



PROTECTION & CONTROL

# CBS-1600A

Type-A multichannel leakage  
current monitoring relay

# Maximum monitoring, minimum space.



Leakage current monitoring is key to detecting potential insulation problems in loads and installations. An insulation fault in conductors or loads, such as motors or pumping systems, can jeopardize the continuity of supply to the installation, resulting in service outages and considerably higher operating costs.

By using monitoring units, you can track multiple circuits using a single device, saving both space and cost. This solution is ideal for TT, TN-S and IT systems, where it is essential to ensure continuity of supply, by checking in real time the correct operation of the connected circuits or loads, and anticipating any problems that may cause a future service outage, or letting you plan maintenance and repair actions far enough in advance to avoid unexpected repairs or faults.

All of this makes the **CBS-1600A** protection unit the ideal solution for a multitude of installations, especially those with an IT system, such as operating rooms, Intensive Care Units (ICU), power plants or substations, Data Processing Centres (DPC), railway applications (signalling, platform lighting, emergency lighting, etc.) and the process industry.

# CBS-1600A

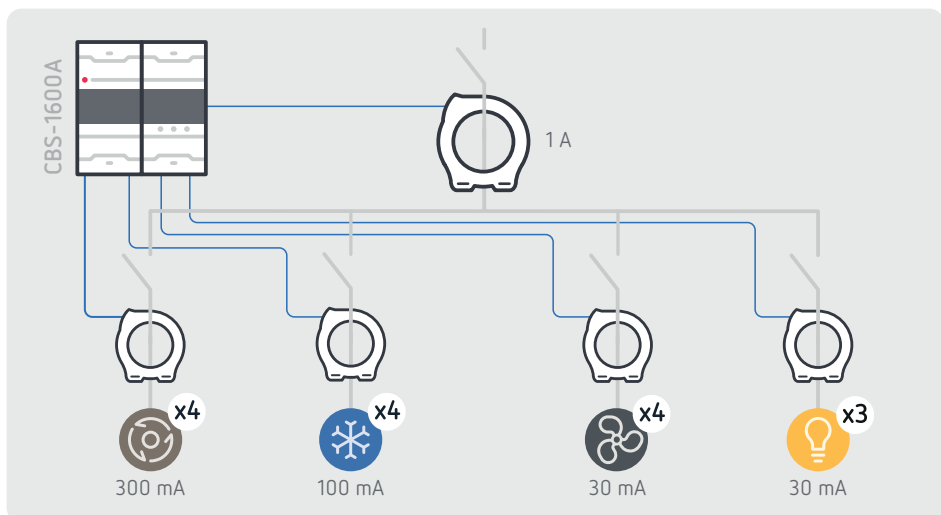
## Type-A multichannel leakage current monitoring relay

The **CBS-1600A** is a differential current monitoring unit (IEC 62020), with 16 type-A channels (IEC 60755) that are compatible with the **WGC** range of transformers, making it the ideal solution for installations with diverse loads that require different types of leakage current monitoring.

This solution is ideal for distribution panels with multiple lines or loads to control, combining in a single device monitoring of leaks and loss of insulation in conductors or loads, while minimizing space usage and reducing the installation cost.

- 👁 Real-time display and monitoring
- 🔧 Preventive maintenance (alarms)
- 👁 Leakage monitoring at the main electrical panel, distribution panels and loads all in one device
- 📡 Remote management through communications
- 📱 Space and cost savings
- ⚡ Ideal for TT, TN-S and IT systems
- ⚡ Versatility for all kinds of installations.

### Example of adjustment



# The most complete monitoring

## Real-time display and monitoring of the leakage current

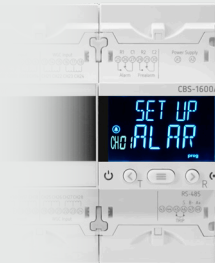
Monitors and tracks leakage currents in real time. Individually view the status of each of the 16 channels, monitoring the leakage level and visually identifying any alarm level programmed.



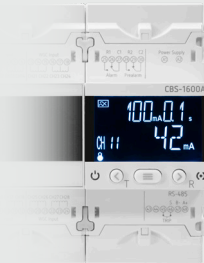
## Easily identify the status of leaks

The display is backlit in red when the set alarm level is exceeded, making it easier to identify the line containing

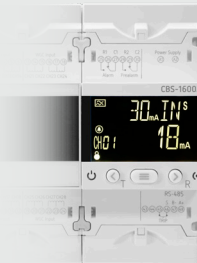
the fault. The different multi-coloured backlights will help you identify the status of each of the 16 channels.



