





## Main

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|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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-3<br>AC-1                                                                                                                                                                                                                                                                       |
| Poles description                           | 3P                                                                                                                                                                                                                                                                                         |
| Power pole contact composition              | 3 NO                                                                                                                                                                                                                                                                                       |
| [Ue] rated operational voltage              | Power circuit: ≤ 1000 V AC 25...400 Hz<br>Power circuit: ≤ 300 V DC                                                                                                                                                                                                                        |
| [Ie] rated operational current              | 200 A (at ≤60 °C) at ≤ 440 V AC AC-1 for power circuit<br>115 A (at ≤60 °C) at ≤ 440 V AC AC-3 for power circuit                                                                                                                                                                           |
| Motor power kW                              | 30 kW at 220...230 V AC 50/60 Hz (AC-3)<br>55 kW at 380...400 V AC 50/60 Hz (AC-3)<br>59 kW at 415...440 V AC 50/60 Hz (AC-3)<br>75 kW at 500 V AC 50/60 Hz (AC-3)<br>80 kW at 660...690 V AC 50/60 Hz (AC-3)<br>65 kW at 1000 V AC 50/60 Hz (AC-3)<br>18.5 kW at 400 V AC 50/60 Hz (AC-4) |
| Motor power HP (UL / CSA)                   | 30 Hp at 200/208 V AC 50/60 Hz for 3 phases motors<br>40 Hp at 230/240 V AC 50/60 Hz for 3 phases motors<br>75 Hp at 460/480 V AC 50/60 Hz for 3 phases motors<br>100 hp at 575/600 V AC 50/60 Hz for 3 phases motors                                                                      |
| Control circuit type                        | DC standard                                                                                                                                                                                                                                                                                |
| [Uc] control circuit voltage                | 48 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 | 200 A (at 60 °C) for power circuit                                                                                                                                                                                                                                                         |
| Irms rated making capacity                  | 1260 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    | 250 A 40 °C - 10 min for power circuit<br>550 A 40 °C - 1 min for power circuit<br>950 A 40 °C - 10 s for power circuit<br>1100 A 40 °C - 1 s for power circuit<br>100 A - 1 s for signalling circuit<br>120 A - 500 ms for signalling circuit<br>140 A - 100 ms for signalling circuit    |
| Associated fuse rating                      | 250 A gG at ≤ 690 V coordination type 1 for power circuit<br>200 A gG at ≤ 690 V coordination type 2 for power circuit<br>10 A gG for signalling circuit                                                                                                                                   |
| Average impedance                           | 0.6 mOhm - Ith 200 A 50 Hz for power circuit                                                                                                                                                                                                                                               |

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|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [Ui] rated insulation voltage | Power circuit: 600 V CSA certified<br>Power circuit: 600 V UL certified<br>Power circuit: 1000 V conforming to IEC 60947-4-1<br>Signalling circuit: 690 V conforming to IEC 60947-1<br>Signalling circuit: 600 V CSA certified<br>Signalling circuit: 600 V UL certified                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Electrical durability         | 0.8 Mcycles 200 A AC-1 at Ue ≤ 440 V<br>0.95 Mcycles 115 A AC-3 at Ue ≤ 440 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Power dissipation per pole    | 24 W AC-1<br>7.9 W AC-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Front 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        | CCC<br>RINA<br>BV<br>CSA<br>UL<br>GL<br>GOST<br>LROS (Lloyds register of shipping)<br>DNV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Connections - terminals       | Control circuit: screw clamp terminals 2 cable(s) 1...<br>2.5 mm <sup>2</sup> flexible with cable end<br>Control circuit: screw clamp terminals 1 cable(s) 1...<br>2.5 mm <sup>2</sup> flexible with cable end<br>Control circuit: screw clamp terminals 1 cable(s) 1...<br>2.5 mm <sup>2</sup> flexible without cable end<br>Control circuit: screw clamp terminals 2 cable(s) 1...<br>2.5 mm <sup>2</sup> flexible without cable end<br>Control circuit: screw clamp terminals 1 cable(s) 1...<br>2.5 mm <sup>2</sup> solid without cable end<br>Control circuit: screw clamp terminals 2 cable(s) 1...<br>2.5 mm <sup>2</sup> solid without cable end<br>Power circuit: connector 1 cable(s) 10...<br>120 mm <sup>2</sup> flexible without cable end<br>Power circuit: connector 2 cable(s) 10...<br>50 mm <sup>2</sup> flexible without cable end<br>Power circuit: connector 1 cable(s) 10...<br>120 mm <sup>2</sup> flexible with cable end<br>Power circuit: connector 2 cable(s) 10...<br>50 mm <sup>2</sup> flexible with cable end<br>Power circuit: connector 1 cable(s) 10...<br>120 mm <sup>2</sup> solid without cable end<br>Power circuit: connector 2 cable(s) 10...50 mm <sup>2</sup> solid<br>without cable end |
| Tightening torque             | Control circuit: 1.2 N.m - on screw clamp terminals -<br>with screwdriver flat Ø 6 mm<br>Control circuit: 1.2 N.m - on screw clamp terminals -<br>with screwdriver Philips No 2<br>Power circuit: 12 N.m - on connector hexagonal<br>screw head 4 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Operating time                | 20...35 ms closing<br>40...75 ms opening                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Safety reliability level      | B10d = 1369863 cycles contactor with nominal load<br>conforming to EN/ISO 13849-1<br>B10d = 20000000 cycles contactor with mechanical<br>load conforming to EN/ISO 13849-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Mechanical durability         | 8 Mcycles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Maximum operating rate        | 1200 cyc/h 60 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## Complementary

