

# LC1D150N7

Contacteur, TeSys Deca, 3P(3NO), AC-3/AC-3e, <=440V, 150A, 415V AC 50/60Hz coil, screw clamp terminals



## Main

|                                |                                                                                                                                                                                |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                          | TeSys                                                                                                                                                                          |
| Range of product               | TeSys Deca                                                                                                                                                                     |
| Product or component type      | Contacteur                                                                                                                                                                     |
| Device short name              | LC1D                                                                                                                                                                           |
| Contacteur application         | Resistive load<br>Motor control                                                                                                                                                |
| Utilisation category           | AC-3<br>AC-4<br>AC-1<br>AC-3e                                                                                                                                                  |
| Poles description              | 3P                                                                                                                                                                             |
| [Ue] rated operational voltage | Power circuit: <= 1000 V AC 25...400 Hz<br>Power circuit: <= 300 V DC                                                                                                          |
| [Ie] rated operational current | 200 A (at <60 °C) at <= 440 V AC AC-1 for power circuit<br>150 A (at <60 °C) at <= 440 V AC AC-3 for power circuit<br>150 A (at <60 °C) at <= 440 V AC AC-3e for power circuit |
| [Uc] control circuit voltage   | 415 V AC 50/60 Hz                                                                                                                                                              |

## Complementary

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| Motor power kW                              | 40 kW at 220...230 V AC 50/60 Hz (AC-3)<br>75 kW at 380...400 V AC 50/60 Hz (AC-3)<br>80 kW at 415...440 V AC 50/60 Hz (AC-3)<br>90 kW at 500 V AC 50/60 Hz (AC-3)<br>100 kW at 660...690 V AC 50/60 Hz (AC-3)<br>75 kW at 1000 V AC 50/60 Hz (AC-3)<br>22 kW at 400 V AC 50/60 Hz (AC-4)<br>40 kW at 220...230 V AC 50/60 Hz (AC-3e)<br>75 kW at 380...400 V AC 50/60 Hz (AC-3e)<br>80 kW at 415...440 V AC 50/60 Hz (AC-3e)<br>90 kW at 500 V AC 50/60 Hz (AC-3e)<br>100 kW at 660...690 V AC 50/60 Hz (AC-3e)<br>75 kW at 1000 V AC 50/60 Hz (AC-3e) |
| Motor power hp                              | 40 Hp at 200/208 V AC 50/60 Hz for 3 phases motors<br>50 Hp at 230/240 V AC 50/60 Hz for 3 phases motors<br>100 Hp at 460/480 V AC 50/60 Hz for 3 phases motors<br>125 Hp at 575/600 V AC 50/60 Hz for 3 phases motors                                                                                                                                                                                                                                                                                                                                  |
| Compatibility code                          | LC1D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Pole contact composition                    | 3 NO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Contact compatibility                       | M13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Protective cover                            | With                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| [Ith] conventional free air thermal current | 200 A (at 60 °C) for power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

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| 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>1660 A at 440 V for power circuit conforming to IEC 60947                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Rated breaking capacity                  | 1400 A at 440 V for power circuit conforming to IEC 60947                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| [Icw] rated short-time withstand current | 250 A 40 °C - 10 min for power circuit<br>580 A 40 °C - 1 min for power circuit<br>1200 A 40 °C - 10 s for power circuit<br>1400 A 40 °C - 1 s for power circuit<br>100 A - 1 s for signalling circuit<br>120 A - 500 ms for signalling circuit<br>140 A - 100 ms for signalling circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Associated fuse rating                   | 10 A gG for signalling circuit conforming to IEC 60947-5-1<br>315 A gG at ≤ 690 V coordination type 1 for power circuit<br>250 A gG at ≤ 690 V coordination type 2 for power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Average impedance                        | 0.6 MOhm - Ith 200 A 50 Hz for power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Power dissipation per pole               | 24 W AC-1<br>13.5 W AC-3<br>13.5 W AC-3e                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| [Ui] rated insulation voltage            | Power circuit: 600 V CSA certified<br>Power circuit: 600 V UL certified<br>Power circuit: 1000 V conforming to IEC 60947-4-1<br>Signalling circuit: 690 V conforming to IEC 60947-1<br>Signalling circuit: 600 V CSA certified<br>Signalling circuit: 600 V UL certified                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Overvoltage category                     | III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Pollution degree                         | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| [Uimp] rated impulse withstand voltage   | 8 KV conforming to IEC 60947                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Safety reliability level                 | B10d = 1369863 cycles contactor with nominal load conforming-<br>to EN/ISO 13849-1<br>B10d = 20000000 cycles contactor with mechanical load conforming-<br>to EN/ISO 13849-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Mechanical durability                    | 8 Mcycles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Electrical durability                    | 0.85 Mcycles 150 A AC-3 at Ue ≤ 440 V<br>1 Mcycles 200 A AC-1 at Ue ≤ 440 V<br>0.85 Mcycles 150 A AC-3e at Ue ≤ 440 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Control circuit type                     | AC at 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Coil technology                          | Built-in bidirectional peak limiting diode suppressor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Control circuit voltage limits           | 0.3...0.5 Uc (-40...70 °C):drop-out AC 50/60 Hz<br>0.8...1.15 Uc (-40...55 °C):operational AC 50/60 Hz<br>1...1.15 Uc (55...70 °C):operational AC 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Inrush power in VA                       | 280...350 VA 60 Hz cos phi 0.9 (at 20 °C)<br>280...350 VA 50 Hz cos phi 0.9 (at 20 °C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Hold-in power consumption in VA          | 2...18 VA 60 Hz cos phi 0.9 (at 20 °C)<br>2...18 VA 50 Hz cos phi 0.9 (at 20 °C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Heat dissipation                         | 3...4.5 W at 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Operating time                           | 20...35 ms closing<br>40...75 ms opening                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Maximum operating rate                   | 1200 Cyc/H 60 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Connections - terminals                  | Control circuit: screw clamp terminals 2 1...2.5 mm² - cable stiffness: flexible with-<br>cable end<br>Control circuit: screw clamp terminals 1 1...2.5 mm² - cable stiffness: flexible-<br>with cable end<br>Control circuit: screw clamp terminals 1 1...2.5 mm² - cable stiffness: flexible-<br>without cable end<br>Control circuit: screw clamp terminals 2 1...2.5 mm² - cable stiffness: flexible-<br>without cable end<br>Control circuit: screw clamp terminals 1 1...2.5 mm² - cable stiffness: solid with-<br>out cable end<br>Control circuit: screw clamp terminals 2 1...2.5 mm² - cable stiffness: solid with-<br>out cable end<br>Power circuit: connector 1 10...120 mm² - cable stiffness: flexible without ca-<br>ble end<br>Power circuit: connector 2 10...50 mm² - cable stiffness: flexible without ca-<br>ble end<br>Power circuit: connector 1 10...120 mm² - cable stiffness: flexible with cable end<br>Power circuit: connector 2 10...50 mm² - cable stiffness: flexible with cable end<br>Power circuit: connector 1 10...120 mm² - cable stiffness: solid without cable end<br>Power circuit: connector 2 10...50 mm² - cable stiffness: solid without cable end |

