



Main

Range of product	TeSys F
Device short name	LR9F
Product or component type	Thermal overload relay
Relay application	Motor protection
Product compatibility	LC1F115...LC1F185
Network type	DC
Overload tripping class	Class 20 conforming to IEC 60947-4
Signalling function	Alarm
Thermal protection adjustment range	60...100 A
Protection type	GG fuse 5 A - for control circuit GG fuse 200 A - for power circuit GB2 circuit breaker 5 A - for control circuit BS fuse 5 A - for control circuit AM fuses 100 A - for power circuit
Signalling function	Pre-alarm indicator
Quantity per set	Set of 10

Complementary

Network frequency	50/60 Hz
[Us] rated supply voltage	24 V DC
Supply voltage limits	17...32 V
Mounting support	Rail Direct on contactor
Tripping threshold	1.12 +/- 0.06 In tripping conforming to IEC 60947-4-1 1.05 +/- 0.06 In alarm conforming to IEC 60947-4-1
Surge withstand	4 kV conforming to IEC 61000-4-5
[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
Reset	Manual reset
Temperature compensation	-20...70 °C
Current consumption	<= 5 mA no-load
Switching capacity in mA	0...150 mA
Output overload protection	Automatic trip
Output short-circuit protection	Automatic trip
Voltage drop	0...2.5 V closed state
Connections - terminals	Control circuit: screw clamp terminals 2 cable 1 mm ² - cable stiffness: solid Control circuit: screw clamp terminals 2 cable 1...2.5 mm ² - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 2 cable 1...1.5 mm ² - cable stiffness: flexible - with cable end Control circuit: screw clamp terminals 1 cable 0.75...4 mm ² - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 1 cable 0.75...2.5 mm ² - cable stiffness: solid Control circuit: screw clamp terminals 1 cable 0.75...2.5 mm ² - cable stiffness: flexible - with cable end
Tightening torque	Power circuit: 18 N.m - on screw clamp terminals Control circuit: 1.2 N.m - on screw clamp terminals Alarm circuit: 0.45 N.m

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Height	123.5 mm
Width	115 mm
Depth	96 mm
Product weight	0.9 kg

Environment

Standards	EN 60947-4-1 IEC 60255-17 IEC 60255-8 IEC 60947-4-1 VDE 0660
Product certifications	CSA 22-2 GOST UL 508
Protective treatment	TH
IP degree of protection	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
Shock resistance	13 gn 11 ms conforming to IEC 60068-2-7
Vibration resistance	2 gn 5...300 Hz conforming to IEC 60068-2-6
Dielectric strength	6 kV at 50 Hz conforming to IEC 60255-5
Resistance to electrostatic discharge	8 kV in air conforming to IEC 61000-4-2 6 kV in indirect mode conforming to IEC 61000-4-2
Resistance to radiated fields	10 V/m conforming to IEC 61000-4-2
Resistance to fast transients	2 kV conforming to IEC 61000-4-4

Contractual warranty

Period	18 months
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