



Main

| | |
|--------------------------------|---|
| Range | TeSys |
| Product name | TeSys F |
| Product or component type | Contacteur |
| Device short name | LC1F |
| Contacteur application | Motor control Resistive load |
| Utilisation category | AC-1 AC-3 AC-4 |
| Poles description | 3P |
| Pole contact composition | 3 NO |
| [Ue] rated operational voltage | <= 1000 V AC 50/60 Hz <= 460 V DC |
| [Ie] rated operational current | 350 A (<= 40 °C) at <= 440 V AC AC-1 265 A (<= 55 °C) at <= 440 V AC AC-3 |
| Motor power kW | 132 kW at 380...400 V AC 50/60 Hz AC-3 140 kW at 415 V AC 50/60 Hz AC-3 140 kW at 440 V AC 50/60 Hz AC-3 160 kW at 500 V AC 50/60 Hz AC-3 147 kW at 1000 V AC 50/60 Hz AC-3 75 kW at 220...230 V AC 50/60 Hz AC-3 51 kW at 400 V AC 50/60 Hz AC-4 160 kW at 660...690 V AC 50/60 Hz AC-3 |
| [Uc] control circuit voltage | 110 V AC 40...400 Hz |

Complementary

| | |
|---|---|
| [Uimp] rated impulse withstand voltage | 8 kV |
| Overvoltage category | III |
| [Ith] conventional free air thermal current | 350 A at <= 40 °C |
| Rated breaking capacity | 2120 A conforming to IEC 60947-4-1 |
| [Icw] rated short-time withstand current | 2200 A <= 40 °C 10 s 1230 A <= 40 °C 30 s 950 A <= 40 °C 1 min 620 A <= 40 °C 3 min 480 A <= 40 °C 10 min |
| Associated fuse rating | 315 A aM at <= 440 V 400 A gG at <= 440 V |
| Average impedance | 0.3 mOhm at 50 Hz - Ith 350 A |
| [Ui] rated insulation voltage | 1000 V conforming to IEC 60947-4-1 1500 V conforming to VDE 0110 group C |
| Power dissipation per pole | 21 W AC-3 37 W AC-1 |
| Mounting support | Plate |
| Standards | EN 60947-1 EN 60947-4-1 IEC 60947-1 IEC 60947-4-1 JIS C8201-4-1 |
| Product certifications | ABS BV CSA DNV LROS (Lloyds register of shipping) RINA |

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RMRoS
UL
CB

| | |
|---------------------------------|--|
| Connections - terminals | Control circuit : screw clamp terminals 2 cable(s) 1...2.5 mm ² - cable stiffness: flexible - with cable end Power circuit : connector 1 cable(s) 240 mm ² Control circuit : screw clamp terminals 1 cable(s) 1...4 mm ² - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 2 cable(s) 1...4 mm ² - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 1 cable(s) 1...4 mm ² - cable stiffness: flexible - with cable end Control circuit : screw clamp terminals 1 cable(s) 1...4 mm ² - cable stiffness: solid - without cable end Control circuit : screw clamp terminals 2 cable(s) 1...4 mm ² - cable stiffness: solid - without cable end Power circuit : lugs-ring terminals 1 cable(s) 240 mm ² Power circuit : bolted connection Power circuit : bar 2 x (32 x 4 mm) |
| Tightening torque | Power circuit : 35 N.m Control circuit : 1.2 N.m |
| Control circuit voltage limits | 0.85...1.1 U _c at 55 °C operational 40...400 Hz 0.15...0.2 U _c at 55 °C drop-out 40...400 Hz |
| Inrush power in VA | 650 VA at 20 °C (cos φ 0.9) 40...400 Hz |
| Hold-in power consumption in VA | 10 VA at 20 °C (cos φ 0.9) 40...400 Hz |
| Heat dissipation | 8 W |
| Operating time | 100...170 ms opening 40...65 ms closing |
| Mechanical durability | 10 Mcycles |
| Operating rate | 2400 cyc/h at ≤ 55 °C |

Environment

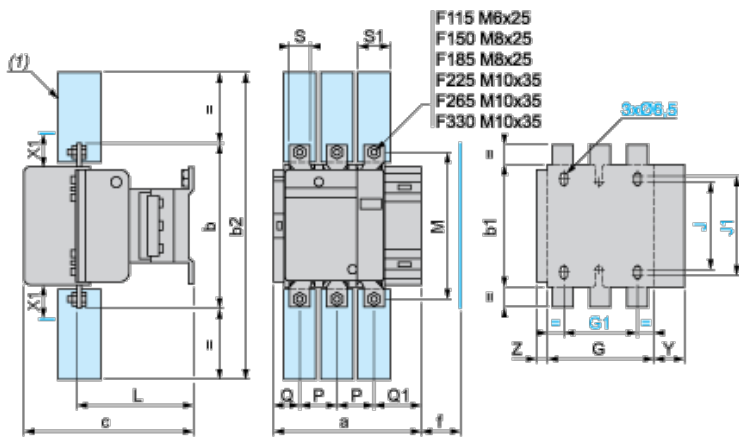
| | |
|---|---|
| IP degree of protection | IP20 front face with shrouds (ordered separately) conforming to IEC 60529 IP20 front face with shrouds (ordered separately) conforming to VDE 0106 |
| protective treatment | TH |
| ambient air temperature for operation | -5...55 °C |
| ambient air temperature for storage | -60...80 °C |
| permissible ambient air temperature around the device | -40...70 °C |
| operating altitude | 3000 m without derating |
| mechanical robustness | Vibrations resistance contactor open 2 Gn, 5...300 Hz Shocks resistance contactor closed 15 Gn for 11 ms Shocks resistance contactor open 6 Gn for 11 ms Vibrations resistance contactor closed 5 Gn, 5...300 Hz |
| height | 203 mm |
| width | 201.5 mm |
| depth | 213 mm |
| product weight | 7.44 kg |

