

## Tehničke karakteristike proizvoda

### Karakteristike

## LC1F400GD

TeSys F kontaktor - 3P (3 NO) - AC -3 -  $\leq 440$   
V 400 A - kalem 125 V DC



### Osnovne informacije

|                              |                                                                                                                        |
|------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Grupa proizvoda              | TeSys                                                                                                                  |
| Grupa proizvoda              | TeSys F                                                                                                                |
| Tip proizvoda ili komponente | Kontaktör                                                                                                              |
| Kratko ime uređaja           | LC1F                                                                                                                   |
| Primena kontaktora           | Upravljanje motorom<br>Rezistivno opterećenje                                                                          |
| Kategorija upotrebe          | AC-1<br>AC-3<br>AC-4                                                                                                   |
| Broj polova                  | 3P                                                                                                                     |
| [ue] nazivni napon           | $\leq 1000$ V AC 50/60 Hz<br>$\leq 460$ V DC                                                                           |
| Napon upravljačkog kola      | 125 V DC                                                                                                               |
| [ie] nazivna struja          | 500 A (at $<40^{\circ}\text{C}$ ) at $\leq 440$ V AC AC-1<br>400 A (at $<55^{\circ}\text{C}$ ) at $\leq 440$ V AC AC-3 |

### Dopunske informacije

|                                                   |                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [uimp] nazivni podnosivi impulsni napon           | 8 kV                                                                                                                                                                                                                                                                                                                           |
| [ith] dozvoljena termička struja u vazduhu        | 500 A (at $40^{\circ}\text{C}$ )                                                                                                                                                                                                                                                                                               |
| Nazivna prekidna moć                              | 3200 A conforming to IEC 60947-4-1                                                                                                                                                                                                                                                                                             |
| [icw] kratkotrajna podnosiva struja kratkog spoja | 3600 A $40^{\circ}\text{C}$ - 10 s<br>2400 A $40^{\circ}\text{C}$ - 30 s<br>1700 A $40^{\circ}\text{C}$ - 1 min<br>1200 A $40^{\circ}\text{C}$ - 3 min<br>1000 A $40^{\circ}\text{C}$ - 10 min                                                                                                                                 |
| Pripadajući osigurač                              | 400 A aM at $\leq 440$ V<br>500 A gG at $\leq 440$ V                                                                                                                                                                                                                                                                           |
| Prosečna impedansa                                | 0,26 m $\Omega$ - Ith 500 A 50 Hz                                                                                                                                                                                                                                                                                              |
| [ui] nazivni napon izolacije                      | 1000 V u skladu sa IEC 60947-4-1<br>1500 V u skladu sa VDE 0110 grupa C                                                                                                                                                                                                                                                        |
| Snaga disipacije po polu                          | 65 W AC-1<br>42 W AC-3                                                                                                                                                                                                                                                                                                         |
| Kategorija prenapona                              | III                                                                                                                                                                                                                                                                                                                            |
| Power pole contact composition                    | 3 NO                                                                                                                                                                                                                                                                                                                           |
| Snaga motora kw                                   | 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) |
| Ograničenje napona upravljačkog kola              | U radu: 0.85...1.1 U <sub>c</sub> $55^{\circ}\text{C}$ )<br>Propad napona: 0.2...0.35 U <sub>c</sub> $55^{\circ}\text{C}$ )                                                                                                                                                                                                    |
| Mehanička trajnost                                | 10 miliona ciklusa                                                                                                                                                                                                                                                                                                             |
| Udar na snagu u w                                 | 1000 W $20^{\circ}\text{C}$ )                                                                                                                                                                                                                                                                                                  |
| Snaga držanja u w                                 | 6 W pri $20^{\circ}\text{C}$                                                                                                                                                                                                                                                                                                   |
| Maksimalni radni ciklus                           | 2400 ciklusa/h pri $<55^{\circ}\text{C}$                                                                                                                                                                                                                                                                                       |

