

RG25

high power relays



**HIGH BREAKING
CAPACITY:
AC1 - 10 KVA**

- General purpose relays, designed for continuous operation* • AC and DC coils, insulation class F: 155 °C • High breaking capacity: AC1 - 10 kVA
- 35 mm rail mount acc. to EN 60715 • High insulation dielectric strength
- Applications: control of electromagnets; systems of heating, cooling, ventilation, air conditioning; control with single-phase motors; catering industry machines and equipment; automation systems; photoelectric systems; etc.
- Recognitions, certifications, directives: RoHS, **CE** **UK**

Contact data

Number and type of contacts		2 NO
Contact material		AgSnO₂
Rated / max. switching voltage	AC	400 V / 440 V
Min. switching voltage		10 V
Rated load (capacity)	AC1	25 A / 400 V AC
	DC1	25 A / 24 V DC (see Fig. 3)
	DC13	0,3 A / 120 V 0,15 A / 250 V (R300)
Motor load	acc. to UL 508	3/4 HP 240 V AC, 6,9 FLA, single-phase motor ❶
	AC3 acc. to IEC 60947-4-1	0,989 kW 230 V AC, single-phase motor
Min. switching current		10 mA
Max. make current		40 A
Rated current		25 A
Max. breaking capacity	AC1	10 000 VA
Min. breaking capacity		1 W
Contact resistance		≤ 100 mΩ
Max. operating frequency		
• at rated load	AC1	600 cycles/hour
	AC3	600 cycles/hour
• no load		3 600 cycles/hour

Coil data

Rated voltage	50 Hz AC	12, 24 , 110, 230 , 400 V
	DC	12, 24 , 48, 110, 220 V
Must release voltage		≥ 0,1 U _n
Operating range of supply voltage		see Tables 1, 2
Rated power consumption	AC	3,0 VA
	DC	1,7 W

Insulation according to EN 60664-1

Insulation rated voltage		400 V AC
Rated surge voltage		4 000 V 1,2 / 50 μs
Overvoltage category		III
Insulation pollution degree		3
Dielectric strength	• between coil and contacts • contact clearance • pole - pole	5 000 V AC type of insulation: reinforced 1 500 V AC type of clearance: micro-disconnection 5 000 V AC type of insulation: reinforced, with contact gap ≥ 1,4 mm
Contact - coil distance	• clearance • creepage	≥ 6 mm ≥ 8 mm

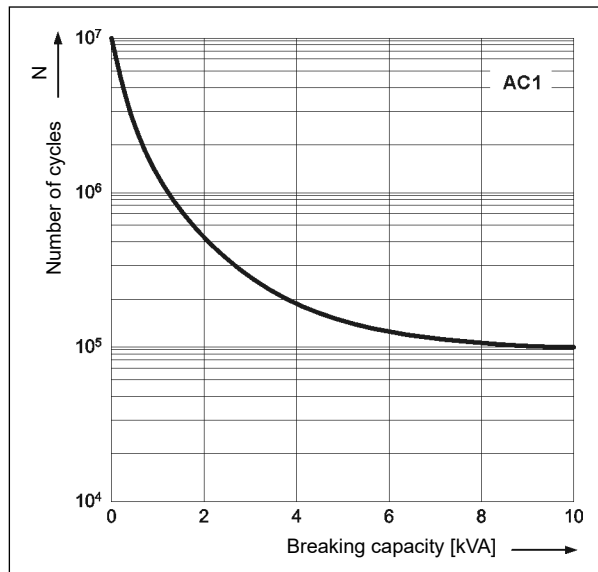
General data

Operating / release time (typical values)		20 ms / 20 ms
Electrical life		
• resistive AC1		> 10 ⁵ 25 A, 400 V AC
• cosφ		see Fig. 2
• at halogen lamp load		> 0,5 x 10 ⁵ 2500 W
• at LED lamp load		> 10 ⁵ 1000 W
Mechanical life (cycles)		> 10 ⁶
Dimensions (L x W x H) / Weight		26 x 53,7 x 75,5 mm / 130 g
Ambient temperature	• storage	-25...+85 °C
(non-condensation and/or icing)	• operating	-25...+85 °C
Cover protection category		IP 20 EN 60529
Environmental protection		RTI EN 61810-1
Shock resistance		10 g
Vibration resistance		5 g 10...150 Hz

The data in bold type relate to the standard versions of the relays. *The relays are designed for continuous operation while maintaining the parameters declared in the data sheet. ❶ For single phase motors for 110-120 V AC do not use motors with higher FLA than given for 240 V AC.

