Product data sheet
Characteristics

LC1D186BD
Contactor, TeSys Deca, 3P(3NO), AC-3/AC-3e, <=440V, 18A, 24V DC coil, lugs-ring terminals



Main

Range of product	TeSys Deca Advanced
Product or component type	Contactor
Device short name	LC1D
Contactor application	Motor control Resistive load
Utilisation category	AC-3 AC-3e AC-1 AC-4
Poles description	3P
[Ue] rated operational voltage	Power circuit: <= 690 V AC 25...400 Hz Power circuit: <= 300 V DC
[Ie] rated operational current	18 A (at <60 °C) at <= 440 V AC AC-3 for power circuit 32 A (at <60 °C) at <= 440 V AC AC-1 for power circuit 18 A (at <60 °C) at <= 440 V AC AC-3e for power circuit
[Uc] control circuit voltage	24 V DC

Complementary

Motor power kW	4 KW at 220/230 V AC 50/60 Hz (AC-3) 7.5 KW at 380/400 V AC 50/60 Hz (AC-3) 9 KW at 415/440 V AC 50/60 Hz (AC-3) 10 KW at 500 V AC 50/60 Hz (AC-3) 10 KW at 660/690 V AC 50/60 Hz (AC-3) 4 KW at 220/230 V AC 50/60 Hz (AC-3e) 7.5 KW at 380/400 V AC 50/60 Hz (AC-3e) 9 KW at 415/440 V AC 50/60 Hz (AC-3e) 10 KW at 500 V AC 50/60 Hz (AC-3e) 10 KW at 660/690 V AC 50/60 Hz (AC-3e) 4 KW at 400 V AC 50/60 Hz (AC-4)
Motor power hp	1 Hp at 115 V AC 50/60 Hz for 1 phase motors 3 Hp at 230/240 V AC 50/60 Hz for 1 phase motors 5 Hp at 200/208 V AC 50/60 Hz for 3 phases motors 5 Hp at 230/240 V AC 50/60 Hz for 3 phases motors 10 Hp at 460/480 V AC 50/60 Hz for 3 phases motors 15 Hp at 575/600 V AC 50/60 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 signalling circuit 32 A (at 60 °C) for power circuit
Irms rated making capacity	140 A AC for signalling circuit conforming to IEC 60947-5-1 250 A DC for signalling circuit conforming to IEC 60947-5-1 300 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 40 °C - 10 s for power circuit 240 A 40 °C - 1 s for power circuit 40 A 40 °C - 10 min for power circuit 84 A 40 °C - 1 min for power circuit 100 A - 1 s for signalling circuit 120 A - 500 ms for signalling circuit 140 A - 100 ms for signalling circuit
Associated fuse rating	10 A gG for signalling circuit conforming to IEC 60947-5-1 50 A gG at <= 690 V coordination type 1 for power circuit 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 0.8 W AC-3 0.8 W AC-3e
[Ui] rated insulation voltage	Power circuit: 690 V conforming to IEC 60947-4-1 Power circuit: 600 V CSA certified Power circuit: 600 V UL certified Signalling circuit: 690 V conforming to IEC 60947-1 Signalling circuit: 600 V CSA certified Signalling circuit: 600 V UL certified
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 B10d = 20000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1
Mechanical durability	30 Mcycles
Electrical durability	1.65 Mcycles 18 A AC-3 at Ue <= 440 V 1 Mcycles 32 A AC-1 at Ue <= 440 V 1.65 Mcycles 25 A AC-3e at Ue <= 440 V
Control circuit type	DC standard
Coil technology	With integral suppression device
Control circuit voltage limits	0.1...0.25 Uc (-40…70 °C):drop-out DC 0.7...1.25 Uc (-40…60 °C):operational DC 1...1.25 Uc (60…70 °C):operational DC
Inrush power in W	5.4 W (at 20 °C)
Hold-in power consumption in W	5.4 W at 20 °C
Operating time	63 ±15 % ms closing 20 ±20 % ms opening
Time constant	28 Ms
Maximum operating rate	3600 Cyc/H at 60 °C
Connections - terminals	Control circuit: lugs-ring terminals - external diameter: 8 mm Power circuit: lugs-ring terminals - external diameter: 8 mm
Tightening torque	Control circuit: 1.7 N.m - on lugs-ring terminals - with screwdriver flat Ø 6 mm M3.5 Control circuit: 1.7 N.m - on lugs-ring terminals - with screwdriver Philips No 2 M3.5 Power circuit: 1.7 N.m - on lugs-ring terminals - with screwdriver flat Ø 8 mm M3.5 Power circuit: 1.7 N.m - on lugs-ring terminals - with screwdriver Philips No 2 M3.5 Control circuit: 1.7 N.m - on lugs-ring terminals - with screwdriver pozidriv No 2 M3.5 Power circuit: 1.7 N.m - on lugs-ring terminals - with screwdriver pozidriv No 2 M3.5
Auxiliary contact composition	1 NO + 1 NC
Auxiliary contacts type	Type mechanically linked 1 NO + 1 NC conforming to IEC 60947-5-1 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 1.5 Ms on energisation between NC and NO contact
Mounting support	Plate Rail

