



## Main

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|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                                       | TeSys<br>TeSys Deca                                                                                                                                                                                                                                                                                    |
| Product name                                | TeSys D<br>TeSys Deca                                                                                                                                                                                                                                                                                  |
| Product or component type                   | Reversing contactor                                                                                                                                                                                                                                                                                    |
| Device short name                           | LC2D                                                                                                                                                                                                                                                                                                   |
| Contactor application                       | Resistive load<br>Motor control                                                                                                                                                                                                                                                                        |
| Utilisation category                        | AC-1<br>AC-3                                                                                                                                                                                                                                                                                           |
| Device presentation                         | Preassembled with reversing power busbar                                                                                                                                                                                                                                                               |
| Poles description                           | 3P                                                                                                                                                                                                                                                                                                     |
| Pole contact composition                    | 3 NO                                                                                                                                                                                                                                                                                                   |
| [Ue] rated operational voltage              | Power circuit: $\leq 690$ V AC 25...400 Hz<br>Power circuit: $\leq 300$ V DC                                                                                                                                                                                                                           |
| [Ie] rated operational current              | 25 A (at $\leq 60$ °C) at $\leq 440$ V AC AC-3 for power circuit<br>40 A (at $\leq 60$ °C) at $\leq 440$ V AC AC-1 for power circuit                                                                                                                                                                   |
| Motor power kW                              | 5.5 kW at 220...230 V AC 50 Hz<br>11 kW at 380...400 V AC 50 Hz<br>11 kW at 415...440 V AC 50 Hz<br>15 kW at 500 V AC 50 Hz<br>15 kW at 660...690 V AC 50 Hz                                                                                                                                           |
| Motor power hp                              | 3 Hp at 230/240 V AC 60 Hz for 1 phase motors<br>5 Hp at 200/208 V AC 60 Hz for 3 phases motors<br>2 Hp at 115 V AC 60 Hz for 1 phase motors<br>7.5 Hp at 230/240 V AC 60 Hz for 3 phases motors<br>15 Hp at 460/480 V AC 60 Hz for 3 phases motors<br>20 Hp at 575/600 V AC 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      | 6 KV conforming to IEC 60947                                                                                                                                                                                                                                                                           |
| Overvoltage category                        | III                                                                                                                                                                                                                                                                                                    |
| [Ith] conventional free air thermal current | 10 A (at $60$ °C) for signalling circuit<br>40 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>450 A at 440 V for power circuit conforming to IEC 60947                                                                                                                 |
| Rated breaking capacity                     | 450 A at 440 V for power circuit conforming to IEC 60947                                                                                                                                                                                                                                               |

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|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [Icw] rated short-time withstand current | 50 A 40 °C - 10 min for power circuit<br>120 A 40 °C - 1 min for power circuit<br>240 A 40 °C - 10 s for power circuit<br>380 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>63 A gG at ≤ 690 V coordination type 1 for power circuit<br>40 A gG at ≤ 690 V coordination type 2 for power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Average impedance                        | 2 MOhm - Ith 40 A 50 Hz for power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| [Ui] rated insulation voltage            | Power circuit: 690 V conforming to IEC 60947-4-1<br>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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Electrical durability                    | 1.65 Mcycles 25 A AC-3 at Ue ≤ 440 V<br>1.4 Mcycles 40 A AC-1 at Ue ≤ 440 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Power dissipation per pole               | 1.25 W AC-3<br>3.2 W AC-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Protective cover                         | With                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Interlocking type                        | Mechanical                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Mounting support                         | Plate<br>Rail                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 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<br>IEC 60335-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Product certifications                   | DNV<br>CSA<br>CCC<br>UL<br>GL<br>LROS (Lloyds register of shipping)<br>BV<br>RINA<br>GOST<br>UKCA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Connections - terminals                  | Control circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> flexible without cable end<br>Control circuit: screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> flexible without cable end<br>Control circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> flexible with cable end<br>Control circuit: screw clamp terminals 2 cable(s) 1...2.5 mm <sup>2</sup> flexible with cable end<br>Control circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> solid<br>Control circuit: screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> solid<br>Power circuit: screw clamp terminals 1 cable(s) 2.5...10 mm <sup>2</sup> flexible without cable end<br>Power circuit: screw clamp terminals 2 cable(s) 2.5...10 mm <sup>2</sup> flexible without cable end<br>Power circuit: screw clamp terminals 1 cable(s) 1...10 mm <sup>2</sup> flexible with cable end<br>Power circuit: screw clamp terminals 2 cable(s) 1.5...6 mm <sup>2</sup> flexible with cable end<br>Power circuit: screw clamp terminals 1 cable(s) 1.5...10 mm <sup>2</sup> solid<br>Power circuit: screw clamp terminals 2 cable(s) 2.5...10 mm <sup>2</sup> solid |
| Tightening torque                        | Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm<br>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2<br>Power circuit: 2.5 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm<br>Power circuit: 2.5 N.m - on screw clamp terminals - with screwdriver Philips No 2<br>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver-pozidriv No 2<br>Power circuit: 2.5 N.m - on screw clamp terminals - with screwdriver-pozidriv No 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Operating time                           | 53.55...72.45 ms closing<br>16...24 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                | Built-in bidirectional peak limiting diode suppressor                                                                            |
| Control circuit voltage limits | 0.1...0.25 Uc (-40...70 °C):drop-out DC<br>0.7...1.25 Uc (-40...60 °C):operational DC<br>1...1.25 Uc (60...70 °C):operational DC |
| Time constant                  | 28 Ms                                                                                                                            |
| Inrush power in W              | 5.4 W (at 20 °C)                                                                                                                 |
| Hold-in power consumption in W | 5.4 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                                                                                                                                           |
| Climatic withstand                    | Conforming to IACS E10<br>conforming to IEC 60947-1 Annex Q category D                                                                                                            |
| 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: 8 Gn for 11 ms |
| Height                                | 85 Mm                                                                                                                                                                             |
| Width                                 | 90 Mm                                                                                                                                                                             |
| Depth                                 | 101 Mm                                                                                                                                                                            |
| Net weight                            | 1.117 Kg                                                                                                                                                                          |

## Packing Units

|                              |          |
|------------------------------|----------|
| Unit Type of Package 1       | PCE      |
| Number of Units in Package 1 | 1        |
| Package 1 Weight             | 1.17 Kg  |
| Package 1 Height             | 10.9 Cm  |
| Package 1 Width              | 11.4 Cm  |
| Package 1 Length             | 11.8 Cm  |
| Unit Type of Package 2       | S03      |
| Number of Units in Package 2 | 1        |
| Package 2 Weight             | 1.883 Kg |
| Package 2 Height             | 30.0 Cm  |
| Package 2 Width              | 30.0 Cm  |
| Package 2 Length             | 40.0 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>       |
| PVC free                   | Yes                                           |

### Contractual warranty

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

|                       |                |
|-----------------------|----------------|
| Product Life Status : | Commercialised |
|-----------------------|----------------|