

# Product datasheet

Specifications



## TeSys D reversing contactor - 3P(3 NO) - AC-3 - <= 440 V 9 A - 110 V AC coil

Local distributor code: 381822635 LC2D09F7

EAN Code : 3389110383386

### Main

Range	TeSys TeSys Deca
Product name	TeSys D TeSys Deca
Product or component type	Reversing contactor
Device short name	LC2D
Contactor application	Resistive load Motor control
Utilisation category	AC-1 AC-3
Device presentation	Preassembled with reversing power busbar
Poles description	3P
Power pole contact composition	3 NO
[Ue] rated operational voltage	Power circuit: <= 690 V AC 25...400 Hz Power circuit: <= 300 V DC
[Ie] rated operational current	9 A (at <60 °C) at <= 440 V AC AC-3 for power circuit 25 A (at <60 °C) at <= 440 V AC AC-1 for power circuit
Motor power kW	2.2 kW at 220...230 V AC 50 Hz 4 kW at 380...400 V AC 50 Hz 4 kW at 415...440 V AC 50 Hz 5.5 kW at 500 V AC 50 Hz 5.5 kW at 660...690 V AC 50 Hz
Motor power HP (UL / CSA)	0.5 hp at 115 V AC 60 Hz for 1 phase motors 1 hp at 230/240 V AC 60 Hz for 1 phase motors 2 hp at 200/208 V AC 60 Hz for 3 phases motors 2 hp at 230/240 V AC 60 Hz for 3 phases motors 5 hp at 460/480 V AC 60 Hz for 3 phases motors 7.5 hp at 575/600 V AC 60 Hz for 3 phases motors
Control circuit type	AC at 50/60 Hz
[Uc] control circuit voltage	110 V AC 50/60 Hz
Auxiliary contact composition	1 NO + 1 NC
[Uimp] rated impulse withstand voltage	6 kV conforming to IEC 60947
Overvoltage category	III
[Ith] conventional free air thermal current	10 A (at 60 °C) for signalling circuit 25 A (at 60 °C) for power circuit
Irms rated making capacity	250 A at 440 V for power circuit conforming to IEC 60947 140 A AC for signalling circuit conforming to IEC 60947-5-1 250 A DC for signalling circuit conforming to IEC 60947-5-1

<b>Rated breaking capacity</b>	250 A at 440 V for power circuit conforming to IEC 60947
<b>[Icw] rated short-time withstand current</b>	30 A 40 °C - 10 min for power circuit 61 A 40 °C - 1 min for power circuit 105 A 40 °C - 10 s for power circuit 210 A 40 °C - 1 s for power circuit 100 A - 1 s for signalling circuit 120 A - 500 ms for signalling circuit 140 A - 100 ms for signalling circuit
<b>Associated fuse rating</b>	25 A gG at <= 690 V coordination type 1 for power circuit 20 A gG at <= 690 V coordination type 2 for power circuit 10 A gG for signalling circuit conforming to IEC 60947-5-1
<b>Average impedance</b>	2.5 mOhm - Ith 25 A 50 Hz for power circuit
<b>[Ui] rated insulation voltage</b>	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
<b>Electrical durability</b>	0.6 Mcycles 25 A AC-1 at Ue <= 440 V 2 Mcycles 9 A AC-3 at Ue <= 440 V
<b>Power dissipation per pole</b>	0.2 W AC-3 1.56 W AC-1
<b>Front cover</b>	With
<b>Interlocking type</b>	Mechanical
<b>Mounting support</b>	Rail Plate
<b>Standards</b>	CSA C22.2 No 14 EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508 IEC 60335-1
<b>Product certifications</b>	DNV CSA CCC UL GL LROS (Lloyds register of shipping) BV RINA GOST UKCA
<b>Connections - terminals</b>	Power circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> flexible without cable end Power circuit: screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> flexible without cable end Power circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> flexible with cable end Power circuit: screw clamp terminals 2 cable(s) 1...2.5 mm <sup>2</sup> flexible with cable end Power circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> solid Power circuit: screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> solid Control circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> flexible without cable end Control circuit: screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> flexible without cable end Control circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> flexible with cable end Control circuit: screw clamp terminals 2 cable(s) 1...2.5 mm <sup>2</sup> flexible with cable end Control circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> solid Control circuit: screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> solid
<b>Tightening torque</b>	Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2 Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2 Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2 Power circuit: 2.5 N.m - on screw clamp terminals - with screwdriver pozidriv No 2
<b>Operating time</b>	12...22 ms closing 4...19 ms opening
<b>Safety reliability level</b>	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
<b>Mechanical durability</b>	15 Mcycles
<b>Maximum operating rate</b>	3600 cyc/h 60 °C

## Complementary

<b>Coil technology</b>	Without built-in suppressor module
------------------------	------------------------------------

