

# Product data sheet

Specifications



Contactor, TeSys Deca, 3P(3NO),  
AC-3/3e, <=440V 32A , 250V DC  
low consumption coil

LC1D32UL

⚠ Discontinued on: Jan 18, 2021

⚠ 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-3<br>AC-1                                                                                                                       |
| 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 | 32 A (at <140 °F (60 °C)) at <= 440 V AC AC-3 for power circuit<br>50 A (at <140 °F (60 °C)) at <= 440 V AC AC-1 for power circuit |
| [Uc] control circuit voltage   | 250 V DC                                                                                                                           |

## Complementary

|                                             |                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Motor power kW                              | 7.5 kW at 220...230 V AC 50/60 Hz<br>15 kW at 380...400 V AC 50/60 Hz<br>15 kW at 415...440 V AC 50/60 Hz<br>18.5 kW at 500 V AC 50/60 Hz<br>18.5 kW at 660...690 V AC 50/60 Hz                                                                                                                                           |
| Motor power hp                              | 5 hp at 230/240 V AC 50/60 Hz for 1 phase motors<br>10 hp at 230/240 V AC 50/60 Hz for 3 phases motors<br>30 hp at 575/600 V AC 50/60 Hz for 3 phases motors<br>2 hp at 115 V AC 50/60 Hz for 1 phase motors<br>7.5 hp at 200/208 V AC 50/60 Hz for 3 phases motors<br>20 hp at 460/480 V AC 50/60 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 signalling circuit<br>50 A (at 140 °F (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>550 A at 440 V for power circuit conforming to IEC 60947                                                                                                                                    |
| Rated breaking capacity                     | 550 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> | 60 A 104 °F (40 °C) - 10 min for power circuit<br>138 A 104 °F (40 °C) - 1 min for power circuit<br>260 A 104 °F (40 °C) - 10 s for power circuit<br>430 A 104 °F (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 |
| <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>63 A gG at <= 690 V coordination type 2 for power circuit                                                                                                                                      |
| <b>Average impedance</b>                        | 2 mOhm - lth 50 A 50 Hz for power circuit                                                                                                                                                                                                                                                                                 |
| <b>Power dissipation per pole</b>               | 2 W AC-3<br>5 W AC-1                                                                                                                                                                                                                                                                                                      |
| <b>[Ui] rated insulation voltage</b>            | Power circuit 600 V CSA<br>Power circuit 600 V UL<br>Signalling circuit 690 V IEC 60947-1<br>Signalling circuit 600 V CSA<br>Signalling circuit 600 V UL<br>Power circuit 690 V IEC 60947-4-1                                                                                                                             |
| <b>Overvoltage category</b>                     | III                                                                                                                                                                                                                                                                                                                       |
| <b>Pollution degree</b>                         | 3                                                                                                                                                                                                                                                                                                                         |
| <b>[Uimp] rated impulse withstand voltage</b>   | 6 kV IEC 60947                                                                                                                                                                                                                                                                                                            |
| <b>Safety reliability level</b>                 | B10d = 1369863 cycles contactor with nominal load EN/ISO 13849-1<br>B10d = 20000000 cycles contactor with mechanical load EN/ISO 13849-1                                                                                                                                                                                  |
| <b>Mechanical durability</b>                    | 30 Mcycles                                                                                                                                                                                                                                                                                                                |
| <b>Electrical durability</b>                    | 1.65 Mcycles 32 A AC-3 <= 440 V<br>1.4 Mcycles 50 A AC-1 <= 440 V                                                                                                                                                                                                                                                         |
| <b>Control circuit type</b>                     | DC low consumption                                                                                                                                                                                                                                                                                                        |
| <b>Coil technology</b>                          | Built-in bidirectional peak limiting diode suppressor                                                                                                                                                                                                                                                                     |
| <b>Control circuit voltage limits</b>           | 0.1...0.3 Uc (-40...158 °F (-40...70 °C)):drop-out DC<br>0.8...1.25 Uc (-40...140 °F (-40...60 °C)):operational DC<br>1...1.25 Uc (140...158 °F (60...70 °C)):operational DC                                                                                                                                              |
| <b>Inrush power in W</b>                        | 2.4 W 68 °F (20 °C))                                                                                                                                                                                                                                                                                                      |
| <b>Hold-in power consumption in W</b>           | 2.4 W 68 °F (20 °C)                                                                                                                                                                                                                                                                                                       |
| <b>Operating time</b>                           | 65.45...88.55 ms closing<br>20...30 ms opening                                                                                                                                                                                                                                                                            |
| <b>Time constant</b>                            | 40 ms                                                                                                                                                                                                                                                                                                                     |
| <b>Maximum operating rate</b>                   | 3600 cyc/h 140 °F (60 °C)                                                                                                                                                                                                                                                                                                 |

