# Product data sheet
## Characteristics

# LC2DT20B7
## TeSys D changeover contactor - 4P(4 NO) - AC-1 - <= 440 V 20 A - 24 V AC coil

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein.
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## Main

| | |
|---|---|
| Range | TeSys |
| Product name | TeSys D |
| Product or component type | Changeover contactor |
| Device short name | LC2D |
| Contactor application | Resistive load |
| Utilisation category | AC-1 |
| Device presentation | Preassembled, with prewired power connections |
| Poles description | 4P |
| Power pole contact composition | 4 NO |
| [Ue] rated operational voltage | Power circuit <= 690 V AC 25...400 Hz<br>Power circuit <= 300 V DC |
| [Ie] rated operational current | 20 A (at <60 °C) at <= 440 V AC AC-1 for power circuit |
| Control circuit type | AC at 50/60 Hz |
| [Uc] control circuit voltage | 24 V AC 50/60 Hz |
| Auxiliary contact composition | 1 NO + 1 NC |
| [Uimp] rated impulse withstand voltage | 6 kV IEC 60947 |
| Overvoltage category | III |
| [Ith] conventional free air thermal current | 10 A 140 °F (60 °C) signalling circuit<br>20 A (at 60 °C) for power circuit |
| Irms rated making capacity | 250 A at 440 V for power circuit conforming to IEC 60947<br>140 A AC signalling circuit IEC 60947-5-1<br>250 A DC signalling circuit IEC 60947-5-1 |
| Rated breaking capacity | 250 A at 440 V for power circuit conforming to IEC 60947 |
| [Icw] rated short-time withstand current | 30 A 40 °C - 10 min for power circuit<br>61 A 40 °C - 1 min for power circuit<br>105 A 40 °C - 10 s for power circuit<br>210 A 40 °C - 1 s for power circuit<br>100 A - 1 s signalling circuit<br>120 A - 500 ms signalling circuit<br>140 A - 100 ms signalling circuit |
| Associated fuse rating | 25 A gG at <= 690 V coordination type 1 for power circuit<br>20 A gG at <= 690 V coordination type 2 for power circuit<br>10 A gG signalling circuit IEC 60947-5-1 |
| Average impedance | 2.5 mOhm - Ith 20 A 50 Hz for power circuit |
| [Ui] rated insulation voltage | Power circuit 690 V IEC 60947-4-1<br>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 |
| Power dissipation per pole | 1.56 W AC-1 |
| Front cover | With |
| Interlocking type | Mechanical |
| Mounting support | Plate<br>Rail |
| 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 | CCC<br>CSA<br>RINA<br>UL<br>LROS (Lloyds register of shipping)<br>DNV<br>GL<br>BV<br>GOST |
| Connections - terminals | Power circuit: screw clamp terminals 1 cable(s) 1…4 mm²flexible without cable end<br>Power circuit: screw clamp terminals 2 cable(s) 1…4 mm²flexible without cable end<br>Power circuit: screw clamp terminals 1 cable(s) 1…4 mm²flexible with cable end<br>Power circuit: screw clamp terminals 2 cable(s) 1…2.5 mm²flexible with cable end<br>Power circuit screw clamp terminals 1 0.00…0.01 in² (1…4 mm²)solid<br>Power circuit screw clamp terminals 2 0.00…0.01 in² (1…4 mm²)solid<br>Control circuit screw clamp terminals 1 0.00…0.01 in² (1…4 mm²)flexible without cable end<br>Control circuit screw clamp terminals 2 0.00…0.01 in² (1…4 mm²)flexible without cable end<br>Control circuit screw clamp terminals 1 0.00…0.01 in² (1…4 mm²)flexible with cable end<br>Control circuit screw clamp terminals 2 0.00…0.00 in² (1…2.5 mm²)flexible with cable end<br>Control circuit screw clamp terminals 1 0.00…0.01 in² (1…4 mm²)solid<br>Control circuit screw clamp terminals 2 0.00…0.01 in² (1…4 mm²)solid |
| Tightening torque | Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm<br>Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2<br>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 |
| Operating time | 12...22 ms closing<br>4...19 ms opening |
| 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 | 15 Mcycles |
| Maximum operating rate | 3600 cyc/h 140 °F (60 °C) |

## Complementary

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|---|---|
| Coil technology | Without built-in suppressor module |
| 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…140 °F (-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 | 70 VA 60 Hz cos phi 0.75 (at 20 °C)<br>70 VA 50 Hz cos phi 0.75 (at 20 °C) |
| Hold-in power consumption in VA | 7.5 VA 60 Hz cos phi 0.3 (at 20 °C)<br>7 VA 50 Hz cos phi 0.3 (at 20 °C) |
| Heat dissipation | 2…3 W at 50/60 Hz |
| 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 current | 5 mA signalling circuit |
| Minimum switching voltage | 17 V 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 |
| Insulation resistance | > 10 MOhm signalling circuit |

## Environment

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|---|---|
| IP degree of protection | IP20 front face IEC 60529 |
| Protective treatment | TH IEC 60068-2-30 |
| Pollution degree | 3 |
| Ambient air temperature for operation | -40…140 °F (-40…60 °C)<br>140…158 °F (60…70 °C) with derating |
| Ambient air temperature for storage | -76…176 °F (-60…80 °C) |
| Operating altitude | 0...9842.52 ft (0...3000 m) |
| Fire resistance | 1562 °F (850 °C) IEC 60695-2-1 |
| Flame retardance | V1 conforming to UL 94 |
| Mechanical robustness | Vibrations contactor open2 Gn, 5...300 Hz<br>Vibrations contactor closed4 Gn, 5...300 Hz<br>Shocks contactor open10 Gn for 11 ms<br>Shocks contactor closed15 Gn for 11 ms |
| Height | 3.35 in (85 mm) |
| Width | 3.54 in (90 mm) |
| Maximum Depth | 3.54 in (90 mm) |
| Net Weight | 1.61 lb(US) (0.73 kg) |

## Ordering and shipping details

| | |
|---|---|
| Category | 22354 - CTR,TESYS D,OPEN,9-38A AC |
| Discount Schedule | I12 |
| GTIN | 00785901610656 |
| Nbr. of units in pkg. | 1 |
| Package weight(Lbs) | 1.9 lb(US) (0.86 kg) |
| Returnability | No |
| Country of origin | FR |

## Packing Units

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|---|---|
| Unit Type of Package 1 | PCE |
| Package 1 Height | 3.34 in (8.48 cm) |
| Package 1 width | 3.54 in (9 cm) |
| Package 1 Length | 3.62 in (9.2 cm) |

## Offer Sustainability

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| Sustainable offer status | Green Premium product |
| California proposition 65 | WARNING: This product can expose you to chemicals including: Antimony oxide & Antimony trioxide, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov |
| REACh Regulation | REACh Declaration |
| REACh free of SVHC | Yes |
| EU RoHS Directive | Compliant EU RoHS Declaration |
| Toxic heavy metal free | Yes |
| Mercury free | Yes |
| RoHS exemption information | Yes |
| China RoHS Regulation | China RoHS Declaration |
| Environmental Disclosure | Product Environmental Profile |
| Circularity Profile | End Of Life Information |
| 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

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