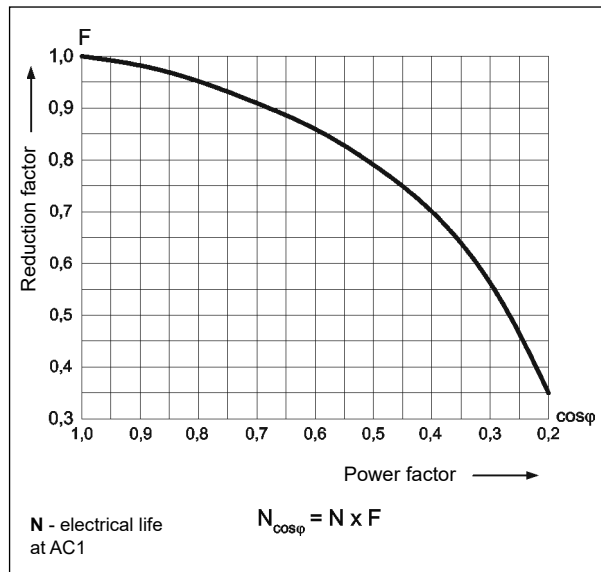
Electrical life at AC resistive load.
Switching frequency: 600 cycles/hour

Fig. 1



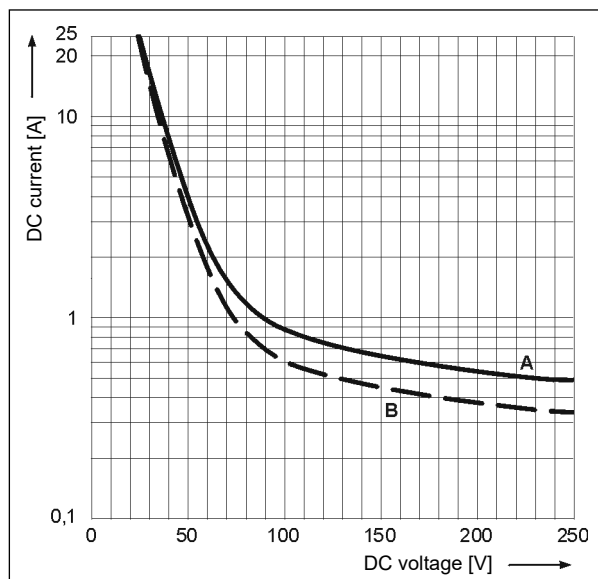
Electrical life reduction factor at AC inductive load

Fig. 2

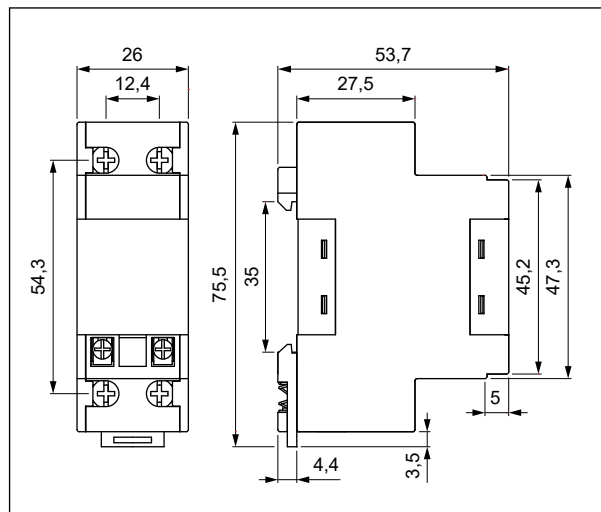


Max. DC breaking capacity
A - resistive load DC1
B - inductive load L/R = 40 ms

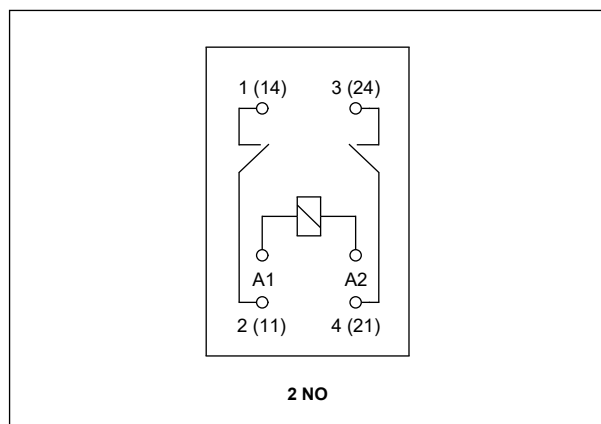
Fig. 3



Dimensions



Connection diagram
(screw terminals side view)



