

Industrial earth leakage protection

Table: Selection of earth leakage relays

	RG1M	WRN-22	RGE-R	WGBU	RGU-2	RGU-10	CBS-4	WRU-10	RGU-10B	IDB4	WGB-35-TB
Client requirements											
Continuity of service Prevents unwanted tripping	•	•	•	•	•	•	•	•	•	•	•
Control, telemanagement	-	-	-	-	•	•	•	•	•	-	-
Monitoring (display/PC)	-	-	-	-	•	•	•	•	•	-	-
Preventive maintenance, prealarm	-	-	•	•	•	•	•	•	•	-	-
Installation											
Use in single-phase installations	•	•	•	•	•	•	•	•	•	•	•
Three-phase, with & without neutral	•	•	•	•	•	•	•	•	•	•	•
WGC External earth leakage transformers	•	-	•	-	•	•	•	-	WGC-TB	-	-
Useful section diameter ø (mm)	DET	22	DET	35...210	DET	DET	DET	28	DET	-	35
Size in modules	1	3	2	-	2	3	3	3	3	4	-
Model features											
Earth leakage protection type (IEC 60755)	A	A	A	A	A	A	A	A	B	B	B
Use as instantaneous protection	•	•	•	•	•	•	•	•	-	•	•
Use as selective protection / monitoring	-	-	•	•	•	•	•	•	•	-	•
Fixed sensitivity and trip delay	•	•	-	-	-	-	-	-	-	•	•
Adjustable sensitivity and trip delay	-	-	•	•	•	•	•	•	•	-	-
RS-485/Modbus communications protocol	-	-	-	-	-	•	•	-	-	-	-
External input, remote control	-	-	-	-	•	•	•	•	•	-	-

DET - Depending on the external transformer

WGC, Earth leakage transformer


Type	Code	Usefull diam.(mm)	IΔn (A)	Cable (m)	weight (kg)
WGC-20-SC	[*] P10181.	20	acc. relay	0,5	0,08
WGC-30-SC	[*] P10182.	30	acc. relay	0,5	0,10
WGS-20	[*] P10131.	20	acc. relay	-	0,06
WGS-30	[*] P10132.	30	acc. relay	-	0,07
WGC-25	[*] P10151.	25	acc. relay	-	0,08
WGC-35	[*] P10152.	35	acc. relay	-	0,11
WGC-55	[*] P10153.	55	acc. relay	-	0,17
WGC-80	[*] P10154.	80	acc. relay	-	0,29
WGC-110	[*] P10155.	115	acc. relay	-	0,41
WGC-140	[*] P10156.	140	acc. relay	-	0,68
WGC-180	[*] P10157.	180	acc. relay	-	0,91
WGC-220x105	[*] P10158.	220 x 105	acc. relay	-	3,90
WGC-350x150	[*] P10159.	350 x 150	acc. relay	-	6,80
WGC-500x200	[*] P10160.	500 x 200	acc. relay	-	11,00

UL certification for all WGC and WGS models, on demand

Type	Code	Description
PA-TC/WG	[*] P19921.	DIN rail mounting accessory for WGC-25, WGC-35 and WGC-55

 Delivery time: [*] immediate
 [x] working weeks
 [c] consult

**TP-WGC, Split-core earth leakage transformers/core balanced**

Type	Code	Usefull diam.(mm)	I Δ n (A)	I Δ n min.(A)	weight (kg)
TP58 WGC	[C] P11121.	80 x 50	acc. relay > 0,3A	0.3	0,80
TP88 WGC	[C] P11131.	80 x 80	acc. relay > 0,3A	0.3	1,05
TP812 WGC	[C] P11141.	120 x 80	acc. relay > 0,3A	0.3	1,06
TP816 WGC	[C] P11151.	160 x 80	acc. relay > 0,3A	0.3	2,45

Only for RGU-2, RGU-10/10C, CBS-4/4C

**RGU-10, Earth leakage relay for Type A ultra-immunised WGC Transformer, 3 modules with display and programmable pre-alarm output.**

