



## 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-1<br>AC-3                                                                                                                                                                                                       |
| Poles description                           | 3P                                                                                                                                                                                                                 |
| Power pole contact composition              | 3 NO                                                                                                                                                                                                               |
| [Ue] rated operational voltage              | Power circuit: ≤ 690 V AC 25...400 Hz                                                                                                                                                                              |
| [Ie] rated operational current              | 18 A (at ≤60 °C) at ≤ 440 V AC AC-3 for power circuit<br>32 A (at ≤60 °C) at ≤ 440 V AC AC-1 for power circuit                                                                                                     |
| Motor power kW                              | 4 kW at 220/230 V AC 50 Hz (AC-3)<br>7.5 kW at 380/400 V AC 50 Hz (AC-3)<br>9 kW at 415 V AC 50 Hz (AC-3)<br>9 kW at 440 V AC 50 Hz (AC-3)<br>10 kW at 500 V AC 50 Hz (AC-3)<br>10 kW at 660/690 V AC 50 Hz (AC-3) |
| [Uc] control circuit voltage                | 72 V DC                                                                                                                                                                                                            |
| Coil type                                   | Low consumption                                                                                                                                                                                                    |
| Auxiliary contact composition               | 1 NO + 1 NC                                                                                                                                                                                                        |
| [Uimp] rated impulse withstand voltage      | 6 kV conforming to IEC 60947                                                                                                                                                                                       |
| Overvoltage category                        | III                                                                                                                                                                                                                |
| [Ith] conventional free air thermal current | 10 A (at 60 °C) for signalling circuit<br>32 A (at 60 °C) for power circuit                                                                                                                                        |
| Irms rated making capacity                  | 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<br>300 A at 440 V for power circuit conforming to IEC 60947                             |
| Rated breaking capacity                     | 300 A at 440 V for power circuit conforming to IEC 60947                                                                                                                                                           |
| [Icw] rated short-time withstand current    | 100 A - 1 s for signalling circuit                                                                                                                                                                                 |

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|                               | 120 A - 500 ms for signalling circuit<br>140 A - 100 ms for signalling circuit<br>145 A 40 °C - 10 s for power circuit<br>240 A 40 °C - 1 s for power circuit<br>40 A 40 °C - 10 min for power circuit<br>84 A 40 °C - 1 min for power circuit                                                                                                                 |
| Associated fuse rating        | 10 A gG for signalling circuit conforming to IEC 60947-5-1<br>50 A gG at <= 690 V coordination type 1 for power circuit<br>35 A gG at <= 690 V coordination type 2 for power circuit                                                                                                                                                                           |
| Average impedance             | 2.5 mOhm - lth 32 A 50 Hz for power circuit                                                                                                                                                                                                                                                                                                                    |
| [Ui] rated insulation voltage | Power circuit: 690 V conforming to IEC 60947-4-1<br>Signalling circuit: 690 V conforming to IEC 60947-1                                                                                                                                                                                                                                                        |
| Electrical durability         | 1.65 Mcycles 18 A AC-3 at Ue <= 440 V<br>1 Mcycles 32 A AC-1 at Ue <= 440 V                                                                                                                                                                                                                                                                                    |
| Power dissipation per pole    | 2.5 W AC-1<br>0.8 W AC-3                                                                                                                                                                                                                                                                                                                                       |
| Safety cover                  | With                                                                                                                                                                                                                                                                                                                                                           |
| Mounting support              | Rail<br>Plate                                                                                                                                                                                                                                                                                                                                                  |
| Standards                     | EN/IEC 60947-4-1<br>EN/IEC 60947-5-1<br>EN 45545 R22 HL3<br>EN 45545 R26 HL3<br>DIN 5510-2                                                                                                                                                                                                                                                                     |
| Product certifications        | IEC<br>CCC<br>EAC<br>UA<br>TR                                                                                                                                                                                                                                                                                                                                  |
| Connections - terminals       | Control circuit: lugs-ring terminals (external diameter: 8 mm)<br>Power circuit: lugs-ring terminals (external diameter: 9.5 mm)                                                                                                                                                                                                                               |
| Tightening torque             | Control circuit: 1.7 N.m - on lugs-ring terminals - with screwdriver flat Ø 6 mm M3.5<br>Control circuit: 1.7 N.m - on lugs-ring terminals - with screwdriver Philips No 2 M3.5<br>Power circuit: 1.7 N.m - on lugs-ring terminals - with screwdriver Philips No 2 M3.5<br>Power circuit: 1.7 N.m - on lugs-ring terminals - with screwdriver flat Ø 6 mm M3.5 |
| Operating time                | 55...75 ms closing<br>16...32 ms opening                                                                                                                                                                                                                                                                                                                       |
| Safety reliability level      | B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1<br>B10d = 20000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1                                                                                                                                                                                           |
| Mechanical durability         | 30 Mcycles                                                                                                                                                                                                                                                                                                                                                     |
| Maximum operating rate        | 3600 cyc/h 60 °C                                                                                                                                                                                                                                                                                                                                               |

## Complementary

|                                |                                                                                                                          |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Coil technology                | With integral suppression device                                                                                         |
| Control circuit voltage limits | 0.1...0.25 Uc 60 °C drop-out DC<br>0.7...1.25 Uc -40...70 °C operational DC                                              |
| Time constant                  | 37 ms                                                                                                                    |
| Inrush power in W              | 4 W at 20 °C                                                                                                             |
| Hold-in power consumption in W | 4 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

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|-------------------------|-----------------------------------------|
| IP degree of protection | IP20 front face conforming to IEC 60529 |
| Protective treatment    | TH conforming to IEC 60068-2-30         |

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|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pollution degree                                      | 3                                                                                                                                                                                  |
| Ambient air temperature for operation                 | -25...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                                                                                                                                                                     |
| Fire resistance                                       | 850 °C conforming to IEC 60695-2-1                                                                                                                                                 |
| Flame retardance                                      | V0 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 open: 10 Gn for 11 ms<br>Shocks contactor closed: 15 Gn for 11 ms |
| Height                                                | 77 mm                                                                                                                                                                              |
| Width                                                 | 45 mm                                                                                                                                                                              |
| Depth                                                 | 95 mm                                                                                                                                                                              |
| Product weight                                        | 0.33 kg                                                                                                                                                                            |

### Offer Sustainability

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|----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                       |
| REACH Regulation           | <a href="#">REACH Declaration</a>                                                                                           |
| REACH free of SVHC         | Yes                                                                                                                         |
| EU RoHS Directive          | Compliant<br><a href="#">EU RoHS Declaration</a>                                                                            |
| Toxic heavy metal free     | Yes                                                                                                                         |
| 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 |

### Contractual warranty

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| Warranty | 18 months |
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