Product data sheet Characteristics

LC2D50AEHE

TeSys D reversing contactor - 3P - <= 440 V - 50 A AC-3 - 48...130 V AC/DC coil





Main

Main		
Range of product	TeSys D	
Range	TeSys	
Product name	TeSys D Green	
Product or component type	Reversing contactor	
Device short name	LC2D	
Contactor application	Resistive load Motor control	
Utilisation category	AC-3 AC-1	
Device presentation	Preassembled with reversing power busbar	
Poles description	3P	
Pole contact composition	3 NO	
[Ue] rated operational voltage	<= 690 V AC 25400 Hz for power circuit	
[le] rated operational current	50 A (<= 60 °C) at <= 440 V AC AC-3 for power circuit 80 A (<= 60 °C) at <= 440 V AC AC-1 for power circuit	
Motor power kW	15 kW at 220230 V AC 50/60 Hz 22 kW at 380400 V AC 50/60 Hz 25 kW at 415 V AC 50/60 Hz 30 kW at 440 V AC 50/60 Hz 30 kW at 500 V AC 50/60 Hz 33 kW at 660690 V AC 50/60 Hz	
Control circuit type	AC 50/60 Hz AC/DC electronic DC AC/DC electronic	
Control circuit voltage	48130 V DC 48130 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	
[lth] conventional free air thermal current	80 A at <= 60 °C for power circuit 10 A at <= 60 °C for signalling circuit	
Irms rated making capacity	900 A at 440 V for power circuit conforming to IEC 60947	

Rated breaking capacity 900 A st. 440 V for power circuit conforming to IEC 60947-5-1 [Iow] rated short-lime withstand current 100 A 1 s. signalling circuit 100 A 1 s. signalling circuit 140 A 100 ms agnating circuit 140 A 500 ms agnating circuit 150 A 500 ms agnating circuit conforming to IEC 60947-5-1 Average impedance 1.5 mOhm at 50 Hz - Ith 80 A for power circuit 150 A 500 ms agnating circuit conforming to IEC 60947-5-1 Average impedance 1.5 mOhm at 50 Hz - Ith 80 A for power circuit 150 A 500 ms agnating circuit conforming to IEC 60947-5-1 Average impedance 1.5 mOhm at 50 Hz - Ith 80 A for power circuit 150 A 500 Ms agnating circuit 150 A 500 Ms agn		140 A AC for signalling circuit conforming to IEC 60947-5-1
Icov rated short-time withstand current 100 A r s. signaffing circuit 120 A 500 ms. signaffing circuit 120 A 500		
120 A 500 ms signalling circuit 140 A 100 ms signalling circuit 810 A <= 40 °C 10 s power circuit 810 A <= 40 °C 10 ms power circuit 826 A <= 40 °C 10 min power circuit 208 A <= 40 °C 10 min power circuit 208 A <= 40 °C 10 min power circuit 208 A <= 40 °C 1 min power circuit 100 A gG at <= 680 V coordination type 1 for power circuit 100 A gG at <= 680 V coordination type 2 for power circuit 1100 A gG at <= 680 V coordination type 2 for power circuit 110 A gG for signalling circuit conforming to IEC 60947-5-1 Average impedance 11.5 mOhm at 50 H ≥ . Ittl 80 A for power circuit 11.5 mOhm at 50 H ≥ . Ittl 80 A for power circuit 11.5 mOhm at 50 H ≥ . Ittl 80 A for power circuit 12.5 mOhm at 50 H ≥ . Ittl 80 A for power circuit 12.5 mOhm at 50 H ≥ . Ittl 80 A for power circuit 12.5 mOhm at 50 H ≥ . Ittl 80 A for power circuit 13.5 mOhm at 50 H ≥ . Ittl 80 A for power circuit 14.5 mohm at 50 H ≥ . Ittl 80 A for power circuit 14.5 mohm at 50 H ≥ . Ittl 80 A for power circuit 15.5 mOhm at 50 H ≥ . Ittl 80 A for power circuit 16.5 mohm at 50 H ≥ . Ittl 80 A for power circuit 17.5 mohm at 50 H ≥ . Ittl 80 A for power circuit 18.5 mohm at 50 H ≥ . Ittl 80 A for power circuit 18.5 mohm at 50 H ≥ . Ittl 80 A for power circuit 18.5 mohm at 50 H ≥ . Ittl 80 A for power circuit 18.5 mohm at 50 A A C → 3 at Ue <= 440 V → 1 A 50 A A C → 3 at Ue <= 440 V → 1 A 50 A A C → 3 at Ue <= 440 V → 1 A 50 A A C → 3 at Ue <= 440 V → 1 A 50 A A A A A A A A A A A A A A A A A	Rated breaking capacity	900 A at 440 V for power circuit conforming to IEC 60947
100 A gG at <= 690 V coordination type 2 for power circuit 10 A gG for signaling circuit conforming to IEC 60947-5-1 Average impedance 1.5 mOhm at 50 Hz - Ith 80 A for power circuit 690 V for power circuit conforming to IEC 60947-4-1 690 V for signaling circuit conforming to IEC 60947-4-1 690 V for signaling circuit conforming to IEC 60947-4-1 690 V for signaling circuit conforming to IEC 60947-4-1 Fortective cover With	[Icw] rated short-time withstand current	120 A 500 ms signalling circuit 140 A 100 ms signalling circuit 400 A <= 40 °C 10 s power circuit 810 A <= 40 °C 1 s power circuit 84 A <= 40 °C 10 min power circuit
