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Product Selection Brochure

Speciality: Thermal Relay, Earth Leakage Circuit Breaker, Electromagnetic Breaker Series











LR2-D13

LR2 Series Thermal Relays

1. Scope of application

LR2 series thermal overload relays are used in circuits with AC 50HZ/60Hz, voltage up to 660V, current up to 80A and below, for AC motor overload and phase break protection. It has differential mechanism, temperature compensation and release indication, and can be equipped with CJX2(LC1-D) AC contactor or installed independently. This product conforms to GB14048.4 and IEC60947-4 standards.

2. Model and Meaning

LR 2 – □

- Indicates the current specification of the thermal relay
- Design number
- Thermal overload relay

3. Normal operating conditions and installation conditions

3.Normal operating conditions and installation conditions
3.1 Altitude: not more than 2000m.
3.2 Ambient air temperature: -5°C~+400, average temperature within 24h: not more than 35°C.
3.3 Atmospheric conditions: Atmospheric relative humidity should not exceed 50% at +40°C, higher relative humidity is possible at lower temperatures, the average monthly minimum temperature of the wettest month should not exceed +25°C, and the average monthly maximum relative humidity of the month should not exceed 90%, taking into account the condensation that occurs on the product due to the temperature change.
3.4 The inclination of the mounting surface to the vertical must not exceed 5°.
3.5 In non-explosive media, where there are no gases or conductive dust in the medium sufficient to corrode metals and destroy insulation.
3.6 In places that are protected against rain and snow and are not filled with water vapour.
3.7 Where there is no significant shaking, shock or vibration.
3.8 Pollution class 3

4. Motion Characteristics

4.1 Action time when three-phase load is balanced

No	Rectification current multiplier	Motion Time			Starting Condition	Environmental Temperature
1	1.05	>2h			Cold state	20±5℃
2	1.2	<2h			hot state (after test of No 1)	
3	1.5	<4min				
4	7.2	10A	2s<Tp ≤ 10s	≤ 63A	Cold state	
		10	4s<Tp ≤ 10s	>63A		

4.2Phase failure characteristics

No	Rectification current multiplier		Motion Time	Starting Condition	Environmental Temperature
	Arbitrary 2-phase	3rd phase			
1	1.0	0.9	>2h	Cold state	20±5℃
2	1.15	0	<2h	hot state (after test of No 1)	

LR2-D series thermal overload relays are used for AC motor overload and phase break protection in circuits with AC 50 or 60 HZ, voltage up to 660V, current up to 93A and below. They are equipped with differential mechanism, temperature compensation and release indication. It can be fitted with CJX2(LC1-D) AC contactor or installed independently.



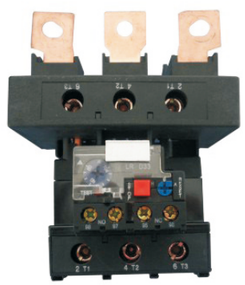
LR2-D13



LR2-D23



LR2-D33



LR2-150

5.Current specification

Model	NO	Rectification current range	Fuse A aM	Fuse A gG	Matching contactor model
LR2-D13	1301	0.1~0.16	0.25	2	GLC1-09~32
	1302	0.16~0.25	0.5	2	
	1303	0.25~0.4	1	2	
	1304	0.4~0.63	1	2	
	1305	0.63~1	2	4	
	1306	1~1.6	2	4	
	1306X	1.25~2	4	6	
	1307	1.6~2.5	4	6	
	1308	2.5~4	6	10	
	1310	4~6	8	16	
	1312	5.5~8	12	20	
	1314	7~10	12	20	
	1316	9~13	16	25	
	1321	12~18	20	35	
	1322	17~25	25	50	
	1353	23~32	40	63	
LR2-D23	2353	23~32	40	63	GLC1-25~32
	2353X	28~36	40	63	
	2355	30~40	40	80	
LR2-D33	3322	17~25	25	50	GLC1-40~95
	3353	23~32	40	63	
	3355	30~40	40	100	
	3357	37~50	63	100	
	3359	48~65	63	100	
	3361	55~70	80	125	
	3363	63~80	80	125	
	3365	80~93	100	160	
LR2-150/D	4365	80~104	125	200	LC1-D
	4367	95~120	125	224	
	4369	110~150	160	250	
LR2-150/F	4365	80~104	125	200	GLC1-95 CJX2-115 CJX2-150
	4367	95~120	125	224	
	4369	110~150	160	250	
LR2-400		51~81A	100	125	F115-D150
		62~99A	125	160	
		84~135A	160	200	
		124~198A	200	250	F185
		146~234A	250	315	F225-265
		174~279A	315	315	
		208~333A	400	400	
		259~414A	400	500	F330-440

