Product data sheet
Characteristics

LC2D150M7
TeSys D reversing contactor - 3P(3 NO) - AC-3 - <= 440 V 150 A - 220 V AC coil

Main

Range of product	TeSys D
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
Pole contact composition	3 NO
[Ue] rated operational voltage	<= 300 V DC for power circuit <= 1000 V AC 25...400 Hz for power circuit
[Ie] rated operational current	200 A (<= 60 °C) at <= 440 V AC AC-1 for power circuit 150 A (<= 60 °C) at <= 440 V AC AC-3 for power circuit
Motor power kW	100 kW at 660...690 V AC 50/60 Hz 40 kW at 220...230 V AC 50/60 Hz 75 kW at 1000 V AC 50/60 Hz 75 kW at 380...400 V AC 50/60 Hz 90 kW at 500 V AC 50/60 Hz 80 kW at 415...440 V AC 50/60 Hz
Motor power hp	40 hp at 200/208 V AC 50/60 Hz for 3 phases motors 50 hp at 230/240 V AC 50/60 Hz for 3 phases motors 100 hp at 460/480 V AC 50/60 Hz for 3 phases motors 125 hp at 575/600 V AC 50/60 Hz for 3 phases motors
Control circuit type	AC 50/60 Hz
[Uc] control circuit voltage	220 V AC 50/60 Hz
Auxiliary contact composition	1 NO + 1 NC
[Uimp] rated impulse withstand voltage	8 kV conforming to IEC 60947
Overvoltage category	III

[Ith] conventional free air thermal current	200 A at <= 60 °C for power circuit
Irms rated making capacity	1660 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
Rated breaking capacity	1400 A at 440 V for power circuit conforming to IEC 60947
[Icw] rated short-time withstand current	100 A 1 s signalling circuit 120 A 500 ms signalling circuit 140 A 100 ms signalling circuit 250 A <= 40 °C 10 min power circuit 580 A <= 40 °C 1 min power circuit 1200 A <= 40 °C 10 s power circuit 1400 A <= 40 °C 1 s power circuit
Associated fuse rating	250 A gG at <= 690 V coordination type 2 for power circuit 315 A gG at <= 690 V coordination type 1 for power circuit 10 A gG for signalling circuit conforming to IEC 60947-5-1
Average impedance	0.6 mOhm at 50 Hz - Ith 200 A for power circuit
[Ui] rated insulation voltage	1000 V for power circuit conforming to IEC 60947-4-1 600 V for power circuit certifications CSA 600 V for power circuit certifications UL 690 V for signalling circuit conforming to IEC 60947-1 600 V for signalling circuit certifications CSA 600 V for signalling circuit certifications UL
Electrical durability	0.85 Mcycles 150 A AC-3 at Ue <= 440 V 1 Mcycles 200 A AC-1 at Ue <= 440 V
Power dissipation per pole	24 W AC-1 13.5 W AC-3
Protective cover	With
Interlocking type	Electrical Mechanical
Mounting support	Plate Rail
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 CSA CCC EAC GL BV DNV RINA
Connections - terminals	Control circuit : screw clamp terminals 2 cable(s) 1...2.5 mm² - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 2 cable(s) 1...2.5 mm² - cable stiffness: flexible - with cable end Control circuit : screw clamp terminals 2 cable(s) 1...2.5 mm² - cable stiffness: solid - without cable end Control circuit : screw clamp terminals 1 cable(s) 1...2.5 mm² - cable stiffness: flexible - with cable end Control circuit : screw clamp terminals 1 cable(s) 1...2.5 mm² - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 1 cable(s) 1...2.5 mm² - cable stiffness: solid - without cable end Power circuit : connector 1 cable(s) 10...120 mm² - cable stiffness: flexible - without cable end Power circuit : connector 2 cable(s) 10...50 mm² - cable stiffness: flexible - without cable end Power circuit : connector 1 cable(s) 10...120 mm² - cable stiffness: flexible - with cable end Power circuit : connector 2 cable(s) 10...50 mm² - cable stiffness: flexible - with cable end Power circuit : connector 1 cable(s) 10...120 mm² - cable stiffness: solid - without cable end Power circuit : connector 2 cable(s) 10...50 mm² - cable stiffness: solid - without cable end
Tightening torque	Control circuit : 1.2 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm Control circuit : 1.2 N.m - on screw clamp terminals - with screwdriver Philips No 2 Power circuit : 12 N.m - on connector hexagonal 4 mm
Operating time	20...35 ms closing 40...75 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	8000000 cycles
Operating rate	1200 cyc/h at <= 60 °C

Complementary

Coil technology	Built-in bidirectional peak limiting diode suppressor
Control circuit voltage limits	0.3...0.5 Uc drop-out at 55 °C, AC 50/60 Hz 0.8...1.15 Uc operational at 55 °C, AC 50/60 Hz
Inrush power in VA	280...350 VA at 20 °C (cos ϕ 0.9) 60 Hz 280...350 VA at 20 °C (cos ϕ 0.9) 50 Hz
Hold-in power consumption in VA	2...18 VA at 20 °C (cos ϕ 0.9) 60 Hz 2...18 VA at 20 °C (cos ϕ 0.9) 50 Hz
Heat dissipation	3...4.5 W at 50/60 Hz
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
Motor power range AC-3	30...50 kW 200...240 V 3 phases 55...100 kW 380...440 V 3 phases 55...100 kW 480...500 V 3 phases
Motor starter type	Reversing contactor
Contactor coil voltage	220 V AC

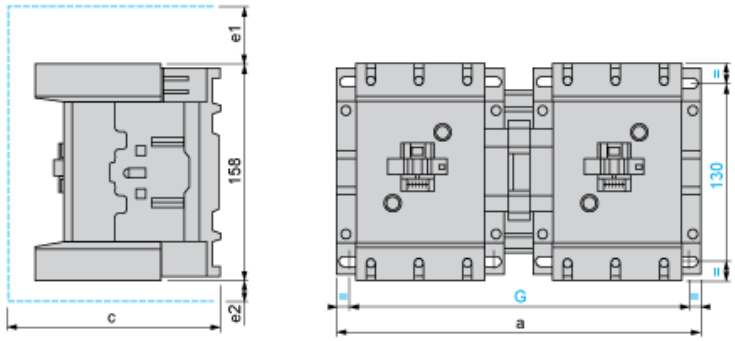
Environment

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	-5...60 °C
Ambient air temperature for storage	-60...80 °C
Permissible ambient air temperature around the device	-40...70 °C at Uc
Operating altitude	3000 m without derating in temperature
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 6 Gn for 11 ms
Height	158 mm
Width	266 mm
Depth	148 mm
Product weight	6.4 kg

Contractual warranty

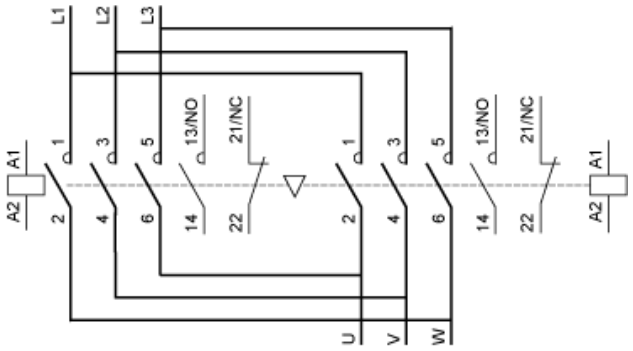
Warranty period	18 months

Dimensions



LC2 or 2 x LC1	a	c	e1	e2	G
D115 and D150	266	148	56	18	242/256
c, e1 and e2: including cabling.					

Wiring



Our Proposal - Type 1 : Circuit Breaker + Contactor for Motor Power 75 kW and 415 VAC

Motor Power (kW)	Icu (kA)	Breaker	Contactor
75	35	 GV7RE150	 LC2D150M7

Non contractual pictures. Type 1 coordination requires that in a short-circuit condition, the contactor or starter must not present any danger to personnel or installations and must not be able to resume operation without repair or the replacement of parts.