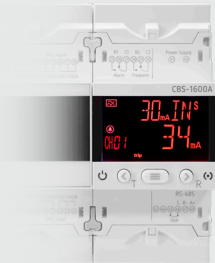
Configuration



Standby



Pre-alarm



Alarm



## Preventive maintenance

The **CBS-1600A** provides a pre-alarm via the display and relay, meaning before the alarm level is reached, it allows preventive maintenance to be carried out, and it also offers an event log that can be analysed to aid in troubleshooting.

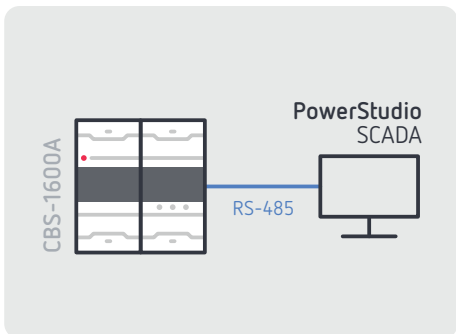
## Wide range of leakage currents

The **CBS-1600A** unit can manage accumulated leaks in the main electrical panel, in sub-panels, or analyse those produced directly in the loads. This is made possible by a wide range of **WGC** protection transformers with cross-sections from 20 mm to 500x200 mm.



## Installation without power outages

For installations that can't be taken offline, the **CBS-1600A** unit offers a wide range of **TP-WGC** split-core transformers. This solution can be installed without having to schedule a service outage of the installation.



## Integrated communications

Monitor leakage currents directly through our SCADA monitoring software, **PowerStudio**, or using any other SCADA system via RS-485 communications (Modbus RTU). These systems can be used to monitor and display alarms and events, as well to remotely manage the relay outputs for alarms and pre-alarms.

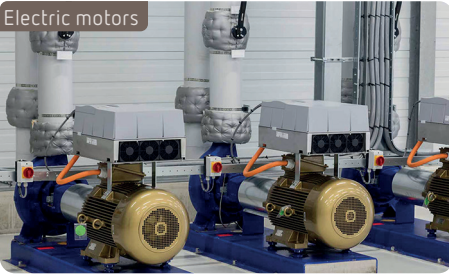
CBS-1600A

# Where can I install the unit?

The **CBS-1600A** unit is a leakage current monitoring device that can be installed in any setting where service reliability and continuity are required.

It is a solution for installations that cannot be taken offline, or for those where faults or production outages occur that affect the safety or economic performance of the installation.

Electric motors



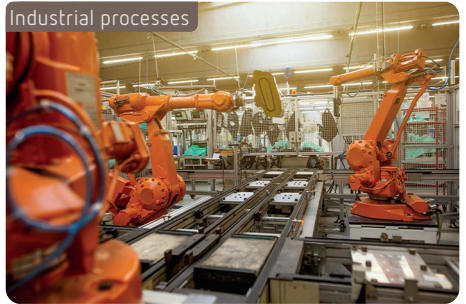
Pumping systems



Data Processing Centres



Industrial processes



Railway applications



Operating rooms



## Technical specifications

Monitoring	Type	A (ultra-immunized)
	Measurement channels	16
	Sensitivity range $I_{\Delta n}$	30 ... 3000 mA
	$t_{\Delta}$ delay	0.1-0.3-0.5-0.8-1-2-3-5 s
	Transformer type	External, <b>WGC</b> , <b>TP-WGC</b> type
	Remote signalling	Pre-alarm, alarm
Electrical characteristics	Auxiliary power	230 VAC
	Consumption	10 VA
	Installation category	Cat III 300V
2 Relay Outputs	Relay 1	Pre-alarm
	Relay 2	Alarm
	Maximum voltage	230 VAC
	Maximum current	6 A
	Maximum switching power	1500 VA
Digital input	Type	Potential-free contact
	Insulation	5.3 kV
Communications	Protocol	Modbus RTU
	Fieldbus	RS-485
Mechanical Characteristics	Attachment	<b>DIN 46277</b> rail (EN 50022)
	Dimensions	105 x 117.85 x 74 mm
	Protection rating	IP 30, IP 40 (Front)   IK 08
	Enclosure	Self-extinguishing V0 plastic
Standards	IEC 62020-1	

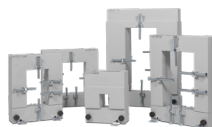
## References

Type	Code	$I_{\Delta n}$	Delay	Power Supply	Communications
CBS-1600A	P12B01.	30 ... 3000 mA	0.1-0.3-0.5-0.8-1-2-3-5 s	230 VAC	Modbus RTU/RS-485

### Compatible transformers



WGC Closed-core



TP-WGC Open-core

Compatible transformers for type-A residual current protection: **WGC** and **TP-WGC**.  
View codes at: [www.circutor.com](http://www.circutor.com)

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