Uij rated insulation voltage 690 V for power circuit conforming to IEC 60947-4-1 690 V for signalling circuit conforming to IEC 60947-1	Associated fuse rating	100 A gG at <= 690 V coordination type 2 for power circuit
Electrical durability 1.45 Mcycles 50 A AC-3 at Ue <= 440 V Power dissipation per pole 3.7 W AC-3 9.6 W AC-1 Protective cover With Interlocking type Mechanical Mounting support Rail Plate Standards EN/IEC 60947-4-1 EN/IEC 60947-5-1 Connections - terminals Control circuit : Serew clamp terminals 2 cable(s) 12.5 mm² - cable stiffness: flexible - with cable end Power circuit : EverLink BTR screw connectors 1 cable(s) 135 mm² - cable stiffness: flexible - without cable end Power circuit : EverLink BTR screw connectors 1 cable(s) 135 mm² - cable stiffness: flexible - without cable end Power circuit : EverLink BTR screw connectors 1 cable(s) 125 mm² - cable stiffness: flexible - without cable end Power circuit : EverLink BTR screw connectors 1 cable(s) 125 mm² - cable stiffness: flexible - without cable end Power circuit : EverLink BTR screw connectors 2 cable(s) 125 mm² - cable stiffness: flexible - without cable end Power circuit : EverLink BTR screw connectors 2 cable(s) 125 mm² - cable stiffness: flexible - without cable end Power circuit : EverLink BTR screw connectors 2 cable(s) 125 mm² - cable stiffness: flexible - without cable end Power circuit : EverLink BTR screw connectors 2 cable(s) 125 mm² - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: solid - without cable end Control circuit : screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: solid - without cable end Control circuit : screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: solid - without cable end Control circuit : screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: solid - without cable end Control circuit : screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: solid - without cable end Control circuit : screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: solid - without cable end Control circuit : screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: solid - without cable end Control	Average impedance	1.5 mOhm at 50 Hz - Ith 80 A for power circuit
Power dissipation per pole 3.7 W AC-3 9.6 W AC-1 Protective cover With Interlocking type Mechanical Mounting support Rail Plate Standards ENIEC 60947-4-1 ENIEC 60947-5-1 Connections - terminals Control circuit : EverLink BTR screw connectors 1 cable(s) 12.5 mm² - cable stiffness: flexible - with cable end Power circuit : EverLink BTR screw connectors 1 cable(s) 135 mm² - cable stiffness: flexible - with cable end Power circuit : EverLink BTR screw connectors 1 cable(s) 135 mm² - cable stiffness: flexible - with cable end Power circuit : EverLink BTR screw connectors 1 cable(s) 135 mm² - cable stiffness: flexible - with cable end Power circuit : EverLink BTR screw connectors 1 cable(s) 135 mm² - cable stiffness: flexible - without cable end Power circuit : EverLink BTR screw connectors 2 cable(s) 125 mm² - cable stiffness: flexible - without cable end Power circuit : EverLink BTR screw connectors 2 cable(s) 125 mm² - cable stiffness: flexible - without cable end Power circuit : EverLink BTR screw connectors 2 cable(s) 125 mm² - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 2 cable(s) 14 mm² - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: flexible end Control circuit : screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: flexible end Control circuit : screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: flexible end Control circuit : screw clamp terminals 2 cable(s) 14 mm² - cable stiffness: flexible end Control circuit : screw clamp terminals 2 cable(s) 14 mm² - cable stiffness: flexible end Control circuit : screw clamp terminals 2 cable(s) 14 mm² - cable stiffness: flexible end Control circuit : screw clamp termina	[Ui] rated insulation voltage	· · · · · · · · · · · · · · · · · · ·