PRECAUTIONS:

1. Ensure that the parameters of the product described in its specification provide a safety margin for the appropriate operation of the device or system and never use the product in circumstances which exceed the parameters of the product. 2. Never touch any live parts of the device. 3. Ensure that the product has been connected correctly. An incorrect connection may cause malfunction, excessive heating or risk of fire. 4. In case of any risk of any serious material loss or death or injuries of humans or animals, the devices or systems shall be designed so to equip them with double safety system to guarantee their reliable operation.

RG25

high power relays

Mounting

Relays **RG25** are designed for direct mounting on 35 mm rail mount acc. to EN 60715. Operational position - coil terminals downwards. **Connections:** max. cross section of the cables: 2 x 2,5 mm² (2 x 14 AWG), stripping length: 9 mm, max. tightening moment for the terminal: 0,7 Nm.



Test button

Coil data - DC voltage version

Table 1

Coil code	Rated voltage V DC	Coil resistance at 20 °C Ω	Acceptable resistance	Coil operating range V DC	
				min. (at 20 °C)	max. (at 55 °C)
1012	12	85	± 10%	9,6	13,2
1024	24	340	± 10%	19,2	26,4
1048	48	1 350	± 10%	38,4	52,8
1110	110	7 600	± 10%	88,0	121,0
1220	220	30 000	± 10%	176,0	242,0

The data in bold type relate to the standard versions of the relays.

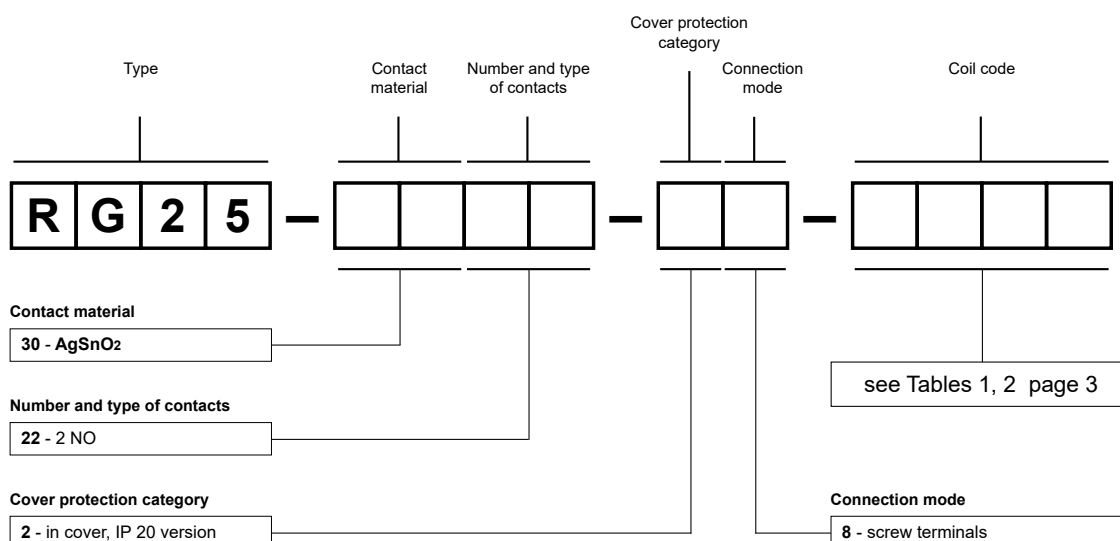
Coil data - AC 50 Hz voltage version

Table 2

Coil code	Rated voltage V AC	Coil resistance at 20 °C Ω	Acceptable resistance	Coil operating range V AC	
				min. (at 20 °C)	max. (at 55 °C)
3012	12	17	± 10%	8,4	13,2
3024	24	76	± 10%	16,8	26,4
3110	110	1 600	± 10%	77,0	121,0
3230	230	6 800	± 10%	161,0	253,0
3400	400	18 600	± 10%	280,0	440,0

The data in bold type relate to the standard versions of the relays.

Ordering codes



Example of ordering code:

RG25-3022-28-3230

relay **RG25**, screw terminals, two normally open contacts, contact material AgSnO₂, coil voltage 230 V AC 50 Hz, in cover IP 20