

THERMAL OVERLOAD RELAYS, RF12 TYPE



 **Lovato**
electric

ENERGY AND AUTOMATION

Thermal overload relays, RF12 type

For BG series mini-contactors

Phase failure sensitive



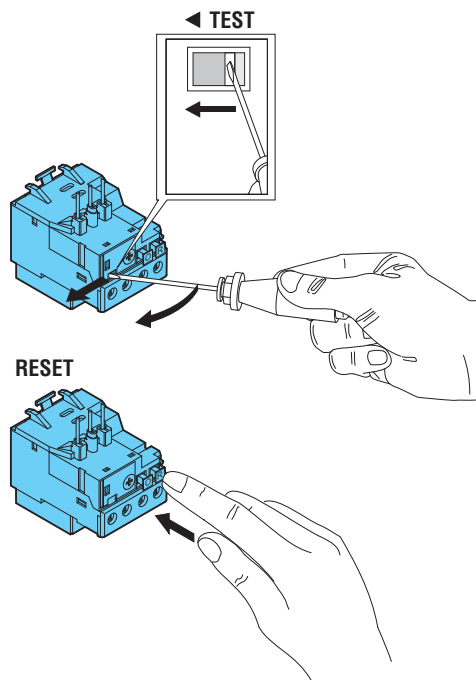
RF12...

Order code	Adjustment range	Protection fuses		Qty per pkg	Wt [kg]
		aM [A]	gG [A]		
	[A]	[A]	[A]	n°	[kg]

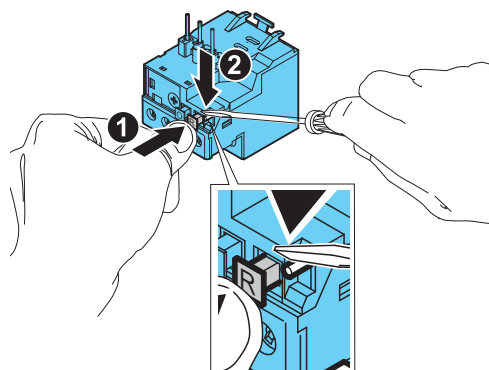
MANUAL OR AUTOMATIC RESETTING.
Direct mounting on BG06, BG09, BG12 mini-contactors.

RF12 0016	0.1 - 0.16	0.25	-	1	0.115
RF12 0025	0.16 - 0.25	0.5	1	1	0.115
RF12 0040	0.25 - 0.4	1	2	1	0.115
RF12 0050	0.35 - 0.5	1	2	1	0.115
RF12 0063	0.45 - 0.63	1	2	1	0.115
RF12 0080	0.55 - 0.8	1	2	1	0.115
RF12 0100	0.75 - 1	2	4	5	0.115
RF12 0130	0.9 - 1.3	2	4	5	0.115
RF12 0160	1.1 - 1.6	2	4	5	0.115
RF12 0200	1.4 - 2	4	6	5	0.115
RF12 0250	1.8 - 2.5	4	6	5	0.115
RF12 0320	2.3 - 3.2	4	10	5	0.115
RF12 0400	2.9 - 4	6	10	5	0.115
RF12 0480	3.5 - 4.8	6	16	5	0.115
RF12 0630	4.5 - 6.3	8	16	5	0.115
RF12 0750	5.5 - 7.5	10	20	5	0.115
RF12 1000	7.2 - 10	16	32	5	0.115
RF12 1250	9 - 12.5	16	32	5	0.115