Protective cover With Interlocking type Mechanical Mounting support Rail Plate Standards EN/IEC 60947-4-1 EN/IEC 60947-5-1 Connections - terminals Control circuit: screw clamp terminals 2 cable(s) 12.5 mm² - cable stiffness: flexible - with cable end Power circuit: EverLink BTR screw connectors 1 cable(s) 135 mm² - cable stiffness: flexible - without cable end Power circuit: EverLink BTR screw connectors 1 cable(s) 135 mm² - cable stiffness: flexible - without cable end Power circuit: EverLink BTR screw connectors 1 cable(s) 135 mm² - cable stiffness: flexible - without cable end Power circuit: EverLink BTR screw connectors 2 cable(s) 125 mm² - cable stiffness: flexible - without cable end Power circuit: EverLink BTR screw connectors 2 cable(s) 125 mm² - cable stiffness: flexible - without cable end Power circuit: EverLink BTR screw connectors 2 cable(s) 125 mm² - cable stiffness: flexible - without cable end Power circuit: EverLink BTR screw connectors 2 cable(s) 125 mm² - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: flexible end Control circuit: screw clamp terminals 2 cable(s) 14 mm² - cable stiffness: flexible end Control circuit: screw clamp terminals 2 cable(s) 14 mm² - cable stiffness: flexible end Control circuit: screw clamp terminals 2 cable(s) 14 mm² - cable stiffness: flexible end Control circuit: screw clamp terminals 2 cable(s) 14 mm² - cable stiffness: flexible end Control circuit: screw clamp terminals 2 cable(s) 14 mm² - cable stiffness: flexible end Control circuit: screw clamp terminals 2 cable(s) 15 mm² - cable stiffness: flexible end Control circuit:	Electrical durability	1.45 Mcycles 50 A AC-3 at Ue <= 440 V
Interlocking type	Power dissipation per pole	
Mounting support Rail Plate Standards EN/IEC 60947-4-1 EN/IEC 60947-5-1 Connections - terminals Control circuit : screw clamp terminals 2 cable(s) 12.5 mm² - cable stiffness: flexible - with cable end Power circuit : EverLink BTR screw connectors 1 cable(s) 135 mm² - cable stiffness: flexible - with cable end Power circuit : EverLink BTR screw connectors 1 cable(s) 135 mm² - cable stiffness: solid - without cable end Power circuit : EverLink BTR screw connectors 1 cable(s) 135 mm² - cable stiffness: solid - without cable end Power circuit : EverLink BTR screw connectors 2 cable(s) 125 mm² - cable stiffness: flexible - without cable end Power circuit : EverLink BTR screw connectors 2 cable(s) 125 mm² - cable stiffness: flexible - without cable end Power circuit : EverLink BTR screw connectors 2 cable(s) 125 mm² - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: slexible - without cable end Control circuit : screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: slexible - without cable end Control circuit : screw clamp terminals 2 cable(s) 14 mm² - cable stiffness: slexible - with cable end Control circuit : screw clamp terminals 2 cable(s) 14 mm² - cable stiffness: slexible - without cable end Control circuit : screw clamp terminals 2 cable(s) 14 mm² - cable stiffness: slexible - without cable end Control circuit : screw clamp terminals 2 cable(s) 14 mm² - cable stiffness: slexible - without cable end Control circuit : screw clamp terminals - vertinals - with screwdriver flat Ø 6 mm Control circuit : 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm Control	Protective cover	With
Standards	Interlocking type	Mechanical
EN/IEC 60947-5-1 Connections - terminals Control circuit : screw clamp terminals 2 cable(s) 12.5 mm² - cable stiffness: flexible - with cable end Power circuit : EverLink BTR screw connectors 1 cable(s) 135 mm² - cable stiffness: flexible - with cable end Power circuit : EverLink BTR screw connectors 1 cable(s) 135 mm² - cable stiffness: flexible - with cable end Power circuit : EverLink BTR screw connectors 1 cable(s) 135 mm² - cable stiffness: solid - without cable end Power circuit : EverLink BTR screw connectors 2 cable(s) 125 mm² - cable stiffness: flexible - with cable end Power circuit : EverLink BTR screw connectors 2 cable(s) 125 mm² - cable stiffness: flexible - with cable end Power circuit : EverLink BTR screw connectors 2 cable(s) 125 mm² - cable stiffness: flexible - with cable end Control circuit : screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 2 cable(s) 14 mm² - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: flexible - without cable end