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6.Main technical parameters

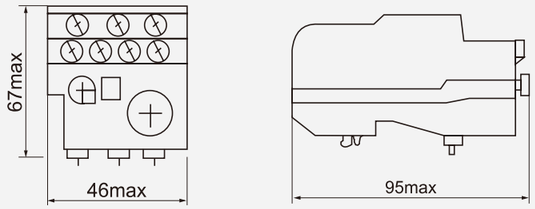
Item			LR2-D13	LR2-D23	LR2-D33
Rated Operation Current A			25	36	93
Rated insulation voltage V			690	690	690
Phase failure protection			Yes	Yes	Yes
Manual and automatic reset			Yes	Yes	Yes
Temperature compensation			Yes	Yes	Yes
Motion indication			Yes	Yes	Yes
Test button			Yes	Yes	Yes
Mounting			plug-in/Independent type	plug-in/Independent type	plug-in/Independent type
Auxiliary Contacts			1NO+1NC	1NO+1NC	1NO+1NC
AC-15 220V Rated current A			2.73	2.73	2.73
AC-15 380V Rated current A			1.58	1.58	1.58
DC-13 220V Rated current A			0.2	0.2	0.2
Cross-sectional area of conductor mm^2	Main circuit	Single core or stranded wire	1~4	4~10	4~35
		Terminal Screws	M4	M4	M10
	Auxiliary circuit	Single core or stranded wire	0.5~2.5	0.5~2.5	0.5~2.5
		Terminal Screws	M3.5	M3.5	M3.5

7.Attachment description

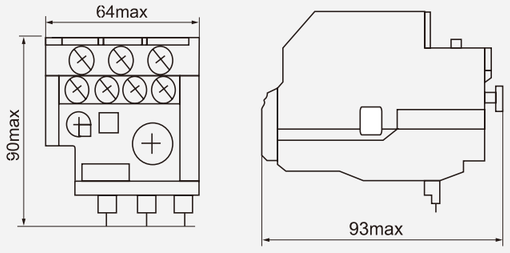
Product appearance	Name	Part numbers	Application
	Mounting base	LA7-1064	Independently installation with LR2-D13
	Mounting base	LA7-2064	Independently installation with LR2-D23
	Mounting base	LA7-3064	Independently installation with LR2-D33

