

CVM 144

Three-phase power analyzer(balanced and unbalanced) for panel mounting



Description

Three-phase power analyzer(balanced and unbalanced) for its assembly on 144 x 144 mm panels, measuring in 2 quadrants.

Other features include:

- Current measuring .../5 A
- Communication protocol: Modbus RTU, Modbus TCP, Johnson Controls
- Connections: RS-232, RS-485, Ethernet.
- Expandable input/output modules
- ITF Technology: galvanic insulation protection inputs inputs, depending on the type.
- Maximeter function (A / A III / kW III / kV·A III).
- Default page selection
- Varied measuring ranges (110, 520, 866 V ph-ph)
- Incorrect connection detection (LED flashing).

Application

- Applied to the control of switchboards and low and medium voltage connection points
- Alarm station, fully programmable variables controlled, maximum value, minimum value and delay
- Control of instantaneous values, maximum and minimum values of the electrical parameters metered
- Multiple-converter function with its analogue outputs 0/4..20 mA
- Leakage current and neutral metering function

Features

Power supply circuit	230 Vac (-15...+10%). For other values, see the coding table	
Consumption	5 V·A	
Frequency	45..0.65 Hz	
Metering circuit		
Nominal voltage	300 Vac (ph-n) / 520 Vac (ph-ph)	
Frequency	45..0.65 Hz	
Current consumption of the circuit	0.75 V·A	
Nominal current	... / 5 A	
Overload (permanent)	1.2 I_n	
Class/Accuracy		
Voltage	0.5 % ± 2 digits	
Current	0.5 % ± 2 digits	
Power ratings	1 % ± 2 digits	
Type of output	Relay	
Maximum switching voltage	250 Vac	
Maximum switching voltage	750 V·A	
Maximum switching current	3 A	
Mechanical working life	3 x 10 ⁷ operations	
Maximum impulse frequency	1 impulse / s	
Ambient conditions		
Operating temperature	-10 ... +50 °C	
Relative humidity (non-condensing)	5 ... 95%	
Build features		
Type of box	VO self-extinguishing plastic	
Degree of protection	Fitted unit (frontal)	IP 54
	Non-fitted unit (sides and rear cover)	IP 31
Dimensions	144 x 144 x 76 mm	
Weight	400 g	
Safety		
Designed for CAT III 300/520 Vac installations, in accordance with EN 61010		
Double-insulated electric shock protection, class II		
Standards		
IEC 664, VDE 0110, UL 94, IEC 348, IEC 571-1, EN 61000-6-3, EN 61000-6-1, EN 61010-1		

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References

Quadrants	Class (V,A)	Communications	Protocol	Digital outputs	Analogue outputs	Digital inputs	Analogue inputs	Harmonics	Current leakages / neutral	Type	Code
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EXPANDABLE EQUIPMENT

2	0,5	-	-	-	-	-	-	-	-	CVM 144	M50600
2	0,5	-	-	-	-	-	-	-	-	CVM 144-ITF	M50700
2	0,5	-	-	-	-	-	-	U/I (31°)	-	CVM 144-ITF-HAR	M50A60
2	0,5	Ethernet	Modbus / TCP	-	-	-	-	-	-	CVM 144-ITF-Ethernet-TCP	M50790
2	0,5	RS-485	Profibus DP	-	-	-	-	-	-	CVM 144-ITF-Profibus	M50730
2	0,5	RS-485	Johnson Controls	-	-	-	-	-	-	CVM 144-ITF-Johnson Controls	M50C10

EXCHANGEABLE MODULES (for expandable equipment)

-	-	-	-	2	-	-	-	-	Yes	CVM 144-C2-Currents Module	M51001
-	-	RS-485	Modbus / RTU	2	-	-	-	-	-	CVM 144-RS485-C2 Module	M51010
-	-	RS-485	Modbus / RTU	2	-	-	-	-	Yes	CVM 144-RS485-C2-Currents Module	M51011
-	-	RS-485	Modbus / RTU	2	-	4	-	-	-	CVM 144-RS485-C2-Digital Module	M51016
-	-	RS-232	Modbus / RTU	2	-	-	-	-	-	CVM 144-RS232-C2 Module	M51020

COMPLETE EQUIPMENT

2	0,5	RS-485	Modbus / RTU	2	-	-	-	-	-	CVM 144-ITF-RS485-C2	M50710
2	0,5	RS-485	Modbus / RTU	2	4	-	-	-	-	CVM 144-ITF-RS485-C2-A40	M50A14
2	0,5	RS-485	Modbus / RTU	2	2	-	2	-	-	CVM 144-ITF-RS485-C2-A2I/2O	M50A18
2	0,5	Ethernet	Modbus / TCP	2	2	-	2	-	-	CVM 144-ITF-Ethernet-C2-A2I/2O-TCP	M50A98
2	0,5	Ethernet	Modbus / TCP	2	-	-	-	-	Yes	CVM 144-ITF-Ethernet-C2-currents-TCP	M50791
2	0,5	RS-485	Profibus DP	2	2	-	2	-	-	CVM 144-ITF-Profibus-C2-A2I/2O	M50A38
2	0,5	RS-485	Profibus DP	2	-	-	-	-	Yes	CVM 144-ITF-Profibus-C2-Currents	M50741
2	0,5	RS-485	Johnson Controls	2	-	-	-	-	Yes	CVM 144-ITF-Johnson Controls-C2-currents	M50C11