<b>Control circuit voltage limits</b>	0.3...0.6 U <sub>c</sub> (-40...70 °C):drop-out AC 50/60 Hz 0.8...1.1 U <sub>c</sub> (-40...60 °C):operational AC 50 Hz 0.85...1.1 U <sub>c</sub> (-40...60 °C):operational AC 60 Hz 1...1.1 U <sub>c</sub> (60...70 °C):operational AC 50/60 Hz
<b>Inrush power in VA</b>	70 VA 60 Hz cos phi 0.75 (at 20 °C) 70 VA 50 Hz cos phi 0.75 (at 20 °C)
<b>Hold-in power consumption in VA</b>	7.5 VA 60 Hz cos phi 0.3 (at 20 °C) 7 VA 50 Hz cos phi 0.3 (at 20 °C)
<b>Heat dissipation</b>	2...3 W at 50/60 Hz
<b>Auxiliary contacts type</b>	type mechanically linked 1 NO + 1 NC conforming to IEC 60947-5-1 type mirror contact 1 NC conforming to IEC 60947-4-1
<b>Signalling circuit frequency</b>	25...400 Hz
<b>Minimum switching current</b>	5 mA for signalling circuit
<b>Minimum switching voltage</b>	17 V for signalling circuit
<b>Non-overlap time</b>	1.5 ms on de-energisation between NC and NO contact 1.5 ms on energisation between NC and NO contact
<b>Insulation resistance</b>	> 10 MOhm for signalling circuit

## Environment

<b>IP degree of protection</b>	IP20 front face conforming to IEC 60529
<b>Climatic withstand</b>	conforming to IACS E10 conforming to IEC 60947-1 Annex Q category D
<b>Protective treatment</b>	TH conforming to IEC 60068-2-30
<b>Pollution degree</b>	3
<b>Ambient air temperature for operation</b>	-40...60 °C 60...70 °C with derating
<b>Ambient air temperature for storage</b>	-60...80 °C
<b>Operating altitude</b>	0...3000 m
<b>Fire resistance</b>	850 °C conforming to IEC 60695-2-1
<b>Flame retardance</b>	V1 conforming to UL 94
<b>Mechanical robustness</b>	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
<b>Height</b>	77 mm
<b>Width</b>	90 mm
<b>Depth</b>	86 mm
<b>Net weight</b>	0.687 kg

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Height</b>	11.300 cm
<b>Package 1 Width</b>	9.500 cm
<b>Package 1 Length</b>	13.500 cm
<b>Package 1 Weight</b>	810.000 g
<b>Unit Type of Package 2</b>	S02
<b>Number of Units in Package 2</b>	6
<b>Package 2 Height</b>	15.000 cm

Package 2 Width	30.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	5.203 kg

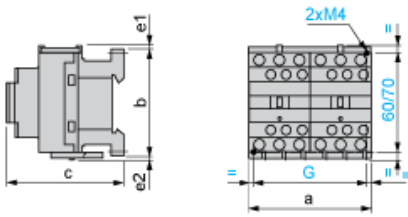
## Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	<a href="#">REACH Declaration</a>
REACH free of SVHC	Yes
EU RoHS Directive	Compliant <a href="#">EU RoHS Declaration</a>
Toxic heavy metal free	Yes
Mercury free	Yes
China RoHS Regulation	<a href="#">China RoHS declaration</a> Pro-active China RoHS declaration (out of China RoHS legal scope)
RoHS exemption information	<a href="#">Yes</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	<a href="#">End of Life Information</a>
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

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

**Dimensions**



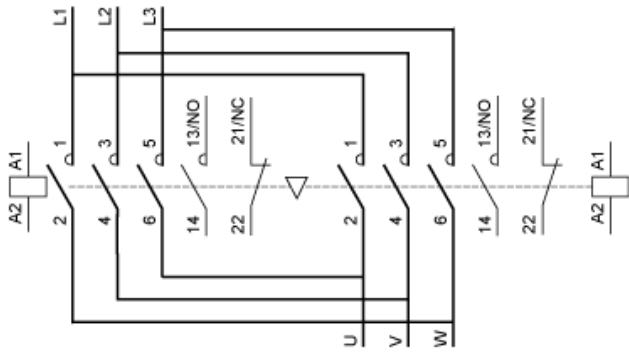
LC2 or 2 x LC1	a	b	c <sup>(1)</sup>	e1	e2	G
D09 to D18 (AC)	90	77	86	4	1.5	80
D093 to D123 (AC)	90	99	86	–	–	80
D09 to D18 (DC)	90	77	95	4	1.5	80
D093 to D123 (DC)	90	99	95	–	–	80
D25 to D38 (AC)	90	85	92	9	5	80
D183 to D383 (AC)	90	99	92	–	–	80
D25 to D32 (DC)	90	85	101	9	5	80
D183 to D383 (DC)	90	99	101	–	–	80

e1 and e2: including cabling.

(1) With safety cover, without add-on block.

**Wiring**

---



**Recommended replacement(s)**