

# Product data sheet

## Characteristics

# LC1D40U7

## CONTACTOR 600VAC 40AMP IEC

### +OPTIONS



EAN Code: 3389110417821



### Main

|                                |                                                                                                                                                                             |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                          | TeSys                                                                                                                                                                       |
| Range of product               | TeSys Deca                                                                                                                                                                  |
| Product or component type      | Contacteur                                                                                                                                                                  |
| Device short name              | LC1D                                                                                                                                                                        |
| Contacteur application         | Motor control<br>Resistive load                                                                                                                                             |
| Utilisation category           | AC-4<br>AC-1<br>AC-2<br>AC-3<br>AC-3e                                                                                                                                       |
| Poles description              | 3P                                                                                                                                                                          |
| [Ue] rated operational voltage | Power circuit: <= 690 V AC 25...400 Hz                                                                                                                                      |
| [Ie] rated operational current | 40 A (at <60 °C) at <= 440 V AC AC-3 for power circuit<br>60 A (at <60 °C) at <= 440 V AC AC-1 for power circuit<br>40 A (at <60 °C) at <= 440 V AC AC-3e for power circuit |
| [Uc] control circuit voltage   | 240 V AC 50/60 Hz                                                                                                                                                           |

### Complementary

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Motor power kW                              | 18.5 kW at 380...400 V AC 50 Hz (AC-3)<br>22 kW at 500 V AC 50 Hz (AC-3)<br>30 kW at 660...690 V AC 50 Hz (AC-3)<br>22 kW at 1000 V AC 50 Hz (AC-3)<br>22 kW at 415 V AC 50 Hz (AC-3)<br>22 kW at 440 V AC 50 Hz (AC-3)<br>11 kW at 220...230 V AC 50 Hz (AC-3)<br>9 kW at 400 V AC 50 Hz (AC-4)<br>18.5 kW at 380...400 V AC 50 Hz (AC-3e)<br>22 kW at 500 V AC 50 Hz (AC-3e)<br>30 kW at 660...690 V AC 50 Hz (AC-3e)<br>22 kW at 1000 V AC 50 Hz (AC-3e)<br>22 kW at 415 V AC 50 Hz (AC-3e)<br>22 kW at 440 V AC 50 Hz (AC-3e)<br>11 kW at 220...230 V AC 50 Hz (AC-3e) |
| Motor power hp                              | 3 Hp at 115 V AC 60 Hz for 1 phase motors<br>5 Hp at 230/240 V AC 60 Hz for 1 phase motors<br>10 Hp at 200/208 V AC 60 Hz for 3 phases motors<br>10 Hp at 230/240 V AC 60 Hz for 3 phases motors<br>30 Hp at 460/480 V AC 60 Hz for 3 phases motors<br>30 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 60 °C) for control circuit<br>60 A (at 60 °C) for power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Irms rated making capacity                  | 800 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                | 800 A at 440 V for power circuit conforming to IEC 60947                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Associated fuse rating                 | 10 A gG for control circuit conforming to IEC 60947-5-1<br>80 A gG at ≤ 690 V coordination type 1 for power circuit<br>80 A gG at ≤ 690 V coordination type 2 for power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Power dissipation per pole             | 5.4 W AC-1<br>2.4 W AC-3<br>2.4 W AC-3e                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| [Ui] rated insulation voltage          | Control circuit: 600 V CSA certified<br>Control circuit: 600 V UL certified<br>Power circuit: 600 V CSA certified<br>Power circuit: 600 V UL certified<br>Control circuit: 690 V conforming to IEC 60947-1<br>Power circuit: 690 V conforming to IEC 60947-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Overvoltage category                   | III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| [Uimp] rated impulse withstand voltage | 8 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                  | 6000000 cycles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Control circuit type                   | AC at 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Coil technology                        | Without built-in bidirectional peak limiting diode suppressor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Control circuit voltage limits         | 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Inrush power in VA                     | 140 VA cos phi 0.75 (at 20 °C)<br>160 VA cos phi 0.75 (at 20 °C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Hold-in power consumption in VA        | 13 VA 60 Hz cos phi 0.3 (at 20 °C)<br>15 VA 50 Hz cos phi 0.3 (at 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Maximum operating rate                 | 3600 cyc/h 60 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Connections - terminals                | Control circuit: screw clamp terminals 1 1...4 mm² - cable stiffness: rigid<br>Control circuit: screw clamp terminals 2 1...4 mm² - cable stiffness: rigid<br>Control circuit: screw clamp terminals 1 1...4 mm² - cable stiffness: flexible without cable end<br>Control circuit: screw clamp terminals 2 1...4 mm² - cable stiffness: flexible without cable end<br>Control circuit: screw clamp terminals 1 1...2.5 mm² - cable stiffness: flexible with cable end<br>Control circuit: screw clamp terminals 2 1...2.5 mm² - cable stiffness: flexible with cable end<br>Power circuit: screw terminals 1 2.5...25 mm² - cable stiffness: rigid<br>Power circuit: screw terminals 2 2.5...16 mm² - cable stiffness: rigid<br>Power circuit: screw terminals 1 2.5...25 mm² - cable stiffness: flexible without cable end<br>Power circuit: screw terminals 2 2.5...16 mm² - cable stiffness: flexible without cable end<br>Power circuit: screw terminals 1 2.5...25 mm² - cable stiffness: flexible with cable end<br>Power circuit: screw terminals 2 2.5...10 mm² - cable stiffness: flexible with cable end |
| Tightening torque                      | Control circuit: 1.7 N.m - on screw clamp terminal - with screwdriver flat Ø 6 mm<br>Control circuit: 1.7 N.m - on screw clamp terminal - with screwdriver Philips No 2<br>Power circuit: 5 N.m - on screw terminal - with screwdriver flat Ø 6 to Ø 8 mm<br>Control circuit: 1.7 N.m - on screw clamp terminal - with screwdriver pozidriv No 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Auxiliary contact composition          | 1 NO + 1 NC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Auxiliary contacts type                | Type mechanically linked 1 NO + 1 NC conforming to IEC 60947-5-1<br>Type mirror contact 1 NC conforming to IEC 60947-4-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 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                       | Rail<br>Plate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

