





## Main

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|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                                       | TeSys                                                                                                                                                                                                                                                                    |
| Product name                                | TeSys D                                                                                                                                                                                                                                                                  |
| Product or component type                   | Reversing contactor                                                                                                                                                                                                                                                      |
| Device short name                           | LC2D                                                                                                                                                                                                                                                                     |
| Contactor application                       | Motor control<br>Resistive load                                                                                                                                                                                                                                          |
| 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: $\leq 690$ V AC 25...400 Hz<br>Power circuit $\leq 300$ V DC                                                                                                                                                                                              |
| [Ie] rated operational current              | 25 A 140 °F (60 °C)) $\leq 440$ V AC AC-1 power circuit<br>12 A (at $\leq 60$ °C) at $\leq 440$ V AC AC-3 for power circuit                                                                                                                                              |
| Motor power kW                              | 3 KW 220...230 V AC 50 Hz<br>5.5 KW 380...400 V AC 50 Hz<br>5.5 KW 415...440 V AC 50 Hz<br>7.5 KW 500 V AC 50 Hz<br>7.5 kW 660...690 V AC 50 Hz                                                                                                                          |
| Motor power HP (UL / CSA)                   | 1 Hp at 115 V AC 60 Hz for 1 phase motors<br>2 Hp 230/240 V AC 60 Hz 1 phase<br>3 Hp 200/208 V AC 60 Hz 3 phase<br>3 Hp 230/240 V AC 60 Hz 3 phase<br>7.5 Hp 460/480 V AC 60 Hz 3 phase<br>10 hp 575/600 V AC 60 Hz 3 phase                                              |
| 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 conforming to IEC 60947                                                                                                                                                                                                                                             |
| Overvoltage category                        | III                                                                                                                                                                                                                                                                      |
| [Ith] conventional free air thermal current | 10 A 140 °F (60 °C) signalling circuit<br>25 A 140 °F (60 °C) power circuit                                                                                                                                                                                              |
| Irms rated making capacity                  | 250 A at 440 V for power circuit conforming to IEC 60947<br>140 A AC signalling circuit IEC 60947-5-1<br>250 A DC signalling circuit IEC 60947-5-1                                                                                                                       |
| 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 signalling circuit<br>120 A - 500 ms signalling circuit<br>140 A - 100 ms signalling circuit |
| Associated fuse rating                      | 10 A gG signalling circuit IEC 60947-5-1<br>40 A gG $\leq 690$ V type 1 power circuit<br>25 A gG $\leq 690$ V type 2 power circuit                                                                                                                                       |
| Average impedance                           | 2.5 mOhm - Ith 25 A 50 Hz power circuit                                                                                                                                                                                                                                  |
| [Ui] rated insulation voltage               | Power circuit 690 V IEC 60947-4-1<br>Power circuit: 600 V CSA certified<br>Power circuit: 600 V UL certified<br>Signalling circuit 690 V IEC 60947-1<br>Signalling circuit: 600 V CSA certified<br>Signalling circuit: 600 V UL certified                                |
| Electrical durability                       | 2 Mcycles 12 A AC-3 at Ue $\leq 440$ V<br>0.8 Mcycles 25 A AC-1 $\leq 440$ V                                                                                                                                                                                             |

