





## Main

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|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                                       | TeSys                                                                                                                                                                                                                                                                                                  |
| Product name                                | TeSys D                                                                                                                                                                                                                                                                                                |
| 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                                                                                                                                                                                                                                                                                                     |
| Power pole contact composition              | 3 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-3 for power circuit<br>40 A 140 °F (60 °C) ≤ 440 V AC AC-1 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 (UL / CSA)                   | 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                | 24 V DC                                                                                                                                                                                                                                                                                                |
| Auxiliary contact composition               | 1 NO + 1 NC                                                                                                                                                                                                                                                                                            |
| [Uimp] rated impulse withstand voltage      | 6 kV IEC 60947                                                                                                                                                                                                                                                                                         |
| Overvoltage category                        | III                                                                                                                                                                                                                                                                                                    |
| [Ith] conventional free air thermal current | 10 A (at 60 °C) for signalling circuit<br>40 A 140 °F (60 °C) power circuit                                                                                                                                                                                                                            |
| Irms rated making capacity                  | 140 A AC signalling circuit IEC 60947-5-1<br>250 A DC for signalling circuit conforming to IEC 60947-5-1<br>450 A 440 V power circuit IEC 60947                                                                                                                                                        |
| Rated breaking capacity                     | 450 A 440 V power circuit IEC 60947                                                                                                                                                                                                                                                                    |
| [Icw] rated short-time withstand current    | 50 A 104 °F (40 °C) - 10 min power circuit<br>120 A 104 °F (40 °C) - 1 min power circuit<br>240 A 104 °F (40 °C) - 10 s power circuit<br>380 A 104 °F (40 °C) - 1 s power circuit<br>100 A - 1 s 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 ≤ 690 V type 1 power circuit<br>40 A gG ≤ 690 V type 2 power circuit                                                                                                                                                             |
| Average impedance                           | 2 mOhm - Ith 40 A 50 Hz for power circuit                                                                                                                                                                                                                                                              |
| [Ui] rated insulation voltage               | Power circuit 690 V IEC 60947-4-1<br>Power circuit 600 V CSA<br>Power circuit 600 V UL<br>Signalling circuit 690 V IEC 60947-1<br>Signalling circuit 600 V CSA<br>Signalling circuit 600 V UL                                                                                                          |
| 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                                                                                                                                                                                                                            |

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|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power dissipation per pole | 1.25 W AC-3<br>3.2 W AC-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Front 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Product certifications     | GL<br>BV<br>LROS (Lloyds register of shipping)<br>GOST<br>DNV<br>CCC<br>RINA<br>UL<br>CSA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 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 0.00...0.01 in <sup>2</sup> (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 0.00...0.02 in <sup>2</sup> (2.5...10 mm <sup>2</sup> )flexible without cable end<br>Power circuit screw clamp terminals 2 0.00...0.02 in <sup>2</sup> (2.5...10 mm <sup>2</sup> )flexible without cable end<br>Power circuit screw clamp terminals 1 0.00...0.02 in <sup>2</sup> (1...10 mm <sup>2</sup> )flexible with cable end<br>Power circuit screw clamp terminals 2 0.00...0.01 in <sup>2</sup> (1.5...6 mm <sup>2</sup> )flexible with cable end<br>Power circuit screw clamp terminals 1 0.00...0.02 in <sup>2</sup> (1.5...10 mm <sup>2</sup> )solid<br>Power circuit screw clamp terminals 2 0.00...0.02 in <sup>2</sup> (2.5...10 mm <sup>2</sup> )solid |
| Tightening torque          | Control circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals flat Ø 6 mm<br>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2<br>Power circuit 22.13 lbf.in (2.5 N.m) screw clamp terminals flat Ø 6 mm<br>Power circuit 22.13 lbf.in (2.5 N.m) screw clamp terminals Philips 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 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 140...158 °F (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>Mirror contact 1 NC 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 signalling circuit                                                                            |

