Motor protection relays



- *Thermal overload relays for currents between 0.09 and 420A*
- *Phase failure sensitive and non phase failure sensitive versions*
- *Automatic and/or manual resetting*
- *Independent or direct mounting on contactor*
- *Thermistor protection relay.*

Thermal overload relays

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For BG series mini-contactors	4-	2
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Electronic relay

Thermistor protection relay	4-	9



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FOR BG SERIES MINI-CONTACTORS
- Type RF9, phase failure sensitive, manual resetting
- Type RFA9, phase failure sensitive, automatic resetting
- Type RFN9, non-phase failure sensitive, manual resetting
- Type RFNA9, non-phase failure sensitive, automatic resetting.



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FOR BF SERIES CONTACTORS
- Type RF38, phase failure sensitive, manual or automatic resetting
- Type RFN38, non phase failure sensitive, manual or automatic resetting
- Type RF95, phase failure sensitive, manual resetting
- Type RFA95, phase failure sensitive, automatic resetting
- Type RFN95, non phase failure sensitive, manual resetting
- Type RFNA95, non phase failure sensitive, automatic resetting.



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FOR B SERIES CONTACTORS
- Type RF200 and RF420, phase failure sensitive, manual or automatic resetting
- Type RFN200 and RFN420, non phase failure sensitive, manual or automatic resetting.



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THERMISTOR PROTECTION RELAY
- 24VDC and 24 to 240VAC supply types.

RF38 features

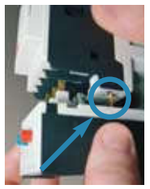
FRONT PROTECTION COVER OF THERMAL OVERLOAD RELAYS
A sealable protection cover is available. When fitted on to the relay front, it precludes all possible adjuster tampering and involuntary activation of the “Reset” and “Stop” buttons of the thermal overload relay.



CLEAR IDENTIFICATION OF THERMAL OVERLOAD RELAY MANUAL OR AUTOMATIC RESETTING
The RF38 thermal overload relay is supplied configured for manual resetting. Breaking the plate below the “Reset” button allows for the automatic resetting configuration.



FIXING EASE OF THE THERMAL OVERLOAD RELAY
While the thermal overload relay is being linked to the contactor, its auxiliary contact fits on and connects to the coil terminal by rigid terminal. Complete relay fixing is done in a single operation, without the need of other connections.



SEALABLE RELAY COVER
A handy closing flap feature excludes any tampering of the thermal overload relay adjuster.



Motor protection relays

Thermal overload relays for BG series mini-contactors

Phase failure sensitive



11 RF9...



11 RFA9...

Order code	Adjustment range	Protection fuses aM	Protection fuses gG	Qty per pkg	Wt
	[A]	[A]	[A]	n°	[kg]
MANUAL RESETTING. Direct mounting on BG06, BG09, BG12 mini-contactors.					
11 RF9 015	0.09 - 0.15	0.25	—	1	0.123
11 RF9 023	0.14 - 0.23	0.5	—	1	0.123
11 RF9 033	0.2 - 0.33	0.5	1	1	0.123
11 RF9 05	0.3 - 0.5	1	2	1	0.123
11 RF9 075	0.45 - 0.75	1	2	1	0.123
11 RF9 1	0.6 - 1	2	4	5	0.123
11 RF9 1V5	0.9 - 1.5	2	4	5	0.123
11 RF9 2V3	1.4 - 2.3	4	6	5	0.123
11 RF9 33	2 - 3.3	4	10	5	0.123
11 RF9 5	3 - 5	6	16	5	0.123
11 RF9 75	4.5 - 7.5	8	20	5	0.123
11 RF9 10	6 - 10	10	32	5	0.123
11 RF9 15	9 - 15	16	40	5	0.123
AUTOMATIC RESETTING. Direct mounting on BG06, BG09, BG12 mini-contactors.					
11 RFA9 015	0.09 - 0.15	0.25	—	1	0.123
11 RFA9 023	0.14 - 0.23	0.5	—	1	0.123
11 RFA9 033	0.2 - 0.33	0.5	1	1	0.123
11 RFA9 05	0.3 - 0.5	1	2	1	0.123
11 RFA9 075	0.45 - 0.75	1	2	1	0.123
11 RFA9 1	0.6 - 1	2	4	1	0.123
11 RFA9 1V5	0.9 - 1.5	2	4	1	0.123
11 RFA9 2V3	1.4 - 2.3	4	6	1	0.123
11 RFA9 33	2 - 3.3	4	10	1	0.123
11 RFA9 5	3 - 5	6	16	1	0.123
11 RFA9 75	4.5 - 7.5	8	20	1	0.123
11 RFA9 10	6 - 10	10	32	1	0.123
11 RFA9 15	9 - 15	16	40	1	0.123

