurement (kW) 0.5% ± 1 digit, without/sin MC Phase voltage measurement 0.2% (5 120% Vn) Serial communication Protocol ModBus RTU BACnet	Quantity	2
Maximum current 50 mA Maximum voltage 24 Vdc Measurement accuracy Phase current measurement 0.2% (10 120% In), without/sin MC Reactive power measurement (kvar) 1% ± 1 digit, without/sin MC Active power measurement (kW) 0.5% ± 1 digit, without/sin MC Phase voltage measurement 0.2% (5 120% Vn) Serial communication Protocol ModBus RTU BACnet	Туре	NPN
Measurement accuracy Phase current measurement 0.2% (10 120% In), without/sin MC Reactive power measurement (kvar) 1% ± 1 digit, without/sin MC Active power measurement (kW) 0.5% ± 1 digit, without/sin MC Phase voltage measurement 0.2% (5 120% Vn) Serial communication Protocol ModBus RTU BACnet	Maximum frequency	16 imp / s
Measurement accuracy Phase current measurement 0.2% (10 120% In), without/sin MC Reactive power measurement (kvar) 1% ± 1 digit, without/sin MC Active power measurement (kW) 0.5% ± 1 digit, without/sin MC Phase voltage measurement 0.2% (5 120% Vn) Serial communication Protocol ModBus RTU BACnet	Maximum current	50 mA
Phase current measurement Reactive power measurement (kvar) Active power measurement (kW) Phase voltage measurement 0.2% (10 120% In), without/sin MC 1% ± 1 digit, without/sin MC 0.5% ± 1 digit, without/sin MC Phase voltage measurement 0.2% (5 120% Vn) Serial communication Protocol ModBus RTU BACnet	Maximum voltage	24 Vdc
Reactive power measurement (kvar) Active power measurement (kW) Phase voltage measurement 0.2% (5 120% Vn) Serial communication Protocol ModBus RTU BACnet	Measurement accuracy	
Active power measurement (kW) Phase voltage measurement 0.2% (5 120% Vn) Serial communication Protocol ModBus RTU BACnet	Phase current measurement	0.2% (10 120% In), without/sin MC
Phase voltage measurement 0.2% (5 120% Vn) Serial communication Protocol ModBus RTU BACnet	Reactive power measurement (kvar)	$1\% \pm 1$ digit, without/sin MC
Serial communication Protocol ModBus RTU BACnet	Active power measurement (kW)	$0.5\% \pm 1$ digit, without/sin MC
Protocol ModBus RTU BACnet	Phase voltage measurement	0.2% (5 120% Vn)
	Serial communication	
Technology / Type RS-485	Protocol	ModBus RTU BACnet
55 51	Technology / Type	RS-485

CVM-C11

Power analyzer, panel mounted 96 x96







Power analyzer for panel

Code: M58581.

CODE	TYPE	Measuring Channels	Input current	Transistor output	N° relays	Digital inputs	Communications	Protocol	Harmonics	Power supply
M58531.	CVM-C11-ITF-IN-ETH-ICT2	4	/5 A /1 A	2	2	2	Ethernet	Modbus/TCP BACnet	31	100270 Vac/dc
M58541.	CVM-C11-ITF-IN-485-ICT2	4	/5 A /1 A	2	2	2	RS-485	Modbus/RTU BACnet	31	100270 Vac/dc
M58581.	CVM-C11-MC-IN-485-ICT2	4	/250 mA	2	2	2	RS-485	Modbus/RTU BACnet	31	100270 Vac/dc
M58561.	CVM-C11-FLEX-IN-485-ICT2	4	100 mV/kA	2	2	2	RS-485	Modbus/RTU BACnet	31	100270 Vac/dc
Kits										
M58562.	CVM-C11-FLEX+3 MFC-FLEX-80									
M58563.	CVM-C11-FLEX+3 MFC-FLEX-125									
M58564.	CVM-C11-FLEX+4 MFC-FLEX-80									
M58565.	CVM-C11-FLEX+4 MFC-FLEX-125									







Power analyzer for panel

Code: M58581.

Dimensions

Connections





