

# LC1D95BD

TeSys D contactor - 3P(3 NO) - AC-3 -  $\leq 440$   
V 95 A - 24 V DC coil



## Main

|   |   |
|---|---|
| Commercial Status                           | Commercialised  |
| Range of product                            | TeSys D   |
| Product or component type                   | Contacteur  |
| Device short name                           | LC1D  |
| Contacteur application                      | Motor control<br>Resistive load   |
| Utilisation category                        | AC-1<br>AC-3  |
| Poles description                           | 3P  |
| Power pole contact composition              | 3 NO  |
| [Ue] rated operational voltage              | $\leq 1000$ V AC for power circuit<br>$\leq 300$ V DC 25...400 Hz for power circuit   |
| [Ie] rated operational current              | 95 A ( $\leq 60$ °C) at $\leq 440$ V AC AC-3 for power circuit<br>125 A ( $\leq 60$ °C) at $\leq 440$ V AC AC-1 for power circuit   |
| Motor power kW                              | 45 kW at 380...400 V AC 50/60 Hz<br>25 kW at 220...230 V AC 50/60 Hz<br>45 kW at 1000 V AC 50/60 Hz<br>45 kW at 660...690 V AC 50/60 Hz<br>55 kW at 500 V AC 50/60 Hz<br>45 kW at 415...440 V AC 50/60 Hz   |
| Motor power HP (UL / CSA)                   | 60 hp at 575/600 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>25 hp at 230/240 V AC 50/60 Hz for 3 phases motors<br>15 hp at 230/240 V AC 50/60 Hz for 1 phase motors<br>7.5 hp at 115 V AC 50/60 Hz for 1 phase motors<br>20 hp at 200/208 V AC 50/60 Hz for 3 phases motors |
| Control circuit type                        | DC standard   |
| Control circuit voltage                     | 24 V DC   |
| Auxiliary contact composition               | 1 NO + 1 NC   |
| [Uimp] rated impulse withstand voltage      | 8 kV conforming to IEC 60947  |
| Overvoltage category                        | III   |
| [Ith] conventional free air thermal current | 125 A at $\leq 60$ °C for power circuit<br>10 A at $\leq 60$ °C for signalling circuit  |
| Irms rated making capacity                  | 1100 A at 440 V for power circuit conforming to IEC 60947<br>250 A DC for signalling circuit conforming to IEC 60947-5-1<br>140 A AC 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    | 400 A $\leq 40$ °C 1 min power circuit<br>800 A $\leq 40$ °C 10 s power circuit<br>135 A $\leq 40$ °C 10 min power circuit<br>140 A 100 ms signalling circuit<br>120 A 500 ms signalling circuit<br>100 A 1 s signalling circuit<br>1100 A $\leq 40$ °C 1 s power circuit   |

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|                               |  |
|-------------------------------|--|
| Associated fuse rating        | 160 A gG at ≤ 690 V coordination type 2 for power circuit<br>200 A gG at ≤ 690 V coordination type 1 for power circuit<br>10 A gG for signalling circuit conforming to IEC 60947-5-1   |
| Average impedance             | 0.80 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 signalling circuit certifications UL<br>600 V for signalling circuit certifications CSA<br>690 V for signalling circuit conforming to IEC 60947-1<br>600 V for power circuit certifications UL<br>600 V for power circuit certifications CSA   |
| Electrical durability         | 1.3 Mcycles 125 A AC-1 at Ue ≤ 440 V<br>1.2 Mcycles 95 A AC-3 at Ue ≤ 440 V  |
| Power dissipation per pole    | 7.2 W AC-3<br>12.5 W AC-1  |
| Safety cover                  | With   |
| Mounting support              | Plate<br>Rail  |
| Standards                     | EN 60947-4-1<br>EN 60947-5-1<br>IEC 60947-4-1<br>IEC 60947-5-1<br>UL 508<br>CSA C22.2 No 14  |
| Product certifications        | BV<br>CCC<br>DNV<br>GL<br>GOST<br>RINA<br>LROS   |
| Connections - terminals       | Power circuit: connector 2 cable(s) 4...25 mm <sup>2</sup> - cable stiffness: solid - without 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...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: flexible - with 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 - 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>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...4 mm <sup>2</sup> - cable stiffness: solid - without cable end<br>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 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: flexible - without cable end |
| Tightening torque             | Power circuit: 9 N.m - on connector hexagonal 4 mm<br>Power circuit: 9 N.m - on connector - with screwdriver flat Ø 6 to Ø 8 mm<br>Control circuit: 1.2 N.m - on screw clamp terminals - with screwdriver Philips No 2<br>Control circuit: 1.2 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm   |
| Operating time                | 20...35 ms opening<br>95...130 ms closing  |
| Safety reliability level      | B10d = 2000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1<br>B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1  |

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

### Complementary

|                                |  |
|--------------------------------|--|
| Coil technology                | Without built-in suppressor module   |
| Control circuit voltage limits | 0.85...1.1 U <sub>c</sub> at 55 °C operational<br>0.1...0.3 U <sub>c</sub> at 55 °C drop-out                                 |
| Time constant                  | 75 ms  |
| Inrush power in W              | 22 W at 20 °C  |
| Hold-in power consumption in W | 22 W at 20 °C  |
| Auxiliary contacts type        | Type mirror contact (1 NC) conforming to IEC 60947-4-1<br>Type mechanically linked (1 NO + 1 NC) conforming to IEC 60947-5-1 |
| 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 energisation (between NC and NO contact)<br>1.5 ms on de-energisation (between NC and NO contact)                  |
| Insulation resistance          | > 10 MOhm for signalling circuit   |

### 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 U <sub>c</sub>   |
| 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                                 | Shocks contactor closed 10 Gn for 11 ms<br>Shocks contactor open 8 Gn for 11 ms<br>Vibrations contactor closed 3 Gn, 5...300 Hz<br>Vibrations contactor open 2 Gn, 5...300 Hz |
| Height  | 127 mm  |
| Width   | 85 mm   |
| Depth   | 186 mm  |
| Product weight  | 2.61 kg   |

### Contractual warranty

|        |           |
|--------|-----------|
| Period | 18 months |
|--------|-----------|