



Main

Range of product	TeSys F
Device short name	LR9F
Product or component type	Electronic thermal overload relay
Relay application	Motor
Product compatibility	LC1F115...LC1F185
Network type	DC
Signalling function	Alarm
Thermal protection adjustment range	90...150 A
Protection type	BS fuse 5 A control circuit GB2 circuit breaker 5 A control circuit AM fuses 160 A power circuit GG fuse 250 A power circuit GG fuse 5 A control circuit
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	Direct on contactor Rail
Overload tripping class	Class 20
Tripping threshold	1.05 +/- 0.06 In IEC 60947-4-1 alarm 1.12 +/- 0.06 In IEC 60947-4-1 tripping
Surge withstand	4 kV IEC 61000-4-5
[Ith] conventional free air thermal current	5 A control circuit
Maximum power	25 W DC 440 V 45 W DC 220 V 50 W DC 110 V 100 VA AC 24 V 100 W DC 24 V 100 W DC 48 V 200 VA AC 48 V 400 VA AC 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 power circuit VDE 0110 group C
[Ui] rated insulation voltage	1000 V AC power circuit IEC 60947-4
[Uimp] rated impulse withstand voltage	8 kV IEC 60947-1
Phase failure sensitivity	Tripping in 4 s +/- 20 % IEC 60947-4-1
Reset	Manual reset on front relay
Temperature compensation	-20...70 °C
Current consumption	≤ 5 mA no-load
Switching capacity in mA	0...150 mA
Output overload protection	Auto-protected
Output short-circuit protection	Auto-protected
Voltage drop	≤ 2,5 V closed state

Connections - terminals	Lugs power circuit M8 Screw clamp terminals control circuit 1 0,75...4 mm ² flexible without Screw clamp terminals control circuit 1 0,75...2,5 mm ² solid Screw clamp terminals control circuit 1 0,75...2,5 mm ² flexible with Screw clamp terminals control circuit 2 1...1,5 mm ² flexible with Screw clamp terminals control circuit 2 1...2,5 mm ² flexible without Screw clamp terminals control circuit 2 1 mm ² solid
Tightening torque	0,45 N.m alarm circuit 1,2 N.m control circuit screw clamp terminals 18 N.m power circuit screw clamp terminals
Height	96 mm
Width	120 mm
Depth	123,5 mm
Product weight	0,885 kg

Environment

Standards	EN 60947-4-1 IEC 60255-17 IEC 60255-8 IEC 60947-4-1 VDE 0660
Product certifications	CSA GOST UL
Protective treatment	TH standard version
IP degree of protection	IP20 VDE 0106 IP20 IEC 60529
Ambient air temperature for operation	-20...55 °C IEC 60255-8
Ambient air temperature for storage	-40...85 °C
Operating altitude	≤ 2000 m without derating
Fire resistance	850 °C IEC 60695-2-1
Shock resistance	13 gn 11 ms IEC 60068-2-7
Vibration resistance	2 gn 5...300 Hz IEC 60068-2-6
Dielectric strength	6 kV 50 Hz IEC 255-5
Resistance to electrostatic discharge	6 kV in indirect mode IEC 61000-4-2 8 kV in air IEC 61000-4-2
Resistance to radiated fields	10 V/m IEC 61000-4-3
Resistance to fast transients	2 kV IEC 61000-4-4
RoHS EUR conformity date	1Q2009
RoHS EUR status	Will be compliant