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Vreme uključenja/isključenja | 50...60 ms zatvaranje<br>45...60 ms otvaranje                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Povezivanje - priključci     | Upravljačko kolo: vijčani priključni blokovi 1 kabl(ovi) 1...4 mm <sup>2</sup> fleksibilni bez kablovskog završetka<br>Upravljačko kolo: vijčani priključni blokovi 2 kabl(ovi) 1...4 mm <sup>2</sup> fleksibilni bez kablovskog završetka<br>Upravljačko kolo: vijčani priključni blokovi 1 kabl(ovi) 1...4 mm <sup>2</sup> fleksibilni sa<br>Upravljačko kolo: vijčani priključni blokovi 2 kabl(ovi) 1...2,5 mm <sup>2</sup> fleksibilni sa<br>Upravljačko kolo: vijčani priključni blokovi 1 kabl(ovi) 1...4 mm <sup>2</sup> jednožični bez kablovskog završetka<br>Upravljačko kolo: vijčani priključni blokovi 2 kabl(ovi) 1...4 mm <sup>2</sup> jednožični bez kablovskog završetka<br>Kolo napajanja: sabirnica 2 kabl(ovi) - poprečni presek sabirnice: 30 x 5 mm<br>Kolo napajanja: prstenaste stopice 2 kabl(ovi) 150 mm <sup>2</sup><br>Kolo napajanja: povezivanje na zavrtnj |
| Moment pritezanja            | Upravljačko kolo: 1,2 N.m<br>Kolo napajanja: 35 N.m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Nosači za montažu            | Ploča                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Disipacija toplote           | 6 W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Motor power range            | 110...220 KW pri 480...500 V trofazne<br>110...220 KW pri 380...440 V trofazne<br>110...220 KW pri 200...240 V trofazne<br>250...500 kW pri 480...500 V trofazne                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Tip motornog pokretača       | Kontaktor za direktno puštanje u rad                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Napon kalema kontaktora      | 125 V DC standardno                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Standardi                    | IEC 60947-1<br>IEC 60947-4-1<br>JIS C8201-4-1<br>EN 60947-4-1<br>EN 60947-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Sertifikacija proizvoda      | BV[RETURN]DNV[RETURN]ABS[RETURN]UL[RETURN]LRQS<br>(Lloyds register of shipping)<br>[RETURN]RMRoS[RETURN]RINA[RETURN]CB[RETURN]CSA[RETURN]UKCA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Kompatibilnost               | LC1F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Tip upravljačkog kola        | DC standardno                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## Okruženje

|                                         |                                                                                                                   |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Ip stepen zaštite                       | IP20 prednja strana sa poklopcima u skladu sa IEC 60529<br>IP20 prednja strana sa poklopcima u skladu sa VDE 0106 |
| Zaštitni tretman                        | TH                                                                                                                |
| Temperatura okoline za rad uređaja      | -5...55 °C                                                                                                        |
| Temperatura okoline za skladištenje     | -60...80 °C                                                                                                       |
| Dopustiva temperatura u okolini uređaja | -40...70 °C                                                                                                       |
| Visina                                  | 206 mm                                                                                                            |
| Širina                                  | 213 mm                                                                                                            |
| Dubina                                  | 219 mm                                                                                                            |
| Nadmorska visina za rad uređaja         | 3000 m bez smanjenja karakteristika                                                                               |
| Masa proizvoda                          | 9,1 kg                                                                                                            |

## Pakovanje

|                              |         |
|------------------------------|---------|
| Unit Type of Package 1       | PCE     |
| Number of Units in Package 1 | 1       |
| Package 1 Height             | 25,0 cm |
| Package 1 Width              | 24,0 cm |
| Package 1 Length             | 29,5 cm |
| Package 1 Weight             | 9,3 kg  |

## Održivost ponude

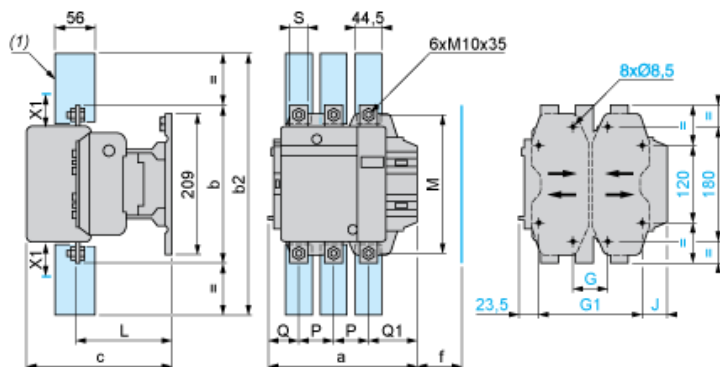
|                              |                                                                                                                                                                             |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Status održive ponude        | Green Premium proizvod                                                                                                                                                      |
| Propis REACH                 |  <a href="#">REACH Deklaracija</a>                                                         |
| EU RoHS direktiva            | У складу са изузецима                                                                                                                                                       |
| Bez žive                     | Da                                                                                                                                                                          |
| RoHS regulativa za Kinu      |  <a href="#">RoHS Deklaracija Za Kinu</a>                                                  |
| Informacije o RoHS izuzecima |  <a href="#">Da</a>                                                                        |
| Izjava o zaštiti okoliša     |  <a href="#">Profil Ekološke Prihvatljivosti Proizvoda</a>                                 |
| Profil cirkularnosti         |  <a href="#">Informacije O Kraju Radnog Veka</a>                                           |
| WEEE                         | Ovaj proizvod je na tržištima Evropske unije neophodno odložiti u skladu sa specifičnim smernicama za prikupljanje otpada i nikako ne sme da dospe u kontejnere za otpatke. |

## Ugovorna garancija

|           |           |
|-----------|-----------|
| Garancija | 18 months |
|-----------|-----------|

