

# Product datasheet

Specifications



## TeSys F contactor - 3P (3 NO) - AC-3 - <= 440 V 400 A - coil 220 V AC

LC1F400M7

⚠ Discontinued on: Dec 31, 2023

⚠ To be discontinued

### 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-1<br>AC-4<br>AC-3   |
| Poles Description              | 3P   |
| [Ue] Rated Operational Voltage | <= 1000 V AC 50/60 Hz<br><= 460 V DC   |
| [Uc] Control Circuit Voltage   | 220 V AC 40...400 Hz   |
| [Ie] Rated Operational Current | 500 A (at <40 °C) at <= 440 V AC AC-1<br>400 A (at <55 °C) at <= 440 V AC AC-3 |

### Complementary

|   |   |
|---|---|
| [Uimp] Rated Impulse Withstand Voltage      | 8 kV  |
| [Ith] Conventional Free Air Thermal Current | 500 A (at 40 °C)  |
| Rated Breaking Capacity                     | 3200 A conforming to IEC 60947-4-1  |
| [Icw] Rated Short-Time Withstand Current    | 3600 A 40 °C - 10 s<br>2400 A 40 °C - 30 s<br>1700 A 40 °C - 1 min<br>1200 A 40 °C - 3 min<br>1000 A 40 °C - 10 min |
| Associated Fuse Rating                      | 400 A aM at <= 440 V<br>500 A gG at <= 440 V  |
| Average Impedance                           | 0.26 mOhm - Ith 500 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                  | 65 W AC-1<br>42 W AC-3  |
| Overvoltage Category                        | III   |
| Power Pole Contact Composition              | 3 NO  |

Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

|  |  |
|--|--|
| <b>Motor Power Kw</b>                  | 75 kW at 400 V AC 50/60 Hz (AC-4)<br>200 kW at 380...400 V AC 50/60 Hz (AC-3)<br>220 kW at 415 V AC 50/60 Hz (AC-3)<br>250 kW at 440 V AC 50/60 Hz (AC-3)<br>257 kW at 500 V AC 50/60 Hz (AC-3)<br>280 kW at 660...690 V AC 50/60 Hz (AC-3)<br>185 kW at 1000 V AC 50/60 Hz (AC-3)<br>110 kW at 220...230 V AC 50/60 Hz (AC-3)   |
| <b>Control Circuit Voltage Limits</b>  | Operational: 0.85...1.1 Uc 40...400 Hz (at 55 °C)<br>Drop-out: 0.3...0.5 Uc 40...400 Hz (at 55 °C)   |
| <b>Mechanical Durability</b>           | 10 Mcycles   |
| <b>Inrush Power In Va</b>              | 1075 VA, 40...400 Hz cos phi 0.9 (at 20 °C)  |
| <b>Hold-In Power Consumption In Va</b> | 15 VA, 40...400 Hz cos phi 0.9 (at 20 °C)  |
| <b>Maximum Operating Rate</b>          | 2400 cyc/h 55 °C   |
| <b>Operating Time</b>                  | 40...65 ms closing<br>100...170 ms opening   |
| <b>Connections - Terminals</b>         | 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 without 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> flexible with cable end<br>Control circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> solid without cable end<br>Control circuit: screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> solid without cable end<br>Power circuit: bar 2 cable(s) - busbar cross section: 30 x 5 mm<br>Power circuit: lugs-ring terminals 2 cable(s) 150 mm <sup>2</sup><br>Power circuit: bolted connection |
| <b>Tightening Torque</b>               | Control circuit: 1.2 N.m<br>Power circuit: 35 N.m  |
| <b>Mounting Support</b>                | Plate  |
| <b>Heat Dissipation</b>                | 14 W   |
| <b>Motor Power Range</b>               | 110...220 kW at 480...500 V 3 phases<br>110...220 kW at 380...440 V 3 phases<br>110...220 kW at 200...240 V 3 phases<br>250...500 kW at 480...500 V 3 phases   |
| <b>Motor Starter Type</b>              | Direct on-line contactor   |
| <b>Contactor Coil Voltage</b>          | 220 V AC standard  |
| <b>Standards</b>                       | IEC 60947-1<br>EN 60947-4-1<br>EN 60947-1<br>IEC 60947-4-1<br>JIS C8201-4-1  |
| <b>Product Certifications</b>          | RMRoS<br>CB<br>RINA<br>DNV<br>LROS (Lloyds register of shipping)<br>CSA<br>UL<br>ABS<br>BV<br>UKCA   |
| <b>Compatibility Code</b>              | LC1F   |
| <b>Control Circuit Type</b>            | AC at 40...400 Hz  |

