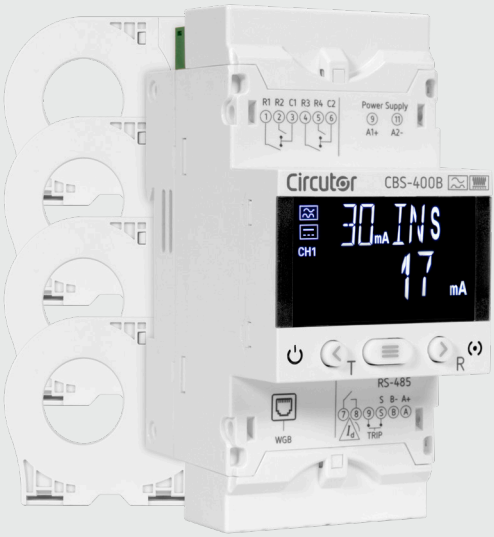


PROTECTION AND CONTROL

CBS-400B

Type B residual current monitoring and protection relay with 4 channels

Why use type B residual current protection?

In recent years the use of loads with power electronics has become widespread. Type B residual current protection is the only protection that safeguards people and loads against AC, DC and AC/DC leakages.

Type A and AC residual current protection devices do not detect continuous residual currents, which are so common in loads such as variable speed drives, UPS's, EV chargers, photovoltaic installations, etc.

AC type protection
Sinusoidal alternating current

Type A protection
Pulsating sinusoidal current
Pulsating alternating current

Type B protection
Sinusoidal alternating current
Pulsating alternating current
Direct current

Load types with DC components

VSD

UPS

Active Filters

Electric vehicle charging

Non-B type residual current protection devices become more sensitive and could even lock up when a pulsating residual current is coupled with a direct current. Those devices can be triggered unexpectedly or be blocked, affecting the service continuity and **creating a serious risk to the installation and/or people**.

CBS-400B

Type B residual current monitoring and protection relay with 4 channels

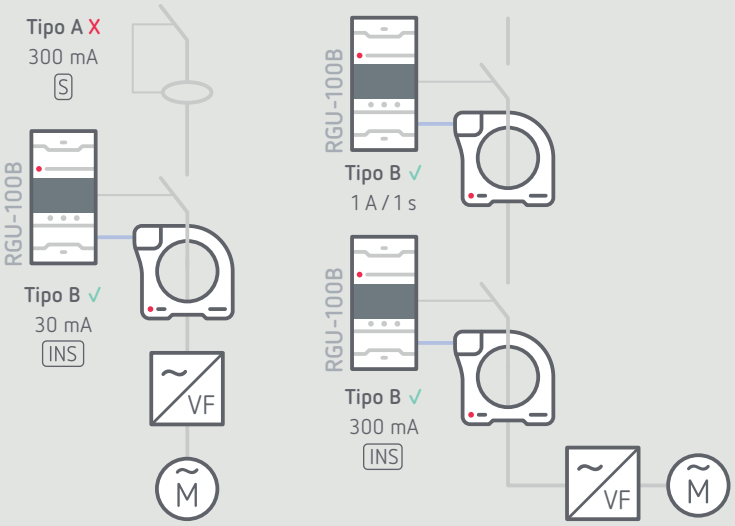
The **CBS-400B** is an electronic relay for protecting and monitoring residual currents (**IEC 62020**). It is compatible with the **WGB** series for B type loads (**IEC 60755**).

- ☑ Versatility for all types of installations
- ☑ Preventive maintenance by means of alarms
- ☑ Real-time display and monitoring
- ☑ Simple to install
- ☑ RS-485 communications (Modbus RTU)

Versatility

The wide range of sensitivities, from 30 mA to 3 A, and adjustable delays, from INS to 10 s, allows using the **CBS-400B** at any point in the installation, whether at a specific location in a distribution board or even in the header.

Examples of vertical selectivity of types



The use of type B always guarantees vertical selectivity.

