

Motor protection relays

Thermal overload relays for BG series mini-contactors

Phase failure / single phase sensitive Three poles (three phase)

3



11 RF9...



11 RFA9...

Order code	Adjustment range	Protection fuses			Qty per pkg	Wt [kg]
		IEC aM	gG	UL K5		
	[A]	[A]	[A]	[A]	n°	

MANUAL RESETTING.

Direct mounting on BG06, BG09, BG12 mini-contactors.

11 RF9 015	0.09 - 0.15	0.25	—	—	1	0.116
11 RF9 023	0.14 - 0.23	0.5	—	1	1	0.116
11 RF9 033	0.2 - 0.33	0.5	1	1	1	0.116
11 RF9 05	0.3 - 0.5	1	2	3	1	0.116
11 RF9 075	0.45 - 0.75	1	2	3	1	0.116
11 RF9 1	0.6 - 1	2	4	3	5	0.116
11 RF9 1V5	0.9 - 1.5	2	4	6	5	0.116
11 RF9 2V3	1.4 - 2.3	4	6	10	5	0.116
11 RF9 33	2 - 3.3	4	10	10	5	0.116
11 RF9 5	3 - 5	6	16	15	5	0.116
11 RF9 75	4.5 - 7.5	8	20	25	5	0.116
11 RF9 10	6 - 10	10	32	30	5	0.116
11 RF9 15	9 - 15	16	40	45	5	0.116

AUTOMATIC RESETTING.

Direct mounting on BG06, BG09, BG12 mini-contactors.

11 RFA9 015	0.09 - 0.15	0.25	—	—	1	0.116
11 RFA9 023	0.14 - 0.23	0.5	—	1	1	0.116
11 RFA9 033	0.2 - 0.33	0.5	1	1	1	0.116
11 RFA9 05	0.3 - 0.5	1	2	3	1	0.116
11 RFA9 075	0.45 - 0.75	1	2	3	1	0.116
11 RFA9 1	0.6 - 1	2	4	3	1	0.116
11 RFA9 1V5	0.9 - 1.5	2	4	6	1	0.116
11 RFA9 2V3	1.4 - 2.3	4	6	10	1	0.116
11 RFA9 33	2 - 3.3	4	10	10	1	0.116
11 RFA9 5	3 - 5	6	16	15	1	0.116
11 RFA9 75	4.5 - 7.5	8	20	25	1	0.116
11 RFA9 10	6 - 10	10	32	30	1	0.116
11 RFA9 15	9 - 15	16	40	45	1	0.116

NOTE: Two-pole (single phase) versions are available on request.

Add the letter "S" in the order code e.g. 11RF9015 is three pole;
11RFS9015 two pole.

The appropriate adjustment range of the overload relay should be selected on
the basis of the motor nameplate full-load current when across the line starting
is considered.

Three-phase IEC motor powers ①

230V	400V	415V	440V	500V	690V
[kW]	[kW]	[kW]	[kW]	[kW]	[kW]

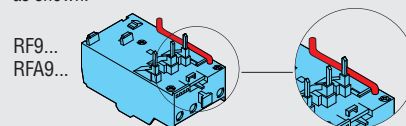
②	②	②	②	②	②
②	②	②	②	②	②
②	②	②	②	②	②
②	②	②	②	②	②
②	②	②	②	②	0.37
②	②	②	0.37	0.37	0.55
②	②	0.55	0.55	0.55	0.75
0.37	0.55-0.75	0.75	0.75	1.1	1.1-1.5
0.55	1.1	1.1	1.1-1.5	1.5	2.2
0.75-1.1	1.5	1.5-2.2	2.2	2.2	3-3.7
1.5	2.2-3	3-3.7	3-3.7	3-3.7	4
2.2	3.7-4	4	3.7-4	4-5.5	—
3.2	5.5	5.5-7.5	5.5	—	—

②	②	②	②	②	②
②	②	②	②	②	②
②	②	②	②	②	②
②	②	②	②	②	②
②	②	②	②	②	0.37
②	②	②	0.37	0.37	0.55
②	②	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	—	—

① The indicated power 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 power 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.



Certifications and compliance

Certifications obtained:

	c U L u s	C S A	G O S T	C C C
Type				
RF9... - RFA9...	●	●	●	●

● Certified products.

cULus – UL Listed for USA and Canada (File E93601) as
Auxiliary Devices – Thermal Overload Relays, 600VAC, open
type, ambient compensated, 5000 Amps RMS symmetrical
short circuit rating; the trip current is 120% FLA.
CSA – CSA certified for Canada (File 54332) as Auxiliary
Devices for use with magnetic contactors.

Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-4-1,
UL508, CSA C22.2 n° 14.

