

# Product data sheet

Specifications



## TeSys Deca contactor,3P(3NO),AC-3/ AC-3e,<=440V 50A,220V AC 50/60Hz coil

LC1D50AM7

### Main

|                                |                                                                                                                                                                             |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                          | TeSys<br>TeSys Deca                                                                                                                                                         |
| Range of product               | TeSys D<br>TeSys Deca                                                                                                                                                       |
| Product or component type      | Contacteur                                                                                                                                                                  |
| Device short name              | LC1D                                                                                                                                                                        |
| Contacteur application         | Resistive load<br>Motor control                                                                                                                                             |
| Utilisation category           | AC-4<br>AC-1<br>AC-3<br>AC-3e                                                                                                                                               |
| Poles description              | 3P                                                                                                                                                                          |
| [Ue] rated operational voltage | Power circuit: <= 690 V AC 25...400 Hz<br>Power circuit: <= 300 V DC                                                                                                        |
| [Ie] rated operational current | 50 A (at <60 °C) at <= 440 V AC AC-3 for power circuit<br>80 A (at <60 °C) at <= 440 V AC AC-1 for power circuit<br>50 A (at <60 °C) at <= 440 V AC AC-3e for power circuit |

### Complementary

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Motor power kW           | 15 kW at 220...230 V AC 50/60 Hz (AC-3)<br>22 kW at 380...400 V AC 50/60 Hz (AC-3)<br>30 kW at 500 V AC 50/60 Hz (AC-3)<br>33 kW at 660...690 V AC 50/60 Hz (AC-3)<br>25 kW at 415 V AC 50/60 Hz (AC-3)<br>30 kW at 440 V AC 50/60 Hz (AC-3)<br>11 kW at 400 V AC 50/60 Hz (AC-4)<br>15 kW at 220...230 V AC 50/60 Hz (AC-3e)<br>22 kW at 380...400 V AC 50/60 Hz (AC-3e)<br>30 kW at 500 V AC 50/60 Hz (AC-3e)<br>33 kW at 660...690 V AC 50/60 Hz (AC-3e)<br>25 kW at 415 V AC 50/60 Hz (AC-3e)<br>30 kW at 440 V AC 50/60 Hz (AC-3e) |
| Motor power hp           | 3 hp at 115 V AC 50/60 Hz for 1 phase motors<br>7.5 hp at 230/240 V AC 50/60 Hz for 1 phase motors<br>15 hp at 200/208 V AC 50/60 Hz for 3 phases motors<br>15 hp at 230/240 V AC 50/60 Hz for 3 phases motors<br>40 hp at 460/480 V AC 50/60 Hz for 3 phases motors<br>40 hp at 575/600 V AC 50/60 Hz for 3 phases motors                                                                                                                                                                                                              |
| Pole contact composition | 3 NO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Contact compatibility    | M2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Protective cover         | With                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                |

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Auxiliary contact composition               | 1 NO + 1 NC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| [Ui] rated insulation voltage               | Power circuit: 600 V CSA certified<br>Power circuit: 600 V UL certified<br>Signalling circuit: 690 V conforming to IEC 60947-1<br>Signalling circuit: 600 V CSA certified<br>Signalling circuit: 600 V UL certified<br>Power circuit: 690 V conforming to IEC 60947-4-1                                                                                                                                                                                                                                                                                                                                                                        |
| [Uimp] rated impulse withstand voltage      | 6 kV conforming to IEC 60947                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Overvoltage category                        | III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| [Ith] conventional free air thermal current | 10 A (at 60 °C) for signalling circuit<br>80 A (at 60 °C) for power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Irms rated making capacity                  | 140 A AC for signalling circuit conforming to IEC 60947-5-1<br>250 A DC for signalling circuit conforming to IEC 60947-5-1<br>900 A at 440 V for power circuit conforming to IEC 60947                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Rated breaking capacity                     | 900 A at 440 V for power circuit conforming to IEC 60947                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Associated fuse rating                      | 10 A gG for signalling circuit conforming to IEC 60947-5-1<br>100 A gG at <= 690 V coordination type 1 for power circuit<br>100 A gG at <= 690 V coordination type 2 for power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Control circuit type                        | AC at 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Coil technology                             | Without built-in suppressor module                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Control circuit voltage limits              | 0.3...0.6 Uc (-40...70 °C):drop-out AC 50/60 Hz<br>0.8...1.1 Uc (-40...60 °C):operational AC 50 Hz<br>0.85...1.1 Uc (-40...60 °C):operational AC 60 Hz<br>1...1.1 Uc (60...70 °C):operational AC 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Average impedance                           | 1.5 mOhm - Ith 80 A 50 Hz for power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Power dissipation per pole                  | 3.7 W AC-3<br>9.6 W AC-1<br>3.7 W AC-3e                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Maximum operating rate                      | 3600 cyc/h 60 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Inrush power in VA                          | 140 VA 60 Hz cos phi 0.75 (at 20 °C)<br>160 VA 50 Hz cos phi 0.75 (at 20 °C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Hold-in power consumption in VA             | 13 VA 60 Hz cos phi 0.3 (at 20 °C)<br>15 VA 50 Hz cos phi 0.3 (at 20 °C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Insulation resistance                       | > 10 MOhm for signalling circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Tightening torque                           | Control circuit: 1.7 N.m - on EverLink BTR screw connectors - with screwdriver flat Ø 6 mm<br>Control circuit: 1.7 N.m - on EverLink BTR screw connectors - with screwdriver Philips No 2<br>Power circuit: 8 N.m - on EverLink BTR screw connectors - cable 25...35 mm² hexagonal screw head 4 mm<br>Power circuit: 5 N.m - on EverLink BTR screw connectors - cable 1...25 mm² hexagonal screw head 4 mm<br>Control circuit: 1.7 N.m - on EverLink BTR screw connectors - with screwdriver pozidriv No 2<br>Power circuit: 2.5 N.m - on EverLink BTR screw connectors - with screwdriver pozidriv No 2<br>- on EverLink BTR screw connectors |
| Mounting support                            | Plate<br>Rail                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Electrical durability                       | 1.45 Mcycles 50 A AC-3 at Ue <= 440 V<br>1.1 Mcycles 80 A AC-1 at Ue <= 440 V<br>1.45 Mcycles 50 A AC-3e at Ue <= 440 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Mechanical durability                       | 6 Mcycles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Safety reliability level                    | B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1<br>B10d = 20000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Operating altitude                          | 0...3000 m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Compatibility code                          | LC1D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Product certifications                      | RINA<br>DNV<br>CSA<br>GOST                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