|                               |                                                                                                                                                                                                                                                                                                                                         |
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| Tightening torque             | Control circuit: 1.2 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm<br>Control circuit: 1.2 N.m - on screw clamp terminals - with screwdriver Philips No 2<br>Power circuit: 12 N.m - on connector hexagonal screw head 4 mm<br>Control circuit: 1.2 N.m - on screw clamp terminals - with screwdriver-<br>pozidriv No 2 |
| Auxiliary contact composition | 1 NO + 1 NC                                                                                                                                                                                                                                                                                                                             |
| 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 voltage     | 17 V for signalling circuit                                                                                                                                                                                                                                                                                                             |
| Minimum switching current     | 5 MA for signalling circuit                                                                                                                                                                                                                                                                                                             |
| Insulation resistance         | > 10 MOhm 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                                                                                                                                                                                                                                 |
| Mounting support              | Plate<br>Rail                                                                                                                                                                                                                                                                                                                           |

## Environment

|                                                       |                                                                                                                                                                                       |
|-------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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                                | BV<br>LROS (Lloyds register of shipping)<br>UL<br>CCC<br>GOST<br>RINA<br>DNV<br>CSA<br>GL<br>UKCA<br>CE                                                                               |
| IP degree of protection                               | IP20 front face conforming to IEC 60529                                                                                                                                               |
| Protective treatment                                  | TH conforming to IEC 60068-2-30                                                                                                                                                       |
| Climatic withstand                                    | Conforming to IACS E10 exposure to damp heat                                                                                                                                          |
| Permissible ambient air temperature around the device | -40...60 °C<br>60...70 °C with derating                                                                                                                                               |
| Operating altitude                                    | 0...3000 m                                                                                                                                                                            |
| Fire resistance                                       | 850 °C conforming to IEC 60695-2-1                                                                                                                                                    |
| Flame retardance                                      | V1 conforming to UL 94                                                                                                                                                                |
| Mechanical robustness                                 | Vibrations contactor open (2 Gn, 5...300 Hz)<br>Vibrations contactor closed (4 Gn, 5...300 Hz)<br>Shocks contactor closed (15 Gn for 11 ms)<br>Shocks contactor open (6 Gn for 11 ms) |
| Height                                                | 158 Mm                                                                                                                                                                                |
| Width                                                 | 120 Mm                                                                                                                                                                                |
| Depth                                                 | 136 Mm                                                                                                                                                                                |
| Net weight                                            | 2.5 Kg                                                                                                                                                                                |

## Packing Units

|                              |          |
|------------------------------|----------|
| Unit Type of Package 1       | PCE      |
| Number of Units in Package 1 | 1        |
| Package 1 Height             | 18.8 Cm  |
| Package 1 Width              | 16.9 Cm  |
| Package 1 Length             | 20.5 Cm  |
| Package 1 Weight             | 2.481 Kg |
| Unit Type of Package 2       | S04      |
| Number of Units in Package 2 | 6        |
| Package 2 Height             | 30.0 Cm  |
| Package 2 Width              | 40.0 Cm  |

|                  |           |
|------------------|-----------|
| Package 2 Length | 60.0 Cm   |
| Package 2 Weight | 15.589 Kg |

### Offer Sustainability

|                            |                                                                                                                                                                                                                                                           |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                                                                                                                                                     |
| REACH Regulation           | <a href="#">REACH Declaration</a>                                                                                                                                                                                                                         |
| EU RoHS Directive          | Compliant <a href="#">EU RoHS Declaration</a>                                                                                                                                                                                                             |
| Mercury free               | Yes                                                                                                                                                                                                                                                       |
| China RoHS Regulation      | <a href="#">China RoHS Declaration</a>                                                                                                                                                                                                                    |
| RoHS exemption information | <a href="#">Yes</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                                                                                                                                                                                                                                                       |
| 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 |
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Product Life Status : **Commercialised**