## 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>Height</b>  | 206 mm                  |
| <b>Width</b>   | 213 mm                  |
| <b>Depth</b>   | 219 mm                  |
| <b>Operating Altitude</b>                                    | 3000 m without derating |
| <b>Net Weight</b>  | 9.1 kg                  |

## Packing Units

|                                     |            |
|-------------------------------------|------------|
| <b>Unit Type Of Package 1</b>       | PCE        |
| <b>Number Of Units In Package 1</b> | 1          |
| <b>Package 1 Height</b>             | 25.000 cm  |
| <b>Package 1 Width</b>              | 25.500 cm  |
| <b>Package 1 Length</b>             | 30.000 cm  |
| <b>Package 1 Weight</b>             | 9.093 kg   |
| <b>Unit Type Of Package 2</b>       | S04        |
| <b>Number Of Units In Package 2</b> | 2          |
| <b>Package 2 Height</b>             | 30.000 cm  |
| <b>Package 2 Width</b>              | 40.000 cm  |
| <b>Package 2 Length</b>             | 60.000 cm  |
| <b>Package 2 Weight</b>             | 18.836 kg  |
| <b>Unit Type Of Package 3</b>       | P06        |
| <b>Number Of Units In Package 3</b> | 10         |
| <b>Package 3 Height</b>             | 75.000 cm  |
| <b>Package 3 Width</b>              | 80.000 cm  |
| <b>Package 3 Length</b>             | 60.000 cm  |
| <b>Package 3 Weight</b>             | 102.180 kg |

## Contractual warranty

|                 |           |
|-----------------|-----------|
| <b>Warranty</b> | 18 months |
|-----------------|-----------|

## Sustainability

**Green Premium™ label** is Schneider Electric's commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO<sub>2</sub> products.

**Guide to assessing product sustainability** is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

[Learn more about Green Premium >](#)

[Guide to assess a product's sustainability >](#)



Transparency RoHS/REACH

## Well-being performance

Mercury Free

Rohs Exemption Information Yes

## Certifications & Standards

Reach Regulation [REACH Declaration](#)

Eu Rohs Directive Compliant with Exemptions

China Rohs Regulation [China RoHS declaration](#)  
Product out of China RoHS scope. Substance declaration for your information

Environmental Disclosure [Product Environmental Profile](#)

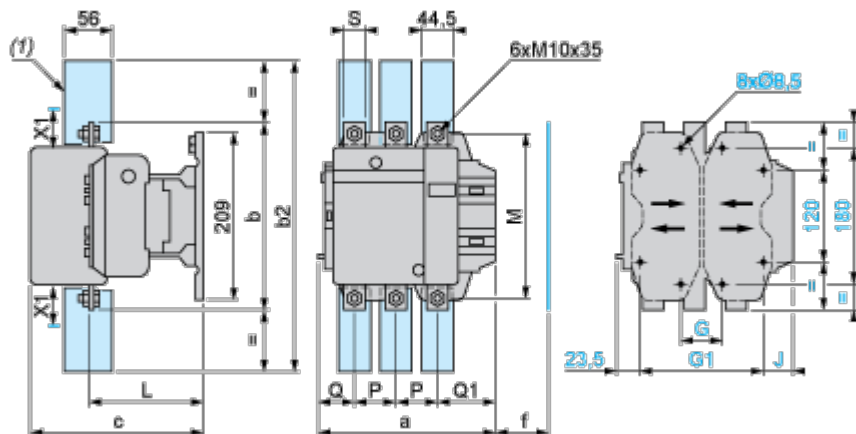
Weee The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

Circularity Profile [End of Life Information](#)