Environment

Standards	CSA C22.2 No 14 EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 60947-4-1 IEC 60335-1:Clause 30.2 IEC 60335-2-40:Annex JJ UL 60335-2-40:Annex JJ CSA C22.2 No 60947-4-1
Product certifications	UL[RETURN]CCC[RETURN]CSA[RETURN]Marine[RETURN]UKCA[RETURN]EAC[RETURN]C
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 conforming to IEC 60947-1 Annex Q category D exposure to damp heat
Permissible ambient air temperature around the device	-40…60 °C 60…70 °C with derating
Operating altitude	0...3000 m
Fire resistance	850 °C conforming to IEC 60695-2-1
Flame retardance	V1 conforming to UL 94
Mechanical robustness	Vibrations contactor open (2 Gn, 5...300 Hz) Vibrations contactor closed (4 Gn, 5...300 Hz) Shocks contactor open (10 Gn for 11 ms) Shocks contactor closed (15 Gn for 11 ms)
Height	77 Mm
Width	45 Mm
Depth	95 Mm
Net weight	0.49 Kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	5.0 Cm
Package 1 Width	9.5 Cm
Package 1 Length	11.5 Cm
Package 1 Weight	540.0 G
Unit Type of Package 2	S02
Number of Units in Package 2	15
Package 2 Height	15.0 Cm
Package 2 Width	30.0 Cm
Package 2 Length	40.0 Cm
Package 2 Weight	8.341 Kg
Unit Type of Package 3	P06
Number of Units in Package 3	240
Package 3 Height	75.0 Cm
Package 3 Width	80.0 Cm
Package 3 Length	60.0 Cm
Package 3 Weight	141.456 Kg

Offer Sustainability

Recyclability potential, in %	75
Total lifecycle Carbon footprint	39 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	2.7103153960992956
Carbon footprint of the manufacturing phase [A1 to A3]	3 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.1497941374842545
Carbon footprint of the distribution phase [A4]	0.1 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.041480539446657784
Carbon footprint of the installation phase [A5]	0 kg CO2 eq.

Carbon footprint of the use phase [B2, B3, B4, B6]	35.11783783783784
Carbon footprint of the use phase [B2, B3, B4, B6]	35 kg CO2 eq.
Mercury free	Yes
Sustainable packaging	Yes
Carbon footprint of the end-of-life phase [C1 to C4]	1.3125800413083537
Carbon footprint of the end-of-life phase [C1 to C4]	1 kg CO2 eq.
Environmental Disclosure	Product Environmental Profile
Total lifecycle Carbon footprint	39
Packaging made with recycled cardboard	Yes
Packaging without single use plastic	Yes
SCIP Number	50ae7612-fd2e-41e4-a369-50d0dea6e592
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: Antimony oxide &amp Antimony t
POP Directive	No POPs
PVC free	Yes
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

Warranty (in months)	18

Product Life Status : Commercialised