Three-phase motor powers ❶

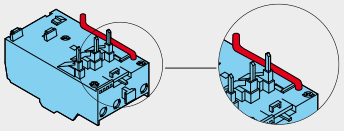
230V	400V	415V	440V	500V	690V
[kW]	[kW]	[kW]	[kW]	[kW]	[kW]
❷	❷	❷	❷	❷	❷
❷	❷	❷	❷	❷	❷
❷	❷	❷	❷	❷	❷
❷	❷	❷	❷	❷	❷
❷	❷	❷	❷	❷	0.37
❷	❷	❷	0.37	0.37	0.55
❷	❷	0.55	0.55	0.55	0.75
0.37	0.55-0.75	0.75	0.75	1.1	1.1-1.5
0.55	1.1	1.1	1.1-1.5	1.5	2.2
0.75-1.1	1.5	1.5-2.2	2.2	2.2	3-3.7
1.5	2.2-3	3-3.7	3-3.7	3-3.7	4
2.2	3.7-4	4	3.7-4	4-5.5	—
3.2	5.5	5.5-7.5	5.5	—	—
❷	❷	❷	❷	❷	❷
❷	❷	❷	❷	❷	❷
❷	❷	❷	❷	❷	❷
❷	❷	❷	❷	❷	❷
❷	❷	❷	❷	❷	0.37
❷	❷	❷	0.37	0.37	0.55
❷	❷	0.55	0.55	0.55	0.75
0.37	0.55-0.75	0.75	0.75	1.1	1.1-1.5
0.55	1.1	1.1	1.1-1.5	1.5	2.2
0.75-1.1	1.5	1.5-2.2	2.2	2.2	3-3.7
1.5	2.2-3	3-3.7	3-3.7	3-3.7	4
2.2	3.7-4	4	3.7-4	4-5.5	—
3.2	5.5	5.5-7.5	5.5	—	—

❶ 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.

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

NOTE: To facilitate connection between the auxiliary NC contact of the RF..9 thermal relay and terminal A2 of the contactor, insert the conductor into the appropriate conduit as shown.

RF9...
RFA9...



Certifications and compliance

Certifications obtained:

Type	cULus	CSA	GOST	CCC
RF9... - RFA9...	●	●	●	●

● Certified products.

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

Accessories page 4-8

Dimensions page D-16

Wiring diagrams page W-7

Technical characteristics pages TC-30 and 31

Non phase failure sensitive



11 RFN9...



11 RFNA9...

Order code	Adjustment range	Protection fuses aM	Protection fuses gG	Qty per pkg	Wt
	[A]	[A]	[A]	n°	[kg]
MANUAL RESETTING. Direct mounting on BG06, BG09, BG12 mini-contactors.					
11 RFN9 015	0.09 - 0.15	0.25	—	1	0.123
11 RFN9 023	0.14 - 0.23	0.5	—	1	0.123
11 RFN9 033	0.2 - 0.33	0.5	1	1	0.123
11 RFN9 05	0.3 - 0.5	1	2	1	0.123
11 RFN9 075	0.45 - 0.75	1	2	1	0.123
11 RFN9 1	0.6 - 1	2	4	1	0.123
11 RFN9 1V5	0.9 - 1.5	2	4	1	0.123
11 RFN9 2V3	1.4 - 2.3	4	6	1	0.123
11 RFN9 33	2 - 3.3	4	10	1	0.123
11 RFN9 5	3 - 5	6	16	1	0.123
11 RFN9 75	4.5 - 7.5	8	20	1	0.123
11 RFN9 10	6 - 10	10	32	1	0.123
11 RFN9 15	9 - 15	16	40	1	0.123
AUTOMATIC RESETTING. Direct mounting on BG06, BG09, BG12 mini-contactors.					
11 RFNA9 015	0.09 - 0.15	0.25	—	1	0.123
11 RFNA9 023	0.14 - 0.23	0.5	—	1	0.123
11 RFNA9 033	0.2 - 0.33	0.5	1	1	0.123
11 RFNA9 05	0.3 - 0.5	1	2	1	0.123
11 RFNA9 075	0.45 - 0.75	1	2	1	0.123
11 RFNA9 1	0.6 - 1	2	4	1	0.123
11 RFNA9 1V5	0.9 - 1.5	2	4	1	0.123
11 RFNA9 2V3	1.4 - 2.3	4	6	1	0.123
11 RFNA9 33	2 - 3.3	4	10	1	0.123
11 RFNA9 5	3 - 5	6	16	1	0.123
11 RFNA9 75	4.5 - 7.5	8	20	1	0.123
11 RFNA9 10	6 - 10	10	32	1	0.123
11 RFNA9 15	9 - 15	16	40	1	0.123

