# **Product data sheet**

Specification





# Contactor, TeSys Deca, 3P(3 NO), AC-3/AC-3e, <=400V, 65A, 110V DC standard coil, spring terminals

LC1D65A3FD

### Main

| Range                          | TeSys   |  |
|--------------------------------|---|--|
| Range Of Product               | TeSys Deca  |  |
| Product Or Component Type      | pe Contactor  |  |
| Device Short Name              | LC1D  |  |
| Contactor Application          | Motor control<br>Resistive load   |  |
| Utilisation Category           | AC-4<br>AC-1<br>AC-3<br>AC-3e   |  |
| Poles Description              | 3P  |  |
| [Ue] Rated Operational Voltage | rted Operational Voltage Power circuit: <= 690 V AC 25400 Hz Power circuit: <= 300 V DC   |  |
| [le] Rated Operational Current | Rated Operational Current  80 A (at <60 °C) at <= 440 V AC AC-1 for power circuit  65 A (at <60 °C) at <= 440 V AC AC-3 for power circuit  65 A (at <60 °C) at <= 440 V AC AC-3 for power circuit |  |
| [Uc] Control Circuit Voltage   | 110 V DC  |  |

## Complementary

| ,                           |   |   |
|-----------------------------|---|---|
| Motor Power Kw              | 11 kW at 400 V AC 50/60 Hz (AC-4)                           |   |
|                             | 18.5 kW at 220230 V AC 50/60 Hz (AC-3)                      |   |
|                             | 30 kW at 380400 V AC 50/60 Hz (AC-3)                        |   |
|                             | 37 kW at 500 V AC 50/60 Hz (AC-3)                           |   |
|                             | 37 kW at 660690 V AC 50/60 Hz (AC-3)                        |   |
|                             | 18.5 kW at 220230 V AC 50/60 Hz (AC-3e)                     |   |
|                             | 30 kW at 380400 V AC 50/60 Hz (AC-3e)                       |   |
|                             | 37 kW at 500 V AC 50/60 Hz (AC-3e)                          |   |
|                             | 37 kW at 660690 V AC 50/60 Hz (AC-3e)                       |   |
| Motor Power Hp              | 40 hp at 460/480 V AC 50/60 Hz for 3 phases motors          | _ |
|                             | 5 hp at 115 V AC 50/60 Hz for 1 phase motors                |   |
|                             | 10 hp at 230/240 V AC 50/60 Hz for 1 phase motors           |   |
|                             | 20 hp at 200/208 V AC 50/60 Hz for 3 phases motors          |   |
|                             | 20 hp at 230/240 V AC 50/60 Hz for 3 phases motors          |   |
|                             | 50 hp at 575/600 V AC 50/60 Hz for 3 phases motors          |   |
| Compatibility Code          | LC1D  | _ |
| Pole Contact Composition    | 3 NO  |   |
| Protective Cover            | With  | _ |
| [Ith] Conventional Free Air | 10 A (at 60 °C) for signalling circuit                      |   |
| Thermal Current             | 80 A (at 60 °C) for power circuit                           |   |
| Irms Rated Making Capacity  | 140 A AC for signalling circuit conforming to IEC 60947-5-1 | _ |
| - · ·                       | 250 A DC for signalling circuit conforming to IEC 60947-5-1 |   |
|                             | 1000 A at 440 V for power circuit conforming to IEC 60947   |   |
| Rated Breaking Capacity     | 1000 A at 440 V for power circuit conforming to IEC 60947   | _ |