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Connections - terminals       | Control circuit: screw clamp terminals 2 0.002...0.004 in² (1...2.5 mm²) - cable stiffness: flexible with cable end<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...0.006 in² (1...4 mm²) - cable stiffness: flexible with cable end<br>Control circuit: screw clamp terminals 1 0.002...0.006 in² (1...4 mm²) - cable stiffness: solid without cable end<br>Control circuit: screw clamp terminals 2 0.002...0.006 in² (1...4 mm²) - cable stiffness: solid without cable end<br>Power circuit: screw clamp terminals 1 0.004...0.02 in² (2.5...10 mm²) - cable stiffness: flexible without cable end<br>Power circuit: screw clamp terminals 2 0.004...0.02 in² (2.5...10 mm²) - cable stiffness: flexible without cable end<br>Power circuit: screw clamp terminals 1 0.002...0.02 in² (1...10 mm²) - cable stiffness: flexible with cable end<br>Power circuit: screw clamp terminals 2 0.002...0.009 in² (1.5...6 mm²) - cable stiffness: flexible with cable end<br>Power circuit: screw clamp terminals 1 0.002...0.02 in² (1.5...10 mm²) - cable stiffness: solid without cable end<br>Power circuit: screw clamp terminals 2 0.004...0.02 in² (2.5...10 mm²) - cable stiffness: solid without cable end |
| Tightening torque             | Control circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals flat Ø 6 mm<br>Control circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals Philips No 2<br>Power circuit 22.1 lbf.in (2.5 N.m) screw clamp terminals flat Ø 6 mm<br>Power circuit 22.1 lbf.in (2.5 N.m) screw clamp terminals Philips 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 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              | 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  | DNV<br>GL<br>CCC<br>LROS (Lloyds register of shipping)<br>RINA<br>BV<br>GOST<br>UL<br>CSA<br>CB |
| IP degree of protection | IP20 front face IEC 60529                                                                       |
| Protective treatment    | THIEC 60068-2-30                                                                                |
| Climatic withstand      | IACS E10 exposure to damp heat<br>IEC 60947-1 Annex Q category D exposure to damp heat          |

|                                                       |                                                                                                                                                                                   |
|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Permissible ambient air temperature around the device | -76...176 °F (-60...80 °C) storage<br>-40...140 °F (-40...60 °C) operation<br>140...158 °F (60...70 °C) with derating                                                             |
| Operating altitude                                    | 0...3000 m                                                                                                                                                                        |
| Fire resistance                                       | 1562 °F (850 °C) IEC 60695-2-1                                                                                                                                                    |
| Flame retardance                                      | V1 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                                                | 3.3 in (85 mm)                                                                                                                                                                    |
| Width                                                 | 1.8 in (45 mm)                                                                                                                                                                    |
| Depth                                                 | 4.0 in (101 mm)                                                                                                                                                                   |
| Net weight                                            | 1.179 lb(US) (0.535 kg)                                                                                                                                                           |

## Packing Units

|                              |     |
|------------------------------|-----|
| Unit Type of Package 1       | PCE |
| Number of Units in Package 1 | 1   |

## 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 >](#)

### Use Better

| Materials and Substances |                           |
|--------------------------|---------------------------|
| EU RoHS Directive        | <a href="#">Compliant</a> |

### Use Longer

| Lifetime extension |    |
|--------------------|----|
| Repair             | No |

### Use Again

| Repack and remanufacture |                                                                                                                                                                                                                 |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WEEE Label               |  The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |