THERMAL OVERLOAD RELAYS BR7



Use: Together with mini-contactors for overload protection of motors with operational currents up to 14 A and operational voltages up to 690 V AC.

Design and operation: Relays are three-pole protective devices. Motor current flows through a bimetal release that is built in each pole. If current value jeopardizes the motor winding, the bimetal release switches it off in time. The built-in auxiliary contacts switch. A break contact interrupts the contactor coil supply and thus indirectly also the motor circuit. The make contact can signalize disturbance, it activates an additional function, etc. The contacts are electrically isolated and can thus be used in two different circuits.

A tripping mechanism design assures free tripping, which means that - at fulfilled conditions - switch-off can not be prevented even when the RESET button is pressed. A double tripping lath enables sensibility to phase failure function in compliance with IEC/EN 60947-4-1. The manual switch OFF and TEST functions are joined in one button. When the button is pressed, the break function is performed (the break contact is opened). When the button is pulled out, the operation of testing control elements is performed (both contacts switch). The RESET button is provided with elements enabling selection between a manual and automatic reset to initial position. The delivered relays enable manual reset. The setting scale shows the motor nominal current. In compliance with the standards, tripping shall not occur at 1.05-time set current, while at 1.2-time set current the relay operation shall be reliable. The relay short-circuit protection is enabled with back-up fuses. Their maximal permitted values are stated in the table. Connection terminals of load and control currents are placed separately, which reduces the risk of wrong connection.

BR7 THERMAL OVERLOAD RELAY

up to 12.5 A for K07 contactors

Type	Setting range (A)	Ordering No.	Weight (g)	Packaging (pcs)
BR7-0.16	0.1 ... 0.16	786.050.567	100	1
BR7-0.25	0.16 ... 0.25	786.050.568	100	1
BR7-0.4	0.25 ... 0.4	786.050.569	100	1
BR7-0.5	0.35 ... 0.5	786.050.570	100	1
BR7-0.63	0.45 ... 0.63	786.050.571	100	1
BR7-0.8	0.55 ... 0.8	786.050.572	100	1
BR7-1	0.75 ... 1	786.050.573	100	1
BR7-1.3	0.9 ... 1.3	786.050.574	100	1
BR7-1.6	1.1 ... 1.6	786.050.575	100	1
BR7-2	1.4 ... 2	786.050.576	100	1
BR7-2.5	1.8 ... 2.5	786.050.577	100	1
BR7-3.2	2.3 ... 3.2	786.050.578	100	1
BR7-4	2.9 ... 4	786.050.579	100	1
BR7-4.8	3.5 ... 4.8	786.050.580	100	1
BR7-6.3	4.5 ... 6.3	786.050.581	100	1
BR7-7.5	5.5 ... 7.5	786.050.582	100	1
BR7-10	7 ... 10	786.050.583	100	1
BR7-12.5	9 ... 12.5	786.050.584	100	1

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TECHNICAL DATA

General:

Standards	IEC/EN 60947, VDE 0660, UL
Ambient temperature	open - 25 to + 50°C enclosed - 25 to + 40°C
Protection degree	IP 20
Terminal capacity	solid or stranded: 1 x 0,75 mm2 to 2 x 2,5 mm2 flexible: 1 x 0,75 mm2 to 2 x 2,5 mm2 flexible with end sleeve: 1 x 0,5 mm2 to 2 x 1,5 mm2

Main circuit

Rated insulation voltage U_i	690 V
Rated impulse withstand voltage U_{imp}	6 kV
Rated operational voltage U_e	690 V AC
Conventional thermal current I_{th}	identical to the upper setting range limit
Over-voltage category	III
Pollution degree	3
Trip class in compliance with IEC/EN 60947-4-1	10 A
Power loss	approx. 2 W / pole
Compensation of ambient temperature influence	-in compliance with fig.7; IEC/EN 60947-4-1

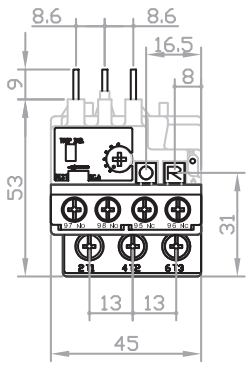
Auxiliary circuit

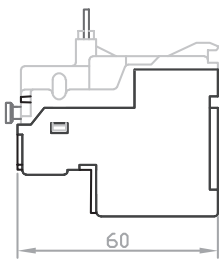
Rated insulation voltage U_i	690 V
Rated impulse withstand voltage U_{imp}	6 kV
Rated operational voltage U_e	500 V AC. 220 V DC
Over-voltage category	III
Pollution degree	3
Conventional thermal current I_{th}(both contacts)	6A
Rated operational currents I_e	

Utilization category AC-15:	make contact	break contact
220/240 V:	1.5 A	1.5 A
380/415 V:	0.5 A	0.7 A
500 V:	0.3 A	0.5 A

Utilization category DC-13	both contacts:
24 V:	0.9 A
60 V:	0.75 A
110 V:	0.4 A
220 V:	0.2 A

Dimensions





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