Motor protection relays

Thermal overload relays for BG series mini-contactors

Non phase failure / non single phase sensitive Three poles (three phase)



11 RFN9...



11 RFNA9...

Order code	Adjustment range	Protection fuses			Qty per pkg	Wt
		IEC aM	gG	UL K5		
	[A]	[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
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11 RFN9 033	0.2 - 0.33	0.5	1	1	1	0.123
11 RFN9 05	0.3 - 0.5	1	2	3	1	0.123
11 RFN9 075	0.45 - 0.75	1	2	3	1	0.123
11 RFN9 1	0.6 - 1	2	4	3	1	0.123
11 RFN9 1V5	0.9 - 1.5	2	4	6	1	0.123
11 RFN9 2V3	1.4 - 2.3	4	6	10	1	0.123
11 RFN9 33	2 - 3.3	4	10	10	1	0.123
11 RFN9 5	3 - 5	6	16	15	1	0.123
11 RFN9 75	4.5 - 7.5	8	20	25	1	0.123
11 RFN9 10	6 - 10	10	32	30	1	0.123
11 RFN9 15	9 - 15	16	40	45	1	0.123

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NOTE: The appropriate adjustment range of the overload relay should be selected on the basis of the motor nameplate full-load current when across the line starting is considered.

Three-phase IEC motor powers ①

230V	400V	415V	440V	500V	690V
[kW]	[kW]	[kW]	[kW]	[kW]	[kW]