## 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.

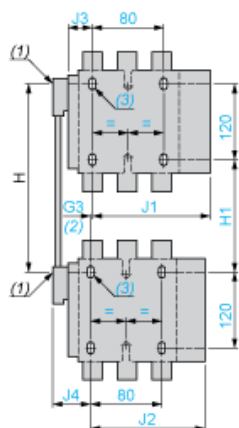
| LC1  | 200...500 V | 600...1000 V |
|------|-------------|--------------|
| F400 | 15          | 20           |
| F500 | 15          | 20           |

| LC1  |    | a   | b   | b2  | c   | f   | G<br>supplied | G<br>min. | G<br>max. | G1<br>supplied | G1<br>min. | G1<br>max. | J    | L   | M   | P  | Q  | Q1  | S  |
|------|----|-----|-----|-----|-----|-----|---------------|-----------|-----------|----------------|------------|------------|------|-----|-----|----|----|-----|----|
| F400 | 2P | 213 | 206 | 375 | 219 | 146 | 80            | 66        | 102       | 170            | 156        | 192        | 19.5 | 145 | 181 | 48 | 69 | 96  | 25 |
|      | 3P | 213 | 206 | 375 | 219 | 146 | 80            | 66        | 102       | 170            | 156        | 192        | 19.5 | 145 | 181 | 48 | 43 | 74  | 25 |
|      | 4P | 261 | 206 | 375 | 219 | 146 | 80            | 66        | 150       | 170            | 156        | 240        | 67.5 | 145 | 181 | 48 | 43 | 74  | 25 |
| F500 | 2P | 233 | 238 | 400 | 232 | 150 | 80            | 66        | 120       | 170            | 156        | 210        | 39.5 | 146 | 208 | 55 | 76 | 102 | 30 |
|      | 3P | 233 | 238 | 400 | 232 | 150 | 80            | 66        | 120       | 170            | 156        | 210        | 39.5 | 146 | 208 | 55 | 46 | 77  | 30 |
|      | 4P | 288 | 238 | 400 | 232 | 150 | 140           | 66        | 175       | 230            | 156        | 265        | 34.5 | 146 | 208 | 55 | 46 | 77  | 30 |

### 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.

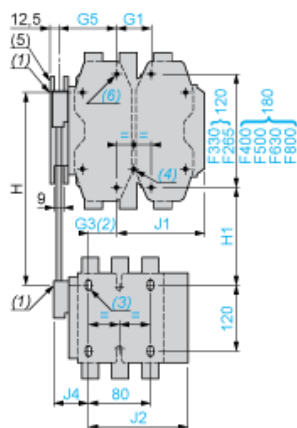
(3) 4 x Ø6.5 for LC1 F115 to F225.

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

|          | G3 3P | G3 4P | H min. | H max. | H1 min. | H1 max. | J1 3P | J1 4P |
|----------|-------|-------|--------|--------|---------|---------|-------|-------|
| 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



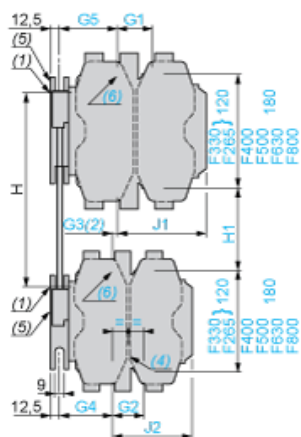
- (4) 4 x Ø6.5 for LC1 F265.
- (5) Mechanical interlock guide bracket.

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

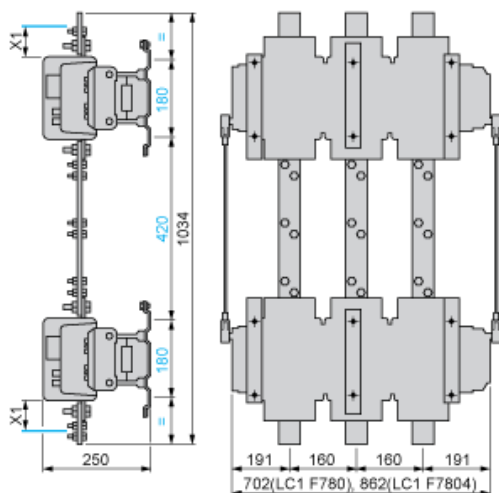
|          | G1 3P | G1 4P | G3 3P | G3 4P | G5 3P | G5 4P | H min. | H max. |
|----------|-------|-------|-------|-------|-------|-------|--------|--------|
| LA9 FH4F | 96    | 96    | 21    | 27    | 60    | 83    | 240    | 380    |
| LA9 FJ4F | 80    | 80    | 45    | 26    | 83    | 83    | 250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

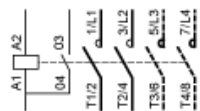
|          | H min. | H max. | H1 min. | H1 max. | J1 3P | J1 4P | J2 3P | J2 4P |
|----------|--------|--------|---------|---------|-------|-------|-------|-------|
| LA9 FL4K | 345    | 380    | 160     | 195     | 248.5 | 328.5 | 164.5 | 219.5 |
| LA9 FL4L | 380    | 380    | 200     | 200     | 248.5 | 328.5 | 248.5 | 328.5 |

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## 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 ~ / --- )