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power dissipation per pole | 1.56 W AC-1<br>0.36 W AC-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 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     | LROS (Lloyds register of shipping)<br>DNV<br>GOST<br>UL<br>BV<br>GL<br>CCC<br>RINA<br>CSA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Connections - terminals    | Power circuit: screw clamp terminals 1 cable(s) 1... 4 mm <sup>2</sup> flexible without cable end<br>Power circuit: screw clamp terminals 2 cable(s) 1... 4 mm <sup>2</sup> flexible without cable end<br>Power circuit: screw clamp terminals 1 cable(s) 1... 4 mm <sup>2</sup> flexible with cable end<br>Power circuit: screw clamp terminals 2 cable(s) 1... 2.5 mm <sup>2</sup> flexible with cable end<br>Power circuit screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> )solid<br>Power circuit screw clamp terminals 2 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> )solid<br>Control circuit screw clamp terminals 1 0.00... 0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> )flexible without cable end<br>Control circuit screw clamp terminals 2 0.00... 0.01 in <sup>2</sup> (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 0.00... 0.00 in <sup>2</sup> (1...2.5 mm <sup>2</sup> )flexible with cable end<br>Control circuit screw clamp terminals 1 0.00... 0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> )solid<br>Control circuit screw clamp terminals 2 0.00... 0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> )solid |
| Tightening torque          | Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm<br>Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2<br>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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Operating time             | 53.55...72.45 ms closing<br>16...24 ms opening                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Safety reliability level   | B10d = 1369863 cycles contactor with nominal load 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 140 °F (60 °C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## Complementary

|                                |                                                                                                                                                                         |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Coil technology                | Built-in bidirectional peak limiting diode suppressor                                                                                                                   |
| Control circuit voltage limits | 0.1...0.25 Uc -40...158 °F (-40...70 °C) drop-out DC<br>0.7...1.25 Uc -40...140 °F (-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 68 °F (20 °C))                                                                                                                                                    |
| Hold-in power consumption in W | 5.4 W 68 °F (20 °C)                                                                                                                                                     |
| Auxiliary contacts type        | Mechanically linked 1 NO + 1 NC 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 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...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...9842.52 ft (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 open: 10 Gn for 11 ms<br>Shocks contactor closed: 15 Gn for 11 ms |
| Height                                | 3.03 in (77 mm)                                                                                                                                                                    |
| Width                                 | 3.54 in (90 mm)                                                                                                                                                                    |
| Maximum Depth                         | 3.74 in (95 mm)                                                                                                                                                                    |
| Net Weight                            | 2.26 lb(US) (1.027 kg)                                                                                                                                                             |

## Ordering and shipping details

|                       |                                      |
|-----------------------|--------------------------------------|
| Category              | 22355 - CTR, TESYS D, OPEN, 9-38A DC |
| Discount Schedule     | I12                                  |
| GTIN                  | 00785901207597                       |
| Nbr. of units in pkg. | 1                                    |
| Package weight(Lbs)   | 2.51 lb(US) (1.14 kg)                |
| Returnability         | Yes                                  |
| Country of origin     | FR                                   |

## Packing Units

|                              |                            |
|------------------------------|----------------------------|
| Unit Type of Package 1       | PCE                        |
| Package 1 Height             | 3.74 in (9.5 cm)           |
| Package 1 width              | 4.45 in (11.3 cm)          |
| Package 1 Length             | 5.51 in (14 cm)            |
| Unit Type of Package 2       | S02                        |
| Number of Units in Package 2 | 6                          |
| Package 2 Weight             | 15.73 lb(US) (7.137 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)           |
| Unit Type of Package 3       | P06                        |
| Number of Units in Package 3 | 96                         |
| Package 3 Weight             | 275.85 lb(US) (125.124 kg) |
| Package 3 Height             | 31.50 in (80 cm)           |
| Package 3 width              | 31.50 in (80 cm)           |
| Package 3 Length             | 23.62 in (60 cm)           |

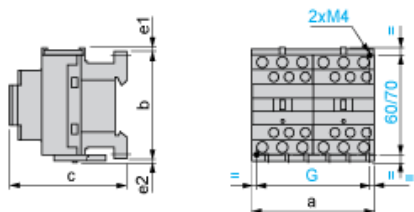
## Offer Sustainability

|                            |                                                                                                                                                                                                                                                           |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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                                                                                                                                                                                                                                                       |

## Contractual warranty

|          |           |
|----------|-----------|
| 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. |    |    |                  |    |     |    |

## Wiring