Three-phase motor powers ❶

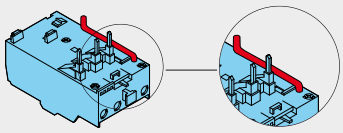
230V [kW]	400V [kW]	415V [kW]	440V [kW]	500V [kW]	690V [kW]
❷	❷	❷	❷	❷	❷
❷	❷	❷	❷	❷	❷
❷	❷	❷	❷	❷	❷
❷	❷	❷	❷	❷	❷
❷	❷	❷	❷	❷	0.37
❷	❷	❷	0.37	0.37	0.55
❷	❷	0.55	0.55	0.55	0.75
0.37	0.55-0.75	0.75	0.75	1.1	1.1-1.5
0.55	1.1	1.1	1.1-1.5	1.5	2.2
0.75-1.1	1.5	1.5-2.2	2.2	2.2	3-3.7
1.5	2.2-3	3-3.7	3-3.7	3-3.7	4
2.2	3.7-4	4	3.7-4	4-5.5	—
3.2	5.5	5.5-7.5	5.5	—	—
❷	❷	❷	❷	❷	❷
❷	❷	❷	❷	❷	❷
❷	❷	❷	❷	❷	❷
❷	❷	❷	❷	❷	❷
❷	❷	❷	❷	❷	0.37
❷	❷	❷	0.37	0.37	0.55
❷	❷	0.55	0.55	0.55	0.75
0.37	0.55-0.75	0.75	0.75	1.1	1.1-1.5
0.55	1.1	1.1	1.1-1.5	1.5	2.2
0.75-1.1	1.5	1.5-2.2	2.2	2.2	3-3.7
1.5	2.2-3	3-3.7	3-3.7	3-3.7	4
2.2	3.7-4	4	3.7-4	4-5.5	—
3.2	5.5	5.5-7.5	5.5	—	—

❶ 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.

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

NOTE: To facilitate connection between the auxiliary NC contact of the RFN...9 thermal relay and terminal A2 of the contactor, insert the conductor into the appropriate conduit as shown.

RFN9...
RFNA9...



Certifications and compliance

Certifications obtained:

Type	cULus	CSA	GOST	CCC
RFN9... - RFNA9...	●	●	●	●

● Certified products.

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

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Accessories page 4-8

Dimensions page D-16

Wiring diagrams page W-7

Technical characteristics pages TC-30 and 31

Motor protection relays

Thermal overload relays for BF series contactors

Phase failure sensitive



RF38...



