

RECmax-CVM C4-20

RECmax-CVM C4-20, Self-reclosing residual current relay with power analyzer functions, 4-pole C-curve

Code: P2B223.

> Poles: 4
> In (A): 20 A
> Breaking element: built-in
> Curve: C

Description

Self-resettable cut-off device with ultra-immunised circuit breaker and residual current protection and built-in power analyzer. Programmable unit with display, which measures leakage currents (residual current protection) and orders the disconnection or reclosing of the circuit breaker (circuit breaker protection) using an engine that regulates it mechanically. The measurement of leakage currents, $I_{\Delta n}$, requires an external residual current transformer of the **WGC** type, which comes in the kit. It also has a built-in power analyzer that enables monitoring of up to 19 electrical parameters using the display or the built-in communications, with voltage measurement built into the unit and current measurement through the use of an external **MC1** (for 2 poles) or **MC3** (for 4 poles) current transformer, which comes in the kit.
This system is commonly used in single-phase and three-phase electrical installations that require a highly continuous electric supply. It has inputs/outputs that allow users to have information about and control of the status of the electrical installation where it is working. LED display and backlit (LCD) display:

- Overcurrent and residual current protection and reclosing
- Trip current intensity of the protection.
- Number of reclosings
- Protection status messages.
- Measurement of electrical values (voltage, current, active power, cos φ) (other values via communications).

Application

The **RECmaxCVM** kit ensures circuit breaker and residual current protection with automatic reclosing by default after a differential relay, overload or short-circuit trip. It also measures the electrical parameters of the circuit it protects. It is a very suitable solution for infrastructures located in areas that make it difficult to control and monitor. It can be installed in the electric panels of:

- Telephone systems
- TDT systems
- Information systems, UPS systems



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Residual current circuit breaker with automatic reclosing and measurement

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Specifications

AC power supply

Installation category	CAT III 300 V
Consumption	7 VA
Frequency	50 / 60 Hz.
Nominal voltage	230V ~ ± 20% (L1-N)

Mechanical characteristics

Size (mm) width x height x depth	133 x 111.5 x 82 (mm)
Envelope	Plastic V0
Fastening	DIN rail
Weight (kg)	0,5

Environmental characteristics

Protection class	IP 20
Relative humidity (without condensation)	5 ... 95 %
Storage temperature	-30 ... +70 °C
Working temperature	-10 ... +55 °C

Electrical characteristics

Earthing system	TT - TN

Current measurement circuit

Installation category	CAT III 300 V~
Nominal current (In)	... / 250 mA
Phase current measuring range	1 ... 100 % In
Minimum current measurement	0,2 % In

Voltage measurement circuit

Installation category	CAT III 600 V
Input impedance	400 kΩ
Frequency measuring range	50/60 Hz
Voltage measuring range	50/60 Hz
Nominal voltage	230 V ~ ±20 %

Standards

Electrical safety, Maximum height (m)	2000
Standards	IEC TR 60755, IEC 60898-1, DIN EN 50022, IEC 60947-2-M, IEC 61010-1-3ª Ed., IEC 61000-6-4, IEC 62053-21, IEC 62053-23, IEC 61557-12



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User interface

LED	2 LED
Keyboard	3 keys
Display type	LCD

Measurement accuracy

Phase current measurement	5 % (for IN > 10% F.E.), value calculated from the vector sum measured in the phase currents.
Neutral current measurement	5 % (for IN > 10% F.E.), calculated value of the vector sum measured in phase currents.
Reactive energy measurement (kvarh)	2%
Reactive power measurement (kvar)	2 % ±2 digit
Active energy measurement (kWh)	1%
Active power measurement (kW)	1% ±2 digits
Phase voltage measurement	0,5 % ± 1 digit

Differential protection

Sensitivity (IΔn), A	0,03 - 0,1 - 0,3 - 0,5 - 1 A (programable)
Delay time (tΔ)	Programmable trip delay (IEC 60947-2-M)
Transformer	External, WGC-20SC series

Thermal-magnetic protection

Trip curve, Type	C
Nominal current In (A)	20
Rated short-circuit breaking capacity (Icn) / service short-circuit breaking capacity (Ics) (IEC 60898)	10 kA
Voltage breaking capacity (IEC 60898)	230 / 400 V ~
DC voltage breaking capacity (IEC 60947-2)	60 V
V~ Breaking capacity (IEC 60947-2)	415 V ~
Nominal voltage	240 / 415 V ~

Serial communication

Protocol	Modbus/RTU
Technology / Type	RS-485

RECmax-CVM
MCB/RCD and power analyzer with reclosing and transformers included

CODE	TYPE	Poles	In (A)	Curve
2 Poles, C Curve				



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CODE	TYPE	Poles	In (A)	Curve
P2B111.	RECmax-CVM 2P C2-10	2	10 A	C
P2B212.	RECmax-CVM C2-16	2	16 A	C
P2B113.	RECmax-CVM 2P C2-20	2	20 A	C
P2B214.	RECmax-CVM C2-25	2	25 A	C
P2B115.	RECmax-CVM 2P C2-32	2	32 A	C
P2B116.	RECmax-CVM 2P C2-40	2	40 A	C
P2B118.	RECmax-CVM 2P C2-63	2	63 A	C
4 Poles, C Curve				
P2B222.	RECmax-CVM C4-16	4	16 A	C
P2B223.	RECmax-CVM C4-20	4	20 A	C
P2B224.	RECmax-CVM C4-25	4	25 A	C
P2B225.	RECmax-CVM C4-32	4	32 A	C
P2B126.	RECmax-CVM 4P C4-40	4	40 A	C
P2B127.	RECmax-CVM 4P C4-50	4	50 A	C
P2B228.	RECmax-CVM C4-63	4	63 A	C
2 Poles, D Curve				
P2B231.	RECmax-CVM D2-10	2	10 A	D
P2B232.	RECmax-CVM D2-16	2	16 A	D
P2B233.	RECmax-CVM D2-20	2	20 A	D
P2B234.	RECmax-CVM D2-25	2	25 A	D
P2B235.	RECmax-CVM D2-32	2	32 A	D
P2B236.	RECmax-CVM D2-40	2	40 A	D
P2B237.	RECmax-CVM D2-50	2	50 A	D
P2B138.	RECmax-CVM 2P D2-63	2	63 A	D
4 Poles, D Curve				
P2B141.	RECmax-CVM 4P D4-10	4	10 A	D
P2B242.	RECmax-CVM D4-16	4	16 A	D
P2B143.	RECmax-CVM 4P D4-20	4	20 A	D
P2B244.	RECmax-CVM D4-25	4	25 A	D
P2B245.	RECmax-CVM D4-32	4	32 A	D
P2B146.	RECmax-CVM 4P D4-40	4	40 A	D
P2B147.	RECmax-CVM 4P D4-50	4	50 A	D
P2B247.	RECmax-CVM D4-50	4	50 A	D

All models feature the WGC20/30-SC residual current transformer and MC-3 or MC-1 measuring transformer with connected terminal. C/D curve circuit breaker with 6 kA cut off power (IEC 60898).

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