Offer Sustainability

| | |
|----------------------------------|---|
| Sustainable offer status | Green Premium product |
| RoHS (date code: YYWW) | Compliant - since 0843 - Schneider Electric declaration of conformity |
| REACH | Reference not containing SVHC above the threshold |
| Product environmental profile | Available |
| Product end of life instructions | Available |

Dimensions and Drawings

LC1 F115 to F330



(1) Power terminal protection shroud

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

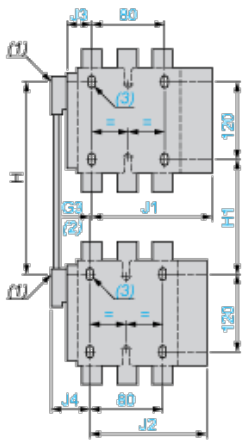
| LC1 | 200...500 V | 600...1000 V |
|------------|-------------|--------------|
| F115, F150 | 10 | 15 |
| F185 | 10 | 15 |
| F225, F265 | 10 | 15 |
| F330 | 10 | 15 |

| LC1 | | a | b | b1 | b2 | c | f | G | G1 | J | J1 | L | M | P | Q | Q1 | S | S1 | Y | Z |
|------|----|-------|-----|-----|-----|-----|-----|-------|----|-----|-----|-------|-----|----|------|------|----|------|----|------|
| F115 | 3P | 163.5 | 162 | 137 | 265 | 171 | 131 | 106 | 80 | 106 | 120 | 107 | 147 | 37 | 29.5 | 60 | 20 | 26 | 44 | 13.5 |
| | 4P | 200.5 | 162 | 137 | 265 | 171 | 131 | 143 | 80 | 106 | 120 | 107 | 147 | 37 | 29.5 | 60 | 20 | 26 | 44 | 13.5 |
| F150 | 3P | 163.5 | 170 | 137 | 301 | 171 | 131 | 106 | 80 | 106 | 120 | 107 | 150 | 40 | 26 | 57.5 | 20 | 34 | 44 | 13.5 |
| | 4P | 200.5 | 170 | 137 | 301 | 171 | 131 | 143 | 80 | 106 | 120 | 107 | 150 | 40 | 26 | 55.5 | 20 | 34 | 44 | 13.5 |
| F185 | 3P | 168.5 | 174 | 137 | 305 | 181 | 130 | 111 | 80 | 106 | 120 | 113.5 | 154 | 40 | 29 | 59.5 | 20 | 34 | 44 | 13.5 |
| | 4P | 208.5 | 174 | 137 | 305 | 181 | 130 | 151 | 80 | 106 | 120 | 113.5 | 154 | 40 | 29 | 59.5 | 20 | 34 | 44 | 13.5 |
| F225 | 3P | 168.5 | 197 | 137 | 364 | 181 | 130 | 111 | 80 | 106 | 120 | 113.5 | 172 | 48 | 21 | 51.5 | 25 | 44.5 | 44 | 13.5 |
| | 4P | 208.5 | 197 | 137 | 364 | 181 | 130 | 151 | 80 | 106 | 120 | 113.5 | 172 | 48 | 17 | 47.5 | 25 | 44.5 | 44 | 13.5 |
| F265 | 3P | 201.5 | 203 | 145 | 375 | 213 | 147 | 142 | 96 | 106 | 120 | 141 | 178 | 48 | 39 | 66.5 | 25 | 44.5 | 38 | 21.5 |
| | 4P | 244.5 | 203 | 145 | 375 | 213 | 147 | 190 | 96 | 106 | 120 | 141 | 178 | 48 | 34 | 66.5 | 25 | 44.5 | 38 | 16.5 |
| F330 | 3P | 213 | 206 | 145 | 375 | 219 | 147 | 154.5 | 96 | 106 | 120 | 145 | 181 | 48 | 43 | 74 | 25 | 44.5 | 38 | 20.5 |
| | 4P | 261 | 206 | 145 | 375 | 219 | 147 | 202.5 | 96 | 106 | 120 | 145 | 181 | 48 | 43 | 74 | 25 | 44.5 | 38 | 20.5 |

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



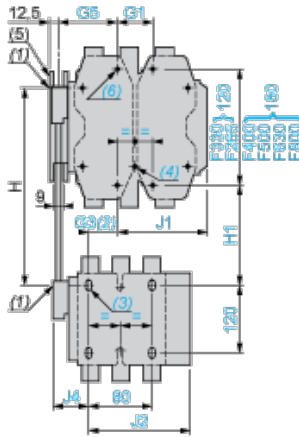
- (1) Mechanical interlock shaft.
- (2) For assembly of contactors of different ratings only.
- (3) 4 x Ø6.5 for LC1 F115 to F225.