BV  
GL  
UL  
CCC  
LROS (Lloyds register of shipping)

Environment

|                                     |                                                                                                                                                                                    |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Climatic withstand                  | conforming to IACS E10<br>conforming to IEC 60947-1 Annex Q category D                                                                                                             |
| Ambient air temperature for storage | -60...80 °C                                                                                                                                                                        |
| 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 closed: 15 Gn for 11 ms<br>Shocks contactor open: 10 Gn for 11 ms |
| Height                              | 122 mm                                                                                                                                                                             |
| Width                               | 55 mm                                                                                                                                                                              |
| Depth                               | 120 mm                                                                                                                                                                             |
| Net weight                          | 0.855 kg                                                                                                                                                                           |

Packing Units

|                              |            |
|------------------------------|------------|
| Unit Type of Package 1       | PCE        |
| Number of Units in Package 1 | 1          |
| Package 1 Weight             | 916.0 g    |
| Package 1 Height             | 6.2 cm     |
| Package 1 width              | 13.5 cm    |
| Package 1 Length             | 15.2 cm    |
| Unit Type of Package 2       | S02        |
| Number of Units in Package 2 | 10         |
| Package 2 Weight             | 9.93 kg    |
| Package 2 Height             | 15.0 cm    |
| Package 2 width              | 30.0 cm    |
| Package 2 Length             | 40.0 cm    |
| Unit Type of Package 3       | P06        |
| Number of Units in Package 3 | 160        |
| Package 3 Weight             | 165.698 kg |
| Package 3 Height             | 77.0 cm    |
| Package 3 width              | 80.0 cm    |
| Package 3 Length             | 60.0 cm    |

Offer Sustainability

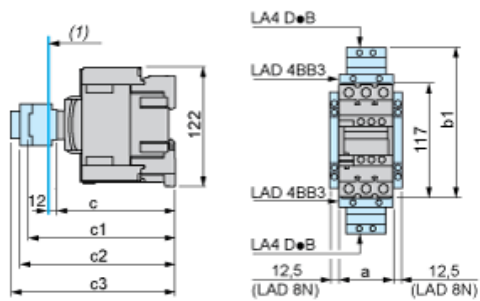
|                          |                                                  |
|--------------------------|--------------------------------------------------|
| Sustainable offer status | Green Premium product                            |
| REACH Regulation         | <a href="#">REACH Declaration</a>                |
| REACH free of SVHC       | Yes                                              |
| EU RoHS Directive        | Compliant<br><a href="#">EU RoHS Declaration</a> |
| Toxic heavy metal free   | Yes                                              |
| Mercury free             | Yes                                              |

|                            |                                                                                                                                                                                                                                                           |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RoHS exemption information | Yes                                                                                                                                                                                                                                                       |
| China RoHS Regulation      | <a href="#">China RoHS declaration</a><br>Pro-active China RoHS declaration (out of China RoHS legal scope)                                                                                                                                               |
| 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                                                                                                                                                                                                                                                       |
| 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> |

Contractual warranty

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

Dimensions



(1) Minimum electrical clearance

| LC1 |                                    | D40A...D65A |
|-----|------------------------------------|-------------|
| a   |                                    | 55          |
| b1  | with LA4 D•2                       | –           |
|     | with LA4 DB3 or LAD 4BB3           | 136         |
|     | with LA4 DF, DT                    | 157         |
|     | with LA4 DM, DW, DL                | 166         |
| c   | without cover or add-on blocks     | 118         |
|     | with cover, without add-on blocks  | 120         |
| c1  | with LAD N (1 contact)             | –           |
|     | with LAD N or C (2 or 4 contacts)  | 150         |
| c2  | with LA6 DK10, LAD 6DK             | 163         |
| c3  | with LAD T, R, S                   | 171         |
|     | with LAD T, R, S and sealing cover | 175         |

Wiring

