

# LC1D95F7

TeSys D contactor - 3P(3 NO) - AC-3 -  $\leq 440$  V  
95 A - 110 V AC 50/60 Hz coil



## Main

|                                |                                                                                                                                                                                                                                                                                                                             |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range of product               | TeSys D                                                                                                                                                                                                                                                                                                                     |
| Range                          | TeSys                                                                                                                                                                                                                                                                                                                       |
| Product name                   | TeSys D                                                                                                                                                                                                                                                                                                                     |
| Product or component type      | Contactor                                                                                                                                                                                                                                                                                                                   |
| Device short name              | LC1D                                                                                                                                                                                                                                                                                                                        |
| Contactor application          | Motor control<br>Resistive load                                                                                                                                                                                                                                                                                             |
| Utilisation category           | AC-4<br>AC-1<br>AC-3                                                                                                                                                                                                                                                                                                        |
| Poles description              | 3P                                                                                                                                                                                                                                                                                                                          |
| Pole contact composition       | 3 NO                                                                                                                                                                                                                                                                                                                        |
| [Ue] rated operational voltage | $\leq 300$ V DC 25...400 Hz for power circuit<br>$\leq 1000$ V AC for power circuit                                                                                                                                                                                                                                         |
| [Ie] rated operational current | 125 A ( $\leq 60$ °C) at $\leq 440$ V AC AC-1 for power circuit<br>95 A ( $\leq 60$ °C) at $\leq 440$ V AC AC-3 for power circuit                                                                                                                                                                                           |
| Motor power kW                 | 45 kW at 660...690 V AC 50/60 Hz AC-3<br>45 kW at 415...440 V AC 50/60 Hz AC-3<br>55 kW at 500 V AC 50/60 Hz AC-3<br>45 kW at 1000 V AC 50/60 Hz AC-3<br>15 kW at 400 V AC 50/60 Hz AC-4<br>25 kW at 220...230 V AC 50/60 Hz AC-3<br>45 kW at 380...400 V AC 50/60 Hz AC-3                                                  |
| Motor power hp                 | 20 hp at 200/208 V AC 50/60 Hz for 3 phases motors<br>7.5 hp at 115 V AC 50/60 Hz for 1 phase motors<br>15 hp at 230/240 V AC 50/60 Hz for 1 phase motors<br>25 hp at 230/240 V AC 50/60 Hz for 3 phases motors<br>60 hp at 460/480 V AC 50/60 Hz for 3 phases motors<br>60 hp at 575/600 V AC 50/60 Hz for 3 phases motors |
| Control circuit type           | AC 50/60 Hz                                                                                                                                                                                                                                                                                                                 |
| Control circuit voltage        | 110 V AC 50/60 Hz                                                                                                                                                                                                                                                                                                           |
| Auxiliary contact composition  | 1 NO + 1 NC                                                                                                                                                                                                                                                                                                                 |