11 RF95 3...



11 RFA95 3...

Order code	Adjustment range	Protection fuses aM	Protection fuses gG	Qty per pkg	Wt	Three-phase motor powers ❶ 230V	400V	415V	440V	500V	690V
	[A]	[A]	[A]	n°	[kg]	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]
MANUAL OR AUTOMATIC RESETTING. Direct mounting on BF09 - BF38 contactors. Independent mounting with RFX38 04 base.											
RF38 0016	0.1-0.16	0.25	—	1	0.140	❷	❷	❷	❷	❷	0.06
RF38 0025	0.16-0.25	0.5	—	1	0.140	❷	0.06	0.06	0.06-0.09	0.06-0.09	0.09-0.12
RF38 0040	0.25-0.4	0.5	1	1	0.140	0.06	0.09	0.09	0.12	0.12	0.18
RF38 0063	0.4-0.63	1	2	1	0.140	0.09	0.12-0.18	0.12-0.18	0.18	0.18	0.25
RF38 0100	0.63-1	2	4	5	0.140	0.12	0.25	0.25	0.37	0.25-0.37	0.37-0.55
RF38 0160	1-1.6	2	4	5	0.140	0.18-0.25	0.37-0.55	0.37-0.55	0.55	0.55-0.75	0.75
RF38 0250	1.6-2.5	4	6	5	0.140	0.37	0.75	0.75	0.75-1.1	1.1	1.1-1.5
RF38 0400	2.5-4	4	6	5	0.140	0.55-0.75	1.1-1.5	1.1-1.5	1.1	1.5-2.2	2.2-3
RF38 0650	4-6.5	8	16	5	0.140	1.1-1.5	2.2	2.2	2.2-3	3	4
RF38 1000	6.3-10	10	20	5	0.140	1.5-2.2	3-4	4	4	4-5.5	5.5-7.5
RF38 1400	9-14	16	32	5	0.140	3	5.5	5.5	5.5-7.5	5.5-7.5	11
RF38 1800	13-18	25	40	5	0.140	4	7.5	7.5-9	9	11	15
RF38 2300	17-23	25	50	5	0.140	5.5	11	9-11	11	11	18.5
RF38 2500	20-25	32	50	5	0.140	5.5	11	11	11	15	22
RF38 3200	24-32	40	63	1	0.140	7.5	15	15	15	18.5	30
RF38 3800	32-38	45	63	1	0.140	11	18.5	18.5	18.5	22	30
MANUAL RESETTING. Direct mounting on BF50-BF110 contactors. Complete with G261 links. Independent mounting with G270 base.											
11 RF95 3 33	20 - 33	40	63	1	0.348	7.5	11-15	11-15	15-18.5	15-18.5	22-25
11 RF95 3 42	28 - 42	45	80	1	0.348	9-10	15-18.5	18.5-22	18.5-22	22-25	30-33
11 RF95 3 50	35 - 50	50	100	1	0.348	10-11	22	25	25	30	37-40
11 RF95 3 65	46 - 65	80	125	1	0.348	15-18.5	25-30	30-33	30-33	33-40	45-55
11 RF95 3 82	60 - 82	100	200	1	0.348	22	33-40	37-45	37-45	45-55	59-75
11 RF95 3 95	70 - 95	100	200	1	0.348	22-25	40-45	45-51	45-55	55-63	75-80
11 RF95 3 110	90 - 110	125	200	1	0.348	30	55	55	55	75	90
AUTOMATIC RESETTING. Direct mounting on BF50-BF110 contactors. Complete with G261 links. Independent mounting with G270 base.											
11 RFA95 3 33	20 - 33	40	63	1	0.348	7.5	11-15	11-15	15-18.5	15-18.5	22-25
11 RFA95 3 42	28 - 42	45	80	1	0.348	9-10	15-18.5	18.5-22	18.5-22	22-25	30-33
11 RFA95 3 50	35 - 50	50	100	1	0.348	10-11	22	25	25	30	37-40
11 RFA95 3 65	46 - 65	80	125	1	0.348	15-18.5	25-30	30-33	30-33	33-40	45-55
11 RFA95 3 82	60 - 82	100	200	1	0.348	22	33-40	37-45	37-45	45-55	59-75
11 RFA95 3 95	70 - 95	100	200	1	0.348	22-25	40-45	45-51	45-55	55-63	75-80
11 RFA95 3 110	90 - 110	125	200	1	0.348	30	55	55	55	75	90

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

Certifications and compliance

Certifications obtained:

Type	c UL us	CSA	GOST	CCC	Registers of shipping RINA	LROS
RF38	●	—	●	●	▲	▲
RF95	●	●	●	●	●	●
RFA95	●	●	●	●	—	—

● Certified products.
▲ Pending completion.

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

Accessories page 4-8
Dimensions pages D-16 and 17
Wiring diagrams page W-7
Technical characteristics pages TC-30 and 31

Non phase failure sensitive



RFN38...



