

## LR97D07F7

electronic overload relay for motor TeSys - 1.2...7 A  
- 100...120 V AC



### Main

|                                     |                                                                                                                                                                                  |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                               | TeSys                                                                                                                                                                            |
| Product name                        | TeSys D                                                                                                                                                                          |
| Device short name                   | LR97                                                                                                                                                                             |
| Product or component type           | Electronic overcurrent relay                                                                                                                                                     |
| Relay application                   | Locked rotor, mechanical jamming $I > 3 \times I_{\text{setting}}$<br>Overload $I_{\text{max}} > I_{\text{setting}}$<br>Sensitivity to phase failure                             |
| Product compatibility               | LC1D09...D38                                                                                                                                                                     |
| Network type                        | AC                                                                                                                                                                               |
| [Us] rated supply voltage           | 100...120 V AC                                                                                                                                                                   |
| Thermal protection adjustment range | 1.2...7 A                                                                                                                                                                        |
| [Ue] rated operational voltage      | 600 V AC 50/60 Hz for power circuit conforming to CSA<br>600 V AC 50/60 Hz for power circuit conforming to UL<br>690 V AC 50/60 Hz for power circuit conforming to IEC 60947-4-1 |
| Quantity per set                    | Set of 10                                                                                                                                                                        |

### Complementary

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Network frequency                           | 50...60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Mounting support                            | Direct on contactor<br>Rail                                                                                                                                                                                                                                                                                                                                                                                                 |
| Tripping threshold                          | 1.2...6 A                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Surge withstand                             | 6 kV conforming to IEC 61000-4-5                                                                                                                                                                                                                                                                                                                                                                                            |
| Contacts type and composition               | 1 C/O                                                                                                                                                                                                                                                                                                                                                                                                                       |
| [Ith] conventional free air thermal current | 3 A for control circuit                                                                                                                                                                                                                                                                                                                                                                                                     |
| Protection type                             | BS fuse 3 A - for control circuit<br>GB2 circuit breaker 3 A - for control circuit<br>GG fuse 3 A - for control circuit                                                                                                                                                                                                                                                                                                     |
| Maximum power                               | 28 W at 110 V DC conforming to IEC 60947<br>28 W at 220 V DC conforming to IEC 60947<br>55 W at 24 V DC conforming to IEC 60947<br>55 W at 48 V DC conforming to IEC 60947<br>140 VA at 48 V AC conforming to IEC 60947<br>360 VA at 110 V AC conforming to IEC 60947<br>360 VA at 220 V AC conforming to IEC 60947<br>70 VA at 24 V AC conforming to IEC 60947                                                             |
| [Ui] rated insulation voltage               | 600 V power circuit conforming to CSA<br>600 V power circuit conforming to UL<br>690 V power circuit conforming to IEC 60947-4-1                                                                                                                                                                                                                                                                                            |
| [Uimp] rated impulse withstand voltage      | 6 kV                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Phase failure sensitivity                   | < 3 s                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Reset                                       | Automatic reset 120 s fixed<br>Electrical by interruption of power supply for minimum 0.1 s<br>Manual reset                                                                                                                                                                                                                                                                                                                 |
| Time range                                  | 0.2...10 s - O-time knob<br>0.3...10 s - O-time knob<br>0.5...30 s - D-time knob                                                                                                                                                                                                                                                                                                                                            |
| Signalling function                         | 2 LEDs                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Connections - terminals                     | Control circuit : cable 1 cable 1...25 mm <sup>2</sup> - cable stiffness: flexible - with cable end<br>Control circuit : cable 1 cable 1...25 mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Power circuit : cable 1 cable 1...4 mm <sup>2</sup> - cable stiffness: flexible - with cable end<br>Power circuit : cable 1 cable 1.5...10 mm <sup>2</sup> - cable stiffness: flexible - without cable end |

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Power circuit : lug-clamp 1 cable 1...4 mm<sup>2</sup> - cable stiffness: flexible - with cable end  
 Power circuit : lug-clamp 1 cable 1.5...10 mm<sup>2</sup> - cable stiffness: flexible - without cable end  
 Control circuit : cable 2 cable 1...25 mm<sup>2</sup> - cable stiffness: flexible - with cable end  
 Control circuit : cable 2 cable 1...25 mm<sup>2</sup> - cable stiffness: flexible - without cable end  
 Control circuit : lug-clamp 1 cable 1...25 mm<sup>2</sup> - cable stiffness: flexible - with cable end  
 Control circuit : lug-clamp 1 cable 1...25 mm<sup>2</sup> - cable stiffness: flexible - without cable end  
 Control circuit : lug-clamp 2 cable 1...25 mm<sup>2</sup> - cable stiffness: flexible - with cable end  
 Control circuit : lug-clamp 2 cable 1...25 mm<sup>2</sup> - cable stiffness: flexible - without cable end

|                   |                                                                                    |
|-------------------|------------------------------------------------------------------------------------|
| Tightening torque | Control circuit : 0.6...1.2 N.m - on lug-clamp<br>Power circuit : 2 N.m - on cable |
| Height            | 67.5 mm                                                                            |
| Width             | 45 mm                                                                              |
| Depth             | 67.5 mm                                                                            |
| Product weight    | 0.172 kg                                                                           |

## Environment

|                                       |                                                                   |
|---------------------------------------|-------------------------------------------------------------------|
| standards                             | IEC 60255-6<br>IEC 60947                                          |
| product certifications                | CSA<br>GOST<br>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 | 6 kV in indirect mode<br>8 kV in air                              |
| resistance to radiated fields         | 10 V/m level 3                                                    |
| resistance to fast transients         | 2 kV                                                              |
| disturbance radiated/conducted        | 10 V conforming to EN 61000-4-6<br>Class A conforming to EN 55011 |