Product data sheet

Specifications

TeSys D reversing contactor - 3P(3 NO) - AC-3 - <= 440 V 25 A - 100 V DC coil

LC2D255KD

⊘ Discontinued

Main

Range	TeSys
Product Name	TeSys D
Product Or Component Type	Reversing contactor
Device Short Name	LC2D
Contactor Application	Motor control Resistive load
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	25 A (at <60 °C) at <= 440 V AC AC-3 for power circuit 40 A (at <60 °C) at <= 440 V AC AC-1 for power circuit
Motor Power Kw	5.5 kW at 220...230 V AC 50 Hz 11 kW at 380...400 V AC 50 Hz 11 kW at 415...440 V AC 50 Hz 15 kW at 500 V AC 50 Hz 15 kW at 660...690 V AC 50 Hz
Motor Power Hp (Ul / Csa)	3 hp at 230/240 V AC 60 Hz for 1 phase motors 5 hp at 200/208 V AC 60 Hz for 3 phases motors 2 hp at 115 V AC 60 Hz for 1 phase motors 7.5 hp at 230/240 V AC 60 Hz for 3 phases motors 15 hp at 460/480 V AC 60 Hz for 3 phases motors 20 hp at 575/600 V AC 60 Hz for 3 phases motors
Control Circuit Type	DC standard
[Uc] Control Circuit Voltage	100 V DC
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 40 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 60947-5-1 450 A at 440 V for power circuit conforming to IEC 60947
Rated Breaking Capacity	450 A at 440 V for power circuit conforming to IEC 60947

[Icw] Rated Short-Time Withstand Current	50 A 40 °C - 10 min for power circuit 120 A 40 °C - 1 min for power circuit 240 A 40 °C - 10 s for power circuit 380 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
Associated Fuse Rating	10 A gG for signalling circuit conforming to IEC 60947-5-1 63 A gG at <= 690 V coordination type 1 for power circuit 40 A gG at <= 690 V coordination type 2 for power circuit
Average Impedance	2 mOhm - Ith 40 A 50 Hz for power circuit
[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
Electrical Durability	1.65 Mcycles 25 A AC-3 at Ue <= 440 V 1.4 Mcycles 40 A AC-1 at Ue <= 440 V
Power Dissipation Per Pole	1.25 W AC-3 3.2 W AC-1
Front Cover	Without
Interlocking Type	Mechanical
Mounting Support	Rail Plate
Standards	CSA C22.2 No 14 EN 60947-4-1 EN 60947-5-1 IEC 60947-4-1 IEC 60947-5-1 UL 508
Product Certifications	UL BV CCC LROS (Lloyds register of shipping) CSA GL GOST RINA DNV
Connections - Terminals	Control circuit: screw clamp terminals 1 cable(s) 1…4 mm²flexible without cable end Control circuit: screw clamp terminals 2 cable(s) 1…4 mm²flexible without cable end Control circuit: screw clamp terminals 1 cable(s) 1…4 mm²flexible with cable end Control circuit: screw clamp terminals 2 cable(s) 1…2.5 mm²flexible with cable end Control circuit: screw clamp terminals 1 cable(s) 1…4 mm²solid Control circuit: screw clamp terminals 2 cable(s) 1…4 mm²solid Power circuit: screw clamp terminals 1 cable(s) 2.5…10 mm²flexible without cable end Power circuit: screw clamp terminals 2 cable(s) 2.5…10 mm²flexible without cable end Power circuit: screw clamp terminals 1 cable(s) 1…10 mm²flexible with cable end Power circuit: screw clamp terminals 2 cable(s) 1.5…6 mm²flexible with cable end Power circuit: screw clamp terminals 1 cable(s) 1.5…10 mm²solid Power circuit: screw clamp terminals 2 cable(s) 2.5…10 mm²solid
Tightening Torque	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 Power circuit: 2.5 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm Power circuit: 2.5 N.m - on screw clamp terminals - with screwdriver Philips No 2
Operating Time	53.55...72.45 ms closing 16...24 ms opening
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

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Maximum Operating Rate	3600 cyc/h 60 °C

Complementary

Coil Technology	Built-in bidirectional peak limiting diode suppressor
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
Time Constant	28 ms
Inrush Power In W	5.4 W (at 20 °C)
Hold-In Power Consumption In W	5.4 W at 20 °C
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 Current	5 mA for signalling circuit
Minimum Switching Voltage	17 V 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
Insulation Resistance	> 10 MOhm for signalling circuit

Environment

Ip Degree Of Protection	IP20 front face conforming to IEC 60529
Protective Treatment	TH conforming to IEC 60068-2-30
Pollution Degree	3
Ambient Air Temperature For Operation	-40…60 °C 60…70 °C with derating
Ambient Air Temperature For Storage	-60…80 °C
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 closed: 15 Gn for 11 ms Shocks contactor open: 8 Gn for 11 ms
Height	85 mm
Width	90 mm
Depth	99 mm
Net Weight	1.117 kg

Contractual warranty

Warranty	18 months