8.Outline and mounting dimensions

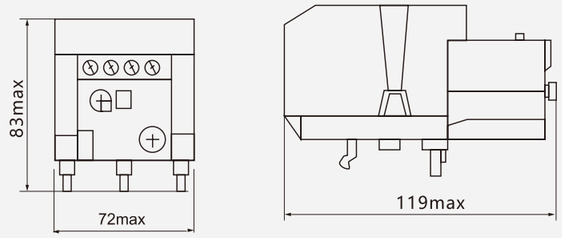
LR2-D13



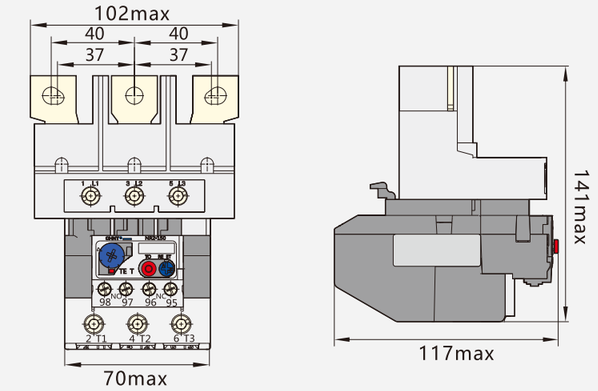
LR2-D23



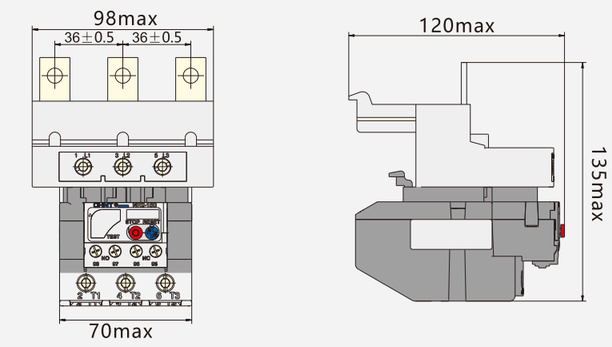
LR2-D33



LR2-150/F(with NC2 type) Appearance and Installation

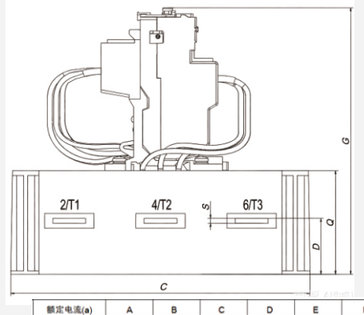


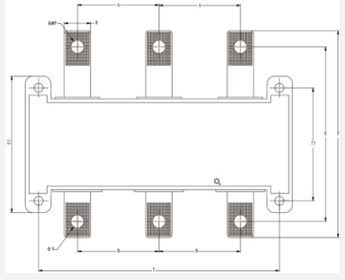
LR2-150/D(with NC7 type) Appearance and Installation



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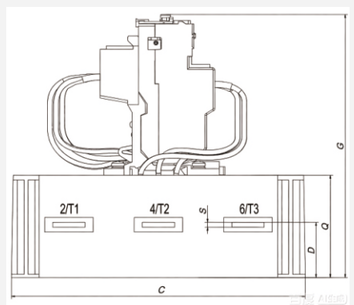
LR2-400

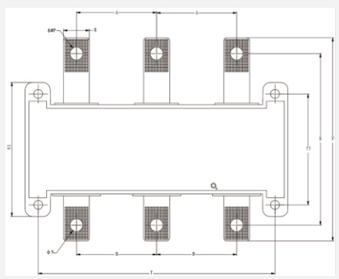




额定电流(a)	A	B	C	D	E	F	G	P	Q	R	S	T
51 ~ 81	34.8	55.5	180	32	119	141	134	9	63	18	3	164
62 ~ 99	34.8	55.5	180	32	119	141	134	9	63	18	3	164
84 ~ 135	34.8	55.5	180	32	119	141	134	9	63	18	3	164
124 ~ 198	40	55.5	180	32	109	131	134	10	63	20	3	164
146 ~ 234	48	55.5	180	32	109	134	134	12	63	25	3	164
174 ~ 279	48	55.5	180	32.5	109	134	134	12	63	25	4	164
208 ~ 333	48	55.5	180	32.5	109	134	134	12	63	25	4	164
259 ~ 414	48	55.5	180	32.5	109	134	134	12	63	25	4	164

LR2-600





额定电流(a)	A	B	C	D	E	F	G	P	Q	R	S	T
321 ~ 513	55	76	222	43	110	140	148	14	77	30	5	222
394 ~ 630	80	80	222	43.5	114	150	148	14	77	40	6	222

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