

# Product datasheet

Specifications



## TeSys D contactor - 3P - <= 440 V - 9 A AC-3 - 100...250 V AC/DC coil

Local distributor code: 407811588    LC1D09KUE

### Main

|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                                  | TeSys<br>TeSys Deca                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Product name                           | TeSys D Green<br>TeSys Deca                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Product or component type              | Contactors                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Device short name                      | LC1D                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Contactors application                 | Motor control<br>Resistive load                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Utilisation category                   | AC-1<br>AC-3<br>AC-3e                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Poles description                      | 3P                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Power pole contact composition         | 3 NO                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| [Ue] rated operational voltage         | Power circuit: <= 690 V AC 25...400 Hz                                                                                                                                                                                                                                                                                                                                                                                                                         |
| [Ie] rated operational current         | 9 A (at <60 °C) at <= 440 V AC-3 for power circuit<br>25 A (at <60 °C) at <= 440 V AC-1 for power circuit<br>9 A (at <60 °C) at <= 440 V AC-3e for power circuit                                                                                                                                                                                                                                                                                               |
| Motor power kW                         | 2.2 kW at 220...230 V AC 50 Hz (AC-3)<br>4 kW at 380...400 V AC 50 Hz (AC-3)<br>4 kW at 415 V AC 50 Hz (AC-3)<br>4 kW at 440 V AC 50 Hz (AC-3)<br>5.5 kW at 500 V AC 50 Hz (AC-3)<br>5.5 kW at 660...690 V AC 50 Hz (AC-3)<br>2.2 kW at 220...230 V AC 50 Hz (AC-3e)<br>4 kW at 380...400 V AC 50 Hz (AC-3e)<br>4 kW at 415 V AC 50 Hz (AC-3e)<br>4 kW at 440 V AC 50 Hz (AC-3e)<br>5.5 kW at 500 V AC 50 Hz (AC-3e)<br>5.5 kW at 660...690 V AC 50 Hz (AC-3e) |
| Motor power HP (UL / CSA)              | 0.33 hp at 115 V AC 60 Hz for 1 phase motors<br>1 hp at 230/240 V AC 60 Hz for 1 phase motors<br>2 hp at 200/208 V AC 60 Hz for 3 phases motors<br>2 hp at 230/240 V AC 60 Hz for 3 phases motors<br>5 hp at 460/480 V AC 60 Hz for 3 phases motors<br>7.5 hp at 575/600 V AC 60 Hz for 3 phases motors                                                                                                                                                        |
| [Uc] control circuit voltage           | 100...250 V AC 50/60 Hz<br>100...250 V DC                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Coil type                              | AC/DC electronic                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Auxiliary contact composition          | 1 NO + 1 NC                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| [Uimp] rated impulse withstand voltage | 6 kV conforming to IEC 60947                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Overvoltage category                   | III                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

|                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>[Ith] conventional free air thermal current</b> | 10 A (at 60 °C) for signalling circuit<br>25 A (at 60 °C) for power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Irms rated making capacity</b>                  | 250 A at 440 V for power circuit conforming to IEC 60947<br>140 A AC for signalling circuit conforming to IEC 60947-5-1<br>250 A DC for signalling circuit conforming to IEC 60947-5-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Rated breaking capacity</b>                     | 250 A at 440 V for power circuit conforming to IEC 60947                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>[Icw] rated short-time withstand current</b>    | 100 A - 1 s for signalling circuit<br>120 A - 500 ms for signalling circuit<br>140 A - 100 ms for signalling circuit<br>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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Associated fuse rating</b>                      | 10 A gG for signalling circuit conforming to IEC 60947-5-1<br>25 A gG at <= 690 V coordination type 1 for power circuit<br>20 A gG at <= 690 V coordination type 2 for power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Average impedance</b>                           | 2.5 mOhm - Ith 25 A 50 Hz for power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>[Ui] rated insulation voltage</b>               | Power circuit: 690 V conforming to IEC 60947-4-1<br>Signalling circuit: 690 V conforming to IEC 60947-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Electrical durability</b>                       | 2.4 Mcycles 8 A AC-3 at Ue <= 440 V<br>0.6 Mcycles 25 A AC-1 at Ue <= 440 V<br>2.4 Mcycles 8 A AC-3e at Ue <= 440 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Power dissipation per pole</b>                  | 1.56 W AC-1<br>0.2 W AC-3<br>0.2 W AC-3e                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Front cover</b>                                 | With                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Mounting support</b>                            | Rail<br>Plate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Standards</b>                                   | EN/IEC 60947-4-1<br>EN/IEC 60947-5-1<br>UL 60947-4-1<br>CSA C22.2 No 60947-4-1<br>IEC 60335-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Product certifications</b>                      | CCC<br>CSA<br>EAC<br>UL<br>KC<br>DNV-GL<br>LROS (Lloyds register of shipping)<br>UKCA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Connections - terminals</b>                     | Control circuit: screw clamp terminals 1 cable(s) 1...4 mm²flexible without cable end<br>Control circuit: screw clamp terminals 2 cable(s) 1...4 mm²flexible without cable end<br>Control circuit: screw clamp terminals 1 cable(s) 1...4 mm²flexible with cable end<br>Control circuit: screw clamp terminals 2 cable(s) 1...2.5 mm²flexible with cable end<br>Control circuit: screw clamp terminals 1 cable(s) 1...4 mm²solid<br>Control circuit: screw clamp terminals 2 cable(s) 1...4 mm²solid<br>Power circuit: screw clamp terminals 1 cable(s) 1...4 mm²flexible without cable end<br>Power circuit: screw clamp terminals 2 cable(s) 1...4 mm²flexible without cable end<br>Power circuit: screw clamp terminals 1 cable(s) 1...4 mm²flexible with cable end<br>Power circuit: screw clamp terminals 2 cable(s) 1...2.5 mm²flexible with cable end<br>Power circuit: screw clamp terminals 1 cable(s) 1...4 mm²solid<br>Power circuit: screw clamp terminals 2 cable(s) 1...4 mm²solid |
| <b>Tightening torque</b>                           | Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm<br>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2<br>Power circuit: 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>Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2 M4<br>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2 M3.5                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Operating time</b>                              | 45...55 ms closing<br>20...90 ms opening                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Safety reliability level</b>                    | B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1<br>B10d = 20000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Mechanical durability</b>                       | 15 Mcycles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Maximum operating rate</b>                      | 3600 cyc/h 60 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## Complementary