Type	Code	I Δ n (A)	Módulos	Delay	Communications	Power supply
Possibility UL on demand						
RGU-10	[*] P11941.	0,03 ... 3 A	0,03 ... 30 A 3	0,02 ... 10 s, INS, SEL (*1)(*2)	-	230 Vac
RGU-10C	[*] P11944.	0,03 ... 3 A	0,03 ... 30 A 3	0,02 ... 10 s, INS, SEL (*1)(*2)	RS-485	230 Vac

(*1) The delay is cancelled in all relays with a 0.03 A sensitivity adjustment, according to IEC 60947-2, annex M (*2) INS, SEL trip curves, according to IEC 61008-1, for trigger coils with a tripping time < 0.02 s Requires a WGC earth leakage transformer To encode other parameters, such as the auxiliary power supply voltage, see the table at the end of the section

Type	Code	Description
ADP CVM-MINI/ RGU10/CBS4	[*] M5ZZF1.	Panel adapter CVM MINI / RGU-10 / CBS-4 (72 x 72)

**RGU-2, Programmable earth leakage relay, 2 modules with display and static prealarm output**

Type	Code	I Δ n (A)	Módulos	Mounting	Delay	Power supply
RGU2	[*] P11A61.	0,03 ... 5A	2	DIN rail	0,1 ... 5 s, INS, SEL (*1)(*2)	120...230 Vac

(*1) The delay is cancelled in all relays with a 0.03 A sensitivity adjustment, according to IEC 60947-2, annex M (*2) INS, SEL trip curves, according to IEC 61008-1, for trigger coils with a tripping time < 0.02 s Requires a WGC earth leakage transformer To encode other parameters, such as the auxiliary power supply voltage, see the table at the end of the section

**RG1M, Earth leakage relays 1 module**

Type	Code	I Δ n (A)	Módulos	Mounting	Delay	Power supply
RG1M - 0,03	[*] P12204.	0,03 A	1	DIN rail	0,02 S	230 Vac
RG1M - 0,3	[*] P12214.	0,3 A	1	DIN rail	0,02 S	230 Vac

(*1) The delay is cancelled in all relays with a 0.03 A sensitivity adjustment, according to IEC 60947-2, annex M (*2) INS, SEL trip curves, according to IEC 61008-1, for trigger coils with a tripping time < 0.02 s Requires a WGC earth leakage transformer To encode other parameters, such as the auxiliary power supply voltage, see the table at the end of the section

**RGE, Earth leakage relay for WGC transformer, type A, 2 modules with visual prealarm.**

Type	Code	I Δ n (A)	Módulos	Mounting	Delay	Power supply
RGE-R1	[*] P12231.	0,03 ... 3 A	2	DIN rail	0,02 ... 1 s (*1)	230 Vac
RGE-RL	[*] P12A32.	0,03 ... 5 A	2	DIN rail	0,02 ... 5 s (*1)	230 Vac
RGE-R	[*] P122320040000	0,03 ... 5 A	2	DIN rail	0,02 ... 5 s (*1)	24...48 Vac / 24...125 Vdc

(*1) Requires a WGC earth leakage transformer To encode other parameters, such as the auxiliary power supply voltage, see the table at the end of the section


CBS-4, Station with 4 programmable earth leakage relays, 4 modules with display and a configurable prealarm output.

Type	Code	I Δ n (A)	N° relays	Módulos	Delay	Communications	Power supply
CBS-4	[*] P12711.	0,03 ... 30 A	4	3	0,02 ... 10 s, INS, SEL	-	230 Vac
CBS-4C	[*] P12712.	0,03 ... 30 A	4	3	0,02 ... 10 s, INS, SEL	RS-485	230 Vac

The delay is cancelled in all relays with a sensitivity adjustment of 0.03 A, IEC 60947-2, annex M Delay: INS, SEL trip curves, according to IEC 61008-1, for trigger coils with a trip time < 0.02 s Optional UL certification in CBS-4 at 230 Vac (not available for other power supply values). To encode other parameters, such as the auxiliary power supply voltage, see the table at the end of the section