11 RFN95 3...



11 RFNA95 3...

Order code	Adjustment range	Protection fuses aM	Protection fuses gG	Qty per pkg	Wt	Three-phase motor powers ❶ 230V	400V	415V	440V	550V	690V
	[A]	[A]	[A]	n°	[kg]	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]
MANUAL OR AUTOMATIC RESETTING. Direct mounting on BF09 - BF38 contactors. Independent mounting with RFX38 04 base.											
RFN38 0016	0.1-0.16	0.25	—	1	0.140	❷	❷	❷	❷	❷	0.06
RFN38 0025	0.16-0.25	0.5	—	1	0.140	❷	0.06	0.06	0.06-0.09	0.06-0.09	0.09-0.12
RFN38 0040	0.25-0.4	0.5	1	1	0.140	0.06	0.09	0.09	0.12	0.12	0.18
RFN38 0063	0.4-0.63	1	2	1	0.140	0.09	0.12-0.18	0.12-0.18	0.18	0.18	0.25
RFN38 0100	0.63-1	2	4	1	0.140	0.12	0.25	0.25	0.37	0.25-0.37	0.37-0.55
RFN38 0160	1-1.6	2	4	1	0.140	0.18-0.25	0.37-0.55	0.37-0.55	0.55	0.55-0.75	0.75
RFN38 0250	1.6-2.5	4	6	1	0.140	0.37	0.75	0.75	0.75-1.1	1.1	1.1-1.5
RFN38 0400	2.5-4	4	6	1	0.140	0.55-0.75	1.1-1.5	1.1-1.5	1.1	1.5-2.2	2.2-3
RFN38 0650	4-6.5	8	16	1	0.140	1.1-1.5	2.2	2.2	2.2-3	3	4
RFN38 1000	6.3-10	10	20	1	0.140	1.5-2.2	3-4	4	4	4-5.5	5.5-7.5
RFN38 1400	9-14	16	32	1	0.140	3	5.5	5.5	5.5-7.5	5.5-7.5	11
RFN38 1800	13-18	25	40	1	0.140	4	7.5	7.5-9	9	11	15
RFN38 2300	17-23	25	50	1	0.140	5.5	11	9-11	11	11	18.5
RFN38 2500	20-25	32	50	1	0.140	5.5	11	11	11	15	22
RFN38 3200	24-32	40	63	1	0.140	7.5	15	15	15	18.5	30
RFN38 3800	32-38	45	63	1	0.140	11	18.5	18.5	18.5	22	30
MANUAL RESETTING. Direct mounting on BF50-BF110 contactors. Complete with G261 links. Independent mounting with G270 base.											
11 RFN95 3 42	28 - 42	45	80	1	0.343	9-10	15-18.5	18.5-22	18.5-22	22-25	30-33
11 RFN95 3 50	35 - 50	50	100	1	0.343	10-11	22	25	25	30	37-40
11 RFN95 3 65	46 - 65	80	125	1	0.343	15-18.5	25-30	30-33	30-33	33-40	45-55
11 RFN95 3 82	60 - 82	100	200	1	0.343	22	33-40	37-45	37-45	45-55	59-75
11 RFN95 3 95	70 - 95	100	200	1	0.343	22-25	40-45	45-51	45-55	55-63	75-80
11 RFN95 3 110	90 - 110	125	200	1	0.343	30	55	55	55	75	90
AUTOMATIC RESETTING. Direct mounting on BF50-BF110 contactors. Complete with G261 links. Independent mounting with G270 base.											
11 RFNA95 3 42	28 - 42	45	80	1	0.343	9-10	15-18.5	18.5-22	18.5-22	22-25	30-33
11 RFNA95 3 50	35 - 50	50	100	1	0.343	10-11	22	25	25	30	37-40
11 RFNA95 3 65	46 - 65	80	125	1	0.343	15-18.5	25-30	30-33	30-33	33-40	45-55
11 RFNA95 3 82	60 - 82	100	200	1	0.343	22	33-40	37-45	37-45	45-55	59-75
11 RFNA95 3 95	70 - 95	100	200	1	0.343	22-25	40-45	45-51	45-55	55-63	75-80
11 RFNA95 3 110	90 - 110	125	200	1	0.343	30	55	55	55	75	90

❶ 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.

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

Certifications and compliance

Certifications obtained:

Type	cULus	CSA	GOST	CCC
RFN38	●	—	●	●
RFN95	●	●	●	●
RFNA95	●	●	●	●

● Certified products.

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

Accessories page 4-8

Dimensions pages D-16 and 17

Wiring diagrams page W-7

Technical characteristics pages TC-30 and 31

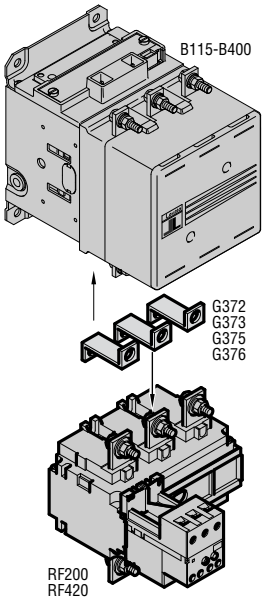
Motor protection relays

Thermal overload relays for B series contactors

Phase failure sensitive



RF200... - RF420...



