

# LC1F630

TeSys F contactor - 3P(3 NO)-AC-3 ≤ 440V  
630 A with coil LX1/ LX9 - 48...1000V AC  
40/400Hz, LX4 - 48...440V DC



## Main

|                                |                                                                                                                                                                                                                                                                                                                                 |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                          | TeSys                                                                                                                                                                                                                                                                                                                           |
| Product name                   | TeSys F                                                                                                                                                                                                                                                                                                                         |
| Product or component type      | Contactor                                                                                                                                                                                                                                                                                                                       |
| Device short name              | LC1F                                                                                                                                                                                                                                                                                                                            |
| Contactor application          | Resistive load<br>Motor control                                                                                                                                                                                                                                                                                                 |
| Utilisation category           | AC-4<br>AC-1<br>AC-3                                                                                                                                                                                                                                                                                                            |
| Poles description              | 3P                                                                                                                                                                                                                                                                                                                              |
| Power pole contact composition | 3 NO                                                                                                                                                                                                                                                                                                                            |
| [Ue] rated operational voltage | ≤ 1000 V AC 50/60 Hz<br>≤ 460 V DC                                                                                                                                                                                                                                                                                              |
| [Ie] rated operational current | 1000 A (at <40 °C) at ≤ 440 V AC AC-1<br>630 A (at <55 °C) at ≤ 440 V AC AC-3                                                                                                                                                                                                                                                   |
| Motor power kW                 | 335 kW at 380...400 V AC 50/60 Hz (AC-3)<br>375 kW at 415 V AC 50/60 Hz (AC-3)<br>400 kW at 440 V AC 50/60 Hz (AC-3)<br>400 kW at 500 V AC 50/60 Hz (AC-3)<br>450 kW at 1000 V AC 50/60 Hz (AC-3)<br>200 kW at 220...240 V AC 50/60 Hz (AC-3)<br>450 kW at 660...690 V AC 50/60 Hz (AC-3)<br>100 kW at 400 V AC 50/60 Hz (AC-4) |

## Complementary

|                                             |                                                                                                                                                                                                                    |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [Uc] control circuit voltage                | 48...1000 V AC 40...400 Hz with LX1/LX9 coil<br>48...440 V DC with LX4 coil                                                                                                                                        |
| [Uimp] rated impulse withstand voltage      | 8 kV                                                                                                                                                                                                               |
| Overvoltage category                        | III                                                                                                                                                                                                                |
| [Ith] conventional free air thermal current | 1000 A (at 40 °C)<br>1250 A                                                                                                                                                                                        |
| Irms rated making capacity                  | 6300 A AC conforming to IEC 60947-4-1                                                                                                                                                                              |
| Rated breaking capacity                     | 5040 A conforming to IEC 60947-4-1                                                                                                                                                                                 |
| [Icw] rated short-time withstand current    | 5050 A 40 °C - 10 s<br>4400 A 40 °C - 30 s<br>3400 A 40 °C - 1 min<br>2200 A 40 °C - 3 min<br>1600 A 40 °C - 10 min                                                                                                |
| Associated fuse rating                      | 630 A aM at ≤ 440 V<br>1000 A gG at ≤ 440 V                                                                                                                                                                        |
| Average impedance                           | 0.12 mOhm - Ith 1000 A 50 Hz                                                                                                                                                                                       |
| [Ui] rated insulation voltage               | 1000 V conforming to IEC 60947-4-1<br>1500 V conforming to VDE 0110 group C                                                                                                                                        |
| Power dissipation per pole                  | 120 W AC-1<br>48 W AC-3                                                                                                                                                                                            |
| Control circuit voltage limits              | Operational: 0.85...1.1 Uc AC 40...400 Hz with LX1/LX9 coil<br>Drop-out: 0.25...0.5 Uc AC 40...400 Hz with LX1/LX9 coil<br>Operational: 0.85...1.1 Uc DC with LX4 coil<br>Drop-out: 0.2...0.35 Uc DC with LX4 coil |
| Heat dissipation                            | 20 W                                                                                                                                                                                                               |

