

# Product data sheet

Specifications



## contactor TeSys Deca - 3 poles - AC-3 440V 50 A - coil 440V AC

LC1D50R7

⚠ Discontinued on: Jul 12, 2021

⚠ End-of-service on: Aug 2, 2021

⚠ Discontinued

### Main

|                                |                                                                                                                                    |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Range                          | TeSys                                                                                                                              |
| Range of product               | TeSys Deca                                                                                                                         |
| Product or component type      | Contactor                                                                                                                          |
| Device short name              | LC1D                                                                                                                               |
| Contactor application          | Resistive load<br>Motor control                                                                                                    |
| Utilisation category           | AC-3<br>AC-1<br>AC-4<br>AC-2                                                                                                       |
| Poles description              | 3P                                                                                                                                 |
| [Ue] rated operational voltage | Power circuit <= 690 V AC 25...400 Hz                                                                                              |
| [Ie] rated operational current | 50 A (at <140 °F (60 °C)) at <= 440 V AC AC-3 for power circuit<br>80 A (at <140 °F (60 °C)) at <= 440 V AC AC-1 for power circuit |
| [Uc] control circuit voltage   | 440 V AC 50/60 Hz                                                                                                                  |

### Complementary

|                                             |                                                                                                                                                                                                                                                                                                          |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Motor power kW                              | 22 kW at 380...400 V AC 50 Hz (AC-3)<br>25 kW at 415 V AC 50 Hz (AC-3)<br>30 kW at 440 V AC 50 Hz (AC-3)<br>30 kW at 500 V AC 50 Hz (AC-3)<br>33 kW at 660...690 V AC 50 Hz (AC-3)<br>15 kW at 220...230 V AC 50 Hz (AC-3)<br>11 kW at 400 V AC 50 Hz (AC-4)<br>30 kW at 1000 V AC 50 Hz (AC-3)          |
| Motor power hp                              | 3 hp at 115 V AC 60 Hz for 1 phase motors<br>7.5 hp at 230/240 V AC 60 Hz for 1 phase motors<br>15 hp at 200/208 V AC 60 Hz for 3 phases motors<br>15 hp at 230/240 V AC 60 Hz for 3 phases motors<br>40 hp at 460/480 V AC 60 Hz for 3 phases motors<br>40 hp at 575/600 V AC 60 Hz for 3 phases motors |
| Compatibility code                          | LC1D                                                                                                                                                                                                                                                                                                     |
| Pole contact composition                    | 3 NO                                                                                                                                                                                                                                                                                                     |
| Protective cover                            | With                                                                                                                                                                                                                                                                                                     |
| [Ith] conventional free air thermal current | 10 A (at 140 °F (60 °C)) for control circuit<br>80 A (at 140 °F (60 °C)) for power circuit                                                                                                                                                                                                               |
| Irms rated making capacity                  | 900 A at 440 V for power circuit conforming to IEC 60947<br>140 A AC for control circuit conforming to IEC 60947-5-1                                                                                                                                                                                     |
| Rated breaking capacity                     | 900 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