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [Uimp] rated impulse withstand voltage      | Conforming to IEC 60947                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Overvoltage category                        | III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| [Ith] conventional free air thermal current | 125 A at $\leq 60^{\circ}\text{C}$ for power circuit<br>10 A at $\leq 60^{\circ}\text{C}$ for signalling circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Irms rated making capacity                  | 1100 A at 440 V for power circuit conforming to IEC 60947<br>140 A AC for signalling circuit conforming to IEC 60947-5-1<br>250 A DC for signalling circuit conforming to IEC 60947-5-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Rated breaking capacity                     | 1100 A at 440 V for power circuit conforming to IEC 60947                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| [Icw] rated short-time withstand current    | 1100 A $\leq 40^{\circ}\text{C}$ 1 s power circuit<br>135 A $\leq 40^{\circ}\text{C}$ 10 min power circuit<br>400 A $\leq 40^{\circ}\text{C}$ 1 min power circuit<br>800 A $\leq 40^{\circ}\text{C}$ 10 s power circuit<br>100 A 1 s signalling circuit<br>120 A 500 ms signalling circuit<br>140 A 100 ms signalling circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Associated fuse rating                      | 160 A gG at $\leq 690\text{ V}$ coordination type 2 for power circuit<br>200 A gG at $\leq 690\text{ V}$ coordination type 1 for power circuit<br>10 A gG for signalling circuit conforming to IEC 60947-5-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Average impedance                           | 0.8 mOhm at 50 Hz - Ith 125 A for power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| [Ui] rated insulation voltage               | 1000 V for power circuit conforming to IEC 60947-4-1<br>600 V for power circuit certifications CSA<br>600 V for power circuit certifications UL<br>690 V for signalling circuit conforming to IEC 60947-1<br>600 V for signalling circuit certifications CSA<br>600 V for signalling circuit certifications UL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Electrical durability                       | 1.2 Mcycles 95 A AC-3 at $U_e \leq 440\text{ V}$<br>1.3 Mcycles 125 A AC-1 at $U_e \leq 440\text{ V}$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Power dissipation per pole                  | 7.2 W AC-3<br>12.5 W AC-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Protective cover                            | With                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Mounting support                            | Rail<br>Plate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Standards                                   | CSA C22.2 No 14<br>EN 60947-4-1<br>EN 60947-5-1<br>IEC 60947-4-1<br>IEC 60947-5-1<br>UL 508                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Product certifications                      | RINA<br>CCC<br>GOST<br>BV<br>GL<br>DNV<br>LROS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Connections - terminals                     | Control circuit : screw clamp terminals 2 cable(s) 1...2.5 mm <sup>2</sup> - cable stiffness: flexible - with cable end<br>Control circuit : screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Control circuit : screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Control circuit : screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: solid - without cable end<br>Control circuit : screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: solid - without cable end<br>Control circuit : screw clamp terminals 1 cable(s) 1...2.5 mm <sup>2</sup> - cable stiffness: flexible - with cable end<br>Power circuit : connector 1 cable(s) 4...50 mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Power circuit : connector 2 cable(s) 4...25 mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Power circuit : connector 1 cable(s) 4...50 mm <sup>2</sup> - cable stiffness: flexible - with cable end<br>Power circuit : connector 2 cable(s) 4...16 mm <sup>2</sup> - cable stiffness: flexible - with cable end<br>Power circuit : connector 1 cable(s) 4...50 mm <sup>2</sup> - cable stiffness: solid - without cable end<br>Power circuit : connector 2 cable(s) 4...25 mm <sup>2</sup> - cable stiffness: solid - without cable end |
| Tightening torque                           | Power circuit : 9 N.m - on connector - with screwdriver flat $\varnothing 6$ to $\varnothing 8$ mm<br>Power circuit : 9 N.m - on connector hexagonal 4 mm<br>Control circuit : 1.2 N.m - on screw clamp terminals - with screwdriver flat $\varnothing 6$ mm<br>Control circuit : 1.2 N.m - on screw clamp terminals - with screwdriver Philips No 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Operating time                              | 20...35 ms closing<br>6...20 ms opening                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Safety reliability level                    | B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

|                       |                            |
|-----------------------|----------------------------|
| Mechanical durability | 4 Mcycles                  |
| Operating rate        | 3600 cyc/h at $\leq 60$ °C |

