
RESET
STOP
97 NO
98 NO
95 NC
96 NC
2 T1
4 T2
6 T3
TEST

5

Thermal Relay

Magnetic Starter

BR2-D13

BR2-D23

BR2-D33

Application

BR2-D series new thermal relays are suitable in circuit of AC 50/60Hz voltage up to 660V and electric power under 45Kw for thermal overload protection. It has temperature compensation component. They can be fixed with BSC2 series contactor together, and be independently installed as well. The product comply with IEC60947-4-1.

Technical Specification

	aM	gG	gG	For direct mounting beneth contactor	Reference
A	A	A	A		

Rated Setting Range (A)

0.10...0.16	0.25	2	-	09...D38	BR2-D01
0.16...0.25	0.5	2	-	09...D38	BR2-D02
0.25...0.40	1	2	-	09...D38	BR2-D03
0.40...0.63	1	2	-	09...D38	BR2-D04
0.63...1	2	4	-	09...D38	BR2-D05
1...1.7	2	4	6	09...D38	BR2-D06
1.6..2.5	4	6	10	09...D38	BR2-D07
2.5...4	6	10	16	09...D38	BR2-D08
4...6	8	16	16	09...D38	BR2-D10
5.5...8	12	20	20	09...D38	BR2-D12
7...10	12	20	20	09...D38	BR2-D14
9...13	16	25	25	12...D38	BR2-D16
12...18	20	35	32	18...D38	BR2-D21
16...24	25	50	50	25...D38	BR2-D22
23...32	40	63	63	25...D38	BR2-D32
30...38	50	80	80	32yD38	BR2-D35
17...25	25	50	50	40...D95	BR2-D3322
23...32	40	63	63	40...D95	BR2-D3353
30...40	40	100	80	40...D95	BR2-D3355
37...50	63	100	100	40...D95	BR2-D3357
48...65	63	100	100	50...D95	BR2-D3359
55...70	80	125	125	50...D95	BR2-D3361
63...80	80	125	125	65...D95	BR2-D3363
80...104	100	160	160	80...D95	BR2-D3365
80...104	125	200	160	115...D150	BR2-D4365
95...120	125	200	200	115...D150	BR2-D4367
110...140	160	250	200	150	BR2-D4369
80...104	100	160	160	(2)	BR2-D33656
95...120	125	200	200	(2)	BR2-D33676
110...140	160	250	200	(2)	BR2-D33696

BR-D13

Application

This series of thermal relay can be used in the circuit of 50Hz or 60Hz, rated insulation voltage 660V, rated current 0.1-93A for protecting the phase break when the electric motor is overload.

The relay has different mechanism and temperature compensation & can be pluged in BSC1-D series AC contactor. It is the most advanced thermal relay in the nineties in the world. The products comply with IEC60947-4-1.

Characteristics

a. Fundamental parameter of the main circuit

- Rated insulation voltage 660V.
- Rated working current 25, 36, 93A.
- The regulator seal of rated setting current and setting.
- Current of the thermal component (see list below)

b. Auxiliary circuit

- There are one pair of N/O and N/C contact with electric insuation.
- Rated insulation voltage 500V.
- Rated frequency 50-60Hz.
- Use group, rated working voltage, appoint thermal current and rated current.

BR-D23

BR-D33

Rated Setting Range (A)

Type	Rated working current of thermal relay		Thermal component	
			Rated current (A)	Rated or scale of rated current (A)
BR-D13	25	BR-D1301	0.16	0.10-0.16
		BR-D1302	0.25	0.16-0.25
		BR-D1303	0.40	0.25-0.40
		BR-D1304	0.63	0.40-0.63
		BR-D1305	1.0	0.63-1.0
		BR-D1306	1.6	1.0-1.6
		BR-D13X6	2.0	1.25-2.0
		BR-D1307	2.5	1.6-2.5
		BR-D1308	4.0	2.5-4.0
		BR-D1310	6.0	4.0-6.0
		BR-D1312	8.0	5.5-8.0
		BR-D1314	10.0	7.0-10.0
		BR-D1316	13.0	9.0-13.0
		BR-D1321	18.0	12.0-18.0
		BR-D1322	25.0	17.0-25.0
BR-D23	36	BR-D2353	32	23.0-32.0
		BR-D2355	36	28.0-36.0
BR-D33	93	BR-D3353	32	23.0-32.0
		BR-D3355	40	30.0-40.0
		BR-D3357	50	37.0-50.0
		BR-D3359	65	48.0-65.0
		BR-D3361	70	55.0-70.0
		BR-D3363	80	63.0-80.0
		BR-D3365	93	80.0-93.0

BKH-22

BKH-40

BKH-85

Application

This series of thermal relay can be used in the circuit of 50/60Hz, rated insulation voltage 660V, rated current 0.1-85A for protecting the phase break when the electric motor is overload.
The relay has different mechanism and temperature compensation & can be pluged in BGC series AC contactor, The products comply with IEC 60947-4-1.

