# Product data sheet
## Characteristics

# LC1D150A6EHE
Contactor, Tesys Deca Advanced, 3P(3NO), AC-3/AC-3e, <=440V, 150A, 48-130V AC/DC coil,lugs-ring or bars



## Main

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|---|---|
| Range | TeSys Deca |
| 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-3<br>AC-3e<br>AC-1<br>AC-4<br>DC-1<br>DC-3<br>DC-5 |
| Poles description | 3P |
| [Ue] rated operational voltage | Power circuit: <= 1000 V AC 16.67...400 Hz<br>Power circuit: <= 300 V DC |
| [Ie] rated operational current | 150 A (at <60 °C) at <= 440 V AC AC-3 for power circuit<br>150 A (at <60 °C) at <= 440 V AC AC-3e for power circuit<br>200 A (at <60 °C) at <= 440 V AC AC-1 for power circuit |
| [Uc] control circuit voltage | 48...130 V AC 50/60 Hz<br>48...130 V DC |

## Complementary

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| Motor power kW | 40 KW at 230 V AC 50/60 Hz (AC-3)<br>75 KW at 400 V AC 50/60 Hz (AC-3)<br>80 KW at 415 V AC 50/60 Hz (AC-3)<br>90 KW at 440 V AC 50/60 Hz (AC-3)<br>90 KW at 500 V AC 50/60 Hz (AC-3)<br>100 KW at 690 V AC 50/60 Hz (AC-3)<br>75 KW at 1000 V AC 50/60 Hz (AC-3)<br>40 KW at 230 V AC 50/60 Hz (AC-3e)<br>75 KW at 400 V AC 50/60 Hz (AC-3e)<br>80 KW at 415 V AC 50/60 Hz (AC-3e)<br>90 KW at 440 V AC 50/60 Hz (AC-3e)<br>90 KW at 500 V AC 50/60 Hz (AC-3e)<br>100 KW at 690 V AC 50/60 Hz (AC-3e)<br>75 KW at 1000 V AC 50/60 Hz (AC-3e)<br>37 KW at 230 V AC 50/60 Hz (AC-4)<br>75 KW at 400 V AC 50/60 Hz (AC-4)<br>75 KW at 440 V AC 50/60 Hz (AC-4)<br>75 KW at 500 V AC 50/60 Hz (AC-4)<br>80 KW at 690 V AC 50/60 Hz (AC-4)<br>65 KW at 1000 V AC 50/60 Hz (AC-4) |
| Motor power hp | 40 Hp at 200/208 V 60 Hz<br>50 Hp at 230/240 V 60 Hz<br>100 Hp at 460/480 V 60 Hz<br>125 Hp at 575/600 V 60 Hz |
| Compatibility code | LC1D |
| Pole contact composition | 3 NO |
| Protective cover | With |
| [Ith] conventional free air thermal current | 200 A (at 60 °C) for power circuit |
| Irms rated making capacity | 1885 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 | 1440 A at 440 V for power circuit conforming to IEC 60947 |
| [Icw] rated short-time withstand current | 350 A 40 °C - 10 min for power circuit<br>600 A 40 °C - 1 min for power circuit<br>1280 A 40 °C - 10 s for power circuit<br>1800 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 | 160 A aM at <= 440 V for power circuit<br>125 A aM at <= 690 V for power circuit<br>250 A gG at <= 690 V for power circuit<br>10 A gG for signalling circuit<br>0.63 A gG for control circuit |

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| Average impedance | 0.45 MOhm - Ith 200 A 50 Hz for power circuit |
| Power dissipation per pole | 8 W AC-3<br>8 W AC-3e<br>22 W AC-1 |
| [Ui] rated insulation voltage | Power circuit: 600 V CSA certified<br>Power circuit: 600 V UL certified<br>Power circuit: 1000 V conforming to IEC 60947-4-1<br>Signalling circuit: 690 V conforming to IEC 60947-1<br>Signalling circuit: 600 V CSA certified<br>Signalling circuit: 600 V UL certified |
| Overvoltage category | III |
| Pollution degree | 3 |
| [Uimp] rated impulse withstand voltage | 8 KV conforming to IEC 60947 |
| Safety reliability level | B10d = 684932 cycles contactor with nominal load conforming to EN/ISO 13849-1<br>B10d = 10000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1 |
| Mechanical durability | 8 Mcycles |
| Electrical durability | 0.85 Mcycles 150 A AC-3 at Ue <= 440 V<br>0.85 Mcycles 150 A AC-3e at Ue <= 440 V<br>0.5 Mcycles 200 A AC-1 at Ue <= 440 V |
| Control circuit type | AC at 50/60 Hz<br>DC |
| Coil technology | Built-in bidirectional peak limiting diode suppressor |
| Control circuit voltage limits | 0.8 Uc Min...1.1 Uc Max (-40…60 °C):operational AC/DC<br>0.1 Uc Max (-40…60 °C):drop-out AC/DC |
| Inrush power in VA | 170 VA (at 20 °C) |
| Inrush power in W | 120 W (at 20 °C) |
| Hold-in power consumption in VA | 7.5 VA (at 20 °C) |
| Hold-in power consumption in W | 5.1 W at 20 °C |
| Heat dissipation | 1.5 W at 20 °C |
| Operating time | 10...80 ms opening<br>20...90 ms closing |
| Maximum operating rate | 2400 Cyc/H at 60 °C<br>3600 Cyc/H at Uc at 20 ºC |
| Connections - terminals | Power circuit: lugs-ring terminals - external diameter: 25 mm<br>Power circuit: bars 1 - busbar cross section: 5 x 25 mm<br>Power circuit: bars 2 - busbar cross section: 5 x 25 mm<br>Control circuit: screw clamp terminals 1 1…4 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>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…4 mm² - cable stiffness: solid without cable end<br>Control circuit: screw clamp terminals 2 1…4 mm² - cable stiffness: solid without cable end |
| Tightening torque | Power circuit: 12 N.m - on bars hexagonal screw head 13 mm M8<br>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm<br>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2<br>Control circuit: 1.7 N.m - on screw clamp terminals - 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 |
| Signalling circuit frequency | 16.67...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 |

