# Product datasheet Characteristics

# **LR9F79**

TeSys LRF - electronic thermal overload relay - 300...500 A - class 10/20



Price\*: 427.51 GBP



#### Main

Wall		
Range	TeSys	
Product name	TeSys LRF	
Device short name	LR9F	
Product or component type	Electronic thermal overload relay	
Relay application	Motor protection	
Product compatibility	LC1F225LC1F500	
Network type	AC	
Thermal overload class	Class 10/20 conforming to IEC 60947-4	
Thermal protection adjustment range	300500 A	
Signalling function	Pre-alarm indicator	

#### Complementary

Network frequency 50/60 Hz  [Us] rated supply voltage 24 V DC  Supply voltage limits 1732 V  Mounting support Direct on contactor Plate  Tripping threshold 1.05 +/- 0.06 In alarm conforming to IEC 60947-4-1 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  [Ue] rated operational voltage 1000 V AC 50/60 Hz for power circuit conforming to VDE 0110 group C  [Ui] rated insulation voltage Power circuit: 1000 V AC conforming to IEC 60947-4  [Uimp] rated impulse withstand voltage 8 kV IEC 60947-1  Phase failure sensitivity Tripping in 4 s +/- 20 % conforming to IEC 60947-4-1	o o p · o · · o · · o · · o · · o · · o · · o · · o · · o · · o · · o · · o · · o · o · · o · o · o · o · · o ·		
Supply voltage limits  1732 V  Mounting support  Direct on contactor Plate  Tripping threshold  1.05 +/- 0.06 In alarm conforming to IEC 60947-4-1 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  [Ue] rated operational voltage  1000 V AC 50/60 Hz for power circuit conforming to VDE 0110 group C  [Ui] rated insulation voltage  Power circuit: 1000 V AC conforming to IEC 60947-4  [Uimp] rated impulse withstand voltage  8 kV IEC 60947-1	Network frequency	50/60 Hz	:
Mounting support  Direct on contactor Plate  Tripping threshold  1.05 +/- 0.06 In alarm conforming to IEC 60947-4-1 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  [Ue] rated operational voltage  1000 V AC 50/60 Hz for power circuit conforming to VDE 0110 group C  [Ui] rated insulation voltage  Power circuit: 1000 V AC conforming to IEC 60947-4  [Uimp] rated impulse withstand voltage  8 kV IEC 60947-1	[Us] rated supply voltage	24 V DC	:
Plate  Tripping threshold  1.05 +/- 0.06 In alarm conforming to IEC 60947-4-1 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  [Ue] rated operational voltage  1000 V AC 50/60 Hz for power circuit conforming to VDE 0110 group C  [Ui] rated insulation voltage  Power circuit: 1000 V AC conforming to IEC 60947-4  [Uimp] rated impulse withstand voltage  8 kV IEC 60947-1	Supply voltage limits	1732 V	
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  [Ue] rated operational voltage 1000 V AC 50/60 Hz for power circuit conforming to VDE 0110 group C  [Ui] rated insulation voltage Power circuit: 1000 V AC conforming to IEC 60947-4  [Uimp] rated impulse withstand voltage 8 kV IEC 60947-1	Mounting support		
Contacts type and composition  1 NO + 1 NC  [Ith] conventional free air thermal current  5 A for control circuit  [Ue] rated operational voltage  1000 V AC 50/60 Hz for power circuit conforming to VDE 0110 group C  [Ui] rated insulation voltage  Power circuit: 1000 V AC conforming to IEC 60947-4  [Uimp] rated impulse withstand voltage  8 kV IEC 60947-1	Tripping threshold	· · · · · · · · · · · · · · · · · · ·	
[Ith] conventional free air thermal current  [Ue] rated operational voltage 1000 V AC 50/60 Hz for power circuit conforming to VDE 0110 group C  [Ui] rated insulation voltage Power circuit: 1000 V AC conforming to IEC 60947-4  [Uimp] rated impulse withstand voltage 8 kV IEC 60947-1	Surge withstand	4 kV conforming to IEC 61000-4-5	
Current  [Ue] rated operational voltage 1000 V AC 50/60 Hz for power circuit conforming to VDE 0110 group C  [Ui] rated insulation voltage Power circuit: 1000 V AC conforming to IEC 60947-4  [Uimp] rated impulse withstand voltage 8 kV IEC 60947-1	Contacts type and composition	1 NO + 1 NC	:
[Ui] rated insulation voltage Power circuit: 1000 V AC conforming to IEC 60947-4  [Uimp] rated impulse withstand voltage 8 kV IEC 60947-1		5 A for control circuit	
[Uimp] rated impulse withstand voltage 8 kV IEC 60947-1	[Ue] rated operational voltage	1000 V AC 50/60 Hz for power circuit conforming to VDE 0110 group C	
	[Ui] rated insulation voltage	Power circuit: 1000 V AC conforming to IEC 60947-4	
Phase failure sensitivity  Tripping in 4 s +/- 20 % conforming to IEC 60947-4-1	[Uimp] rated impulse withstand voltage	8 kV IEC 60947-1	i
	Phase failure sensitivity	Tripping in 4 s +/- 20 % conforming to IEC 60947-4-1	

