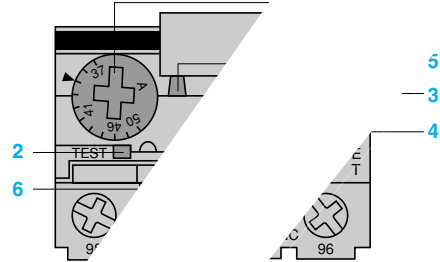


# Protection components

Thermal relays, model LR2-D

to protect a.c. circuits and motors against  
overcurrent.

LRD-3322...4369, LR2-D



Not available

are supplied with the selector in the manual position,  
not the automatic position.

## Environment

### Conforming to standards

### Product certifications

Degree of protection  
Protective treatment

Ambient air temperature  
around the device

Operating positions  
without derating

Shock resistance

Vibration resistance

Dielectric strength at 50 Hz

Impulse withstand voltage

C  
Co.  
Storage  
Normal  
Minimum  
(with derat.  
In relation  
Permiss  
Permiss  
Conform  
IEC 255  
Conform  
IEC 801-5

EN 60947-1, EN 60947-4-1, NF C 63-650,  
VDE 0660

CSA, UL, Sichere Trennung, PTB except LAD-4:  
UL, CSA.

Protection against direct finger contact IP 2X  
"TH"

°C - 60...+ 70  
°C - 20...+ 60  
°C - 40...+ 70

Any position

15 gn - 11 ms

6 gn

kV 6

kV 6

## Auxiliary contact characteristics

### Conventional thermal current

### Maximum consumption

of operating coils  
of controlled contactors  
(Occasional operating  
cycles of contact 95-96)

### Short-circuit protection

### Connection to spring terminals

Flexible cable without cable end 1 or 2 conductors  
Flexible cable with cable end 1 or 2 conductors  
Solid cable without cable end 1 or 2 conductors  
Tightening torque

### Connection to spring terminals

Flexible cable without cable end 1 or 2 conductors  
Solid cable without cable end 1 or 2 conductors

d.c. supply  
d.c. supply  
By gG or BS fuse. Max. rating or by GB2 circuit-

A	5					
V	24	48	110	220	380	600
VA	100	200	400	600	600	600
	24	48	110	220	440	-
	100	100	50	45	25	-

References:  
pages 2/112 and 2/113

Dimensions:  
pages 2/116 to 2/118

Schemes:  
page 2/119

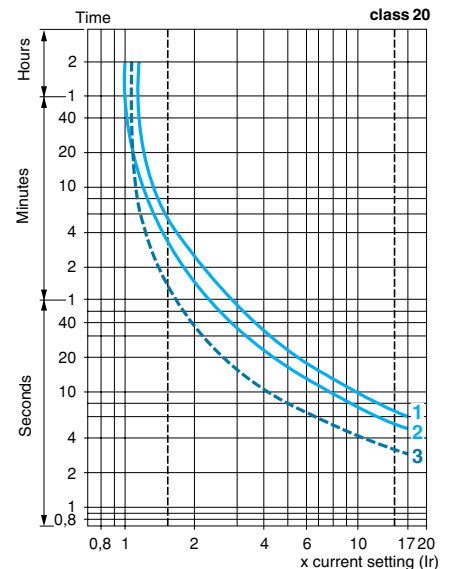
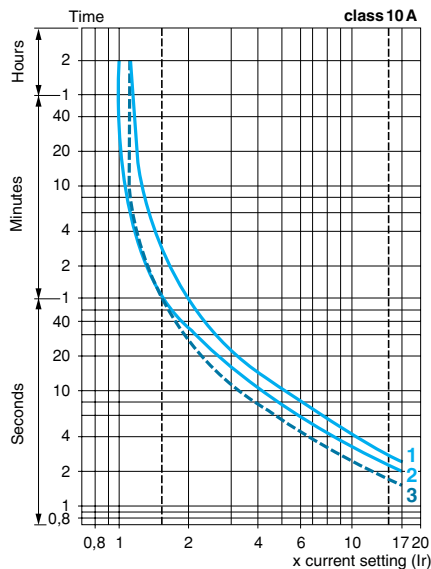
### Electrical characteristics of power circuit

Relay type			LRD-01 to 16 LR3-D01 to D16	LR2-D15●●	LRD-21 to 35 LR3-D21 to D35	LR2-D25●●	LRD-3322 to 33696 LR3-D3322 to D33696	LR2-D35●●	LRD-4365 to 4369
<b>Tripping class</b>	To UL 508, EN 60947-4-1		10 A	20	10 A	20	10 A	20	10 A
<b>Rated insulation voltage (Ui)</b>	Conforming to EN 60947-4-1	<b>V</b>	690		690		1000		1000
	Conforming to UL, CSA	<b>V</b>	600		600		600		600 except LRD-4369
<b>Rated impulse withstand voltage (Uimp)</b>		<b>kV</b>	6		6		6		6
<b>Frequency limits</b>	Of the operational current	<b>Hz</b>	0...400		0...400		0...400		0...400
<b>Setting range</b>	Depending on model	<b>A</b>	0.1...13		12...38		17...104		80...140
<b>Connection to screw clamp terminals</b>	Flexible cable without cable end	1 conductor	<b>mm<sup>2</sup></b> Min/max c.s.a. 1.5/10		1.5/10		4/35		4/50
	Flexible cable with cable end	1 conductor	<b>mm<sup>2</sup></b> 1/4		1/6 except LRD-21: 1/4		4/35		4/35
	Solid cable without cable end	1 conductor	<b>mm<sup>2</sup></b> 1/6		1.5/10 except LRD-21: 1/6		4/35		4/50
	Tightening torque		<b>N.m</b> 1.7		1.85		2.5		9
<b>Connection to spring terminals</b>	Flexible cable without cable end	1 conductor	<b>mm<sup>2</sup></b> 1.5/4		-		1.5/4		-
	Solid cable without cable end	1 conductor	<b>mm<sup>2</sup></b> 1.5/4		-		1.5/4		-

### Operating characteristics

<b>Temperature compensation</b>		<b>°C</b>	-20...+60	-30...+60-	-30...+60	-20...+60
<b>Tripping threshold</b>	Conforming to EN 60947-4-1	<b>A</b>	1.14 ± 0.06 I <sub>n</sub>			
<b>Sensitivity to phase failure</b>	Conforming to EN 60947-4-1		Tripping current 30 % of I <sub>n</sub> on one phase, the others at I <sub>n</sub>			

**Average operating time**  
related to multiples of the current setting



- 1 Balanced operation, 3-phase, from cold state.
- 2 Balanced operation, 2-phase, from cold state.
- 3 Balanced operation, 3-phase, after a long period at the set current (hot state).