|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Associated fuse rating                 | 10 A gG for control 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Power dissipation per pole             | 3.7 W AC-3<br>9.6 W AC-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| [Ui] rated insulation voltage          | Control circuit 600 V CSA<br>Control circuit 600 V UL<br>Power circuit 600 V CSA<br>Power circuit 600 V UL<br>Control circuit 690 V IEC 60947-1<br>Power circuit 690 V IEC 60947-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Overvoltage category                   | III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| [Uimp] rated impulse withstand voltage | 8 kV IEC 60947                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Safety reliability level               | B10d = 1369863 cycles contactor with nominal load EN/ISO 13849-1<br>B10d = 20000000 cycles contactor with mechanical load EN/ISO 13849-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Mechanical durability                  | 6000000 cycles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Control circuit type                   | AC 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Coil technology                        | Without built-in bidirectional peak limiting diode suppressor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Control circuit voltage limits         | 0.3...0.6 Uc (-40...158 °F (-40...70 °C)):drop-out AC 50/60 Hz<br>0.8...1.1 Uc (-40...140 °F (-40...60 °C)):operational AC 50 Hz<br>0.85...1.1 Uc (-40...140 °F (-40...60 °C)):operational AC 60 Hz<br>1...1.1 Uc (140...158 °F (60...70 °C)):operational AC 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Inrush power in VA                     | 140 VA cos phi 0.75 (at 68 °F (20 °C))<br>160 VA cos phi 0.75 (at 68 °F (20 °C))                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Hold-in power consumption in VA        | 13 VA 60 Hz cos phi 0.3 (at 68 °F (20 °C))<br>15 VA 50 Hz cos phi 0.3 (at 68 °F (20 °C))                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Heat dissipation                       | 4...5 W at 50/60 Hz for control circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Operating time                         | 4...19 ms opening<br>12...26 ms closing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Connections - terminals                | Control circuit: screw clamp terminals 1 0.002...0.006 in² (1...4 mm²) - cable stiffness: rigid<br>Control circuit: screw clamp terminals 2 0.002...0.006 in² (1...4 mm²) - cable stiffness: rigid<br>Control circuit: screw clamp terminals 1 0.002...0.006 in² (1...4 mm²) - cable stiffness: flexible without cable end<br>Control circuit: screw clamp terminals 2 0.002...0.006 in² (1...4 mm²) - cable stiffness: flexible without cable end<br>Control circuit: screw clamp terminals 1 0.002...0.004 in² (1...2.5 mm²) - cable stiffness: flexible with cable end<br>Control circuit: screw clamp terminals 2 0.002...0.004 in² (1...2.5 mm²) - cable stiffness: flexible with cable end<br>Power circuit: screw terminals 1 0.004...0.04 in² (2.5...25 mm²) - cable stiffness: rigid<br>Power circuit: screw terminals 2 0.004...0.02 in² (2.5...16 mm²) - cable stiffness: rigid<br>Power circuit: screw terminals 1 0.004...0.04 in² (2.5...25 mm²) - cable stiffness: flexible without cable end<br>Power circuit: screw terminals 2 0.004...0.02 in² (2.5...16 mm²) - cable stiffness: flexible without cable end<br>Power circuit: screw terminals 1 0.004...0.04 in² (2.5...25 mm²) - cable stiffness: flexible with cable end<br>Power circuit: screw terminals 2 0.004...0.02 in² (2.5...10 mm²) - cable stiffness: flexible with cable end |
| Tightening torque                      | Control circuit 15.05 lbf.in (1.7 N.m) screw clamp terminal flat Ø 6 mm<br>Control circuit 15.05 lbf.in (1.7 N.m) screw clamp terminal Philips No 2<br>Power circuit 44.3 lbf.in (5 N.m) screw terminal flat Ø 6 to Ø 8 mm<br>Control circuit 15.05 lbf.in (1.7 N.m) screw clamp terminal pozidriv No 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Auxiliary contact composition          | 1 NO + 1 NC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Auxiliary contacts type                | Mechanically linked 1 NO + 1 NC IEC 60947-5-1<br>Mirror contact 1 NC IEC 60947-4-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Terminals description ISO n°1          | (21-22)NC<br>(A1-A2)CO<br>(13-14)NO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

|                           |                                                                                                           |
|---------------------------|-----------------------------------------------------------------------------------------------------------|
| Minimum switching voltage | 17 V for control circuit                                                                                  |
| Minimum switching current | 5 mA for control circuit                                                                                  |
| Insulation resistance     | > 10 MOhm for control circuit                                                                             |
| Non-overlap time          | 1.5 ms on de-energisation between NC and NO contacts<br>1.5 ms on energisation between NC and NO contacts |
| Mounting support          | Plate<br>Rail                                                                                             |

## Environment

|                         |                                                                                                                                                                                        |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standards               | UL 508<br>EN 60947-5-1<br>EN 60947-4-1<br>IEC 60947-4-1<br>CSA C22.2 No 14<br>IEC 60947-5-1                                                                                            |
| Product certifications  | UL<br>DNV<br>BV<br>GOST<br>RINA<br>CSA<br>CCC<br>LROS (Lloyds register of shipping)<br>GL                                                                                              |
| IP degree of protection | IP2X IEC 60529<br>IP2X VDE 0106                                                                                                                                                        |
| Climatic withstand      | IACS E10 exposure to damp heat                                                                                                                                                         |
| Operating altitude      | 0...3000 m                                                                                                                                                                             |
| Fire resistance         | 1562 °F (850 °C) IEC 60695-2-1                                                                                                                                                         |
| Flame retardance        | V1 UL 94                                                                                                                                                                               |
| Mechanical robustness   | Shocks contactor opened 10 Gn for 11 ms)<br>Shocks contactor closed 15 Gn for 11 ms)<br>Vibrations contactor opened 2 Gn, 5...300 Hz)<br>Vibrations contactor closed 4 Gn, 5...300 Hz) |
| Height                  | 5 in (127 mm)                                                                                                                                                                          |
| Width                   | 3.0 in (75 mm)                                                                                                                                                                         |
| Depth                   | 4.7 in (119 mm)                                                                                                                                                                        |
| Net weight              | 3.09 lb(US) (1.4 kg)                                                                                                                                                                   |

## Packing Units

|                              |                         |
|------------------------------|-------------------------|
| Unit Type of Package 1       | PCE                     |
| Number of Units in Package 1 | 1                       |
| Package 1 Height             | 3.2 in (8.2 cm)         |
| Package 1 Width              | 4.9 in (12.5 cm)        |
| Package 1 Length             | 5.3 in (13.5 cm)        |
| Package 1 Weight             | 3.192 lb(US) (1.448 kg) |

## Contractual warranty

|                      |    |
|----------------------|----|
| Warranty (in months) | 18 |
|----------------------|----|



## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)



### Environmental footprint

Environmental Disclosure

[Product Environmental Profile](#)

## Use Better



### Materials and Substances

EU RoHS Directive

[Compliant](#)

PVC free

Yes

## Use Longer



### Lifetime extension

Repair

No

## Use Again



### Repack and remanufacture

Circularity Profile

[End of Life Information](#)

WEEE Label



The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins