# Product data sheet
## Characteristics

# LC1D188F7
## Contactor, TeSys Deca, 4P(2NO+2NC), AC-1, <=440V, 32A, 110V AC 50/60Hz coil, screw clamp terminal


## Main

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|---|---|
| Range of Product | TeSys Deca |
| Product or Component Type | Contactor |
| Device short name | LC1D |
| Contactor application | Resistive load |
| Utilisation category | AC-1<br>AC-3<br>AC-3e<br>AC-4 |
| Poles description | 4P |
| [Ue] rated operational voltage | Power circuit <= 690 V AC 25...400 Hz |
| [Ie] rated operational current | 32 A (at <140 °F (60 °C)) at <= 440 V AC AC-1 for power circuit |
| [Uc] control circuit voltage | 110 V AC 50/60 Hz |

## Complementary

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|---|---|
| Compatibility code | LC1D |
| Pole contact composition | 2 NO + 2 NC |
| Contact compatibility | M6 |
| Protective cover | With |
| [Ith] conventional free air thermal current | 10 A (at 140 °F (60 °C)) for signalling circuit<br>32 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>300 A at 440 V for power circuit conforming to IEC 60947 |
| Rated breaking capacity | 300 A at 440 V for power circuit conforming to IEC 60947 |
| [Icw] rated short-time withstand current | 145 A 104 °F (40 °C) - 10 s for power circuit<br>240 A 104 °F (40 °C) - 1 s for power circuit<br>40 A 104 °F (40 °C) - 10 min for power circuit<br>84 A 104 °F (40 °C) - 1 min 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 |
| Associated fuse rating | 10 A gG for signalling circuit conforming to IEC 60947-5-1<br>50 A gG at <= 690 V coordination type 1 for power circuit<br>35 A gG at <= 690 V coordination type 2 for power circuit |
| Average impedance | 2.5 mOhm - Ith 32 A 50 Hz for power circuit |
| Power dissipation per pole | 2.5 W AC-1 |
| [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 |
| Overvoltage category | III |
| Pollution degree | 3 |
| [Uimp] rated impulse withstand voltage | 6 kV IEC 60947 |
| Safety reliability level | B10d = 1369863 cycles contactor with nominal load EN/ISO 13849-1<br>B10d = 20000000 cycles contactor with mechanical load EN/ISO 13849-1 |
| Mechanical durability | 15 Mcycles |

