





## Main

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|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                                       | TeSys                                                                                                                                                                                                                                                                                |
| Product name                                | TeSys D                                                                                                                                                                                                                                                                              |
| Product or component type                   | Contactor                                                                                                                                                                                                                                                                            |
| Device short name                           | LC1D                                                                                                                                                                                                                                                                                 |
| Contactor application                       | Resistive load                                                                                                                                                                                                                                                                       |
| Utilisation category                        | AC-1                                                                                                                                                                                                                                                                                 |
| Poles description                           | 4P                                                                                                                                                                                                                                                                                   |
| Power pole contact composition              | 4 NO                                                                                                                                                                                                                                                                                 |
| [Ue] rated operational voltage              | Power circuit: ≤ 690 V AC 25...400 Hz<br>Power circuit: ≤ 300 V DC                                                                                                                                                                                                                   |
| [Ie] rated operational current              | 25 A (at ≤60 °C) at ≤ 440 V AC AC-1 for power circuit                                                                                                                                                                                                                                |
| Control circuit type                        | DC low consumption                                                                                                                                                                                                                                                                   |
| [Uc] control circuit voltage                | 24 V DC                                                                                                                                                                                                                                                                              |
| 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>25 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>250 A at 440 V for power circuit conforming to IEC 60947                                                                                               |
| Rated breaking capacity                     | 250 A at 440 V for power circuit conforming to IEC 60947                                                                                                                                                                                                                             |
| [Icw] rated short-time withstand current    | 30 A 40 °C - 10 min for power circuit<br>61 A 40 °C - 1 min for power circuit<br>105 A 40 °C - 10 s for power circuit<br>210 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                      | 10 A gG for signalling circuit conforming to IEC 60947-5-1<br>40 A gG at ≤ 690 V coordination type 1 for power circuit<br>25 A gG at ≤ 690 V coordination type 2 for power circuit                                                                                                   |
| Average impedance                           | 2.5 mOhm - Ith 25 A 50 Hz for power circuit                                                                                                                                                                                                                                          |
| [Ui] rated insulation voltage               | Power circuit: 600 V CSA certified<br>Power circuit: 600 V UL certified<br>Signalling circuit: 690 V conforming to IEC 60947-1<br>Signalling circuit: 600 V CSA certified<br>Signalling circuit: 600 V UL certified<br>Power circuit: 690 V conforming to IEC 60947-4-1              |
| Electrical durability                       | 0.8 Mcycles 25 A AC-1 at Ue ≤ 440 V                                                                                                                                                                                                                                                  |
| Power dissipation per pole                  | 1.56 W AC-1                                                                                                                                                                                                                                                                          |
| 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                                                                                                                                                                                          |

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|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product certifications   | BV<br>LROS (Lloyds register of shipping)<br>RINA<br>GOST<br>CCC<br>GL<br>CSA<br>DNV<br>UL                                                                                                                                                                                                      |
| Connections - terminals  | Control circuit: spring terminals 1 cable(s)<br>2.5 mm <sup>2</sup> flexible without cable end<br>Control circuit: spring terminals 2 cable(s)<br>2.5 mm <sup>2</sup> flexible without cable end<br>Power circuit: spring terminals 1 cable(s)<br>4 mm <sup>2</sup> flexible without cable end |
| Operating time           | 65.45...88.55 ms closing<br>20...30 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    | 30 Mcycles                                                                                                                                                                                                                                                                                     |
| Maximum operating rate   | 3600 cyc/h 60 °C                                                                                                                                                                                                                                                                               |

## Complementary

|                                |                                                                                                                                                                     |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Coil technology                | Built-in bidirectional peak limiting diode suppressor                                                                                                               |
| Control circuit voltage limits | 0.1...0.3 U <sub>c</sub> (-40...70 °C):drop-out DC<br>0.8...1.25 U <sub>c</sub> (-40...60 °C):operational DC<br>1...1.25 U <sub>c</sub> (60...70 °C):operational DC |
| Time constant                  | 40 ms                                                                                                                                                               |
| Inrush power in W              | 2.4 W (at 20 °C)                                                                                                                                                    |
| Hold-in power consumption in W | 2.4 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

|                                       |                                                                                                                                                                                    |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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: 10 Gn for 11 ms |
| Height                                | 99 mm                                                                                                                                                                              |
| Width                                 | 45 mm                                                                                                                                                                              |
| Depth                                 | 99 mm                                                                                                                                                                              |
| Net weight                            | 0.365 kg                                                                                                                                                                           |

## Packing Units

|                  |          |
|------------------|----------|
| Package 1 Weight | 0.545 kg |
| Package 1 Height | 0.500 dm |
| Package 1 width  | 0.930 dm |
| Package 1 Length | 1.130 dm |

## Offer Sustainability

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

## Contractual warranty

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