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Instantaneous Auxiliary Relays (RAG1020)

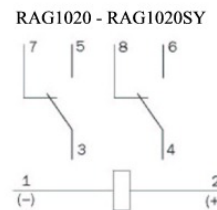
The RAG1020 is an auxiliary relay with two changeover contacts and a transparent cover. Different types of sockets, suitable for different methods of mounting, are available, as shown on the second page of this datasheet. Other instantaneous relays (the RAG2040, RAG3080 and RAG4160) are also available.

New options have been included in the RAG series of relays. Its design, durability and quality guarantee its application in high dependency applications such as power stations, substations, railway, and continuous process industries (petrochemical, rolling mills, cement and chemical industries). Relays in the RAG series of relays have been designed and manufactured in accordance with the most demanding test standards (IEC, EN, IEEE) and bear the CE mark. Their making/breaking capacities, high permanent current and overvoltage capacity allow direct action on HV and MV switchgear.

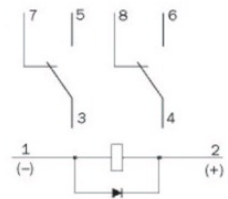
Range and Model Selection

RAG1020		Voltage (AC/DC)	OP	X	X	X	X	X
Type								
Standard								
High speed trip relay (<8ms; Vdc only)	R							
Very high speed trip relay (<5.5ms; Vdc only)	XR							
Diode in parallel with the coil (Vdc only)	DI							
Seismic characteristics	SY							
Seismic characteristics and diode in parallel with the coil (only Vdc)	SYDI							
Options								
High breaking capacity (magnetic arc blow out)	No			0				
	Yes			1				
Front LED	No				0			
	Yes				1			
Contact position mechanical indicator	No					0		
	Yes					1		
Relay trip flag	No						0	
	Yes						1	
Push-to-test button	No							0
	To push the contacts							1
	Fix the contacts							2

Connections



RAG1020DI - RAG1020SYDI
RAG1020R - RAG1020XR



Characteristics

- Mechanical life: 10^7 operations
- Pick-up time: <20 ms
- Drop-out time: <15 ms/Vdc, <50 ms/Vac, <40 ms (DI and all relays with a front LED)
- Operating temperature: -10°C to +55°C
- Storage temperature: -30°C to +70°C
- Operating humidity: 93%/40°C
- Contacts: Permanent current: 10 A
- Instant. current: 80A/200ms; 150A/10ms
- Making capacity: 40A/0.5s/110Vdc
- Breaking capacity: see curves.
- Umax, opened contact: 250Vdc/400Vac
- Standard voltages (UN): 24,48,72,96,110,125,220Vdc/Vac;50/60Hz

Type	Voltage range	Consumptions		
		Permanent	Peak: up to 96Vdc	Peak: over 96Vdc
Standard & DI	+10%/-20%	3.9W; 6.6VA		
R & XR	+10%/-20%	1.5W	0.8A/20ms 2.5A/20ms	0.3A/20ms 0.8A/20ms
SY & SYDI	+25%/-30%	3.9W; 6.6VA		

Vibration and Shock Test (SY Models)

	In Operation	In Transit
IEC 60068-2-6	1g / 5Hz – 150Hz	2g / 5Hz - 150Hz
IEC 60068-2-6	5g / 11ms	15g / 11ms
IEC 60068-2-6		10g / 16ms

Instantaneous Auxiliary Relays (RAG1020)

Construction Standards

- | | |
|---|--|
| <ul style="list-style-type: none"> Electrical test IEC60255-5 Dielectric test 2kV/50Hz/1 min Surge withstand 5 kV/1.2/50µs Insulation >2,000ΩW/500Vdc | <ul style="list-style-type: none"> Inflammability tests UL94: V0 Plastic materials Protection degree relay IEC60529, EN60529: IP40 Climatic tests IEC60068-2 Thermal shock -25°C +70°C |
|---|--|