|                                |                                                                                                                                                                     |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Coil technology                | With integral suppression device                                                                                                                                    |
| Control circuit voltage limits | 0.75...1.2 U <sub>c</sub> (-40...55 °C):operational DC<br>0.15...0.4 U <sub>c</sub> (-40...70 °C):drop-out DC<br>1...1.2 U <sub>c</sub> (55...70 °C):operational DC |
| Time constant                  | 25 ms                                                                                                                                                               |
| Inrush power in W              | 270...365 W (at 20 °C)                                                                                                                                              |
| Hold-in power consumption in W | 2.4...5.1 W at 20 °C                                                                                                                                                |
| 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                                                                                                                                    |

## Environment

|                                       |                                                                                                                                                                                   |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IP degree of protection               | IP20 front face conforming to IEC 60529                                                                                                                                           |
| Protective treatment                  | TH conforming to IEC 60068-2-30                                                                                                                                                   |
| Pollution degree                      | 3                                                                                                                                                                                 |
| Ambient air temperature for operation | -40...60 °C<br>60...70 °C with derating                                                                                                                                           |
| Ambient air temperature for storage   | -60...80 °C                                                                                                                                                                       |
| Operating altitude                    | 0...3000 m                                                                                                                                                                        |
| 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>Vibrations contactor closed: 4 Gn, 5...300 Hz<br>Shocks contactor closed: 15 Gn for 11 ms<br>Shocks contactor open: 6 Gn for 11 ms |
| Height                                | 158 mm                                                                                                                                                                            |
| Width                                 | 120 mm                                                                                                                                                                            |
| Depth                                 | 136 mm                                                                                                                                                                            |
| Net weight                            | 2.5 kg                                                                                                                                                                            |

## Packing Units

|                              |         |
|------------------------------|---------|
| Unit Type of Package 1       | PCE     |
| Number of Units in Package 1 | 1       |
| Package 1 Weight             | 2.42 kg |
| Package 1 Height             | 18.5 cm |
| Package 1 width              | 16.8 cm |
| Package 1 Length             | 20.8 cm |

## Offer Sustainability

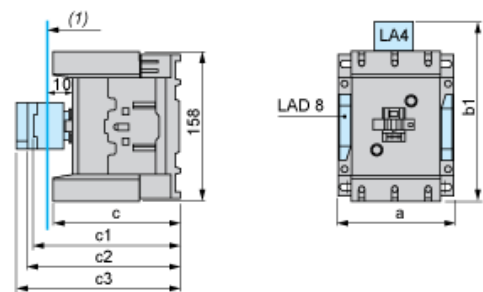
|                            |                                                                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                             |
| REACH Regulation           |  <a href="#">REACH Declaration</a>             |
| EU RoHS Directive          | Compliant  <a href="#">EU RoHS Declaration</a> |
| Mercury free               | Yes                                                                                                                               |
| RoHS exemption information |  <a href="#">Yes</a>                           |
| China RoHS Regulation      |  <a href="#">China RoHS Declaration</a>        |
| Environmental Disclosure   |  <a href="#">Product Environmental Profile</a> |
| Circularity Profile        |  <a href="#">End Of Life Information</a>       |

|          |                                                                                                                             |
|----------|-----------------------------------------------------------------------------------------------------------------------------|
| WEEE     | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |
| PVC free | Yes                                                                                                                         |

### Contractual warranty

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

Dimensions



(1) Minimum electrical clearance

| LC1                                |                                   | D115 and D150 (3-pole) |
|------------------------------------|-----------------------------------|------------------------|
| a                                  |                                   | 120                    |
| b1                                 | with LA4 DA2                      | 174                    |
| with LA4 DF, DT                    | 185                               |                        |
| with LA4 DM, DL                    | 188                               |                        |
| with LA4 DW                        | 188                               |                        |
| c                                  | without cover or add-on blocks    | 132                    |
| with cover, without add-on blocks  | 136                               |                        |
| c1                                 | with LAD N or C (2 or 4 contacts) | 150                    |
| c2                                 | with LA6 DK20                     | 155                    |
| c3                                 | with LAD T, R, S                  | 168                    |
| with LAD T, R, S and sealing cover | 172                               |                        |

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Wiring

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