Assembly A⁽⁷⁾ - Mechanical interlock reference

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

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

Assembly B



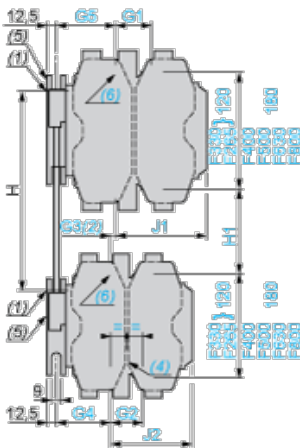
- (4) 4 x Ø6.5 for LC1 F265.
- (5) Mechanical interlock guide bracket.

Assembly B⁽⁷⁾ - Mechanical interlock reference

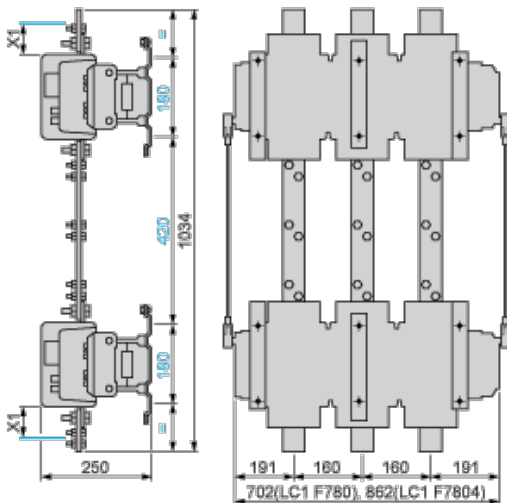
| | G1 3P | G1 4P | G3 3P | G3 4P | G5 3P | G5 4P | H min. | H max. |
|----------|-------|-------|-------|-------|-------|-------|--------|--------|
| LA9 FH4F | 96 | 96 | 21 | 27 | 60 | 83 | 240 | 380 |
| LA9 FJ4F | 80 | 80 | 45 | 26 | 83 | 83 | 250 | 380 |
| LA9 FK4F | 80 | 140 | 45 | 26 | 83 | 83 | 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 |
| 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⁽⁷⁾

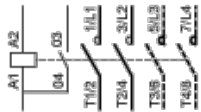
| | G1 3P | G1 4P | G2 3P | G2 4P | G3 3P | G3 4P | G4 3P | G4 4P | G5 3P | G5 4P |
|----------|-------|-------|-------|-------|-------|------------------|-------|-------|-------|-------|
| LA9 FH4H | 96 | 96 | 96 | 96 | 0 | 0 | 60 | 83 | 60 | 83 |
| LA9 FJ4H | 80 | 80 | 96 | 96 | 23 | 0 | 60 | 83 | 83 | 83 |
| LA9 FK4H | 80 | 140 | 96 | 96 | 23 | 0 | 60 | 83 | 83 | 83 |
| LA9 FL4H | 180 | 240 | 96 | 96 | 14 | 9 ⁽⁸⁾ | 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 | 9 ⁽⁸⁾ | 9 ⁽⁸⁾ | 83 | 83 | 74 | 74 |
| LA9 FK4K | 80 | 140 | 80 | 140 | 0 | 0 | 83 | 83 | 83 | 83 |
| LA9 FL4K | 180 | 240 | 80 | 140 | 9 ⁽⁸⁾ | 9 ⁽⁸⁾ | 83 | 83 | 74 | 74 |
| LA9 FL4L | 180 | 240 | 180 | 240 | 0 | 0 | 74 | 74 | 74 | 74 |

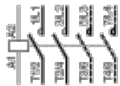
| | H min. | H max. | H1 min. | H1 max. | J1 3P | J1 4P | J2 3P | J2 4P |
|----------|--------|--------|---------|---------|-------|-------|-------|-------|
| LA9 FH4H | 250 | 380 | 130 | 260 | 157.5 | 181.5 | 157.5 | 181.5 |
| LA9 FJ4H | 260 | 380 | 110 | 230 | 144.5 | 192.5 | 157.5 | 181.5 |
| LA9 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

2, 3, and 4-pole Contactors



LC1 F115 to F630, F1250 (coil LX1 F \sim)



LC1 F115 to F630 , F1250 (coil LX4 F $\overline{\sim}$)

LC1 F115 to F265 (coil LX9 F \sim)

LC1 F800 (coil LX8 F \sim / $\overline{\sim}$)