Type	Code	Description
ADP CVM-MINI/ RGU10/CBS4	[*] M5ZZF1.	Panel adapter CVM MINI / RGU-10 / CBS-4 (72 x 72)


WRU, Type A ultra-immunised earth leakage relay with built-in transformer

Programmable earth leakage relay, 3 modules with display and two configurable pre-alarm outputs. 230 Vac Auxiliary power supply

Type	Code	Usefull diam.(mm)	I Δ n (A)	Módulos	Delay	Power supply
WRU-10	[*] P14035.	28	0,03 ... 3 A / 0,03 ... 30 A	3	0,02 ... 10s, INS, SEL	230 Vac

The delay is cancelled in all relays with a 0.03 A sensitivity adjustment, according to IEC 60947-2, annex M Delay: INS, SEL trip curves, according to IEC 61008-1, for trigger coils with a tripping time < 0.02 s To encode other parameters, such as the auxiliary power supply voltage, see the table at the end of the section


WGBU, Transformer with built-in earth leakage relay, Type A.

Configurable earth leakage relay with visual pre-alarm. 230 Vac Auxiliary power supply

Type	Code	Usefull diam.(mm)	I Δ n (A)	Delay
WGBU-35	[*] P16011.	35	0,03 ... 3 A	0,02...1 s
WGBU-70	[*] P16012.	70	0,03 ... 3 A	0,02...1 s
WGBU-105	[*] P16013.	105	0,03 ... 3 A	0,02...1 s
WGBU-140	[*] P16014.	140	0,03 ... 3 A	0,02...1 s
WGBU-210	[*] P16015.	210	0,03 ... 3 A	0,02...1 s

Relay mounted at 90°. It allows to reduce the mounting space

WGBU-90-35	[*] P16021.	35	0,03 ... 3 A	0,02...1 s
WGBU-90-70	[*] P16022.	70	0,03 ... 3 A	0,02...1 s
WGBU-90-105	[*] P16023.	105	0,03 ... 3 A	0,02...1 s
WGBU-90-140	[*] P16024.	140	0,03 ... 3 A	0,02...1 s
WGBU-90-210	[*] P16025.	210	0,03 ... 3 A	0,02...1 s

The delay is cancelled in all relays with a sensitivity adjustment of 0.03 A, IEC 60947-2, annex M

CODIFICATION TABLE

RGU-10, RGE, CBS-4, WRU-10, RGU-10B										
Code		Internal code								
P	1	X	X	X	X	0	0	X	X	X
Power supply voltage								↑	↑	↑
	Standard (230 V _{ac})							0		-
	110 V _{ac}							1		1
	400 V _{ac} (Only RGE, RGU-10)							3		1
	24...48 V _{ac} 24...125 V _{ac} (Only RGE, RGU-10, RGU-10B)							4		1
	Certificate UL (Only RGU10/10C - 230 V _{ac})								0	7
Certificate CCC (Only RGU10 - 230 V _{ac})								0	8	2

