

# Product data sheet

Specifications



## Contactor, TeSys Deca, 3P(3NO), AC-3, <=440V, 25A, 208V AC 50/60Hz coil

LC1D256LE7

ⓘ Discontinued

### Main

|                                |  |
|--------------------------------|--|
| Range                          | TeSys  |
| Range Of Product               | TeSys Deca   |
| Product Or Component Type      | Contactor  |
| Device Short Name              | LC1D   |
| Contactor Application          | Motor control<br>Resistive load  |
| Utilisation Category           | AC-1<br>AC-3   |
| 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 | 25 A (at <60 °C) at <= 440 V AC AC-3 for power circuit<br>40 A (at <60 °C) at <= 440 V AC AC-1 for power circuit |
| [Uc] Control Circuit Voltage   | 208 V AC 50/60 Hz  |

### Complementary

|   |  |
|---|--|
| Motor Power Kw                              | 5.5 kW at 220...230 V AC 50/60 Hz<br>11 kW at 380...400 V AC 50/60 Hz<br>11 kW at 415...440 V AC 50/60 Hz<br>15 kW at 500 V AC 50/60 Hz<br>15 kW at 660...690 V AC 50/60 Hz  |
| Motor Power Hp                              | 3 hp at 230/240 V AC 50/60 Hz for 1 phase motors<br>2 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 3 phases motors<br>15 hp at 460/480 V AC 50/60 Hz for 3 phases motors<br>20 hp at 575/600 V AC 50/60 Hz for 3 phases motors<br>7.5 hp at 200/208 V AC 50/60 Hz for 3 phases motors |
| Compatibility Code                          | LC1D   |
| Pole Contact Composition                    | 3 NO   |
| Contact Compatibility                       | M2   |
| Protective Cover                            | With   |
| [Ith] Conventional Free Air Thermal Current | 10 A (at 60 °C) for signalling circuit<br>40 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>450 A at 440 V for power circuit conforming to IEC 60947   |
| Rated Breaking Capacity                     | 450 A at 440 V for power circuit conforming to IEC 60947   |

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

|   |  |
|---|--|
| <b>[Icw] Rated Short-Time Withstand Current</b> | 240 A 40 °C - 10 s for power circuit<br>380 A 40 °C - 1 s for power circuit<br>50 A 40 °C - 10 min for power circuit<br>120 A 40 °C - 1 min 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  |
| <b>Associated Fuse Rating</b>                   | 10 A gG for signalling circuit conforming to IEC 60947-5-1<br>63 A gG at <= 690 V coordination type 1 for power circuit<br>40 A gG at <= 690 V coordination type 2 for power circuit   |
| <b>Average Impedance</b>                        | 2 mOhm - lth 40 A 50 Hz for power circuit  |
| <b>Power Dissipation Per Pole</b>               | 3.2 W AC-1<br>1.25 W AC-3  |
| <b>[Ui] Rated Insulation Voltage</b>            | Power circuit: 690 V conforming to IEC 60947-4-1<br>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  |
| <b>Overvoltage Category</b>                     | III  |
| <b>Pollution Degree</b>                         | 3  |
| <b>[Uimp] Rated Impulse Withstand Voltage</b>   | 6 kV conforming to IEC 60947   |
| <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>Electrical Durability</b>                    | 1.65 Mcycles 25 A AC-3 at Ue <= 440 V<br>1.4 Mcycles 40 A AC-1 at Ue <= 440 V  |
| <b>Control Circuit Type</b>                     | AC at 50/60 Hz   |
| <b>Coil Technology</b>                          | Without built-in suppressor module   |
| <b>Control Circuit Voltage Limits</b>           | 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  |
| <b>Inrush Power In Va</b>                       | 70 VA 60 Hz cos phi 0.75 (at 20 °C)<br>70 VA 50 Hz cos phi 0.75 (at 20 °C)   |
| <b>Hold-In Power Consumption In Va</b>          | 7.5 VA 60 Hz cos phi 0.3 (at 20 °C)<br>7 VA 50 Hz cos phi 0.3 (at 20 °C)   |
| <b>Heat Dissipation</b>                         | 2...3 W at 50/60 Hz  |
| <b>Operating Time</b>                           | 12...22 ms closing<br>4...19 ms opening  |
| <b>Maximum Operating Rate</b>                   | 3600 cyc/h 60 °C   |
| <b>Connections - Terminals</b>                  | Control circuit: lugs-ring terminals - external diameter: 8 mm<br>Power circuit: lugs-ring terminals - external diameter: 10 mm  |
| <b>Tightening Torque</b>                        | Control circuit: 1.7 N.m - on lugs-ring terminals - with screwdriver flat Ø 6 mm M3.5<br>Control circuit: 1.7 N.m - on lugs-ring terminals - with screwdriver Philips No 2 M3.5<br>Power circuit: 2.5 N.m - on lugs-ring terminals - with screwdriver flat Ø 8 mm M4<br>Power circuit: 2.5 N.m - on lugs-ring terminals - with screwdriver Philips No 2 M4 |
| <b>Auxiliary Contact Composition</b>            | 1 NO + 1 NC  |
| <b>Auxiliary Contacts Type</b>                  | 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   |
| <b>Signalling Circuit Frequency</b>             | 25...400 Hz  |
| <b>Minimum Switching Voltage</b>                | 17 V for signalling circuit  |
| <b>Minimum Switching Current</b>                | 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      | Rail<br>Plate   |

## 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                                | RINA<br>GL<br>CCC<br>GOST<br>BV<br>CSA<br>DNV<br>UL<br>LROS (Lloyds register of shipping)   |
| 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<br>conforming to IEC 60947-1 Annex Q category D exposure to damp heat  |
| Permissible Ambient Air Temperature Around The Device | -60...80 °C storage<br>-40...60 °C operation<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 (8 Gn for 11 ms) |
| Height  | 85 mm   |
| Width   | 45 mm   |
| Depth   | 92 mm   |
| Net Weight  | 0.37 kg   |

## Packing Units

|                              |     |
|------------------------------|-----|
| Unit Type Of Package 1       | PCE |
| Number Of Units In Package 1 | 1   |

## Contractual warranty

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