

# Product datasheet

Specifications



## TeSys F reversing contactor - 3P(3 NO) AC-3 <= 440 V 225 A 220 V AC 40...400 Hz

LC2F225M7

⚠ Discontinued on: 13 Sep 2024

⚠ Discontinued

### Main

|                                             |                                                                                                                                                                                                                                         |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                                       | TeSys                                                                                                                                                                                                                                   |
| Product name                                | TeSys F                                                                                                                                                                                                                                 |
| Product or component type                   | Reversing contactor                                                                                                                                                                                                                     |
| Device short name                           | LC2F                                                                                                                                                                                                                                    |
| Contactor application                       | Motor control<br>Resistive load                                                                                                                                                                                                         |
| Utilisation category                        | AC-1<br>AC-3                                                                                                                                                                                                                            |
| Device presentation                         | Preassembled with reversing power busbar                                                                                                                                                                                                |
| 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              | 225 A (at <40 °C) at <= 440 V AC AC-3<br>315 A (at <40 °C) at <= 440 V AC AC-1                                                                                                                                                          |
| Motor power kW                              | 100 kW at 1000 V AC 50/60 Hz<br>110 kW at 380...400 V AC 50/60 Hz<br>110 kW at 415 V AC 50/60 Hz<br>110 kW at 440 V AC 50/60 Hz<br>129 kW at 500 V AC 50/60 Hz<br>63 kW at 220...240 V AC 50/60 Hz<br>129 kW at 660...690 V AC 50/60 Hz |
| Control circuit type                        | AC at 40...400 Hz                                                                                                                                                                                                                       |
| [Uc] control circuit voltage                | 220 V AC 40...400 Hz                                                                                                                                                                                                                    |
| [Uimp] rated impulse withstand voltage      | 8 kV                                                                                                                                                                                                                                    |
| Overvoltage category                        | III                                                                                                                                                                                                                                     |
| [Ith] conventional free air thermal current | 315 A (at 40 °C)                                                                                                                                                                                                                        |
| Irms rated making capacity                  | 2250 A AC conforming to IEC 60947-4-1                                                                                                                                                                                                   |
| 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                                                                                                                                                                                                             |

Excluding VAT, FCA Jabal Ali & are subject to change – check with your local distributor.

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [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    | 16 W AC-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Interlocking type             | Mechanical                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Mounting support              | Plate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Standards                     | IEC 60947-1<br>EN 60947-1<br>EN 60947-4-1<br>IEC 60947-4-1<br>JIS C8201-4-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Product certifications        | CB<br>UL<br>LROS (Lloyds register of shipping)<br>RINA<br>DNV<br>CSA<br>CCC<br>RMRoS<br>ABS<br>UKCA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 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: lugs-ring terminals 1 cable(s) 185 mm²<br>Power circuit: connector 1 cable(s) 185 mm²<br>Power circuit: bar 2 cable(s) - busbar cross section: 32 x 4 mm |
| Tightening torque             | Control circuit: 1.2 N.m<br>Power circuit: 35 N.m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Operating time                | 20...35 ms closing<br>7...15 ms opening                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Mechanical durability         | 10 Mcycles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Maximum operating rate        | 2400 cyc/h 55 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

## Complementary

|                                 |                                                                                                       |
|---------------------------------|-------------------------------------------------------------------------------------------------------|
| Control circuit voltage limits  | Operational: 0.85...1.1 Uc at 50/60 Hz (at <55 °C)<br>Drop-out: 0.2...0.55 Uc at 50/60 Hz (at <55 °C) |
| Inrush power in VA              | 805 VA 50 Hz cos phi 0.3 (at 20 °C)<br>970 VA 60 Hz cos phi 0.3 (at 20 °C)                            |
| Hold-in power consumption in VA | 55 VA 50 Hz cos phi 0.3 (at 20 °C)<br>66 VA 60 Hz cos phi 0.3 (at 20 °C)                              |
| Heat dissipation                | 18...24 W                                                                                             |

## 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>Shocks contactor closed: 15 Gn for 11 ms<br>Vibrations contactor closed: 5 Gn, 5...300 Hz<br>Shocks contactor open: 7 Gn for 11 ms |
| Height                | 197 mm                                                                                                                                                                            |
| Width                 | 357 mm                                                                                                                                                                            |
| Depth                 | 181 mm                                                                                                                                                                            |
| Net weight            | 11.1 kg                                                                                                                                                                           |

## Packing Units

|                              |           |
|------------------------------|-----------|
| Unit Type of Package 1       | PCE       |
| Number of Units in Package 1 | 1         |
| Package 1 Height             | 22.0 cm   |
| Package 1 Width              | 36.0 cm   |
| Package 1 Length             | 53.0 cm   |
| Package 1 Weight             | 12.353 kg |



## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)



### Environmental footprint

|                                                        |                                               |
|--------------------------------------------------------|-----------------------------------------------|
| Total lifecycle Carbon footprint                       | 1 769 kg CO2 eq.                              |
| Carbon footprint of the manufacturing phase [A1 to A3] | 184 kg CO2 eq.                                |
| Carbon footprint of the distribution phase [A4]        | 2 kg CO2 eq.                                  |
| Carbon footprint of the installation phase [A5]        | 0.8 kg CO2 eq.                                |
| Carbon footprint of the use phase [B2, B3, B4, B6]     | 1 565 kg CO2 eq.                              |
| Carbon footprint of the end-of-life phase [C1 to C4]   | 17 kg CO2 eq.                                 |
| Environmental Disclosure                               | <a href="#">Product Environmental Profile</a> |

## Use Better



### Materials and Substances

|             |                                      |
|-------------|--------------------------------------|
| SCIP Number | B2d4179a-eb65-40a3-a1ef-d9a33060486f |
| PVC free    | Yes                                  |

## Use Longer



### Lifetime extension

|        |    |
|--------|----|
| Repair | No |
|--------|----|

## Use Again



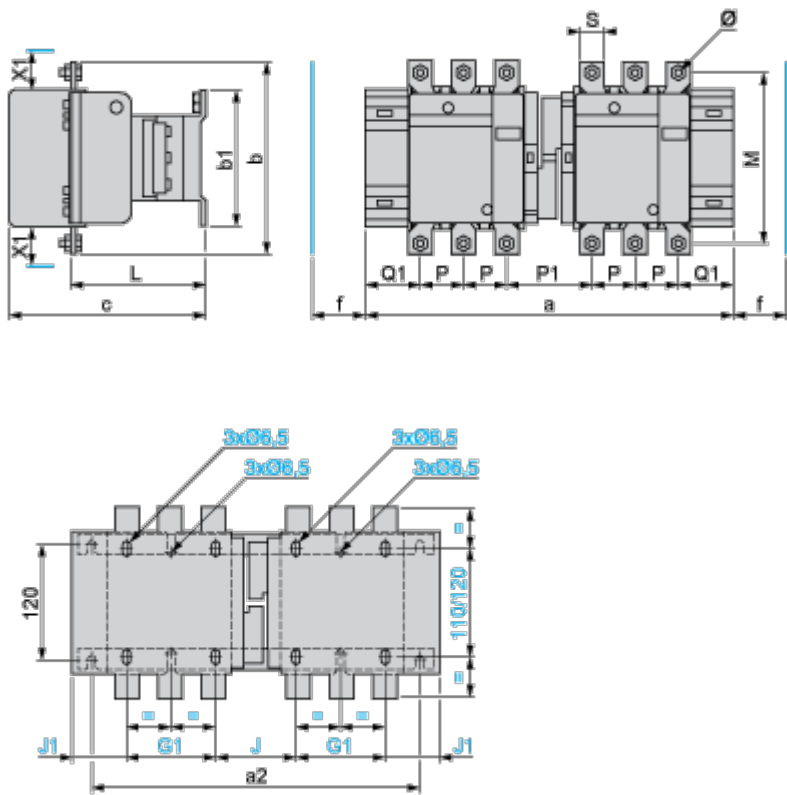
### Repack and remanufacture

|                               |                                                                                                                                                                                                                 |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Recyclability potential, in % | 91                                                                                                                                                                                                              |
| WEEE Label                    |  The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |

Dimensions Drawings

Dimensions and Drawings

Pre-assembled: LC2 F115 to F265 (Reverser supplied on 2 bars which can be used for fixing the device)



**NOTE:** Bar fixing centers Vertical: 120 mm, Horizontal: a2 see table.

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

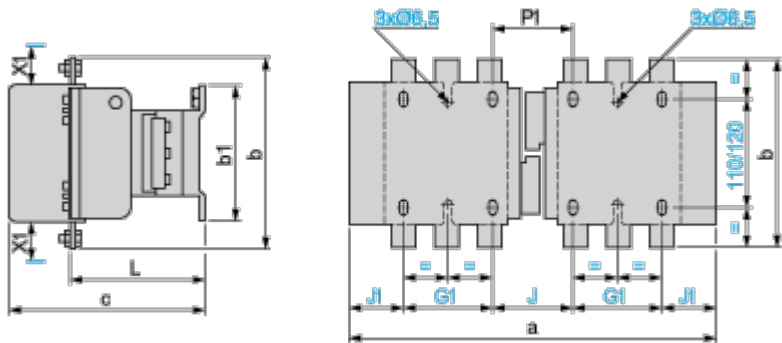
| LC1        | 200...500 V | 660...1000 V |
|------------|-------------|--------------|
| F115, F150 | 10          | 15           |
| F185       | 10          | 15           |
| F225, F265 | 10          | 15           |