## Environment

|                                       |                                                                                                                                                                                |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IP degree of protection               | IP20 front face IEC 60529                                                                                                                                                      |
| Protective treatment                  | TH IEC 60068-2-30                                                                                                                                                              |
| Pollution degree                      | 3                                                                                                                                                                              |
| Ambient air temperature for operation | -40...140 °F (-40...60 °C)<br>140...158 °F (60...70 °C) with derating                                                                                                          |
| Ambient air temperature for storage   | -76...176 °F (-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                                | 3.35 in (85 mm)                                                                                                                                                                |
| Width                                 | 3.54 in (90 mm)                                                                                                                                                                |
| Maximum Depth                         | 3.98 in (101 mm)                                                                                                                                                               |
| Net Weight                            | 2.46 lb(US) (1.117 kg)                                                                                                                                                         |

## Ordering and shipping details

|                       |                                      |
|-----------------------|--------------------------------------|
| Category              | 22355 - CTR, TESYS D, OPEN, 9-38A DC |
| Discount Schedule     | I12                                  |
| GTIN                  | 00785901207603                       |
| Nbr. of units in pkg. | 1                                    |
| Package weight(Lbs)   | 1 lb(US) (0.45 kg)                   |
| Returnability         | No                                   |
| Country of origin     | FR                                   |

## Packing Units

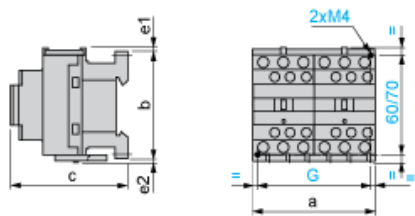
|                              |                         |
|------------------------------|-------------------------|
| Unit Type of Package 1       | PCE                     |
| Package 1 Height             | 4.53 in (11.5 cm)       |
| Package 1 width              | 4.80 in (12.2 cm)       |
| Package 1 Length             | 5.71 in (14.5 cm)       |
| Unit Type of Package 2       | S02                     |
| Number of Units in Package 2 | 5                       |
| Package 2 Weight             | 14.73 lb(US) (6.683 kg) |
| Package 2 Height             | 5.91 in (15 cm)         |
| Package 2 width              | 11.81 in (30 cm)        |
| Package 2 Length             | 15.75 in (40 cm)        |

## Offer Sustainability

|                           |                                                                                                                                                                                                                                                           |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status  | Green Premium product                                                                                                                                                                                                                                     |
| California proposition 65 | WARNING: This product can expose you to chemicals including: Antimony oxide & Antimony trioxide, which is known to the State of California to cause cancer. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> |
| 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                                                                                                                          |
| <b>Contractual warranty</b> |                                                                                                                              |
| Warranty                    | 18 months                                                                                                                    |

Dimensions



| LC2 or 2 x LC1                               | a  | b  | c <sup>(1)</sup> | e1 | e2  | G  |
|----------------------------------------------|----|----|------------------|----|-----|----|
| D09 to D18 (AC)                              | 90 | 77 | 86               | 4  | 1.5 | 80 |
| D093 to D123 (AC)                            | 90 | 99 | 86               | –  | –   | 80 |
| D09 to D18 (DC)                              | 90 | 77 | 95               | 4  | 1.5 | 80 |
| D093 to D123 (DC)                            | 90 | 99 | 95               | –  | –   | 80 |
| D25 to D38 (AC)                              | 90 | 85 | 92               | 9  | 5   | 80 |
| D183 to D383 (AC)                            | 90 | 99 | 92               | –  | –   | 80 |
| D25 to D32 (DC)                              | 90 | 85 | 101              | 9  | 5   | 80 |
| D183 to D383 (DC)                            | 90 | 99 | 101              | –  | –   | 80 |
| e1 and e2: including cabling.                |    |    |                  |    |     |    |
| (1) With safety cover, without add-on block. |    |    |                  |    |     |    |

