

# Product Datasheet

## Characteristic

# LC1F225P7

TeSys F contactor - 3P (3 NO) - AC-3 -  
≤ 440 V 225 A - coil 230 V AC



## Main

|                                |                                                                        |
|--------------------------------|------------------------------------------------------------------------|
| Range                          | TeSys                                                                  |
| Range of product               | 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                                                                     |
| [Ue] rated operational voltage | ≤ 460 V DC<br>≤ 690 V AC 50/60 Hz                                      |
| [Uc] control circuit voltage   | 230 V AC 40...400 Hz                                                   |
| [Ie] rated operational current | 315 A (at <40 °C) at ≤ 440 V AC-1<br>225 A (at <55 °C) at ≤ 440 V AC-3 |

## Complementary

|                                             |                                                                                                                      |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| [Uimp] rated impulse withstand voltage      | 8 kV                                                                                                                 |
| [Ith] conventional free air thermal current | 315 A (at 40 °C)                                                                                                     |
| Rated breaking capacity                     | 1800 A conforming to IEC 60947-4-1                                                                                   |
| [Icw] rated short-time withstand current    | 1800 A 40 °C - 10 s<br>1000 A 40 °C - 30 s<br>850 A 40 °C - 1 min<br>560 A 40 °C - 3 min<br>440 A 40 °C - 10 min     |
| Associated fuse rating                      | 315 A gG at ≤ 440 V<br>250 A aM at ≤ 440 V                                                                           |
| Average impedance                           | 0.32 mOhm - Ith 315 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                  | 32 W AC-1<br>16 W AC-3                                                                                               |
| Overvoltage category                        | III                                                                                                                  |
| Pole contact composition                    | 3 NO                                                                                                                 |
| Motor power kW                              | 110 kW at 380...400 V AC 50/60 Hz (AC-3)<br>110 kW at 415 V AC 50/60 Hz (AC-3)<br>110 kW at 440 V AC 50/60 Hz (AC-3) |

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                 | 129 kW at 500 V AC 50/60 Hz (AC-3)<br>129 kW at 660...690 V AC 50/60 Hz (AC-3)<br>63 kW at 220...230 V AC 50/60 Hz (AC-3)<br>40 kW at 400 V AC 50/60 Hz (AC-4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Control circuit voltage limits  | Operational: 0.85...1.1 Uc 40...400 Hz (at 55 °C)<br>Drop-out: 0.2...0.55 Uc 40...400 Hz (at 55 °C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Mechanical durability           | 10 Mcycles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Inrush power in VA              | 1070 VA, 40...400 Hz cos phi 0.9 (at 20 °C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Hold-in power consumption in VA | 9.9 VA, 40...400 Hz cos phi 0.9 (at 20 °C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Maximum operating rate          | 2400 cyc/h 55 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Operating time                  | 35 ms closing (at Uc)<br>130 ms opening (at Uc)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Connections - terminals         | 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 without 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 mm²flexible with cable end<br>Control circuit: screw clamp terminals 1 cable(s) 1...4 mm²solid without cable end<br>Control circuit: screw clamp terminals 2 cable(s) 1...4 mm²solid without cable end<br>Power circuit: bar 2 cable(s) - busbar cross section: 32 x 4 mm<br>Power circuit: lugs-ring terminals 1 cable(s) 185 mm²<br>Power circuit: connector 1 cable(s) 185 mm²<br>Power circuit: bolted connection |
| Tightening torque               | Control circuit: 1.2 N.m<br>Power circuit: 35 N.m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| mounting support                | Plate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Heat dissipation                | 8...9.8 W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Power range                     | 55...100 kW at 200...240 V 3 phases<br>110...220 kW at 480...500 V 3 phases<br>110...220 kW at 380...440 V 3 phases                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Motor starter type              | Direct on-line contactor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Contactor coil voltage          | 230 V AC standard                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Standards                       | EN 60947-1<br>IEC 60947-1<br>IEC 60947-4-1<br>EN 60947-4-1<br>JIS C8201-4-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Product certifications          | RMRoS<br>CB<br>UL<br>BV<br>CSA<br>LROS (Lloyds register of shipping)<br>RINA<br>ABS<br>DNV<br>UKCA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Compatibility code              | LC1F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Control circuit type            | AC at 40...400 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## 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                                                                                                 |
| Height                                                | 197 mm                                                                                                      |
| Width                                                 | 168.5 mm                                                                                                    |
| Depth                                                 | 181 mm                                                                                                      |
| Operating altitude                                    | 3000 m without derating                                                                                     |
| net weight                                            | 4.75 kg                                                                                                     |

## Packing Units

|                              |           |
|------------------------------|-----------|
| Unit Type of Package 1       | PCE       |
| Number of Units in Package 1 | 1         |
| Package 1 Height             | 22.000 cm |
| Package 1 Width              | 21.000 cm |
| Package 1 Length             | 23.000 cm |
| Package 1 Weight             | 5.241 kg  |
| Unit Type of Package 2       | S04       |
| Number of Units in Package 2 | 2         |
| Package 2 Height             | 30.000 cm |
| Package 2 Width              | 40.000 cm |
| Package 2 Length             | 60.000 cm |
| Package 2 Weight             | 11.132 kg |
| Unit Type of Package 3       | P06       |
| Number of Units in Package 3 | 12        |
| Package 3 Height             | 75.000 cm |
| Package 3 Width              | 80.000 cm |
| Package 3 Length             | 60.000 cm |
| Package 3 Weight             | 74.792 kg |

## Offer Sustainability

|                            |                                                                                                                             |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                       |
| REACH Regulation           | Reference contains Substances of Very High Concern above the threshold                                                      |
| EU RoHS Directive          | Compliant with Exemptions                                                                                                   |
| Mercury free               | Yes                                                                                                                         |
| China RoHS Regulation      | Product out of China RoHS scope. Substance declaration for your information                                                 |
| RoHS exemption information | Yes                                                                                                                         |
| Environmental Disclosure   | ENVPEP080208EN                                                                                                              |
| Circularity Profile        | ENVEOLI100418                                                                                                               |
| WEEE                       | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |
| PVC free                   | Yes                                                                                                                         |