# Product data sheet
## Characteristics

# LC1D18AF7
Contactor, TeSys Deca, 3P(3NO), AC-3/3e, <=440V, 18A, 110V AC 50/60Hz coil, snap-in terminals



## Main

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|---|---|
| Range of product | TeSys Deca Advanced |
| Product or component type | Contactor |
| Device short name | LC1D |
| Contactor application | Motor control<br>Resistive load |
| Utilisation category | AC-1<br>AC-3<br>AC-3e<br>AC-4 |
| 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 | 18 A (at <60 °C) at <= 440 V AC-3 for power circuit<br>18 A (at <60 °C) at <= 440 V AC-3e for power circuit<br>32 A (at <60 °C) at <= 440 V AC-1 for power circuit |
| [Uc] control circuit voltage | 110 V AC 50/60 Hz |

## Complementary

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|---|---|
| Motor power kW | 4 KW at 220...230 V AC 50/60 Hz (AC-3)<br>7.5 KW at 380...400 V AC 50/60 Hz (AC-3)<br>9 KW at 415...440 V AC 50/60 Hz (AC-3)<br>10 KW at 500 V AC 50/60 Hz (AC-3)<br>10 KW at 660...690 V AC 50/60 Hz (AC-3)<br>4 KW at 400 V AC 50/60 Hz (AC-4)<br>4 KW at 220...230 V AC 50/60 Hz (AC-3e)<br>7.5 KW at 380...400 V AC 50/60 Hz (AC-3e)<br>9 KW at 415...440 V AC 50/60 Hz (AC-3e)<br>10 KW at 500 V AC 50/60 Hz (AC-3e)<br>10 KW at 660...690 V AC 50/60 Hz (AC-3e) |
| Compatibility code | LC1D |
| Pole contact composition | 3 NO |
| Protective cover | With |
| [Ith] conventional free air thermal current | 32 A (at 60 °C) for power circuit<br>10 A (at 60 °C) for signalling circuit |
| Irms rated making capacity | 300 A at 440 V for power circuit conforming to IEC 60947<br>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 |
| Rated breaking capacity | 300 A at 440 V for power circuit conforming to IEC 60947 |

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|---|---|
| [Icw] rated short-time withstand current | 40 A 40 °C - 10 min for power circuit<br>84 A 40 °C - 1 min for power circuit<br>145 A 40 °C - 10 s for power circuit<br>240 A 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 |
| 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 | 0.8 W AC-3<br>0.8 W AC-3e<br>2.5 W AC-1 |
| [Ui] rated insulation voltage | Power circuit: 690 V conforming to IEC 60947-4-1<br>Signalling circuit: 690 V conforming to IEC 60947-1 |
| Overvoltage category | III |
| Pollution degree | 3 |
| [Uimp] rated impulse withstand 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 | 15 Mcycles |
| Electrical durability | 1.65 Mcycles 18 A AC-3 at Ue <= 440 V<br>1 Mcycles 32 A AC-1 at Ue <= 440 V<br>1.65 Mcycles 18 A AC-3e at Ue <= 440 V |
| Control circuit type | AC at 50/60 Hz standard |
| 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…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 |
| Operating time | 12...22 ms closing<br>4...19 ms opening |
| Maximum operating rate | 3600 Cyc/H at 60 °C |
| Connections - terminals | Control circuit: snap-in terminal 1 0.5…4 mm² - cable stiffness: flexible without cable end<br>Control circuit: snap-in terminal 2 0.5…4 mm² - cable stiffness: flexible without cable end<br>Control circuit: snap-in terminal 1 0.5…2.5 mm² - cable stiffness: flexible with cable end<br>Control circuit: snap-in terminal 2 0.5…2.5 mm² - cable stiffness: flexible with cable end<br>Power circuit: snap-in terminal 1 0.75…6 mm² - cable stiffness: flexible without cable end<br>Power circuit: snap-in terminal 2 0.75…6 mm² - cable stiffness: flexible without cable end<br>Power circuit: snap-in terminal 1 0.75…4 mm² - cable stiffness: flexible with cable end<br>Power circuit: snap-in terminal 2 0.75…4 mm² - cable stiffness: flexible with cable end |
| 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 |
| 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 | Plate<br>Rail |

## Environment

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|---|---|
| Standards | EN 60947-4-1<br>IEC 60947-4-1<br>UL 60947-4-1<br>CSA C22.2 No 60947-4-1<br>IEC 60335-1:Clause 30.2<br>IEC 60335-2-40:Annex JJ<br>UL 60335-2-40:Annex JJ |
| Product certifications | CB Scheme[RETURN]CCC[RETURN]cULus[RETURN]CE[RETURN]UKCA[RETURN]EU-RO-M |
| 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<br>conforming to IEC 60947-1 Annex Q category D exposure to damp heat |
| Permissible ambient air temperature around the device | -40…60 °C<br>60…70 °C with derating |
| Operating altitude | 0...3000 m |
| Fire resistance | 850 °C conforming to IEC 60695-2-1 |
| 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 (10 Gn for 11 ms) |
| Height | 110 Mm |
| Width | 45 Mm |
| Depth | 92 Mm |
| Net weight | 454 G |

## Packing Units

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|---|---|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 5.600 Cm |
| Package 1 Width | 10.100 Cm |
| Package 1 Length | 11.700 Cm |
| Package 1 Weight | 468.000 G |
| Unit Type of Package 2 | S02 |
| Number of Units in Package 2 | 15 |
| Package 2 Height | 15.000 Cm |
| Package 2 Width | 30.000 Cm |
| Package 2 Length | 40.000 Cm |
| Package 2 Weight | 7.425 Kg |
| Unit Type of Package 3 | P06 |
| Number of Units in Package 3 | 240 |
| Package 3 Height | 75.000 Cm |
| Package 3 Width | 60.000 Cm |
| Package 3 Length | 80.000 Cm |
| Package 3 Weight | 127.300 Kg |

## Offer Sustainability

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|---|---|
| Recyclability potential, in % | 66 |
| Total lifecycle Carbon footprint | 27 kg CO2 eq. |
| Carbon footprint of the manufacturing phase [A1 to A3] | 1.9408262145309851 |
| Carbon footprint of the manufacturing phase [A1 to A3] | 2 kg CO2 eq. |
| Carbon footprint of the distribution phase [A4] | 0.2169157127834966 |
| Carbon footprint of the distribution phase [A4] | 0.2 kg CO2 eq. |
| Carbon footprint of the installation phase [A5] | 0.07644171962958086 |
| Carbon footprint of the installation phase [A5] | 0.1 kg CO2 eq. |
| Carbon footprint of the use phase [B2, B3, B4, B6] | 24.42511252308 |
| REACh free of SVHC | Yes |
| Carbon footprint of the use phase [B2, B3, B4, B6] | 24 kg CO2 eq. |

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|---|---|
| Toxic heavy metal free | Yes |
| Mercury free | Yes |
| Sustainable packaging | Yes |
| Environmental Disclosure | Product Environmental Profile |
| Total lifecycle Carbon footprint | 27 |
| Packaging made with recycled cardboard | Yes |
| Packaging without single use plastic | Yes |
| REACh Regulation | Free of Substances of Very High Concern above the threshold |
| EU RoHS Directive | Compliant |
| California proposition 65 | WARNING: This product can expose you to chemicals including: Antimony oxide & Antimony trioxi |
| End of life manual availability | End Of Life Information |
| Take-back | No |
| WEEE Label | The product must be disposed on European Union markets following specific waste collection and |

## Contractual warranty

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|---|---|
| Warranty (in months) | 18 |

Product Life Status : Commercialised