| LC2  |    | a   | a2  | b   | b1  | c   | G1 | J   | J1   | L   | M   | P  | P1 | Q1   | S  | f   | Ø  |
|------|----|-----|-----|-----|-----|-----|----|-----|------|-----|-----|----|----|------|----|-----|----|
| F115 | 3P | 345 | 317 | 162 | 137 | 171 | 80 | 71  | 57   | 107 | 147 | 37 | 77 | 60   | 20 | 131 | M6 |
|      | 4P | 419 | 378 | 162 | 137 | 171 | 80 | 108 | 75.5 | 107 | 147 | 37 | 77 | 60   | 20 | 131 | M6 |
| F150 | 3P | 345 | 317 | 170 | 137 | 171 | 80 | 71  | 57   | 107 | 150 | 40 | 71 | 57   | 20 | 131 | M8 |
|      | 4P | 422 | 381 | 170 | 137 | 171 | 80 | 111 | 75.5 | 107 | 150 | 40 | 71 | 55.5 | 20 | 131 | M8 |

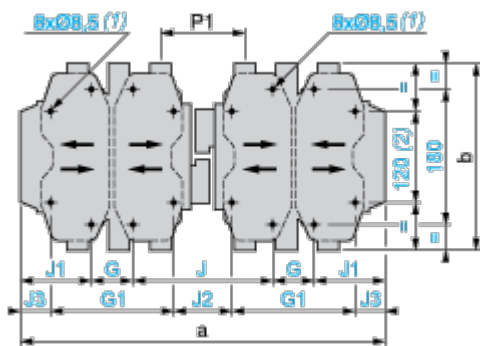
| LC2  |    | a   | a2  | b   | b1  | c   | G1 | J   | J1   | L     | M   | P  | P1  | Q1   | S  | f   | Ø   |
|------|----|-----|-----|-----|-----|-----|----|-----|------|-------|-----|----|-----|------|----|-----|-----|
| F185 | 3P | 357 | 326 | 174 | 137 | 181 | 80 | 78  | 59.5 | 113.5 | 154 | 40 | 78  | 59.5 | 20 | 130 | M8  |
|      | 4P | 437 | 390 | 174 | 137 | 181 | 80 | 118 | 79.5 | 113.5 | 154 | 40 | 78  | 59.5 | 20 | 130 | M8  |
| F225 | 3P | 357 | 326 | 197 | 137 | 181 | 80 | 78  | 59.5 | 113.5 | 172 | 48 | 62  | 51.5 | 25 | 130 | M10 |
|      | 4P | 437 | 390 | 197 | 137 | 181 | 80 | 118 | 79.5 | 113.5 | 172 | 48 | 54  | 47.5 | 25 | 130 | M10 |
| F265 | 3P | 425 | 386 | 203 | 145 | 213 | 96 | 109 | 61.5 | 141   | 178 | 48 | 100 | 66.5 | 25 | 147 | M10 |
|      | 4P | 521 | 464 | 203 | 145 | 213 | 96 | 157 | 85.5 | 141   | 178 | 48 | 100 | 66.5 | 25 | 147 | M10 |

**NOTE:** For customer assembly, fixing recommended on AM1 EC uprights, please consult your Regional Sales Office.

2 x LC1 F115 to F330



2 x LC1 F400, F500, F630, F800



- (1) Except LC1 F630 and F800: 4 x Ø10.5.
- (2) Except LC1 F630 and F800.

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

| LC1        | 200...500 V | 660...1000 V | 200...690 V | 1000 V |
|------------|-------------|--------------|-------------|--------|
| F115, F150 | 10          | 15           | –           | –      |

| LC1        | 200...500 V | 660...1000 V | 200...690 V | 1000 V |
|------------|-------------|--------------|-------------|--------|
| F185       | 10          | 15           | –           | –      |
| F225, F265 | 10          | 15           | –           | –      |
| F330       | 10          | 15           | –           | –      |
| F400       | 15          | 20           | –           | –      |
| F500       | 15          | 20           | –           | –      |
| F630       | 20          | 30           | –           | –      |
| F800       | –           | –            | 10          | 20     |