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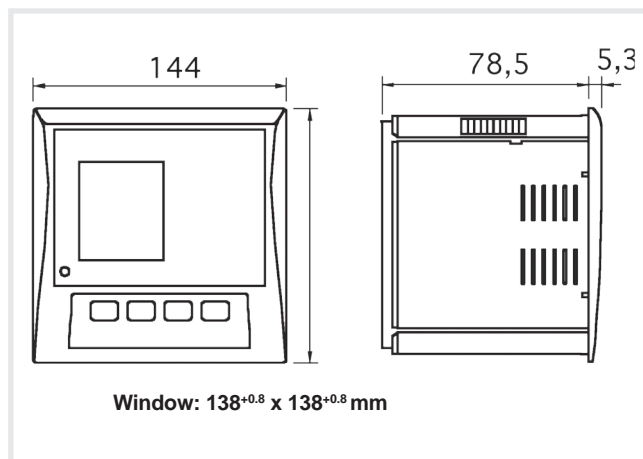
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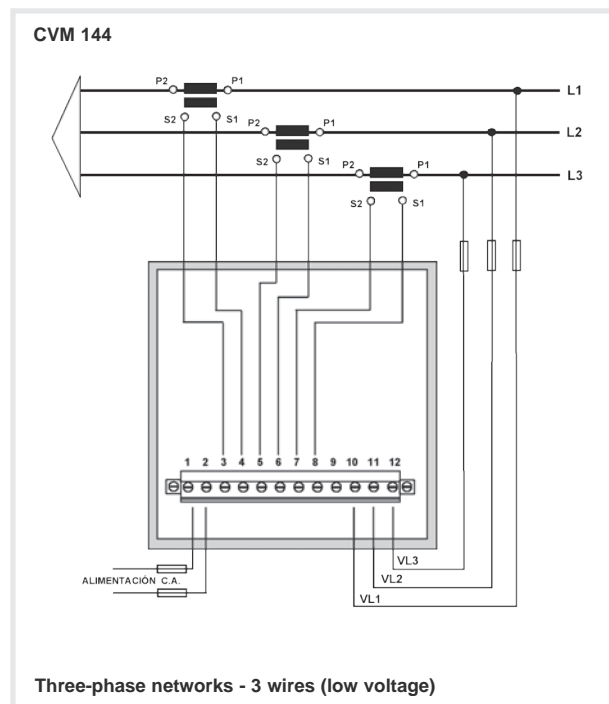
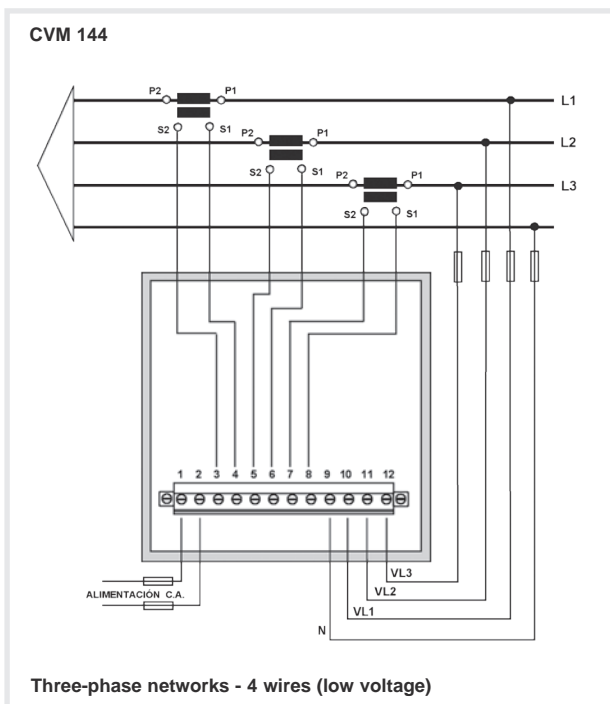
Coding table

M	5	X	X	X	X	0	0	X	X	X
Code						Internal Code				
Power Supply Voltage (PSV)	Standard (230 V ac)					0				
	110 V ac					1				
	400 V ac					3				
	480 V ac					4				
	24..0.120 V dc					5				
Voltage metered (VM)	Standard (300 V _{ph-n} / 520 V _{ph-ph})					0				
	63.5 V _{ph-n} / 110 V _{ph-ph}					1				
	500 V _{ph-n} / 866 V _{ph-ph}					3				
Current input (CI)	Standard (.../ 5 A)					0				
	.../ 1 A (Only ITF)					1				

Dimensions



Connections



See the user manual for other types of connections