## Environment

|                         |                                                                                                                                                                                            |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standards               | IEC 60947-5-1<br>IEC 60947-4-1<br>UL 508<br>EN 60947-4-1<br>EN 60947-5-1<br>CSA C22.2 No 14                                                                                                |
| Product certifications  | RINA[RETURN]UL[RETURN]BV[RETURN]CSA[RETURN]GOST[RETURN]DNV[RETURN]LR[RETURN]<br>(Lloyds register of shipping)[RETURN]GL[RETURN]CCC[RETURN]UKCA                                             |
| IP degree of protection | IP2X conforming to IEC 60529<br>IP2X conforming to VDE 0106                                                                                                                                |
| Climatic withstand      | Conforming to IACS E10 exposure to damp heat                                                                                                                                               |
| Operating altitude      | 0...3000 m                                                                                                                                                                                 |
| Fire resistance         | 850 °C conforming to IEC 60695-2-1                                                                                                                                                         |
| Flame retardance        | V1 conforming to 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                  | 127 mm                                                                                                                                                                                     |
| Width                   | 75 mm                                                                                                                                                                                      |
| Depth                   | 119 mm                                                                                                                                                                                     |
| Net weight              | 1.4 kg                                                                                                                                                                                     |

## Packing Units

|                              |          |
|------------------------------|----------|
| Unit Type of Package 1       | PCE      |
| Number of Units in Package 1 | 1        |
| Package 1 Height             | 9.5 cm   |
| Package 1 Width              | 13.1 cm  |
| Package 1 Length             | 14.0 cm  |
| Package 1 Weight             | 1.439 kg |
| Unit Type of Package 2       | S02      |
| Number of Units in Package 2 | 5        |
| Package 2 Height             | 15 cm    |
| Package 2 Width              | 30 cm    |
| Package 2 Length             | 40 cm    |
| Package 2 Weight             | 7.514 kg |

## Offer Sustainability

|                            |                                                                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                             |
| REACH Regulation           |  <a href="#">REACH Declaration</a>             |
| REACH free of SVHC         | Yes                                                                                                                               |
| EU RoHS Directive          | Compliant  <a href="#">EU RoHS Declaration</a> |
| Toxic heavy metal free     | Yes                                                                                                                               |
| Mercury free               | Yes                                                                                                                               |
| China RoHS Regulation      |  <a href="#">China RoHS Declaration</a>        |
| RoHS exemption information |  <a href="#">Yes</a>                           |
| Environmental Disclosure   |  <a href="#">Product Environmental Profile</a> |
| Circularity Profile        | No need of specific recycling operations                                                                                          |
| WEEE                       | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins       |
| PVC free                   | Yes                                                                                                                               |

## Contractual warranty

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