Delivery time: [*] immediate
[x] working weeks
[c] consult

**RGMD, Earth leakage protection assembly with miniature circuit breaker, ultra-immunised**

Type	Code	In (A)	Poles	Sensitivity
RGMD Series, type A - 2 poles				
RGMD-2-16-30	[1] P13231.	16 A	2	30 mA
RGMD-2-25-30	[1] P13251.	25 A	2	30 mA
RGMD-2-32-30	[1] P13261.	32 A	2	30 mA
RGMD-2-40-30	[1] P13271.	40 A	2	30 mA
RGMD-2-63-30	[1] P13291.	63 A	2	30 mA
RGMD-2-16-300	[1] P13233.	16 A	2	300 mA
RGMD-2-25-300	[1] P13253.	25 A	2	300 mA
RGMD-2-32-300	[1] P13263.	32 A	2	300 mA
RGMD-2-40-300	[1] P13273.	40 A	2	300 mA
RGMD-2-63-300	[1] P13293.	63 A	2	300 mA
RGMD Series, type A - 4 poles				
RGMD-4-16-30	[1] P13431.	16 A	4	30 mA
RGMD-4-25-30	[1] P13451.	25 A	4	30 mA
RGMD-4-32-30	[1] P13461.	32 A	4	30 mA
RGMD-4-40-30	[1] P13471.	40 A	4	30 mA
RGMD-4-63-30	[1] P13491.	63 A	4	30 mA
RGMD-4-16-300	[1] P13433.	16 A	4	300 mA
RGMD-4-25-300	[1] P13453.	25 A	4	300 mA
RGMD-4-32-300	[1] P13463.	32 A	4	300 mA
RGMD-4-40-300	[1] P13473.	40 A	4	300 mA
RGMD-4-63-300	[1] P13493.	63 A	4	300 mA

It features an RG1M earth leakage relay, WGS/WGC earth leakage transformer and C curve circuit breaker, 6 kA (IEC 60898) with 230 Vac trigger coil

Earth leakage relay for Type B**WGC-TB, Earth leakage transformers for type-B earth leakage relays**

Type	Code	Usefull diam.(mm)	I Δ n min.(A)	weight (kg)
WGS-20-TB	[*] P11731.	20	0.1	0,08
WGC-25-TB	[*] P11751.	25	0.1	0,12
WGC-35-TB	[*] P11752.	35	0.1	0,11
WGC-55-TB	[*] P11753.	55	0.3	0,18
WGC-80-TB	[*] P11755.	80	0.5	0,25
WGC-110 TB	[*] P11756.	110	0.5	0,38
WGC-140TB	[*] P11757.	140	0.5	0,48
WGC-180 TB	[*] P11758.	180	0.5	0,20

RGU-10B, Earth leakage current monitoring relay, type-B

Programmable earth leakage relay, 3 modules with display and configurable pre-alarm output.



Type	Code	I Δ n (A)	N° relays	Módulos	Mounting	Delay	Power supply
RGU10B	[*] P11951.	0,1 ... 3 A	0	3	DIN rail	0,1 ... 10 s	230 Vac

Requires an earth leakage transformer, WGC-TB type

IDB-4, RCCB Type B

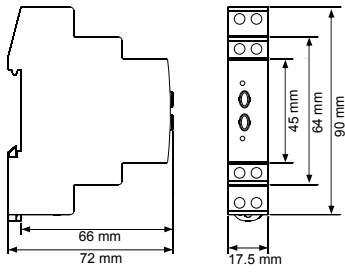
Type	Code	In (A)	Poles	Sensitivity
IDB-4 4P-40A-30 mA	[*] P17221.	40 A	4	30 mA
IDB-4 4P-40A-300 mA	[*] P17222.	40 A	4	300 mA
IDB-4 4P-63A -30 mA	[*] P17231.	63 A	4	30 mA
IDB-4 4P-63A -300mA	[*] P17232.	63 A	4	300 mA

WGB-35-TB, Relay Type B built-in earth leakage current transformer

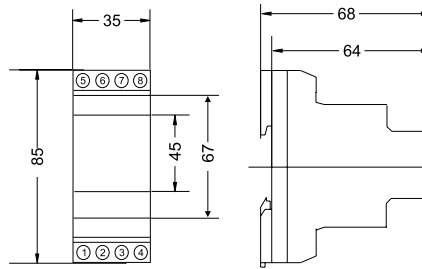
Type	Code	Delay	Sensitivity
WGB-35-TB30	[*] P16111.	INS	30 mA
WGB-35-TB300	[*] P16121.	INS	300 mA
WGB-35-TB300S	[*] P16131.	SEL	300 mA