0.37	0.55	0.75	1.1	1.5	2.2
0.55	0.75	1.1	1.5	2.2	3.3
0.75	1.1	1.5	2.2	3.3	4.5
1.1	1.5	2.2	3.3	4.5	6.6
1.5	2.2	3.3	4.5	6.6	9.9
2.2	3.3	4.5	6.6	9.9	13.2
3.3	4.5	6.6	9.9	13.2	19.8
4.5	6.6	9.9	13.2	19.8	27.7
6.6	9.9	13.2	19.8	27.7	39.6
9.9	13.2	19.8	27.7	39.6	59.4
13.2	19.8	27.7	39.6	59.4	87.3
19.8	27.7	39.6	59.4	87.3	132
27.7	39.6	59.4	87.3	132	198
39.6	59.4	87.3	132	198	297
59.4	87.3	132	198	297	440
87.3	132	198	297	440	660
132	198	297	440	660	990
198	297	440	660	990	1485
297	440	660	990	1485	2232
440	660	990	1485	2232	3348
660	990	1485	2232	3348	4992
990	1485	2232	3348	4992	7488
1485	2232	3348	4992	7488	11232
2232	3348	4992	7488	11232	16848
3348	4992	7488	11232	16848	25272
4992	7488	11232	16848	25272	37908
7488	11232	16848	25272	37908	56862
11232	16848	25272	37908	56862	85292
16848	25272	37908	56862	85292	127938
25272	37908	56862	85292	127938	191907
37908	56862	85292	127938	191907	287860
56862	85292	127938	191907	287860	431790
85292	127938	191907	287860	431790	647685
127938	191907	287860	431790	647685	971527
191907	287860	431790	647685	971527	1457290
287860	431790	647685	971527	1457290	2185935
431790	647685	971527	1457290	2185935	3278902
647685	971527	1457290	2185935	3278902	4918353
971527	1457290	2185935	3278902	4918353	7377529
1457290	2185935	3278902	4918353	7377529	11066293
2185935	3278902	4918353	7377529	11066293	16600000
3278902	4918353	7377529	11066293	16600000	24900000
4918353	7377529	11066293	16600000	24900000	37350000
7377529	11066293	16600000	24900000	37350000	56025000
11066293	16600000	24900000	37350000	56025000	84037500
16600000	24900000	37350000	56025000	84037500	126056250
24900000	37350000	56025000	84037500	126056250	189084375
37350000	56025000	84037500	126056250	189084375	283626562
56025000	84037500	126056250	189084375	283626562	425439844
84037500	126056250	189084375	283626562	425439844	638159766
126056250	189084375	283626562	425439844	638159766	957239649
189084375	283626562	425439844	638159766	957239649	1435859473
283626562	425439844	638159766	957239649	1435859473	2153789210
425439844	638159766	957239649	1435859473	2153789210	3230683815
638159766	957239649	1435859473	2153789210	3230683815	4846025723
957239649	1435859473	2153789210	3230683815	4846025723	7269038584
1435859473	2153789210	3230683815	4846025723	7269038584	10903557876
2153789210	3230683815	4846025723	7269038584	10903557876	16355336814
3230683815	4846025723	7269038584	10903557876	16355336814	24533005221
4846025723	7269038584	10903557876	16355336814	24533005221	36799507832
7269038584	10903557876	16355336814	24533005221	36799507832	55198511748
10903557876	16355336814	24533005221	36799507832	55198511748	82797767622
16355336814	24533005221	36799507832	55198511748	82797767622	124196651433
24533005221	36799507832	55198511748	82797767622	124196651433	186294977150
36799507832	55198511748	82797767622	124196651433	186294977150	279442465725
55198511748	82797767622	124196651433	186294977150	279442465725	419163698588
82797767622	124196651433	186294977150	279442465725	419163698588	628745547882
124196651433	186294977150	279442465725	419163698588	628745547882	943118321823
186294977150	279442465725	419163698588	628745547882	943118321823	1414677482735
279442465725	419163698588	628745547882	943118321823	1414677482735	2122016224103
419163698588	628745547882	943118321823	1414677482735	2122016224103	3183024336155
628745547882	943118321823	1414677482735	2122016224103	3183024336155	4774536504233
943118321823	1414677482735	2122016224103	3183024336155	4774536504233	7161804756350
1414677482735	2122016224103	3183024336155	4774536504233	7161804756350	10742707134525
2122016224103	3183024336155	4774536504233	7161804756350	10742707134525	16114060701788
3183024336155	4774536504233	7161804756350	10742707134525	16114060701788	24171091052682
4774536504233	7161804756350	10742707134525	16114060701788	24171091052682	36256636579023
7161804756350	10742707134525	16114060701788	24171091052682	36256636579023	54384954868535
10742707134525	16114060701788	24171091052682	36256636579023	54384954868535	81577432292803
16114060701788	24171091052682	36256636579023	54384954868535	81577432292803	122366148439205
24171091052682	36256636579023	54384954868535	81577432292803	122366148439205	183549222658808
36256636579023	54384954868535	81577432292803	122366148439205	183549222658808	275323833988212
54384954868535	81577432292803	122366148439205	183549222658808	275323833988212	412985750982318
81577432292803	122366148439205	183549222658808	275323833988212	412985750982318	619478626473477
122366148439205	183549222658808	275323833988212	412985750982318	619478626473477	929217939710216
183549222658808	275323833988212	412985750982318	619478626473477	929217939710216	1393826909565325
275323833988212	412985750982318	619478626473477	929217939710216	1393826909565325	2090740364347988
412985750982318	619478626473477	929217939710216	1393826909565325	2090740364347988	3136080546521982
619478626473477	929217939710216	1393826909565325	2090740364347988	3136080546521982	4704120819782974
929217939710216	1393826909565325	2090740364347988	3136080546521982	4704120819782974	7056181229674461
1393826909565325	2090740364347988	3136080546521982	4704120819782974	7056181229674461	10584271844511692
2090740364347988	3136080546521982	4704120819782974	7056181229674461	10584271844511692	15876407766767536
3136080546521982	4704120819782974	7056181229674461	10584271844511692	15876407766767536	23814611650151304
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7056181229674461	10584271844511692	15876407766767536	23814611650151304	35721917475227056	53562875907840584
10584271844511692	15876407766767536	23814611650151304	35721917475227056	53562875907840584	80344313861760880
15876407766767536	23814611650151304	35721917475227056	53562875907840584	80344313861760880	120516470792641312
23814611650151304	35721917475227056	53562875907840584	80344313861760880	120516470792641312	180774706188962016
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53562875907840584	80344313861760880	120516470792641312	180774706188962016	271162059283443072	406743088925164128
80344313861760880	120516470792641312	180774706188962016	271162059283443072	406743088925164128	610114633388746176
120516470792641312	180774706188962016	271162059283443072	406743088925164128	610114633388746176	915171950083116224
180774706188962016	271162059283443072	406743088925164128	610114633388746176	915171950083116224	1372757925124674304
271162059283443072	406743088925164128	610114633388746176	915171950083116224	1372757925124674304	2090740364347988000
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1372757925124674304	2090740364347988000	3136080546521982000	4704120819782974000	7056181229674461000	10584271844511692000
2090740364347988000	3136080546521982000	4704120819782974000	7056181229674461000	10584271844511692000	15876407766767536000
3136080546521982000	4704120819782974000	7056181229674461000	10584271844511692000	15876407766767536000	23814611650151304000
4704120819782974000	7056181229674461000	10584271844511692000	15876407766767536000	23814611650151304000	35721917475227056000
7056181229674461000	10584271844511692000	15876407766767536000	23814611650151304000	35721917475227056000	53562875907840584000
10584271844511692000	15876407766767536000	23814611650151304000	35721917475227056000	53562875907840584000	80344313861760880000
15876407766767536000	23814611650151304000	35721917475227056000	53562875907840584000	80344313861760880000	1205164707926413120000
23814611650151304000	35721917475227056000	53562875907840584000	80344313861760880000	1205164707926413120000	1807747061889620160000
35721917475227056000	53562875907840584000	80344313861760880000	1205164707926413120000	1807747061889620160000	2711620592834430720000
53562875907840584000	80344313861760880000	1205164707926413120000	1807747061889620160000	2711620592834430720000	4067430889251641280000
80344313861760880000	1205164707926413120000	1807747061889620160000	2711620592834430720000	4067430889251641280000	6101146333887461760000
1205164707926413120000	1807747061889620160000	2711620592834430720000	4067430889251641280000	6101146333887461760000	9151719500831162240000
1807747061889620160000	2711620592834430720000	4067430889251641280000	6101146333887461760000	9151719500831162240000	13727579251246743040000
2711620592834430720000	4067430889251641280000	6101146333887461760000	9151719500831162240000	13727579251246743040000	209074036434798800000
4067430889251641280000	6101146333887461760000	9151719500831162240000	13727579251246743040000	209074036434798800000	313608054652198200000
6101146333887461760000	9151719500831162240000				