## Complementary

|                                 |                                                                                                                                                                              |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Coil technology                 | Without built-in suppressor module                                                                                                                                           |
| Control circuit voltage limits  | 0.85...1.1 Uc operational at 55 °C, AC 60 Hz<br>0.3...0.6 Uc drop-out at 55 °C, AC 50/60 Hz<br>0.8...1.1 Uc operational at 55 °C, AC 50 Hz                                   |
| Inrush power in VA              | 245 VA at 20 °C ( $\cos \phi$ 0.75) 60 Hz<br>245 VA at 20 °C ( $\cos \phi$ 0.75) 50 Hz                                                                                       |
| Hold-in power consumption in VA | 26 VA at 20 °C ( $\cos \phi$ 0.3) 60 Hz<br>26 VA at 20 °C ( $\cos \phi$ 0.3) 50 Hz                                                                                           |
| Heat dissipation                | 6...10 W at 50/60 Hz                                                                                                                                                         |
| Auxiliary contacts type         | Type mechanically linked (1 NO + 1 NC) conforming to IEC 60947-5-1<br>Type mirror contact (1 NC) conforming to IEC 60947-4-1                                                 |
| Signalling circuit frequency    | 25...400 Hz                                                                                                                                                                  |
| Minimum switching current       | 5 mA for signalling circuit                                                                                                                                                  |
| Minimum switching voltage       | 17 V for signalling circuit                                                                                                                                                  |
| Non-overlap time                | 1.5 ms on de-energisation (between NC and NO contact)<br>1.5 ms on energisation (between NC and NO contact)                                                                  |
| Insulation resistance           | > 10 MOhm for signalling circuit                                                                                                                                             |
| Motor power range AC-3          | 15...25 kW 200...240 V 3 phases<br>30...50 kW 380...440 V 3 phases<br>30...50 kW 480...500 V 3 phases<br>55...100 kW 480...500 V 3 phases<br>30...50 kW 525...690 V 3 phases |
| Motor starter type              | Direct on-line contactor                                                                                                                                                     |
| Contactor coil voltage          | 110 V AC                                                                                                                                                                     |

## Environment

|                                                       |                                                                                                                                                                               |
|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IP degree of protection                               | IP2x front face conforming to IEC 60529                                                                                                                                       |
| Protective treatment                                  | TH conforming to IEC 60068-2-30                                                                                                                                               |
| Pollution degree                                      | 3                                                                                                                                                                             |
| Ambient air temperature for operation                 | -5...60 °C                                                                                                                                                                    |
| Ambient air temperature for storage                   | -60...80 °C                                                                                                                                                                   |
| Permissible ambient air temperature around the device | -40...70 °C at Uc                                                                                                                                                             |
| Operating altitude                                    | 3000 m without derating in temperature                                                                                                                                        |
| Fire resistance                                       | 850 °C conforming to IEC 60695-2-1                                                                                                                                            |
| Flame retardance                                      | V1 conforming to UL 94                                                                                                                                                        |
| Mechanical robustness                                 | Vibrations contactor open 2 Gn, 5...300 Hz<br>Shocks contactor open 8 Gn for 11 ms<br>Vibrations contactor closed 3 Gn, 5...300 Hz<br>Shocks contactor closed 10 Gn for 11 ms |
| Height                                                | 127 mm                                                                                                                                                                        |
| Width                                                 | 85 mm                                                                                                                                                                         |
| Depth                                                 | 130 mm                                                                                                                                                                        |
| Product weight                                        | 1.61 kg                                                                                                                                                                       |

## Contractual warranty

|                 |           |
|-----------------|-----------|
| Warranty period | 18 months |
|-----------------|-----------|

<!-- File : MPC-LC1D95F7-BOM.xml , Range ID : 664, Reference ID : LC1D95F7 -->

## Our Proposal - Type 1 : Circuit Breaker + Contactor for Motor Power 45 kW and 415 VAC

<!-- DataBOM 2 Template BEGIN -->

| Motor Power<br>(kW) | Icu<br>(kA) | Breaker                                                                                       | Contactor                                                                                     |
|---------------------|-------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| 45                  | 36          | <br>GV7RE100 | <br>LC1D95F7 |

Non contractual pictures. Type 1 coordination requires that in a short-circuit condition, the contactor or starter must not present any danger to personnel or installations and must not be able to resume operation without repair or the replacement of parts.

<!-- DataBOM 2 Template END --> <!-- No Variants -->