

# Product data sheet

Specifications



contactor, TeSys F, 3P(3NO), AC-3,  
<=440V 800 A with coil LX1/LX9  
110...400V AC 40/400Hz, LX4  
110...400V DC, LXE 100...250V AC  
50/60Hz

LC1F800

⚠ To be discontinued

⚠ To be discontinued on: 31 December 2023

## Main

|                                |                                                                                                                                                                                                                                                                                                                                 |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                          | TeSys                                                                                                                                                                                                                                                                                                                           |
| Product name                   | TeSys F                                                                                                                                                                                                                                                                                                                         |
| Product or component type      | Contactor                                                                                                                                                                                                                                                                                                                       |
| Device short name              | LC1F                                                                                                                                                                                                                                                                                                                            |
| Contactor application          | Motor control<br>Resistive load                                                                                                                                                                                                                                                                                                 |
| Utilisation category           | AC-3<br>AC-1<br>AC-4                                                                                                                                                                                                                                                                                                            |
| 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>800 A (at <55 °C) at <= 440 V AC AC-3                                                                                                                                                                                                                                                 |
| Motor power kW                 | 450 kW at 1000 V AC 50/60 Hz (AC-3)<br>450 kW at 500 V AC 50/60 Hz (AC-3)<br>475 kW at 660...690 V AC 50/60 Hz (AC-3)<br>110 kW at 400 V AC 50/60 Hz (AC-4)<br>450 kW at 380...400 V AC 50/60 Hz (AC-3)<br>450 kW at 415 V AC 50/60 Hz (AC-3)<br>450 kW at 440 V AC 50/60 Hz (AC-3)<br>250 kW at 220...240 V AC 50/60 Hz (AC-3) |

## Complementary

|                                             |                                                                                                                                                       |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| [Uc] control circuit voltage                | 110...400 V AC 40...400 Hz with LX1/LX9 coil<br>110...400 V DC with LX4 coil<br>100...250 V AC 50/60 Hz with LXE coil<br>100...380 V DC with LXE coil |
| [Uimp] rated impulse withstand voltage      | 8 kV                                                                                                                                                  |
| Overvoltage category                        | III                                                                                                                                                   |
| [Ith] conventional free air thermal current | 1000 A (at 40 °C)                                                                                                                                     |
| Irms rated making capacity                  | 8000 A AC conforming to IEC 60947-4-1                                                                                                                 |
| Rated breaking capacity                     | 6400 A conforming to IEC 60947-4-1                                                                                                                    |

|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>[Icw] rated short-time withstand current</b> | 2600 A 40 °C - 3 min<br>5500 A 40 °C - 10 s<br>4600 A 40 °C - 30 s<br>3600 A 40 °C - 1 min<br>1700 A 40 °C - 10 min                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Associated fuse rating</b>                   | 1000 A gG at <= 440 V<br>800 A aM at <= 440 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Average impedance</b>                        | 0.12 mOhm - Ith 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>77 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: 0.3...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: 0.3...0.5 Uc DC with LX4 coil<br>Operational: 85...275 V AC 50/60 Hz with LXE coil<br>Drop-out: 0...60 V AC 50/60 Hz with LXE coil<br>Operational: 85...418 V DC with LXE coil<br>Drop-out: 0...45 V DC with LXE coil                                                                                                                                                                                       |
| <b>Heat dissipation</b>                         | 25 W<br>2.2...5.5 W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Operating time</b>                           | 60...80 ms closing for with LX1/LX9 coil<br>160...180 ms opening for with LX1/LX9 coil<br>60...80 ms closing for with LX4 coil<br>40...50 ms opening for with LX4 coil<br>40...80 ms closing for with LXE coil<br>6...54 ms opening for with LXE coil                                                                                                                                                                                                                                                                                                                                          |
| <b>Mounting support</b>                         | Plate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Standards</b>                                | IEC 60947-1<br>JIS C8201-4-1<br>EN 60947-1<br>IEC 60947-4-1<br>EN 60947-4-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Product certifications</b>                   | CB<br>CSA<br>LROS (Lloyds register of shipping)<br>ABS<br>CCC<br>UL<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 mm²flexible without cable end<br>Control circuit: screw clamp terminals 2 cable(s) 1...4 mm²flexible with cable end<br>Control circuit: screw clamp terminals 1 cable(s) 1...4 mm²flexible with cable end<br>Control circuit: screw clamp terminals 2 cable(s) 1...2.5 mm²solid without cable end<br>Control circuit: screw clamp terminals 1 cable(s) 1...4 mm²<br>Control circuit: screw clamp terminals 2 cable(s) 1...4 mm² |
| <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>                       | 1700 VA, 40...400 Hz cos phi 0.9 (at 20 °C)with LX1/LX9 coil<br>1900 VA (at 20 °C)with LX4 coil<br>460...730 VA, 50/60 Hz cos phi 0.5 (at 20 °C)with LXE coil<br>500...680 VA cos phi 0.5 (at 20 °C)with LXE coil                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Hold-in power consumption in VA</b>          | 12 VA, 40...400 Hz cos phi 0.9 (at 20 °C)with LX1/LX9 coil<br>12 VA (at 20 °C)with LX4 coil<br>7...10 VA, 50/60 Hz cos phi 0.5 (at 20 °C)with LXE coil<br>4.0...5.5 VA cos phi 0.5 (at 20 °C)with LXE coil                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Maximum operating rate</b>                   | 600 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                                                                                                          |

|                                                       |                                                                                                                                                                                                                   |
|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ambient air temperature for operation                 | -5...55 °C                                                                                                                                                                                                        |
| Ambient air temperature for storage                   | -60...80 °C                                                                                                                                                                                                       |
| Permissible ambient air temperature around the device | -5...55 °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                                            | 18.75 kg                                                                                                                                                                                                          |

### Packing Units

|                              |           |
|------------------------------|-----------|
| Unit Type of Package 1       | PCE       |
| Number of Units in Package 1 | 1         |
| Package 1 Height             | 33.500 cm |
| Package 1 Width              | 33.500 cm |
| Package 1 Length             | 44.500 cm |
| Package 1 Weight             | 17.195 kg |
| Unit Type of Package 2       | P06       |
| Number of Units in Package 2 | 4         |
| Package 2 Height             | 75.000 cm |
| Package 2 Width              | 60.000 cm |
| Package 2 Length             | 80.000 cm |
| Package 2 Weight             | 77.280 kg |

### 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                                                                                                                                                                                                                                                                                         |
| China RoHS Regulation      | <a href="#">China RoHS declaration</a><br>Product out of China RoHS scope. Substance declaration for your information                                                                                                                                                                       |
| RoHS exemption information | <a href="#">Yes</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                                                                                                                                                                 |
| 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)

LC1F800 may be replaced by any of the following products:

|    |                                                                                    |                                                                                                                                        |
|----|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| 1x |   | High power contactor, TeSys Giga, 3 pole (3NO), AC-3 <=440V 800A, advanced version, 48...130V wide band AC/DC coil<br>LC1G800EHEA      |
| 1x |   | High power contactor, TeSys Giga, 3 pole (3NO), AC-3 <=440V 800A, advanced version, 200...500V wide band AC/DC coil<br>LC1G800LSEA     |
| 1x |   | High power contactor, TeSys Giga 800, 4 pole (4NO), AC-1 <=440V 1050A, standard version, 48...130V wide band AC/DC coil<br>LC1G800EHEN |
| 1x |  | High power contactor, TeSys Giga, 3 pole (3NO), AC-3 <=440V 800A, standard version, 100...250V wide band AC/DC coil<br>LC1G800KUEN     |