

LR97D38B

electronic overload relay for motor TeSys -
20...38 A - 24 V AC/DC



Main

Range of product	TeSys
Device short name	LR97
Product or component type	Electronic overcurrent relay
Relay application	Locked rotor, mechanical jamming $I > 3 \times I_{\text{setting}}$ Overload $I_{\text{max}} > I_{\text{setting}}$ Sensitivity to phase failure
Product compatibility	LC1D25...D38
Network type	AC DC
[Us] rated supply voltage	24 V AC/DC
Thermal protection adjustment range	20...38 A
[Ue] rated operational voltage	690 V AC 50/60 Hz for power circuit conforming to IEC 60947-4-1 600 V AC 50/60 Hz for power circuit conforming to UL 600 V AC 50/60 Hz for power circuit conforming to CSA
Quantity per set	Set of 10

Complementary

Network frequency	50...60 Hz
Mounting support	Rail Direct on contactor
Tripping threshold	20...34 A
Surge withstand	6 kV conforming to IEC 61000-4-5
Contacts type and composition	1 NC 1 NO
[Ith] conventional free air thermal current	3 A for control circuit
Protection type	GG fuse 3 A - for control circuit GB2 circuit breaker 3 A - for control circuit BS fuse 3 A - for control circuit
Maximum power	70 VA at 24 V AC conforming to IEC 60947 360 VA at 220 V AC conforming to IEC 60947 360 VA at 110 V AC conforming to IEC 60947 140 VA at 48 V AC conforming to IEC 60947 55 W at 48 V DC conforming to IEC 60947 55 W at 24 V DC conforming to IEC 60947 28 W at 220 V DC conforming to IEC 60947 28 W at 110 V DC conforming to IEC 60947
[Ui] rated insulation voltage	690 V power circuit conforming to IEC 60947-4-1 600 V power circuit conforming to UL 600 V power circuit conforming to CSA
[Uimp] rated impulse withstand voltage	6 kV
Phase failure sensitivity	< 3 s
Reset	Manual reset Electrical by interruption of power supply for minimum 0.1 s Automatic reset 120 s fixed
Time range	0.5...30 s - D-time knob 0.3...10 s - O-time knob 0.2...10 s - O-time knob
Signalling function	2 LEDs

Connections - terminals	Power circuit: lug-clamp 1 cable 2.5...10 mm ² - cable stiffness: flexible - with cable end Power circuit: lug-clamp 1 cable 1...6 mm ² - cable stiffness: flexible - without cable end Power circuit: cable 1 cable 2.5...10 mm ² - cable stiffness: flexible - with cable end Power circuit: cable 1 cable 1...6 mm ² - cable stiffness: flexible - without cable end Control circuit: cable 2 cable 1...25 mm ² Control circuit: lug-clamp 2 cable 1...25 mm ² - cable stiffness: flexible - without cable end Control circuit: lug-clamp 2 cable 1...25 mm ² - cable stiffness: flexible - with cable end Control circuit: lug-clamp 1 cable 1...25 mm ² - cable stiffness: flexible - without cable end Control circuit: lug-clamp 1 cable 1...25 mm ² - cable stiffness: flexible - with cable end Control circuit: cable 2 cable 1...25 mm ² - cable stiffness: flexible - without cable end Control circuit: cable 1 cable 1...25 mm ² - cable stiffness: flexible - without cable end Control circuit: cable 1 cable 1...25 mm ² - cable stiffness: flexible - with cable end
Tightening torque	Power circuit: 2 N.m - on cable Control circuit: 0.6...1.2 N.m - on lug-clamp
Height	67.5 mm
Width	45 mm
Depth	67.5 mm
Product weight	0.172 kg

Environment

Standards	IEC 60255-6 IEC 60947
Product certifications	CSA GOST UL
Protective treatment	TH conforming to IEC 60068
IP degree of protection	IP20 conforming to IEC 60529
Ambient air temperature for operation	-25...60 °C conforming to IEC 60947-4-1
Ambient air temperature for storage	-30...80 °C
Operating altitude	2000 m
Fire resistance	850 °C conforming to IEC 60695-2-1
Shock resistance	15 gn 11 ms conforming to IEC 60068-2-7
Vibration resistance	4 gn conforming to IEC 60068-2-6
Dielectric strength	2 V at 50 Hz conforming to IEC 60255-5
Resistance to electrostatic discharge	8 kV in air 6 kV in indirect mode
Resistance to radiated fields	10 V/m level 3
Resistance to fast transients	2 kV
Disturbance radiated/conducted	Class A conforming to EN 55011 10 V conforming to EN 61000-4-6

Contractual warranty

Period	18 months
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