Dimensions

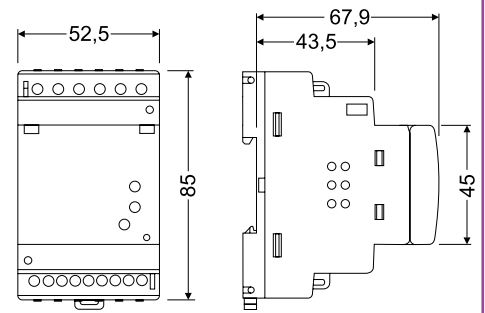
RG1M



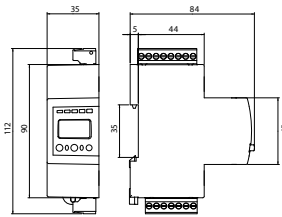
RGE



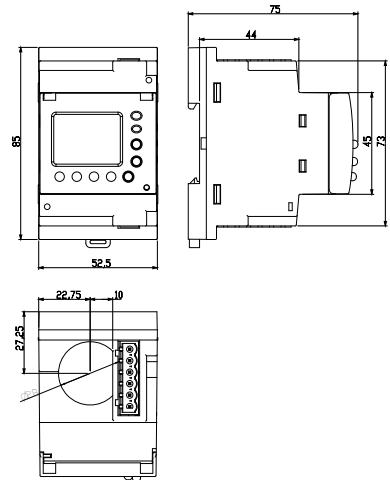
RGU-10 / CBS-4 / RGU-10B



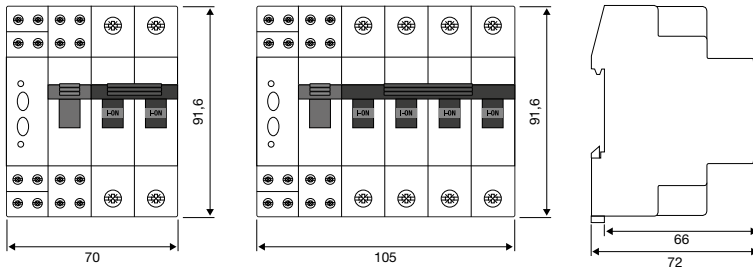
RGU2



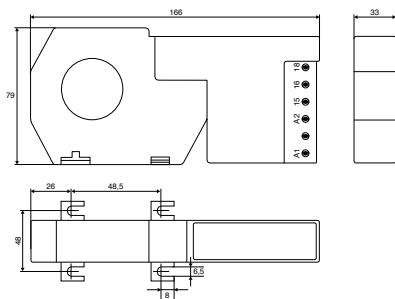
WRU-10



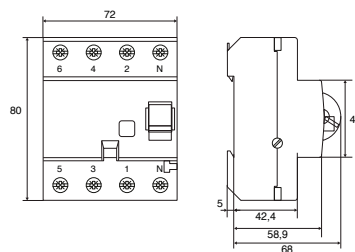
RGMD 2P / RGMD 4P



WGB-35-TB



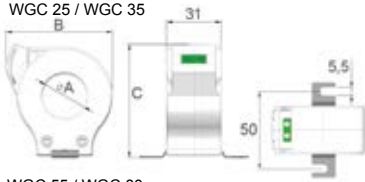
IDB-4



Dimensions

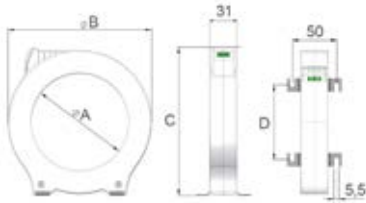
WGC / WGC-TB

WGC 25 / WGC 35

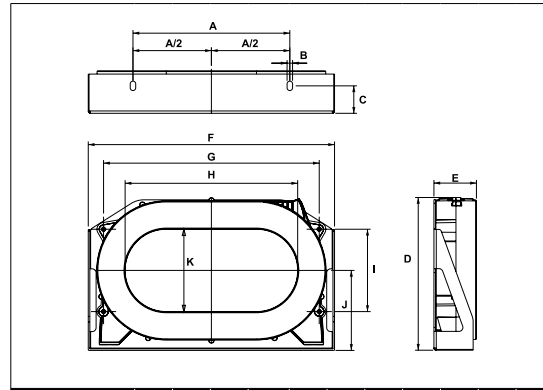


WGC 55 / WGC 80

WGC 110 / WGC 140

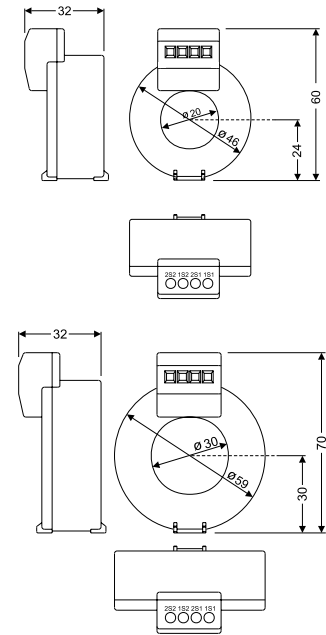


Modelo	A	B	C	D
WGC 25	25	60,5	64	
WGC 35	35	70,5	75,5	
WGC 55	55	92	98	38
WGC 80	80	124,5	130	60
WGC 110	110	163	168	84,5
WGC 140	140	201	206	110
WGC 180	180	252	256	144

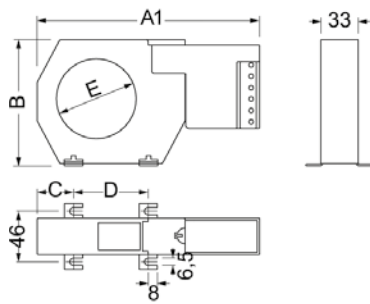


	A	B	C	D	E	F	G	H	I	J	K
