

# Product data sheet

Specifications



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

LC1F630

! To be discontinued on: 31 December 2023

! To be discontinued

### Main

|                                |   |
|--------------------------------|---|
| Range                          | TeSys   |
| Product name                   | TeSys F   |
| Product or component type      | Contactors  |
| Device short name              | LC1F  |
| Contactors 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 |

1600 A 40 °C - 10 min

|  |  |
|--|--|
| <b>Associated fuse rating</b>          | 630 A aM at <= 440 V<br>1000 A gG at <= 440 V  |
| <b>Average impedance</b>               | 0.12 mOhm - lth 1000 A 50 Hz   |
| <b>[Ui] rated insulation voltage</b>   | 1000 V conforming to IEC 60947-4-1<br>1500 V conforming to VDE 0110 group C  |
| <b>Power dissipation per pole</b>      | 120 W AC-1<br>48 W AC-3  |
| <b>Control circuit voltage limits</b>  | 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   |
| <b>Heat dissipation</b>                | 20 W   |
| <b>Operating time</b>                  | 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   |
| <b>Mounting support</b>                | Plate  |
| <b>Standards</b>                       | EN 60947-4-1<br>IEC 60947-4-1<br>IEC 60947-1<br>JIS C8201-4-1<br>EN 60947-1  |
| <b>Product certifications</b>          | ABS<br>UL<br>RINA<br>DNV<br>CSA<br>CB<br>LROS (Lloyds register of shipping)<br>BV<br>RMRoS<br>UKCA   |
| <b>Connections - terminals</b>         | 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> |
| <b>Tightening torque</b>               | Power circuit: 58 N.m<br>Control circuit: 1.2 N.m  |
| <b>Mechanical durability</b>           | 5 Mcycles  |
| <b>Inrush power in VA</b>              | 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  |
| <b>Hold-in power consumption in VA</b> | 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   |
| <b>Maximum operating rate</b>          | 1200 cyc/h 55 °C   |
| <b>Compatibility code</b>              | LC1F   |

## Environment

|  |   |
|--|---|
| <b>IP degree of protection</b>                               | IP20 front face with shrouds conforming to IEC 60529<br>IP20 front face with shrouds conforming to VDE 0106 |
| <b>Protective treatment</b>                                  | TH  |
| <b>Ambient air temperature for operation</b>                 | -5...55 °C  |
| <b>Ambient air temperature for storage</b>                   | -60...80 °C   |
| <b>Permissible ambient air temperature around the device</b> | -40...70 °C   |
| <b>Operating altitude</b>                                    | 3000 m without derating   |
| <b>Mechanical robustness</b>                                 | Vibrations contactor open: 2 Gn, 5...300 Hz<br>Vibrations contactor closed: 4 Gn, 5...300 Hz                |

Shocks contactor open: 6 Gn for 1/2 sine wave (11 ms)  
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             | 77 cm    |
| Package 2 width              | 60 cm    |
| Package 2 Length             | 80 cm    |

## Offer Sustainability

|                            |   |
|----------------------------|---|
| Sustainable offer status   | Green Premium product   |
| REACH Regulation           | <a href="#">REACH Declaration</a>   |
| EU RoHS Directive          | Compliant<br><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><br>Product out of China RoHS scope. Substance declaration for your information   |
| 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   |
| California proposition 65  | WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> |


## Contractual warranty


|          |           |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|


## Recommended replacement(s)


LC1F630 is replaced by the following group of products:

Global group 1

1x  High power contactor, TeSys Giga, 3 pole (3NO), AC-3  $\leq 440V$  630A, advanced version, 48...130V wide band AC/DC coil  
LC1G630EHEA

1x  High power contactor, TeSys Giga 630, 4 pole (4NO), AC-1  $\leq 440V$  1050A, standard version, 48...130V wide band AC/DC coil  
LC1G630EHEN

1x  High power contactor, TeSys Giga, 3 pole (3NO), AC-3  $\leq 440V$  630A, standard version, 100...250V wide band AC/DC coil  
LC1G630KUEN

1x  High power contactor, TeSys Giga, 3 pole (3NO), AC-3  $\leq 440V$  630A, advanced version, 200...500V wide band AC/DC coil  
LC1G630LSEA