## Environment

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| Standards | EN/IEC 60947-4-1<br>EN/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>JIS C8201-4-1<br>JIS C8201-5-1<br>GB/T 14048.4<br>GB/T 14048.5 |
| Product certifications | CB Scheme[RETURN]CCC[RETURN]cULus[RETURN]CE[RETURN]UKCA[RETURN]EU-RO-MR |
| IP degree of protection | IP20 front face conforming to IEC 60529 |
| Protective treatment | None 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 operation<br>60…70 °C with derating<br>-60…80 °C storage |
| Operating altitude | 0...3000 m without derating |
| Fire resistance | 850 °C conforming to IEC 60695-2-11 |
| Mechanical robustness | Vibrations contactor open (2 Gn, 5...300 Hz) conforming to IEC 60068-2-6<br>Vibrations contactor closed (4 Gn, 5...300 Hz) conforming to IEC 60068-2-6<br>Shocks contactor open (10 Gn for 11 ms) conforming to IEC 60068-2-27<br>Shocks contactor closed (15 Gn for 11 ms) conforming to IEC 60068-2-27 |
| Height | 152 Mm |
| Width | 99 Mm |
| Depth | 155 Mm |
| Net weight | 2.2 Kg |

## Packing Units

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|---|---|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 18.9 Cm |
| Package 1 Width | 13.2 Cm |
| Package 1 Length | 18.2 Cm |
| Package 1 Weight | 2.38 Kg |
| Unit Type of Package 2 | S03 |
| Number of Units in Package 2 | 4 |
| Package 2 Height | 30 Cm |
| Package 2 Width | 30 Cm |
| Package 2 Length | 40 Cm |
| Package 2 Weight | 10.0547 Kg |
| Unit Type of Package 3 | P06 |
| Number of Units in Package 3 | 32 |
| Package 3 Height | 73.5 Cm |
| Package 3 Width | 60 Cm |
| Package 3 Length | 80 Cm |
| Package 3 Weight | 90.4376 Kg |

## Offer Sustainability

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| Recyclability potential, in % | 78 |
| Total lifecycle Carbon footprint | 363 kg CO2 eq. |
| Carbon footprint of the manufacturing phase [A1 to A3] | 23.42982040723571 |
| Carbon footprint of the manufacturing phase [A1 to A3] | 23 kg CO2 eq. |
| Carbon footprint of the distribution phase [A4] | 0.36181977873972493 |
| Carbon footprint of the distribution phase [A4] | 0.4 kg CO2 eq. |
| Carbon footprint of the installation phase [A5] | 0.26280340554160675 |
| Carbon footprint of the installation phase [A5] | 0.3 kg CO2 eq. |

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| Carbon footprint of the use phase [B2, B3, B4, B6] | 333.9103176655554 |
| Carbon footprint of the use phase [B2, B3, B4, B6] | 334 kg CO2 eq. |
| Mercury free | Yes |
| Sustainable packaging | No |
| Carbon footprint of the end-of-life phase [C1 to C4] | 4.9383894741868675 |
| Carbon footprint of the end-of-life phase [C1 to C4] | 5 kg CO2 eq. |
| Environmental Disclosure | Product Environmental Profile |
| Total lifecycle Carbon footprint | 363 |
| Packaging made with recycled cardboard | Yes |
| Packaging without single use plastic | No |
| SCIP Number | 608af421-265e-4dfd-b0b3-1192c9364536 |
| REACh Regulation | Reference contains Substances of Very High Concern above the threshold |
| EU RoHS Directive | Compliant By Exemption |
| California proposition 65 | WARNING: This product can expose you to chemicals including: Styrene, which is known to the |
| Halogen-free status | Halogen free plastic parts product |
| 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 a |

## Contractual warranty

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| Warranty (in months) | 18 |

Product Life Status : Commercialised