Order code	Adjustment range	Protection fuses aM	Protection fuses gG	Qty per pkg	Wt
	[A]	[A]	[A]	n°	[kg]
MANUAL OR AUTOMATIC RESETTING. Independent screw fixing or direct mounting on contactors: B115-B145-B180 using G372 links B250-B310-B400 using G373 links					
RF200 100	60-100	100	160	1	1.980
RF200 125	75-125	125	200	1	1.980
RF200 150	90-150	160	250	1	1.980
RF200 200	120-200	200	315	1	1.980
Independent screw fixing or direct mounting on contactors: B145-B180 using G375 links B250-B310-B400 using G376 links					
RF420 250	150-250	250	400	1	2.470
RF420 300	180-300	315	500	1	2.470
RF420 420	250-420	400	630	1	2.470

RELAYS FOR B500 AND B630 CONTACTORS

MANUAL OR AUTOMATIC RESETTING.
Contact our Customer Service (Tel. +39 035 4282422; email: service@LovatoElectric.com) for the relative order codes and detailed information.

Three-phase motor powers❶

230V [kW]	400V [kW]	415V [kW]	440V [kW]	550V [kW]	690V [kW]
18.5-25	33-51	37-55	37-59	45-63	59-92
22-37	40-63	45-63	51-75	55-80	75-110
25-45	51-80	55-80	55-92	63-100	92-140
37-59	75-100	75-100	75-110	92-140	129-184
45-75	92-132	92-147	100-150	110-162	140-220
55-92	100-162	110-162	129-184	129-198	180-280
75-110	129-198	147-220	150-220	180-280	250-368

NOTE: For 1000V powers, contact our Customer Service (Tel. +39 035 4282422; email: service@LovatoElectric.com).

❶ 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.

Certifications and compliance
Certifications obtained:

Type	c UL us	GOST
RF200	●	●
RF420	●	●

● Certified products.

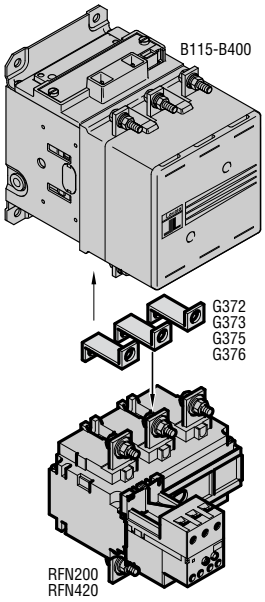
Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-4-1.

Accessories page 4-8
Dimensions pages D-18, 19 and 27
Wiring diagrams page W-7
Technical characteristics pages TC-30 and 31

Non phase failure sensitive



RFN200... - RFN420...



Order code	Adjustment range	Protection fuses aM	Protection fuses gG	Qty per pkg	Wt
	[A]	[A]	[A]	n°	[kg]
MANUAL OR AUTOMATIC RESETTING. Independent screw fixing or direct mounting on contactors: B115-B145-B180 using G372 links B250-B310-B400 using G373 links					
RFN200 100	60-100	100	160	1	1.980
RFN200 125	75-125	125	200	1	1.980
RFN200 150	90-150	160	250	1	1.980
RFN200 200	120-200	200	315	1	1.980
Independent screw fixing or direct mounting on contactors: B145-B180 using G375 links B250-B310-B400 using G376 links					
RFN420 250	150-250	250	400	1	2.470
RFN420 300	180-300	315	500	1	2.470
RFN420 420	250-420	400	630	1	2.470

RELAYS FOR B500 AND B630 CONTACTORS.

MANUAL OR AUTOMATIC RESETTING.
Contact our Customer Service (Tel. +39 035 4282422; email: service@LovatoElectric.com) for the relative order codes and detailed information.

Three-phase motor powers❶

230V [kW]	400V [kW]	415V [kW]	440V [kW]	550V [kW]	690V [kW]
18.5-25	33-51	37-55	37-59	45-63	59-92
22-37	40-63	45-63	51-75	55-80	75-110
25-45	51-80	55-80	55-92	63-100	92-140
37-59	75-100	75-100	75-110	92-140	129-184
45-75	92-132	92-147	100-150	110-162	140-220
55-92	100-162	110-162	129-184	129-198	180-280
75-110	129-198	147-220	150-220	180-280	250-368

NOTE: For 1000V powers, contact our Customer Service (Tel. +39 035 4282422; email: service@LovatoElectric.com).

❶ 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.

Certifications and compliance

Certifications obtained:

Type	cULus	GOST
RFN200	●	●
RFN420	●	●

● Certified products.