Characteristics

Direct mounting structure
The TOR is mounting directly to the Magnetic Contactors without additional brackets.
(Applied model: BKH-22, 40, 85)
Safety cover
The finger proof safety cover prevent careless touch of electric conductor
(Applied mode: BKH-22, 40, 85)
Separation of power part and operation part
The main circuit and the operation part are separately designed and the operation part is commonly used in BKH-22, 40, 85
Easy operation

Types And Ratings

Ratings	Type	BKH-22			BKH-40			BKH-85		
	Nominal current	Ranges			Ranges			Ranges		
		Min.	Mid.	Max.	Min.	Mid.	Max.	Min.	Mid.	Max.
Rated current (A)	0.14	0.1	0.14	0.16						
	0.21	0.16	0.21	0.25						
	0.33	0.25	0.33	0.4						
	0.52	0.4	0.52	0.63						
	0.82	0.63	0.82	1						
	1.3	1	1.3	1.6						
	2.1	1.6	2.1	2.5						
	3.3	2.5	3.3	4						
	5	4	5	6	4	5	6			
	6.5	5	6.5	8	5	6.5	8			
	7.5	6	7.5	9	6	7.5	9			
	8.5	7	8.5	10	7	8.5	10	7	8.5	10
	11	9	11	13	9	11	13	9	11	13
	15	12	15	18	12	15	18	12	15	18
	19	16	19	22	16	19	22	16	19	22
	22				18	22	26	18	22	26
	30				24	30	36	24	30	36
	34				28	34	40	28	34	40
	42							34	42	50
	55							45	55	65
	65							54	65	75
	74							63	74	85
Element No.	2 heaters	Standard			Standard			Standard		
	3 heaters	Option			Option			Option		
Aux. contact		1NO 1NC			1NO 1NC			1NO 1NC		
Reset type		Auto/Manual			Auto/Manual			Auto/Manual		
Power consumption		1.8VA/heater			2.0VA/heater			3.5VA/heater		
Dimension (mm) (W x H x D)		44 x 63 x 90			53 x 67 x 90			70 x 73 x 103		
Separate mounting unit		AZ-22H			AZ-40H			AZ-85H		
	3 heaters	BKH-22/3			BKH-40/3			BKH-85/3		
Other model	Differential	BTK-22			BTK-40			BTK-85		
	Delay open	BKH-22/L			BKH-40/L			BKH-85/L		
Applied contactors		BGC-9, 12, 18, 22			BGC-32, 40			BGC-50, 65, 75, 85		
Applied switches		BGS-9, 12, 18, 22			BGS-32, 40			BGS-50, 65, 75, 85		

3UA59

3UA62, 3UA66, 3UA68

Application

3UA series thermal relay is suitable for using in power system with AC 50Hz, rated operation voltage up to 660V and 1000V, in main circuit, current from 0.1A to 630A. It is used to protect AC three-phase asynchronous motor against overload and open-phase.
The relays have the test push-button for breaking NC contacts and the operating indication and free trip characteristics. The products also can be supplied with protecting case to ensure safety. The products can plug in the contactor and install independently or mount by rail.

Technical Specification

Type	Rated operating current (A)	Rated operating voltage (V)	Current setting range (A)
3UA50	12.5	660	0.1-0.16, 0.16-0.25, 0.25-0.4, 0.32-0.63, 0.63-0.1, 0.8-1.25, 1-1.6, 1.25-2, 1.6-2.5, 2-3.2, 2.5-4, 3.2-5, 4-6.3, 5-8, 6.3-10, 8-12.5
3UA52	25	660	0.1-0.16, 0.16-0.25, 0.25-0.4, 0.4-0.63, 1.63-1, 0.8-1.25, 1-1.6, 1.25-2, 1.6-2.5, 2-3.2, 2.5-4, 3.2-5, 4-6.3, 5-8, 6.3-10, 8-12.5, 10-16, 12.5-20, 16-25
3UA54	32	660	4-6.3, 6.3-10, 10-16, 12.5-20, 16-25, 20-32
3UA58			16-25, 20-32, 25-40, 32-50, 40-57, 50-63, 57-70, 63-80
3UA59	63	660	0.1-0.16, 0.16-0.25, 0.25-0.4, 0.4-0.63, 0.63-1, 0.8-1.25, 1-1.6, 1.25-2, 1.6-2.5, 2-3.2, 2.5-4, 3.2-5, 4-6.3, 5-8, 6.3-10, 8-12.5, 10-16, 12.5-20, 16-25, 20-32, 25-40, 32-45, 40-57, 50-63
3UA62	180	660	55-80, 63-90, 80-110, 90-120, 110-135, 120-150, 135-160, 150-180
3UA66 3UA68	400 630	1000 1000	80-125, 125-200, 180-250, 200-320, 250-400 320-500, 400-630

BSE1
Magnetic Starter

BSE1-09~18

BSE1-40~65

Application

BSE1 series Magnetic starter is mainly used in the circuit of AC 50Hz or 60Hz, rated insulation voltage of 440V, and the rated current up to 95A, apply to start the electromotor and parking.

Technical Specification

Model	Rated working current	Three phase capacity			Matching thermal overload relay	Current setting range
		220V 230V	380V 400V	415V/440V		
BSE1-09	9	2.2	4	4	BR-D1314	7~10
BSE1-12	12	3	5.5	5.5	BR-D1316	9~13
BSE1-18	18	4	7.5	9	BR-D1321	12~18
BSE1-25	25	5.5	11	11	BR-D1322	17~25
BSE1-32	32	7.5	15	15	BR-D2353	23~32
BSE1-40	40	11	18.5	22	BR-D3355	30~40
BSE1-50	50	15	22	25	BR-D3359	48~65
BSE1-65	65	18.5	30	37	BR-D3361	55~70
BSE1-80	80	22	37	45	BR-D3363	63~80
BSE1-95	95	25	45	45	BR-D3365	80~93