





## Main

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|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                                       | TeSys                                                                                                                                                                                                                                                                          |
| Product name                                | TeSys D                                                                                                                                                                                                                                                                        |
| Product or component type                   | Contactor                                                                                                                                                                                                                                                                      |
| Device short name                           | LC1D                                                                                                                                                                                                                                                                           |
| Contactor application                       | Resistive load<br>Motor control                                                                                                                                                                                                                                                |
| Utilisation category                        | AC-3<br>AC-4<br>AC-1                                                                                                                                                                                                                                                           |
| 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              | 32 A (at <60 °C) at ≤ 440 V AC AC-3 for power circuit<br>50 A (at <60 °C) at ≤ 440 V AC AC-1 for power circuit                                                                                                                                                                 |
| Motor power kW                              | 7.5 kW 220...230 V AC 50/60 Hz AC-3)<br>15 kW 380...400 V AC 50/60 Hz AC-3)<br>15 kW 415...440 V AC 50/60 Hz AC-3)<br>18.5 kW at 500 V AC 50/60 Hz (AC-3)<br>18.5 kW at 660...690 V AC 50/60 Hz (AC-3)<br>7.5 kW at 400 V AC 50/60 Hz (AC-4)                                   |
| Motor power HP (UL / CSA)                   | 2 Hp 115 V AC 50/60 Hz 1 phase<br>5 Hp 230/240 V AC 50/60 Hz 1 phase<br>7.5 Hp 200/208 V AC 50/60 Hz 3 phase<br>10 Hp 230/240 V AC 50/60 Hz 3 phase<br>20 Hp 460/480 V AC 50/60 Hz 3 phase<br>30 hp 575/600 V AC 50/60 Hz 3 phase                                              |
| Control circuit type                        | DC standard                                                                                                                                                                                                                                                                    |
| [Uc] control circuit voltage                | 125 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>50 A (at 60 °C) for power circuit                                                                                                                                                                                                    |
| Irms rated making capacity                  | 140 A AC signalling circuit IEC 60947-5-1<br>250 A DC signalling circuit IEC 60947-5-1<br>550 A at 440 V for power circuit conforming to IEC 60947                                                                                                                             |
| Rated breaking capacity                     | 550 A at 440 V for power circuit conforming to IEC 60947                                                                                                                                                                                                                       |
| [Icw] rated short-time withstand current    | 260 A 40 °C - 10 s for power circuit<br>430 A 40 °C - 1 s for power circuit<br>60 A 40 °C - 10 min for power circuit<br>138 A 104 °F (40 °C) - 1 min 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>63 A gG ≤ 690 V type 1 power circuit<br>63 A gG at ≤ 690 V coordination type 2 for power circuit                                                                                                                                   |
| Average impedance                           | 2 mOhm - Ith 50 A 50 Hz for 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      | 1.65 Mcycles 32 A AC-3 <= 440 V<br>1.4 Mcycles 50 A AC-1 at Ue <= 440 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Power dissipation per pole | 2 W AC-3<br>5 W AC-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Front cover                | With                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 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     | CCC<br>RINA<br>BV<br>GOST<br>LROS (Lloyds register of shipping)<br>GL<br>DNV<br>UL<br>CSA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Connections - terminals    | Control circuit screw clamp terminals 1 0.00...<br>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...<br>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...<br>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...<br>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...<br>0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> )solid without cable end<br>Control circuit screw clamp terminals 2 0.00...<br>0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> )solid without cable end<br>Power circuit screw clamp terminals 1 0.00...0.02 in <sup>2</sup><br>(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><br>(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><br>(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><br>(1.5...6 mm <sup>2</sup> )flexible with cable end<br>Power circuit: screw clamp terminals 1 cable(s)<br>1.5...10 mm <sup>2</sup> solid without cable end<br>Power circuit: screw clamp terminals 2 cable(s) 2.5...<br>10 mm <sup>2</sup> solid without cable end |
| Tightening torque          | Control circuit: 1.7 N.m - on screw clamp terminals -<br>with screwdriver flat Ø 6 mm<br>Control circuit: 1.7 N.m - on screw clamp terminals -<br>with screwdriver Philips No 2<br>Power circuit 22.13 lbf.in (2.5 N.m) screw clamp<br>terminals flat Ø 6 mm<br>Power circuit 22.13 lbf.in (2.5 N.m) screw clamp<br>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<br>EN/ISO 13849-1<br>B10d = 20000000 cycles contactor with mechanical<br>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 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 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                       | 1562 °F (850 °C) 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                                 | 1.77 in (45 mm)                                                                                                                                                                  |
| Maximum Depth                         | 3.98 in (101 mm)                                                                                                                                                                 |
| Net Weight                            | 1.18 lb(US) (0.535 kg)                                                                                                                                                           |

## Ordering and shipping details

|                       |                                      |
|-----------------------|--------------------------------------|
| Category              | 22355 - CTR, TESYS D, OPEN, 9-38A DC |
| Discount Schedule     | I12                                  |
| GTIN                  | 00785901207320                       |
| Nbr. of units in pkg. | 1                                    |
| Package weight(Lbs)   | 1.2 lb(US) (0.54 kg)                 |
| Returnability         | No                                   |
| Country of origin     | FR                                   |

## Packing Units

|                  |          |
|------------------|----------|
| Package 1 Height | 0.490 dm |
| Package 1 width  | 1.110 dm |
| Package 1 Length | 0.890 dm |

## 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                                                                                                                    |