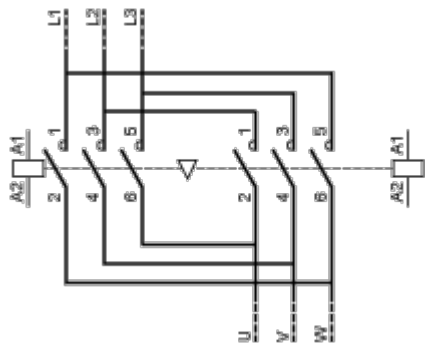
| 2 x LC1 |    | a   | b   | b1  | c   | G   | G1  | J   | J1    | J2 | J3   | L     | P1  |
|---------|----|-----|-----|-----|-----|-----|-----|-----|-------|----|------|-------|-----|
| F115    | 3P | 345 | 162 | 137 | 171 | –   | 80  | 71  | 57    | –  | –    | 107   | 77  |
|         | 4P | 419 | 162 | 137 | 171 | –   | 80  | 108 | 75.5  | –  | –    | 107   | 77  |
| F150    | 3P | 345 | 170 | 137 | 171 | –   | 80  | 71  | 57    | –  | –    | 107   | 71  |
|         | 4P | 422 | 170 | 137 | 171 | –   | 80  | 111 | 75.5  | –  | –    | 107   | 71  |
| F185    | 3P | 357 | 174 | 137 | 181 | –   | 80  | 78  | 59.5  | –  | –    | 113.5 | 78  |
|         | 4P | 437 | 174 | 137 | 181 | –   | 80  | 118 | 79.5  | –  | –    | 113.5 | 78  |
| F225    | 3P | 357 | 197 | 137 | 181 | –   | 80  | 78  | 59.5  | –  | –    | 113.5 | 62  |
|         | 4P | 437 | 197 | 137 | 181 | –   | 80  | 118 | 79.5  | –  | –    | 113.5 | 54  |
| F265    | 3P | 425 | 203 | 145 | 213 | –   | 96  | 109 | 61.5  | –  | –    | 141   | 100 |
|         | 4P | 521 | 203 | 145 | 213 | –   | 96  | 157 | 85.5  | –  | –    | 141   | 100 |
| F330    | 3P | 447 | 206 | 145 | 219 | –   | 96  | 124 | 65.5  | –  | –    | 145   | 107 |
|         | 4P | 543 | 206 | 145 | 219 | –   | 96  | 172 | 89.5  | –  | –    | 145   | 107 |
| F400    | 3P | 446 | 206 | 209 | 219 | 80  | 170 | 157 | 64.5  | 67 | 19.5 | 145   | 107 |
|         | 4P | 542 | 206 | 209 | 219 | 80  | 170 | 157 | 112.5 | 67 | 67.5 | 145   | 107 |
| F500    | 3P | 485 | 238 | 209 | 232 | 80  | 170 | 156 | 84.5  | 66 | 39.5 | 146   | 112 |
|         | 4P | 595 | 238 | 209 | 232 | 140 | 230 | 156 | 79.5  | 66 | 34.5 | 146   | 112 |
| F630    | 3P | 636 | 304 | 280 | 255 | 180 | –   | 139 | 68.5  | –  | –    | 155   | 137 |
|         | 4P | 796 | 304 | 280 | 255 | 240 | –   | 139 | 88.5  | –  | –    | 155   | 137 |
| F800    | 3P | 636 | 304 | 280 | 255 | 180 | –   | 139 | 68.5  | –  | –    | 155   | 137 |



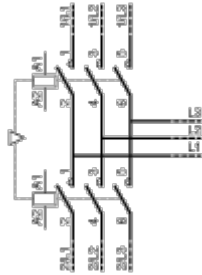
Connections and Schema

Connections and Schema

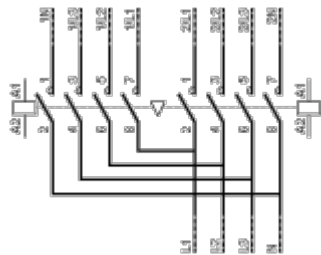
Reversing contactors for motor control LC2 F: 2xLC1 F Horizontally mounted



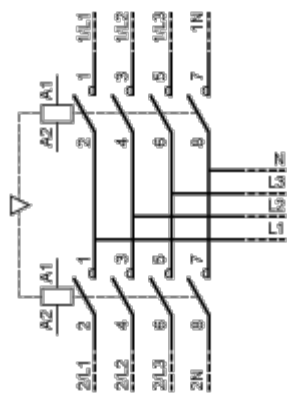
Reversing contactors for motor control LC2 F: 2xLC1 F Vertically mounted



Changeover contactor pairs for distribution LC2 F: 2xLC1 F Horizontally mounted



Changeover contactor pairs for distribution LC2 F: 2xLC1 F Vertically mounted



Electrical interlocking of reversers fitted with mechanical interlock without integral electrical contacts: LA9 F