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|---|---|
| Electrical durability | 1 Mcycles 32 A AC-1 <= 440 V |
| Control circuit type | AC 50/60 Hz |
| Coil technology | Without built-in suppressor module |
| Control circuit voltage limits | 0.3...0.6 Uc -40…140 °F (-40…60 °C) drop-out AC 50/60 Hz<br>0.8...1.1 Uc -40…140 °F (-40…60 °C) operational AC 50 Hz<br>0.85...1.1 Uc -40…140 °F (-40…60 °C) operational AC 60 Hz |
| Inrush power in VA | 70 VA 60 Hz cos phi 0.75 (at 68 °F (20 °C))<br>70 VA 50 Hz cos phi 0.75 (at 68 °F (20 °C)) |
| Hold-in power consumption in VA | 7.5 VA 60 Hz cos phi 0.3 (at 68 °F (20 °C))<br>7 VA 50 Hz cos phi 0.3 (at 68 °F (20 °C)) |
| Heat dissipation | 2…3 W at 50/60 Hz |
| Operating time | 12...22 ms closing<br>4...19 ms opening |
| Maximum operating rate | 3600 cyc/h 140 °F (60 °C) |
| Connections - terminals | Control circuit: screw clamp terminals 1 0.00…0.01 in² (1…4 mm²) - cable stiffness: flexible without cable end<br>Control circuit: screw clamp terminals 2 0.00…0.01 in² (1…4 mm²) - cable stiffness: flexible without cable end<br>Control circuit: screw clamp terminals 1 0.00…0.01 in² (1…4 mm²) - cable stiffness: flexible with cable end<br>Control circuit: screw clamp terminals 2 0.00…0.00 in² (1…2.5 mm²) - cable stiffness: flexible with cable end<br>Control circuit: screw clamp terminals 1 0.00…0.01 in² (1…4 mm²) - cable stiffness: solid without cable end<br>Control circuit: screw clamp terminals 2 0.00…0.01 in² (1…4 mm²) - cable stiffness: solid without cable end<br>Power circuit: screw clamp terminals 1 0.00…0.02 in² (2.5…10 mm²) - cable stiffness: flexible without cable end<br>Power circuit: screw clamp terminals 2 0.00…0.02 in² (2.5…10 mm²) - cable stiffness: flexible without cable end<br>Power circuit: screw clamp terminals 1 0.00…0.02 in² (2.5…10 mm²) - cable stiffness: flexible with cable end<br>Power circuit: screw clamp terminals 2 0.00…0.02 in² (2.5…10 mm²) - cable stiffness: flexible with cable end<br>Power circuit: screw clamp terminals 1 0.00…0.02 in² (2.5…16 mm²) - cable stiffness: solid without cable end<br>Power circuit: screw clamp terminals 2 0.00…0.02 in² (2.5…16 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>Control circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals pozidriv No 2<br>Power circuit 15.93 lbf.in (1.8 N.m) screw clamps terminals flat Ø 6 mm<br>Power circuit 15.93 lbf.in (1.8 N.m) screw clamps terminals Philips No 2<br>Power circuit 15.93 lbf.in (1.8 N.m) screw clamp terminals pozidriv No 2 |
| Auxiliary contact composition | 1 NO + 1 NC |
| Auxiliary contacts type | Mechanically linked 1 NO + 1 NC IEC 60947-5-1<br>Mirror contact 1 NC IEC 60947-4-1 |
| 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

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|---|---|
| Standards | EN 60947-4-1<br>EN 60947-5-1<br>IEC 60947-4-1<br>IEC 60947-5-1<br>UL 60947-4-1<br>UL 60947-5-1<br>CSA C22.2 No 60947-4-1<br>CSA C22.2 No 60947-5-1<br>GB/T 14048.4 |
| Product Certifications | UL[RETURN]CSA[RETURN]CCC[RETURN]EAC[RETURN]UKCA[RETURN]CB[RETURN]EU-RO-MR by DNV-GL |
| 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 | -40…140 °F (-40…60 °C)<br>140…158 °F (60…70 °C) with derating |
| 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 open 2 Gn, 5...300 Hz)<br>Vibrations contactor closed 4 Gn, 5...300 Hz)<br>Shocks contactor open 10 Gn for 11 ms)<br>Shocks contactor closed 15 Gn for 11 ms) |
| Height | 3.58 in (91 mm) |
| Width | 1.77 in (45 mm) |
| Depth | 3.90 in (99 mm) |
| Net Weight | 0.94 lb(US) (0.425 kg) |

## Packing Units

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|---|---|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 2.17 in (5.5 cm) |
| Package 1 Width | 3.74 in (9.5 cm) |
| Package 1 Length | 4.72 in (12 cm) |
| Package 1 Weight | 16.37 oz (464 g) |
| Unit Type of Package 2 | S02 |
| Number of Units in Package 2 | 15 |
| Package 2 Height | 5.91 in (15 cm) |
| Package 2 Width | 11.81 in (30 cm) |
| Package 2 Length | 15.75 in (40 cm) |
| Package 2 Weight | 16.22 lb(US) (7.355 kg) |

## Offer Sustainability

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|---|---|
| Sustainable offer status | Green Premium product |
| REACh Regulation | REACh Declaration |
| REACh free of SVHC | Yes |
| EU RoHS Directive | Compliant EU RoHS Declaration |
| Toxic heavy metal free | Yes |
| Mercury free | Yes |
| China RoHS Regulation | China RoHS Declaration |
| RoHS exemption information | Yes |
| Environmental Disclosure | Product Environmental Profile |
| Circularity Profile | End Of Life Information |

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|---|---|
| WEEE | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins. |
| PVC free | Yes |