Dimensions Drawings

Dimensions and Drawings

LC1 F400 and F500



(1) Power terminal protection shroud

**NOTE:** X1 (mm) = Minimum electrical clearance according to operating voltage and breaking capacity.

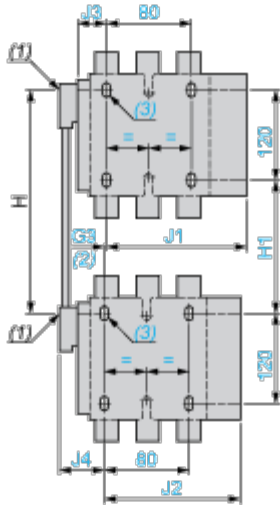
|      |             |              |
|------|-------------|--------------|
| LC1  | 200...500 V | 600...1000 V |
| F400 | 15          | 20           |
| F500 | 15          | 20           |

| LC1  |    | a   | b   | b2  | c   | f   | G supplied | G min. | G max. | G1 supplied | G1 min. | G1 max. | J    | L   | M   | P  | Q  | Q1  |
|------|----|-----|-----|-----|-----|-----|------------|--------|--------|-------------|---------|---------|------|-----|-----|----|----|-----|
| F400 | 2P | 213 | 206 | 375 | 219 | 146 | 80         | 66     | 102    | 170         | 156     | 192     | 19.5 | 145 | 181 | 48 | 69 | 96  |
|      | 3P | 213 | 206 | 375 | 219 | 146 | 80         | 66     | 102    | 170         | 156     | 192     | 19.5 | 145 | 181 | 48 | 43 | 74  |
|      | 4P | 261 | 206 | 375 | 219 | 146 | 80         | 66     | 150    | 170         | 156     | 240     | 67.5 | 145 | 181 | 48 | 43 | 74  |
| F500 | 2P | 233 | 238 | 400 | 232 | 150 | 80         | 66     | 120    | 170         | 156     | 210     | 39.5 | 146 | 208 | 55 | 76 | 102 |
|      | 3P | 233 | 238 | 400 | 232 | 150 | 80         | 66     | 120    | 170         | 156     | 210     | 39.5 | 146 | 208 | 55 | 46 | 77  |
|      | 4P | 288 | 238 | 400 | 232 | 150 | 140        | 66     | 175    | 230         | 156     | 265     | 34.5 | 146 | 208 | 55 | 46 | 77  |

TeSys F reversing contactors and changeover contactor pairs Vertically mounted

**NOTE:** For customer assembly, with mechanical interlock (MI) LA9 F, fixing recommended on AM1 EC uprights (please consult your Regional Sales Office). 2 x LC1 identical or different ratings (LC1 F115 to F630 and F800).

Assembly A



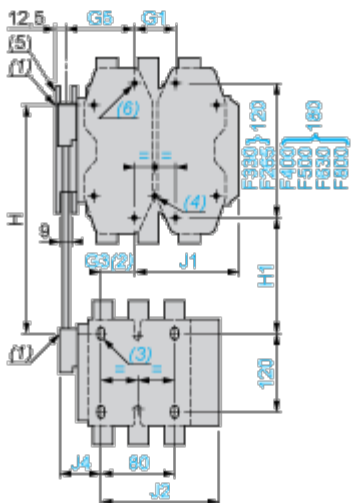
- (1) Mechanical interlock shaft.
- (2) For assembly of contactors of different ratings only.
- (3) 4 x Ø6.5 for LC1 F115 to F225.

Assembly A<sup>(7)</sup> - Mechanical interlock reference

|                 | G3 3P | G3 4P | H min. | H max. | H1 min. | H1 max. | J1 3P | J1 4P |
|-----------------|-------|-------|--------|--------|---------|---------|-------|-------|
| <b>LA9 FF4F</b> | 0     | 0     | 200    | 310    | 80      | 190     | 137   | 155.5 |
| <b>LA9 FG4F</b> | 3     | 4     | 210    | 300    | 90      | 180     | 139.5 | 159.5 |
| <b>LA9 FG4G</b> | 0     | 0     | 220    | 310    | 100     | 190     | 139.5 | 159.5 |

|                 | J2 3P | J2 4P | J3 3P | J3 4P | J4 3P | J4 4P |
|-----------------|-------|-------|-------|-------|-------|-------|
| <b>LA9 FF4F</b> | 137   | 155.5 | 48.5  | 67    | 48.5  | 67    |
| <b>LA9 FG4F</b> | 137   | 155.5 | 53    | 73    | 54    | 69    |
| <b>LA9 FG4G</b> | 139.5 | 159.5 | 53    | 73    | 53    | 73    |

Assembly B



- (4) 4 x Ø6.5 for LC1 F265.
- (5) Mechanical interlock guide bracket.