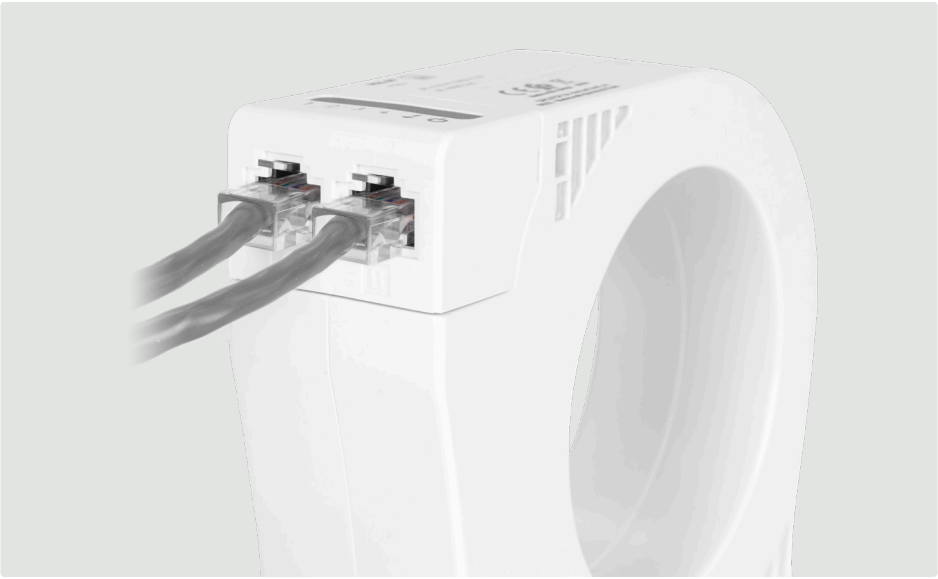
The most comprehensive protection

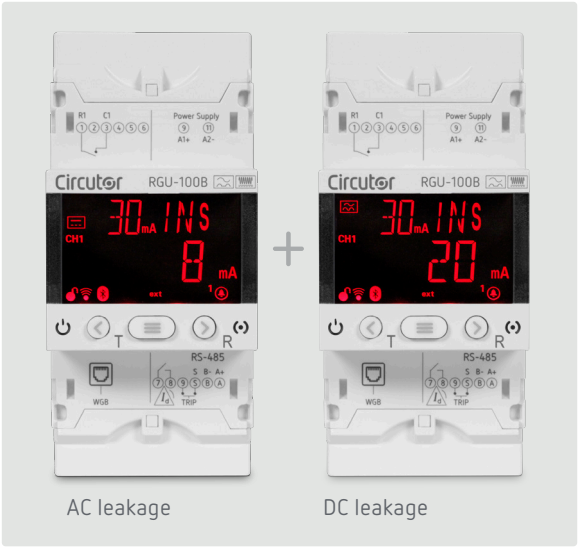
Preventive maintenance

The **CBS-400B** has a display and relay prealarms. Before an event is triggered, the device allows preventive maintenance to be scheduled when the installation is taken offline. It also offers an event log that can be analysed to aid in troubleshooting.

Easy to install

The **CBS-400B** is quickly and conveniently connected to its **WGB** residual current transformer with an RJ-45 connector.



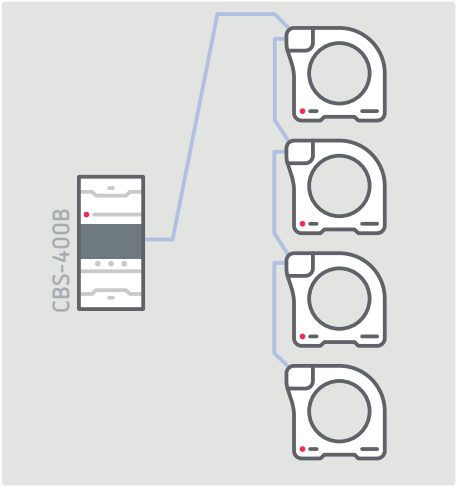


AC leakage

DC leakage

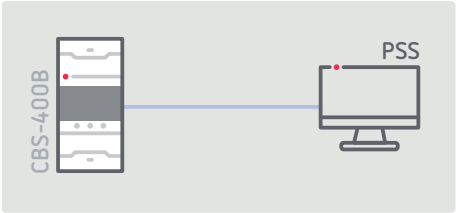
Real-time display and earth leakage monitoring

Its high-contrast display, together with its RS-485 communications (Modbus RTU), allows leakage to be monitored in real time. The display changes to red when it triggers, saving the value of the trip current and breaking it down into its AD and DC components, facilitating the problem's detection and source.



4 Fully independent channels

It allows programming and recording events in a completely independent way, with **WGB** transformers, for each of the 4 available channels: saves space in the electrical panel.



Integrated communications

RS-485 communications (Modbus protocol) for integration into PSS or any SCADA system, which makes all the monitoring, event logging and remote control features offered by the relay much easier to use.

Loads and applications with type B requirement

The **CBS-400B** relay, together with the **WGB** transformers, protects and monitors all electrical installations where, due to the type of load, the applicable law or manufacturer's requirement, it is necessary to install type B residual current protection.

Electric vehicle charging points, photovoltaic installations, etc.

Heavy industry, Data Centres, etc.

Type B industrial earth leakage protection is required in any installation that contains variable drives: Industry, production lines, lifts / elevators, etc.

Technical specifications

Protection and monitoring	Type	B (**IEC 60755**)
	Sensitivity range /Δn	0.03... 3A
	Delay *t*Δ	INS, SEL, 0.02... 10s
	Transformer type	External, **WGB** series
	Remote signalling	Alarm, Prealarm
Environmental Electrical characteristics	Auxiliary power supply	85... 264 VAC. (50-60 Hz) / 120...370 VDC.
	Consumption	15 VA
	Installation category	Cat III 300V
4 relay outputs	Maximum open contact voltage	230 Vac
	Maximum current	6 A
	Maximum switching power	1.5 VA
Digital output	Type	Optoisolated
	Maximum voltage	230 Vac
	Maximum current	0.1 A
Digital input	Type	Potential-free contact
	Insulation	5.3 kV
Communications	RS-485	Modbus RTU
Mechanical Characteristics	Fixing	**DIN 46277 (EN 50022)** rail or Panel with accessory
	Dimensions	52.5 x 118 x 70 mm (3 modules)
	Connection to transformer	Via RJ-45 connector
	Protection degree	IP 30 terminals, Front IP 40
	Enclosure	Self-extinguishing V0 plastic
Standards	**IEC 62020, IEC 60755, IEC 60947-2-M**	

References

Type	Code	/Δn	Delay	Power Supply	Communications
CBS-400B	**P12721.**	0.03 ... 3 A	0.02 ... 10 s, INS, SEL	230 Vac	RS-485

Compatible transformers

Type	Code	Useful cross-section	/Δn	Weight
WGB-35	**P11B52.**	35 mm	0.03... 3 A	230 g
WGB-55	**P11B53.**	55 mm	0.03... 3 A	360 g
WGB-80	**P11B54.**	80 mm	0.03... 3 A	570 g
WGB-110	**P11B55.**	110 mm	0.03... 3 A	750 g

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