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

Motor protection relays

Add-on blocks and accessories for thermal overload relays



RFX38 02



RFX38 03



11 G262



RFX38 04



11 G228



11 G244

Order code	For relay		Qty per pkg	Wt
			n°	[kg]
Set of links for direct contactor mounting.				
11 G372	RF...200 on contactor	B115-B145-B180	1	0.082
11 G373		B250-B310-B400	1	0.100
11 G375	RF...420 on contactor	B145-B180	1	0.103
11 G376		B250-B310-B400	1	0.165
Protection cover for thermal overload relay-contactor assembly.				
RFX38 02	RF38 on contactor BF09 - BF12 - BF18 - BF25		10	0.007
RFX38 03	RF38 on contactor BF26-BF32 - BF38		10	0.010
Protection shrouds for power terminals.				
11 G262❶	For RF...95...3		10	0.004
11 G361	RF...200		6	0.026
11 G363	RF...420		6	0.046
Independent mounting. Screw fixing or 35mm DIN rail (IEC/EN 60715) mounting.				
RFX38 04	RF...38		5	0.042
11 G270❷	RF...95		10	0.094
Electrical reset.				
11 G228❸	RF...9 - RF...95		5	0.058
Sealing device.				
RFX38 01	RF...38 - RF...200 - RF...420		10	0.002
11 G233	RF...9 - RF...95		1	0.002
Electric button NO.				
11 G244	RF...9 - RF...95		10	0.011
Marking element.				
11 RB6	RF...9 - RF...95		100	0.001
Alphanumeric symbols.				
3958❹	RF...9 - RF...95		100	0.002

❶ Front IP20 protection is warranted to contactor-thermal relay connections.
❷ Independent mounting base for any RF95 relay.
Remove the links fixed on RF...95 and use those supplied with the base.
❸ Replace with voltage digit.
Standard voltages are:
– AC 50/60Hz 24V / 48V / 110-125V / 220-240V / 380-415V.
❹ Replace with the required alphanumeric symbol.
Each package contains 100 pieces of the same symbol.

Electrical reset (G228) operational characteristics

Control circuit voltage AC (50/60Hz)	V	12 - 550
Power consumption in AC	VA	300
Minimum reset time	ms	20

NOTE: Coils can remain supplied for a maximum interval of 500ms; 3 consecutive operations are allowed, followed by a 5 minute interval.
It is recommended to use the wiring diagram on page W-7.

Certification and compliance

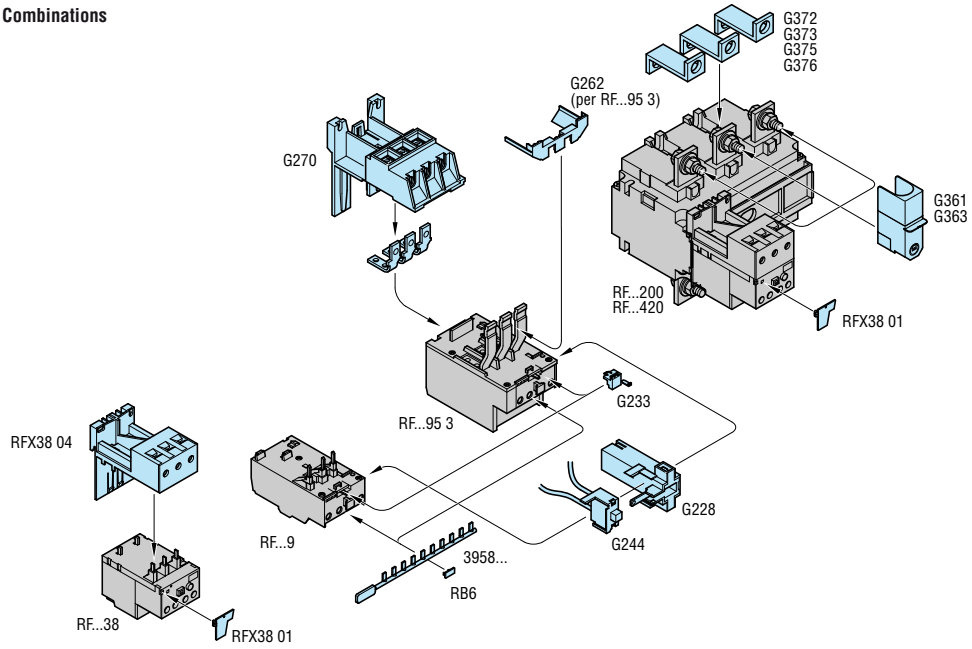
Certifications obtained:

Tipo	c UL us	CSA	GOST
G361	●	●	●
G362	●	●	●
G372	●	●	●
G373	●	●	●
G375	●	●	●
G376	●	●	●
G270	●	—	●
RFX38 04	●	—	●

● Certified products.
"Recognized". Products having this type of marking are intended for use as components of complete workshop-assembled equipment.