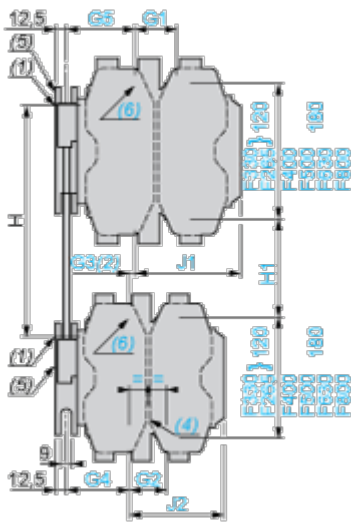
Assembly B<sup>(7)</sup> - Mechanical interlock reference

|          | G1 3P | G1 4P | G3 3P | G3 4P | G5 3P | G5 4P | H min. | H max. |
|----------|-------|-------|-------|-------|-------|-------|--------|--------|
| LA9 FH4F | 96    | 96    | 21    | 27    | 60    | 83    | 240    | 380    |
| LA9 FJ4F | 80    | 80    | 45    | 26    | 83    | 83    | 250    | 380    |
| LA9 FK4F | 80    | 140   | 45    | 26    | 83    | 83    | 270    | 380    |
| LA9 FL4F | 180   | 240   | 35    | 17    | 74    | 74    | 310    | 380    |
| LA9 FH4G | 96    | 96    | 19    | 23    | 60    | 83    | 250    | 380    |
| LA9 FJ4G | 80    | 80    | 42    | 22    | 83    | 83    | 250    | 380    |
| LA9 FK4G | 80    | 140   | 42    | 22    | 83    | 83    | 270    | 380    |
| LA9 FL4G | 180   | 240   | 33    | 13    | 74    | 74    | 310    | 380    |

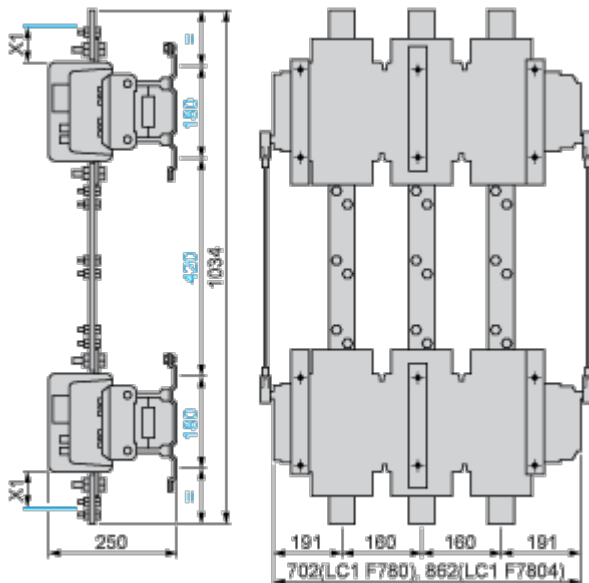
|          | H1 min. | H1 max. | J1 3P | J1 4P | J2 3P | J2 4P | J4 3P | J4 4P |
|----------|---------|---------|-------|-------|-------|-------|-------|-------|
| LA9 FH4F | 110     | 250     | 157.5 | 181.5 | 137   | 155.5 | 48.5  | 67    |
| LA9 FJ4F | 80      | 210     | 144.5 | 192.5 | 137   | 155.5 | 48.5  | 67    |
| LA9 FK4F | 100     | 210     | 164.5 | 219.5 | 137   | 155.5 | 48.5  | 67    |
| LA9 FL4F | 140     | 210     | 248.5 | 328.5 | 137   | 155.5 | 48.5  | 67    |
| LA9 FH4G | 120     | 250     | 157.5 | 181.5 | 139.5 | 159.5 | 53    | 73    |
| LA9 FJ4G | 90      | 220     | 144.5 | 192.5 | 139.5 | 159.5 | 53    | 73    |
| LA9 FK4G | 110     | 220     | 164.5 | 219.5 | 139.5 | 159.5 | 53    | 73    |

|          |         |         |       |       |       |       |       |       |
|----------|---------|---------|-------|-------|-------|-------|-------|-------|
|          | H1 min. | H1 max. | J1 3P | J1 4P | J2 3P | J2 4P | J4 3P | J4 4P |
| LA9 FL4G | 150     | 220     | 248.5 | 328.5 | 139.5 | 159.5 | 53    | 73    |

Assembly C



(6) 4 x Ø8.5 for LC1 F400, F500 or 4 x Ø10.5 for LC1 F630 and F800.



