Product data sheet
Characteristics

LR9F5369
TeSys LRF - electronic thermal overload relay - 90...150 A - class 10



Main

Range	TeSys
Product name	TeSys LRF
Device short name	LR9F
Product or component type	Electronic thermal overload relay
Relay application	Motor protection
Product compatibility	LC1F115...LC1F185
Network type	AC
Thermal overload class	Class 10 conforming to IEC 60947-4
Thermal protection adjustment range	90...150 A

Complementary

Network frequency	50/60 Hz
Supply voltage limits	17...32 V
Mounting support	Plate Direct on contactor
Tripping threshold	1.12 +/- 0.06 In tripping conforming to IEC 60947-4-1
Surge withstand	4 kV conforming to IEC 61000-4-5
Contacts type and composition	1 NO + 1 NC
[Ith] conventional free air thermal current	5 A for control circuit
Rated power in W	100 VA AC 24 V 100 W DC 24 V 100 W DC 48 V 200 VA AC 48 V 25 W DC 440 V 400 VA AC 110 V 45 W DC 220 V 50 W DC 110 V 600 VA AC 220 V 600 VA AC 380 V 600 VA AC 600 V
[Ue] rated operational voltage	1000 V AC 50/60 Hz for power circuit conforming to VDE 0110 group C
[Ui] rated insulation voltage	1000 V AC power circuit conforming to IEC 60947-4
[Uimp] rated impulse withstand voltage	8 kV conforming to IEC 60947-1
Phase failure sensitivity	Tripping in 4 s +/- 20 % conforming to IEC 60947-4-1

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

Reset	Manual reset on front relay
Control type	Dial white full-load current adjustment Test button red Push-button red reset Push-button stop
Local signalling	Trip indicator
Temperature compensation	-20...70 °C
Current consumption	<= 5 mA no-load
Switching capacity in mA	0...150 mA
Voltage drop	2.5 V closed state
Connections - terminals	Control circuit : screw clamp terminals 1 cable 0.75...2.5 mm² - cable stiffness: solid Control circuit : screw clamp terminals 2 cable 1 mm² - cable stiffness: solid Control circuit : screw clamp terminals 1 cable 0.75...2.5 mm² - cable stiffness: flexible - with cable end cable end Control circuit : screw clamp terminals 1 cable 0.75...4 mm² - cable stiffness: flexible - without cable end cable end Control circuit : screw clamp terminals 2 cable 1...1.5 mm² - cable stiffness: flexible - with cable end cable end Control circuit : screw clamp terminals 2 cable 1...2.5 mm² - cable stiffness: flexible - without cable end cable end Power circuit : lugs-ring terminals M8
Tightening torque	Control circuit : 1.2 N.m - on screw clamp terminals Power circuit : 18 N.m - on screw clamp terminals
Height	96 mm
Width	115 mm
Depth	123.5 mm
Product weight	0.885 kg
Compatibility code	LR9F

Environment

Standards	IEC 60947-4-1 EN 60947-4-1 VDE 0660 IEC 60255-8 IEC 60255-17
Product certifications	UL CSA
Protective treatment	TH
IP degree of protection	IP20 conforming to VDE 0106 IP20 conforming to IEC 60529
Ambient air temperature for operation	-20...55 °C conforming to IEC 60255-8
Ambient air temperature for storage	-40...85 °C
Operating altitude	<= 2000 m without derating
Fire resistance	850 °C conforming to IEC 60695-2-1
Mechanical robustness	Shocks 13 Gn for 11 ms conforming to IEC 60068-2-7 Vibrations 5...300 Hz 2 Gn conforming to IEC 60068-2-6
Dielectric strength	6 kV at 50 Hz conforming to IEC 255-5
Electromagnetic compatibility	Radiated radio-frequency electromagnetic field immunity test 10 V/m conforming to IEC 61000-4-3 Resistance to electrostatic discharge 6 kV in indirect mode conforming to IEC 61000-4-2 Resistance to electrostatic discharge 8 kV in air conforming to IEC 61000-4-2 Fast transients immunity test 2 kV conforming to IEC 61000-4-4

Contractual warranty

Warranty period	18 months