Reset	Manual reset
Control type	Dial white full-load current adjustment Test button red Push-button reset Push-button red stop Selector switch load balancing Selector switch class 10/20
Local signalling	Alarm Trip indicator
Temperature compensation	-2070 °C
Current consumption	<= 5 mA no-load
Switching capacity for alarm	0150 mA
Maximum voltage drop	<2.5 V closed state
Connections - terminals	Control circuit: screw clamp terminals 1 cable 0.752.5 mm² - cable stiffness: flexible - with cable end  Control circuit: screw clamp terminals 1 cable 0.752.5 mm² - cable stiffness: solid  Control circuit: screw clamp terminals 1 cable 0.754 mm² - cable stiffness: flexible - without cable end  Control circuit: screw clamp terminals 2 cable 11.5 mm² - cable stiffness: flexible - with cable end  Control circuit: screw clamp terminals 2 cable 12.5 mm² - cable stiffness: flexible - without cable end  Control circuit: screw clamp terminals 2 cable 1 mm² - cable stiffness: solid  Power circuit: lugs-ring terminals M10  Alarm circuit: screw clamp terminals 1 cable 0.51.5 mm² - cable stiffness: flexible - without cable end
Tightening torque	Control circuit: 1.2 N.m on screw clamp terminals Power circuit: 35 N.m on screw clamp terminals Alarm circuit: 0.45 N.m on screw clamp terminals
Height	136.8 mm
Width	150 mm
Depth	127.6 mm
Product weight	2.32 kg

#### Environment

Standards	VDE 0660 EN 60947-4-1 IEC 60947-4-1 IEC 60255-17 IEC 60255-8
Product certifications	UL CSA
Protective treatment	TH
IP degree of protection	IP20 conforming to IEC 60529
Ambient air temperature for operation	-2055 °C conforming to IEC 60255-8
Ambient air temperature for storage	-4085 °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 5300 Hz: 2 Gn conforming to IEC 60068-2-6
Dielectric strength	6 kV 50 Hz conforming to IEC 255-5
Electromagnetic compatibility	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 Radiated radio-frequency electromagnetic field immunity test: 10 V/m conforming to IEC 61000-4-3 Fast transients immunity test: 2 kV conforming to IEC 61000-4-4

### Offer Sustainability

Sustainable offer status	Green Premium product
REACh Regulation	REACh Declaration
EU RoHS Directive	Compliant EU RoHS Declaration
Mercury free	Yes

RoHS exemption information	Yes	
China RoHS Regulation	China RoHS declaration Product out of China RoHS scope. Substance declaration for your information	
Environmental Disclosure	Product Environmental Profile	
Circularity Profile	End of Life Information	
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins	

## Contractual warranty

	Warranty	18 months
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