Thermal overload relay test



From manual to automatic resetting



Three-phase motor powers ①

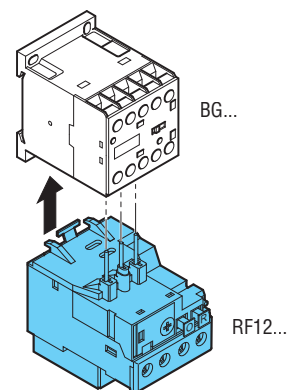
230V [kW]	400V [kW]	415V [kW]	440V [kW]	500V [kW]	690V [kW]
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②	②	②	②	0.06	0.06
②	0.06	0.06	0.06	0.06-0.09	0.09-0.12
0.06	0.09	0.09	0.09-0.12	0.12	0.18
0.06	0.12	0.12	0.12	0.18	0.18-0.25
0.09	0.18	0.18	0.18	0.18	0.25
0.12	0.18	0.18	0.18-0.25	0.25	0.37
0.18	0.25	0.25	0.25-0.37	0.37	0.55
0.18	0.37	0.37	0.37	0.55	0.75
0.25	0.37-0.55	0.55	0.55	0.75	0.75-1.1
0.25-0.37	0.75	0.75	0.75	0.75	1.1
0.37	0.75	0.75	1.1	1.1	1.5
0.55	1.1	1.1	1.1	1.5	2.2
0.75	1.5	1.5	1.5	1.5-2.2	3
1.1	1.5	1.5-2.2	2.2	2.2	3
1.1-1.5	2.2	2.2-3	3	3	4
1.5	3	3	3	4	5.5
2.2	4	4	4	5.5	7.5
3	5.5	5.5	5.5	7.5	7.5

① The indicated powers apply to 4-pole motors; it is advisable to always check that the nameplate motor current is within the relay adjustment range.

② No standard powers ratings exist; select relay according to current consumption.

The RF12 thermal overload relay, thanks to its contained and compact size, together with the BG minicontactors, allows for installation in areas with reduced spaces. The clear identification of the manual or automatic resetting makes the chosen configuration immediate and certain.



Certifications and compliance

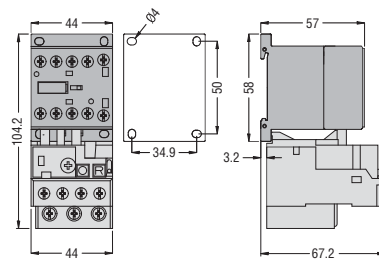
Certifications obtained: cULus.
Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-4-1.

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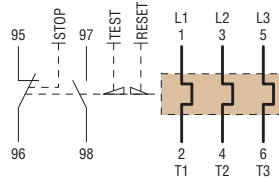
Dimensions (mm)

RF12...
mounted on BG mini-contactor



Wiring diagram

RF12...



Operational characteristics thermal overload relays RF12...

Phase failure sensitive hand or automatic reset		RF12	
POWER CIRCUIT CHARACTERISTICS			
Rated insulation voltage U_i	V	690	
Rated impulse withstand voltage U_{imp}	kV	6	
Frequency limit	Hz	0-400	
Operational range	from	A	0.1
	to	A	12.5
Connection	Direct		
Terminals	Type	Screw & washer	
	Screw	M 4	
	Terminal width	mm	9.8
	Tool	Pozidrive	2
Tightening torque for power terminals		Nm	1.4...2.3
		lbft	1...1.7
Maximum conductor section connectable	AWG	n°	10
	flexible w/o lug	mm ²	6
	flexible c/w lug	mm ²	10
Dissipation per phase	W	0.7-2.6	
AUXILIARY CIRCUIT CHARACTERISTICS			
Available contacts	NO	n°	1
	NC	n°	1
Rated insulation voltage	V	690	
Conventional free air thermal current	A	5	
Terminals with screw and washer	Screw	M3.5	
	Terminal width	mm	8
	Pozidrive	n°	2
Maximum conductor section connectable	Flexible w/o lug	mm ²	2.5
	Flexible c/w lug	mm ²	2.5
Tightening torque for auxiliary terminals		Nm	1
		lbft	0.74
IEC/EN 60947-5-1 designation	A600 - Q600		
AMBIENT CONDITIONS			
Operating temperature	°C	-20...+55	
Storage temperature	°C	-55...+70	
Compensation temperature	°C	-15...+55	
Maximum altitude	m	3000	
Operation position	normale	On vertical plane	
	allowable	±30°	
Mounting	On contactor		
Tripping class	10A		
Particular characteristics	Test button - Trip indicator		



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