

RGU-100B

Type-B earth leakage monitoring and protection relay



Description

The earth leakage current intensity monitoring and protection relay (IEC 62020), compatible with the **WGB** series, for type B loads (IEC 60755).

High-performance relay with the following main features and functions:

- Electronic relay with relay output
- Measures in alternating, continuous or mixed current (Type B according to IEC 60755)
- It measures and displays the current intensity through the connection to the **WGB**-series earth leakage transformer.
- Fully programmable with display showing instantaneous leakage current in real time on a high-contrast backlight display (display turns red when the relay trips).
- Integrated RS-485 (Modbus) communications
- Pre-alarm relay
- Event log
- Remote control input.

Applications

Earth leakage protection or monitoring of single-phase or three-phase electrical loads in alternating current with continuous components, with frequencies up to 2 kHz, such as:

- Variable speed drives
- UPS
- Photovoltaic Installations
- Electric Vehicle Charging
- Active Filters.

Technical specifications

Protection and monitoring	Type	B (IEC 60755)
	Sensitivity range Δn	0.03... 3A
	Delay $t\Delta$	INS, SEL, 0.02... 10s
	Transformer type	External, WGB series
	Test and Reset	By means of buttons
	Remote control	Possibility of remote Testing and Reset
	LED indication	Supply voltage, Leakage trip, Pre-alarm
	Display visualisation	Leakage current (instantaneous value) Trip current (Display in red) Parameter programming Transformer disconnection of WGB events
	Reading display	Full scale 10%
	Remote signalling	Alarm, Pre-alarm
Electrical features	Auxiliary power supply	85...264 Vca (50-60 Hz) / 120...370 Vcc
	Consumption	15 VA
	Installation category	Cat III 300 V
Timing response	Response time for $1 \times I\Delta n$	≤ 180 ms
	Response time for $5 \times I\Delta n^*$	≤ 30 ms
Relay Outputs	Quantity	1
	Maximum open contact voltage	230 Vca
	Maximum current	6 A
	Maximum switching capacity	1.5 VA
Digital outputs	Type	Opto-insulated
	Maximum voltage	230 Vca
	Maximum current	0.1 A
Digital input	Type	Potential free contact
	Insulation	5.3 kV
RS-485 Communications	Communications protocol	Modbus RTU
	Speed	9600 - 19200 - 38400 - 57600 - 115200 bps
	Data bits / Stop bits	8/11 - 2
	Parity	Without-even-odd
Mechanical Features	Fixing	DIN 46277 Rail (EN 50022) Panel: Using accessory (M5ZZF00000E3)
	Dimensions	52.5 x 118 x 70 mm (3 modules)
	Weight	300 g
	Transformer connection	RJ-45 connector
	Protection degree	IP 30 Terminals, front panel IP 40
	Enclosure	V0 self-extinguishing plastic
	Environmental characteristics	Humidity (without condensation)
	Maximum altitude	2000 m
	Operating temperature	-10...+55 °C
Standards	IEC 62020, IEC 60755, IEC 60947-2-M	

* The RGU-100B + WGB set guarantees a time ≤ 30 ms for $5 \times I\Delta n$, so that in combination with the circuit breaker it must guarantee a time ≤ 40 ms to comply with IEC-60947-2-M.

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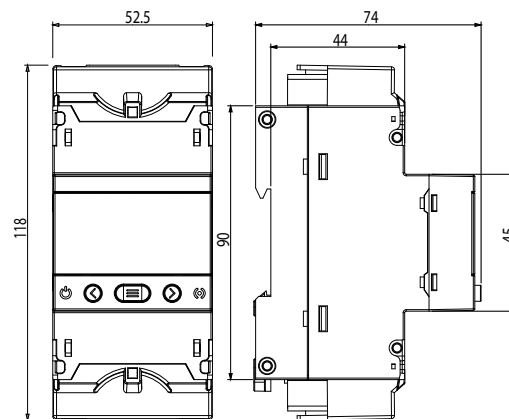
References

Type	Code	$I_{\Delta n}$	Delay	Power supply	Communications
RGU-100B	P11961.	0.03... 3 A	0.02 ... 10 s, INS, SEL	230 Vca	RS-485
ADP.CVM-E3-MINI/ RGU-100B/CBS-400B	M5ZZF00000E3	-	-	-	-

Transformer references

Type	Code	Useful section	$I_{\Delta n}$	Weight
WGB-35	P11B52.	35	0.03... 3 A	230 g
WGB-55	P11B53.	55	0.03... 3 A	360 g
WGB-80	P11B54.	80	0.03... 3 A	570 g
WGB-110	P11B55.	110	0.03... 3 A	750 g

Dimensions



Connections