|                                       |                                        |
|---------------------------------------|----------------------------------------|
| <b>Coil technology</b>                | Built-in bidirectional peak limiting   |
| <b>Control circuit voltage limits</b> | <= 0.1 Uc (-40...70 °C):drop-out AC/DC |

|                                 |                                                                                                                          |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------|
|                                 | 0.85...1.1 Uc (-40...60 °C):operational AC/DC<br>1...1.1 Uc (60...70 °C):operational AC/DC                               |
| Inrush power in VA              | 25 VA 50/60 Hz (at 20 °C)                                                                                                |
| Inrush power in W               | 18 W at 20 °C                                                                                                            |
| Hold-in power consumption in VA | 1.6 VA (at 20 °C) 50/60 Hz                                                                                               |
| Hold-in power consumption in W  | 1.1 W at 20 °C                                                                                                           |
| Heat dissipation                | 1.1 W at 50/60 Hz                                                                                                        |
| Auxiliary contacts type         | type mechanically linked 1 NO + 1 NC conforming to IEC 60947-5-1<br>type mirror contact 1 NC conforming to IEC 60947-4-1 |
| Signalling circuit frequency    | 25...400 Hz                                                                                                              |
| Minimum switching current       | 5 mA for signalling circuit                                                                                              |
| Minimum switching voltage       | 17 V for signalling circuit                                                                                              |
| Non-overlap time                | 1.5 ms on de-energisation between NC and NO contact<br>1.5 ms on energisation between NC and NO contact                  |
| Insulation resistance           | > 10 MOhm for signalling circuit                                                                                         |

## Environment

|                                       |                                                                                                                                                                                    |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IP degree of protection               | IP20 front face conforming to IEC 60529                                                                                                                                            |
| Climatic withstand                    | conforming to IACS E10<br>conforming to IEC 60947-1 Annex Q category D                                                                                                             |
| Pollution degree                      | 3                                                                                                                                                                                  |
| Ambient air temperature for storage   | -60...80 °C                                                                                                                                                                        |
| Operating altitude                    | 0...3000 m                                                                                                                                                                         |
| Fire resistance                       | 850 °C conforming to IEC 60695-2-1                                                                                                                                                 |
| 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 |
| Ambient air temperature for operation | -40...60 °C<br>60...70 °C with derating                                                                                                                                            |
| Height                                | 77 mm                                                                                                                                                                              |
| Width                                 | 45 mm                                                                                                                                                                              |
| Depth                                 | 86 mm                                                                                                                                                                              |
| Net weight                            | 0.368 kg                                                                                                                                                                           |
| Colour                                | Grey (SE GREY 6)<br>Green (SE GREEN 2)                                                                                                                                             |

## Packing Units

|                              |          |
|------------------------------|----------|
| Unit Type of Package 1       | PCE      |
| Number of Units in Package 1 | 1        |
| Package 1 Weight             | 393.0 g  |
| Package 1 Height             | 5.4 cm   |
| Package 1 width              | 9.4 cm   |
| Package 1 Length             | 11.4 cm  |
| Unit Type of Package 2       | S02      |
| Number of Units in Package 2 | 15       |
| Package 2 Weight             | 6.205 kg |

|                  |       |
|------------------|-------|
| Package 2 Height | 15 cm |
| Package 2 width  | 30 cm |
| Package 2 Length | 40 cm |

Offer Sustainability

|                             |                                                                                                                             |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status    | Green Premium product                                                                                                       |
| REACH Regulation            | <a href="#">REACH Declaration</a>                                                                                           |
| EU RoHS Directive           | Compliant<br><a href="#">EU RoHS Declaration</a>                                                                            |
| Mercury free                | Yes                                                                                                                         |
| RoHS exemption information  | <a href="#">Yes</a>                                                                                                         |
| China RoHS Regulation       | <a href="#">China RoHS declaration</a><br>Product out of China RoHS scope. Substance declaration for your information       |
| 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 |
| Halogen content performance | Halogen free plastic parts & cables product                                                                                 |

Contractual warranty

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