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

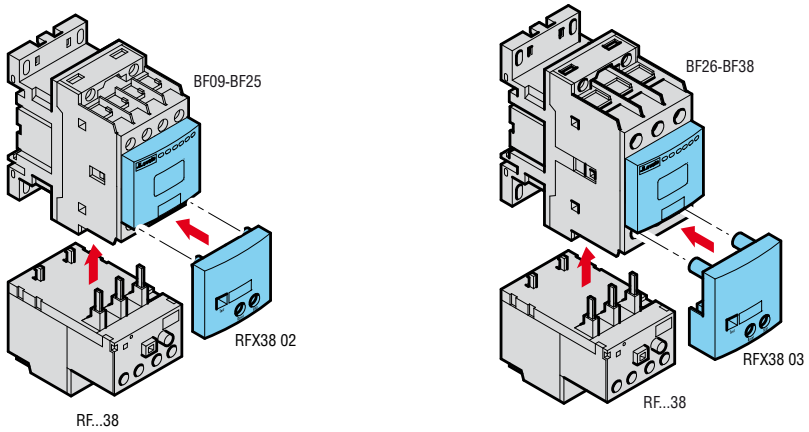
Combinations



Dimensions page D-27
Wiring diagrams page W-7
Technical characteristics pages TC-30 and 31

Add-on blocks and accessories for thermal relays. Electronic relay and accessory

Protection cover for thermal overload relay-contactor assembly



Thermistor protection relay



31 DRPT...

Order code	Rated auxiliary supply voltage	Qty per pkg	Wt.
	[V]	n°	[kg]
DC supply (version for 35 mm DIN rail IEC/EN 60715).			
31 DRPTC 24	24VDC❶	1	0.275
AC supply (version for 35 mm DIN rail IEC/EN 60715).			
31 DRPT 24	24VAC	1	0.275
31 DRPT 110	110VAC	1	0.275
31 DRPT 220	220-240VAC	1	0.275
ACCESSORY			
Order code	Description	Qty per pkg	Wt
		n°	[kg]
31 CE106	Adapter for screw fixing of DRPT relay on mounting plate.	10	0.002

❶ Galvanic isolation between supply and internal circuit does not exist.

General characteristics
The DRPT is a thermal protection relay of motors equipped with thermistor PTC sensors immersed in the winding heads. The maximum number of thermistors to be used is limited by the resistance of all the sensors connected in series; total ohmic value is not to exceed 1.5kΩ at 25°C.
The DRPT type has fail-safe operation: the protective feature trips even in the case the PTC circuit is disconnected or there is a lack of voltage.

Operational characteristics
- Supply circuit
  - Rated frequency: 50-60Hz for AC types only
  - Operational limits: 0.85-1.1 Us
  - Maximum heat dissipation: 2.5W
  - Connection: permanent.
- Measuring circuit
  - Type of connectable PTC sensor: According to DIN 44081
  - Total PTC resistance at 25°C: ≤1.5kΩ
  - Tripping resistance: 2.7-3.1kΩ
  - Resetting resistance: 1.5-1.8kΩ
  - Voltage at PTC terminals: ≤ 2.5VDC.
- Remote resetting
  - Control: NC contact opening
  - Contact voltage: 5VDC
  - Current consumption: about 1mA.
- Output relay
  - Arrangement: 1 relay with 2 changeover contacts
  - Rated operational voltage Ue: 250VAC
  - Conventional free air thermal current Ith: 5A
  - Designation to IEC/EN 60947-5-1: B300
  - Mechanical life: $50x10^6$ cycles
  - Electrical life (with rated load): $2x10^5$ cycles.
- Indications
  - Green LED indicator for power ON
  - Red LED indicator for relay state TRIP
- Ambient conditions
  - Operating temperature: -10...+60°C
  - Storage temperature: -30...+80°C.
- Housing
  - Snap on 35mm DIN rail (IEC/EN 60715)
  - For screw fixing, use CE106 adapter
  - Degree of protection
    - IP40 housing
    - IP20 terminals.

Reference standards
Compliant with standards: IEC/EN 60255-6.

Dimensions page D-27

Wiring diagrams page W-7