| [Icw] Rated Short-Time Withstand<br>Current | 640 A 40 °C - 10 s for power circuit 900 A 40 °C - 1 s for power circuit 110 A 40 °C - 10 min for power circuit 260 A 40 °C - 1 min for power circuit 100 A - 1 s for signalling circuit 120 A - 500 ms for signalling circuit 140 A - 100 ms for signalling circuit  |
|---|---|
| Associated Fuse Rating                      | 10 A gG for signalling circuit conforming to IEC 60947-5-1 125 A gG at <= 690 V coordination type 1 for power circuit 125 A gG at <= 690 V coordination type 2 for power circuit  |
| Average Impedance                           | 1.5 mOhm - Ith 80 A 50 Hz for power circuit   |
| Power Dissipation Per Pole                  | 9.6 W AC-1<br>6.3 W AC-3<br>6.3 W AC-3e   |
| [Ui] Rated Insulation Voltage               | Power circuit: 600 V CSA certified Power circuit: 600 V UL certified Signalling circuit: 690 V conforming to IEC 60947-1 Signalling circuit: 600 V CSA certified Signalling circuit: 600 V UL certified Power circuit: 690 V conforming to IEC 60947-4-1  |
| Overvoltage Category                        | III   |
| Pollution Degree                            | 3   |
| [Uimp] Rated Impulse Withstand<br>Voltage   | 6 kV conforming to IEC 60947  |
| Safety Reliability Level                    | B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1<br>B10d = 20000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1  |
| Mechanical Durability                       | 10 Mcycles  |
| Electrical Durability                       | 0.5 Mcycles 80 A AC-1 at Ue <= 440 V<br>1.45 Mcycles 65 A AC-3 at Ue <= 440 V<br>1.45 Mcycles 65 A AC-3e at Ue <= 440 V   |
| Control Circuit Type                        | DC standard   |
| Coil Technology                             | Built-in bidirectional peak limiting diode suppressor   |
| Control Circuit Voltage Limits              | 0.10.3 Uc (-4070 °C):drop-out DC<br>0.751.25 Uc (-4060 °C):operational DC<br>11.25 Uc (6070 °C):operational DC  |
| Inrush Power In W                           | 19 W (at 20 °C)   |
| Hold-In Power Consumption In W              | 7.4 W at 20 °C  |
| Operating Time                              | 50 ±15 % ms closing<br>1624 ms opening  |
| Time Constant                               | 34 ms   |
| Maximum Operating Rate                      | 3600 cyc/h 60 °C  |
| Connections - Terminals                     | Control circuit: spring terminals 1 2.5 mm² - cable stiffness: flexible without cable end Control circuit: spring terminals 2 2.5 mm² - cable stiffness: flexible without cable end Power circuit: EverLink BTR screw connectors 1 135 mm² - cable stiffness: flexible without cable end Power circuit: EverLink BTR screw connectors 2 125 mm² - cable stiffness: flexible without cable end Power circuit: EverLink BTR screw connectors 1 135 mm² - cable stiffness: flexible with cable end Power circuit: EverLink BTR screw connectors 2 125 mm² - cable stiffness: flexible with cable end Power circuit: EverLink BTR screw connectors 1 135 mm² - cable stiffness: solid without cable end Power circuit: EverLink BTR screw connectors 2 125 mm² - cable stiffness: solid without cable end |
| Tightening Torque                           | Power circuit: 8 N.m - on EverLink BTR screw connectors - cable 2535 mm² hexagonal screw head 4 mm Power circuit: 5 N.m - on EverLink BTR screw connectors - cable 2.525 mm² hexagonal screw head 4 mm  |

| <b>Auxiliary Contact Composition</b> | 1 NO + 1 NC   |  |
|--------------------------------------|---|--|
| Auxiliary Contacts Type              | type mechanically linked 1 NO + 1 NC conforming to IEC 60947-5-1 type mirror contact 1 NC conforming to IEC 60947-4-1 |  |
| Signalling Circuit Frequency         | 25400 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     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   |  |
|--|---|--|
|  | UL 508  |  |
| Product Certifications                                   | CCC<br>UL<br>CSA<br>GOST  |  |
| 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 conforming to IEC 60947-1 Annex Q category D exposure to damp heat   |  |
| Permissible Ambient Air<br>Temperature Around The Device | -4060 °C<br>6070 °C with derating   |  |
| Operating Altitude                                       | 03000 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, 5300 Hz) Vibrations contactor closed (4 Gn, 5300 Hz) Shocks contactor closed (15 Gn for 11 ms) Shocks contactor open (10 Gn for 11 ms) |  |
| Height   | 122 mm  |  |
| Width  | 55 mm   |  |
| Depth  | 120 mm  |  |
| Net Weight   | 0.935 kg  |  |

# **Packing Units**

| Unit Type Of Package 1       | PCE       |
|------------------------------|-----------|
| Number Of Units In Package 1 | 1         |
| Package 1 Height             | 6.000 cm  |
| Package 1 Width              | 13.700 cm |
| Package 1 Length             | 15.200 cm |
| Package 1 Weight             | 995.000 g |
| Unit Type Of Package 2       | S02       |

| Number Of Units In Package 2 | 10         |
|------------------------------|------------|
| Package 2 Height             | 15 cm      |
| Package 2 Width              | 30 cm      |
| Package 2 Length             | 40 cm      |
| Package 2 Weight             | 10.210 kg  |
| Unit Type Of Package 3       | P06        |
| Number Of Units In Package 3 | 160        |
| Package 3 Height             | 75.000 cm  |
| Package 3 Width              | 80.000 cm  |
| Package 3 Length             | 60.000 cm  |
| Package 3 Weight             | 171.360 kg |

## **Contractual warranty**

Warranty 18 months



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Transparency RoHS/REACh

### Well-being performance

| <b>⊘</b> | Reach Free Of Svhc         |     |
|----------|----------------------------|-----|
| <b>②</b> | Mercury Free               |     |
|          | Rohs Exemption Information | Yes |
| <b>②</b> | Pvc Free                   |     |

#### **Certifications & Standards**

| Reach Regulation         | REACh Declaration   |
|--------------------------|---|
| Eu Rohs Directive        | Compliant EU RoHS Declaration   |
| China Rohs Regulation    | China RoHS declaration  Pro-active China RoHS declaration (out of China RoHS legal scope)                                   |
| Environmental Disclosure | Product Environmental Profile   |
| Weee                     | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |
| Circularity Profile      | End of Life Information   |