EMC Tests

- | | |
|--|---|
| <p>EN 60255-22-1</p> <ul style="list-style-type: none"> High frequency burst disturbance test: 1MHz, 400 imp/s, 2 s Common mode: 2.5 kV • Dif. mode: 1kV | <p>EN 61000-4-6</p> <ul style="list-style-type: none"> Conducted disturbances induced by radio frequency fields. 0.15-80MHz, 10V, 80% AM (1kHz) |
| <p>EN 61000-4-4</p> <ul style="list-style-type: none"> Electrical Fast transient burst: 4kV, 2.5kHz, 1min•2kV, 5kHz, 1min | <p>EN 61000-4-2</p> <ul style="list-style-type: none"> Electrostatic discharges: Contact: ±15kV • Air mode: ±15kV |
| <p>EN 61000-4-5</p> <ul style="list-style-type: none"> Surge: 1.2/50µs.(voltage) 8/20µs.(current) Common mode: 2kV • Differential mode: 1kV | <p>EN 61000-4-8</p> <ul style="list-style-type: none"> Power frequency magnetic field: 100A/m 1min•1000 A/m 1s. |
| <p>EN 61000-4-3</p> <ul style="list-style-type: none"> Radiated electromagnetic field: Test level: 80-1000MHz, 10V/m, 80% AM (1kHz) | <p>EN 55011 Class A</p> <ul style="list-style-type: none"> Radio disturbance. Cover: 30-230MHz, 40dB(µV/m) (quasi peak)-10m 230-1000MHz, 47dB(µV/m) (quasi peak)-10m |
| <p>EN 61000-4-3</p> <ul style="list-style-type: none"> Digital telephones radiated electromagnetic field: 900 ±5MHz, 10V/m, 50% (200Hz) 1.89GHz ±10MHz, 10V/m, 50% (200Hz) | <p>Power supply: 0.15-0.5 MHz, 79dB(µV)(peak)/66dB med. value 0.5-5 MHz, 73dB(µV) (peak)/60dB med. value 5-30 MHz, 73dB(µV) (peak)/60dB med. value</p> |

Sockets

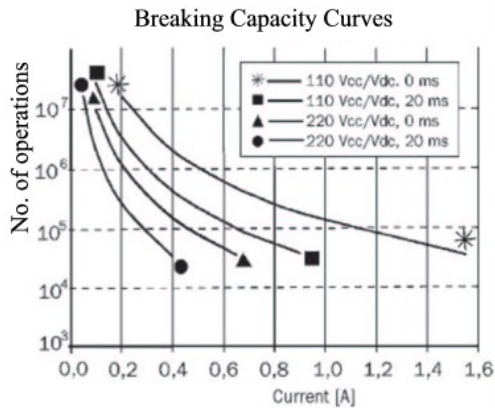
	Screw	Double Faston
Front connection	PAV1 IP10	N/A
Rear connection	PAR1 OP	N/A

Weights

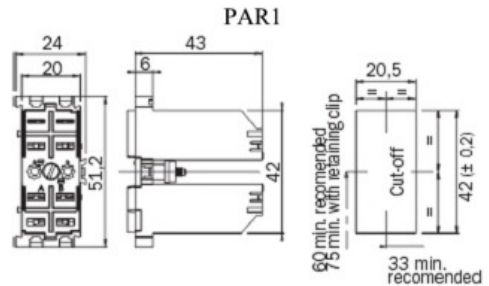
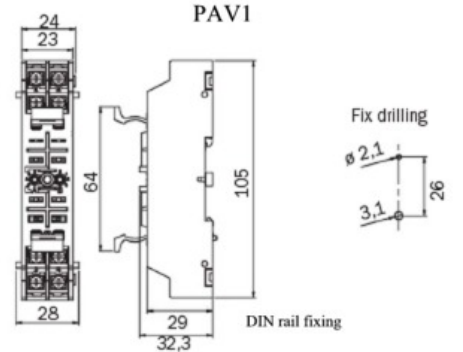
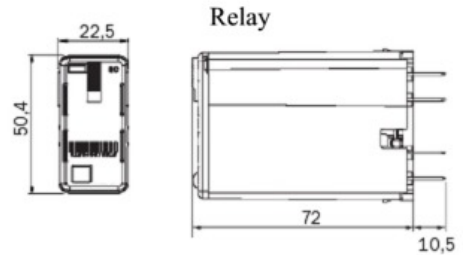
RAG1020 – 125g
 PAV1 IP10 – 60g
 PAR1 OP – 50g.

Accessories

- Retaining clips.
- Function signs on the extraction ring.
- Security pins.



Dimensions and panel cut-out



Minimum torque value: 0,5 Nm
 Maximum torque value: 1 Nm