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating time                  | 40...80 ms closing for with LX1/LX9 coil<br>100...200 ms opening for with LX1/LX9 coil<br>60...70 ms closing for with LX4 coil<br>40...50 ms opening for with LX4 coil                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Mounting support                | Plate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Standards                       | EN 60947-4-1<br>IEC 60947-4-1<br>IEC 60947-1<br>JIS C8201-4-1<br>EN 60947-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Product certifications          | ABS<br>UL<br>RINA<br>DNV<br>CSA<br>CB<br>LROS (Lloyds register of shipping)<br>BV<br>RMRoS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Connections - terminals         | Power circuit: bar 2 cable(s) - busbar cross section: 60 x 5 mm<br>Power circuit: bolted connection<br>Control circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> flexible without cable end<br>Control circuit: screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> flexible with cable end<br>Control circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> flexible with cable end<br>Control circuit: screw clamp terminals 2 cable(s) 1...2.5 mm <sup>2</sup> solid without cable end<br>Control circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup><br>Control circuit: screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> |
| Tightening torque               | Power circuit: 58 N.m<br>Control circuit: 1.2 N.m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Mechanical durability           | 5 Mcycles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Inrush power in VA              | 1500...1730 VA, 40...400 Hz cos phi 0.9 (at 20 °C)with LX1/LX9 coil<br>1420...1920 VA (at 20 °C)with LX4 coil                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Hold-in power consumption in VA | 20...25 VA, 40...400 Hz cos phi 0.9 (at 20 °C)with LX1/LX9 coil<br>6.5...12.5 VA (at 20 °C)with LX4 coil                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Maximum operating rate          | 1200 cyc/h 55 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Compatibility code              | LC1F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## Environment

|                                                       |                                                                                                                                                                                                                   |
|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IP degree of protection                               | IP20 front face with shrouds conforming to IEC 60529<br>IP20 front face with shrouds conforming to VDE 0106                                                                                                       |
| Protective treatment                                  | TH                                                                                                                                                                                                                |
| Ambient air temperature for operation                 | -5...55 °C                                                                                                                                                                                                        |
| Ambient air temperature for storage                   | -60...80 °C                                                                                                                                                                                                       |
| Permissible ambient air temperature around the device | -40...70 °C                                                                                                                                                                                                       |
| Operating altitude                                    | 3000 m without derating                                                                                                                                                                                           |
| Mechanical robustness                                 | Vibrations contactor open: 2 Gn, 5...300 Hz<br>Vibrations contactor closed: 4 Gn, 5...300 Hz<br>Shocks contactor open: 6 Gn for 1/2 sine wave (11 ms)<br>Shocks contactor closed: 15 Gn for 1/2 sine wave (11 ms) |
| Height                                                | 304 mm                                                                                                                                                                                                            |
| Width                                                 | 309 mm                                                                                                                                                                                                            |
| Depth                                                 | 255 mm                                                                                                                                                                                                            |
| Net weight                                            | 18.6 kg                                                                                                                                                                                                           |

## Packing Units

|                              |          |
|------------------------------|----------|
| Unit Type of Package 1       | PCE      |
| Number of Units in Package 1 | 1        |
| Package 1 Weight             | 17.11 kg |
| Package 1 Height             | 34 cm    |
| Package 1 width              | 34 cm    |
| Package 1 Length             | 45 cm    |
| Unit Type of Package 2       | P06      |

|                              |          |
|------------------------------|----------|
| Number of Units in Package 2 | 4        |
| Package 2 Weight             | 76.94 kg |
| Package 2 Height             | 80 cm    |
| Package 2 width              | 80 cm    |
| Package 2 Length             | 60 cm    |

### Offer Sustainability

|                            |                                                                                                                             |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                       |
| REACH Regulation           | <a href="#">REACH Declaration</a>                                                                                           |
| EU RoHS Directive          | Compliant <a href="#">EU RoHS Declaration</a>                                                                               |
| Mercury free               | Yes                                                                                                                         |
| RoHS exemption information | <a href="#">Yes</a>                                                                                                         |
| China RoHS Regulation      | <a href="#">China RoHS Declaration</a>                                                                                      |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>                                                                               |
| Circularity Profile        | <a href="#">End Of Life Information</a>                                                                                     |
| 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 |
|----------|-----------|