(7) Only 3P for F800.

(8) In this case, G4 is greater than G5.

Assembly C<sup>(7)</sup>

|          | G1 3P | G1 4P | G2 3P | G2 4P | G3 3P | G3 4P | G4 3P | G4 4P | G5 3P | G5 4P |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| LA9 FH4H | 96    | 96    | 96    | 96    | 0     | 0     | 60    | 83    | 60    | 83    |
| LA9 FJ4H | 80    | 80    | 96    | 96    | 23    | 0     | 60    | 83    | 83    | 83    |
| LA9 FK4H | 80    | 140   | 96    | 96    | 23    | 0     | 60    | 83    | 83    | 83    |



|          | G1 3P | G1 4P | G2 3P | G2 4P | G3 3P            | G3 4P            | G4 3P | G4 4P | G5 3P | G5 4P |
|----------|-------|-------|-------|-------|------------------|------------------|-------|-------|-------|-------|
| LA9 FL4H | 180   | 240   | 96    | 96    | 14               | g <sup>(8)</sup> | 60    | 83    | 74    | 74    |
| LA9 FJ4J | 80    | 80    | 80    | 80    | 0                | 0                | 83    | 83    | 83    | 83    |
| LA9 FK4J | 80    | 140   | 80    | 80    | 0                | 0                | 83    | 83    | 83    | 83    |
| LA9 FL4J | 180   | 240   | 80    | 80    | g <sup>(8)</sup> | g <sup>(8)</sup> | 83    | 83    | 74    | 74    |
| LA9 FK4K | 80    | 140   | 80    | 140   | 0                | 0                | 83    | 83    | 83    | 83    |
| LA9 FL4K | 180   | 240   | 80    | 140   | g <sup>(8)</sup> | g <sup>(8)</sup> | 83    | 83    | 74    | 74    |
| LA9 FL4L | 180   | 240   | 180   | 240   | 0                | 0                | 74    | 74    | 74    | 74    |

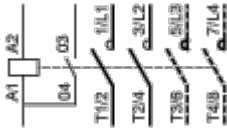
|          | H min. | H max. | H1 min. | H1 max. | J1 3P | J1 4P | J2 3P | J2 4P |
|----------|--------|--------|---------|---------|-------|-------|-------|-------|
| LA9 FH4H | 250    | 380    | 130     | 260     | 157.5 | 181.5 | 157.5 | 181.5 |
| LA9 FJ4H | 260    | 380    | 110     | 230     | 144.5 | 192.5 | 157.5 | 181.5 |
| LA9 FK4H | 280    | 380    | 130     | 230     | 164.5 | 219.5 | 157.5 | 181.5 |
| LA9 FL4H | 330    | 380    | 170     | 220     | 248.5 | 328.5 | 157.5 | 181.5 |
| LA9 FJ4J | 260    | 380    | 60      | 200     | 144.5 | 192.5 | 144.5 | 192.5 |
| LA9 FK4J | 280    | 380    | 100     | 200     | 164.5 | 219.5 | 144.5 | 192.5 |
| LA9 FL4J | 325    | 380    | 140     | 195     | 248.5 | 329.5 | 144.5 | 192.5 |
| LA9 FK4K | 300    | 380    | 120     | 200     | 164.5 | 329.5 | 164.5 | 219.5 |
| LA9 FL4K | 345    | 380    | 160     | 195     | 248.5 | 328.5 | 164.5 | 219.5 |
| LA9 FL4L | 380    | 380    | 200     | 200     | 248.5 | 328.5 | 248.5 | 328.5 |


Connections and Schema

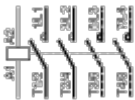
Connections and Schema


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2, 3, and 4-pole Contactors




LC1 F115 to F630, F1250 (coil LX1 F )



LC1 F115 to F630, F1250 (coil LX4 F )

LC1 F115 to F265 (coil LX9 F )

LC1 F800 (coil LX8 F )

Motor Starter BOM

Motor Starter BOM