WGC 220x105	200	7	35	195	54,2	314	275	220	105	102	105
WGC 350x150	340	7	30	279	50,2	479	430	350	165	143	150
WGC 500x200	460	7	40	306	64	614	550	500	180	155	200

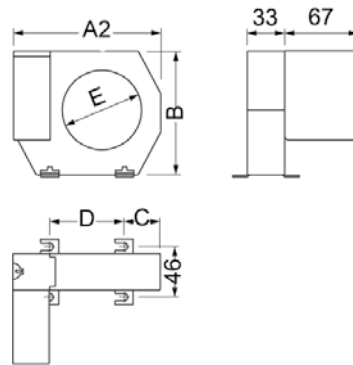
WGS



WGBU

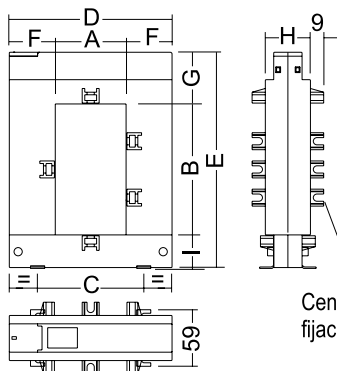


WGBU-90



Type	A1	A2	B	C	D	E
WGBU-35 (A1) / WGBU-90-35 (A2)	166	100	79	26	48,5	35
WGBU-70 (A1) / WGBU-90-70 (A2)	196	130	110	332	66	70
WGBU-105 (A1) / WGBU-90-105 (A2)	236	170	146	38	94	105
WGBU-140 (A1) / WGBU-90-140 (A2)	286	220	196	48,5	123	140
WGBU-210 (A1) / WGBU-90-210 (A2)	365	299	284	69	161	210

TP-WGC



Centradores de fijación pletina

dimensiones (mm)	TP-23	TP-58	TP-88	TP-812	TP-816
a	20	50	80	80	80
b	30	80	80	120	160
c	51	78	108	108	120
d	89	114	144	144	184
e	110	145	145	185	245
f	34	32	32	32	52
g	47	32	32	32	47
h	40	32	32	32	52
i	32	32	32	32	38

Nota: Todos los tipos llevan centradores de fijación, excepto el TP-23