Control circuit : screw clamp terminals 2 cable(s) 14 mm² - cable stiffness: solid - without cable end Control circuit : Sr. N.m on screw clamp terminals - with screwdriver flat Ø 6 mm Control circuit : 1.7 N.m on screw clamp terminals - with screwdriver flat Ø 6 mm Control circuit : 5 N.m on EverLink BTR screw connectors - cable < 25 mm² hexagonal 4 mm Power circuit : 5 N.m on EverLink BTR screw connectors - cable < 2535 mm² hexagonal 4 mm Power circuit : 5 N.m on EverLink BTR screw connectors - cable < 2535 mm² hexagonal 4 mm Power circuit : 5 N.m on EverLink BTR screw connectors - cable < 2535 mm² hexagonal 4 mm Power circuit : 5 N.m on EverLink BTR screw connectors - cable < 2535 mm² hexagonal 4 mm Power circuit : 5 N.m on EverL	Mounting support	
end Power circuit: EverLink BTR screw connectors 1 cable(s) 135 mm² - cable stiffness: flexible - without cable end Power circuit: EverLink BTR screw connectors 1 cable(s) 135 mm² - cable stiffness: flexible - with cable end Power circuit: EverLink BTR screw connectors 1 cable(s) 135 mm² - cable stiffness: solid - without cable end Power circuit: EverLink BTR screw connectors 2 cable(s) 125 mm² - cable stiffness: flexible - without cable end Power circuit: EverLink BTR screw connectors 2 cable(s) 125 mm² - cable stiffness: flexible - with cable end Power circuit: EverLink BTR screw connectors 2 cable(s) 125 mm² - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: flexible - with cable end Control circuit: screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: solid - without cable end Control circuit: screw clamp terminals 2 cable(s) 14 mm² - cable stiffness: solid - without cable end Control circuit: screw clamp terminals 2 cable(s) 14 mm² - cable stiffness: solid - without cable end Control circuit: screw clamp terminals 2 cable(s) 14 mm² - cable stiffness: solid - without cable end Control circuit: screw clamp terminals 2 cable(s) 14 mm² - cable stiffness: solid - without cable end Control circuit: screw clamp terminals 2 cable(s) 14 mm² - cable stiffness: solid - without cable end Control circuit: screw clamp terminals 2 cable(s) 14 mm² - cable stiffness: solid - without cable end Control circuit: screw clamp terminals 2 cable(s) 14 mm² - cable stiffness: solid - without cable end Control circuit: screw clamp terminals 2 cable(s) 14 mm² - cable stiffness: solid - without cable end Control circuit: screw clamp terminals 2 cable(s) 14 mm² - cable stiffness: solid - without	Standards	
Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2 Power circuit: 5 N.m - on EverLink BTR screw connectors - cable <= 25 mm² hexagonal 4 mm Power circuit: 8 N.m - on EverLink BTR screw connectors - cable 2535 mm² hexagonal 4 mm Operating time 5565 ms closing 2030 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	Connections - terminals	end Power circuit: EverLink BTR screw connectors 1 cable(s) 135 mm² - cable stiffness: flexible - without cable end Power circuit: EverLink BTR screw connectors 1 cable(s) 135 mm² - cable stiffness: flexible - with cable end Power circuit: EverLink BTR screw connectors 1 cable(s) 135 mm² - cable stiffness: solid - without cable end Power circuit: EverLink BTR screw connectors 2 cable(s) 125 mm² - cable stiffness: flexible - without cable end Power circuit: EverLink BTR screw connectors 2 cable(s) 125 mm² - cable stiffness: flexible - with cable end Power circuit: EverLink BTR screw connectors 2 cable(s) 125 mm² - cable stiffness: solid - without cable end Control circuit: screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 2 cable(s) 14 mm² - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: flexible - without cable end Control circuit: screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: flexible - with cable end Control circuit: screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: flexible - with cable end Control circuit: screw clamp terminals 1 cable(s) 14 mm² - cable stiffness: solid - without cable end
2030 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	Tightening torque	Control circuit : 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2 Power circuit : 5 N.m - on EverLink BTR screw connectors - cable <= 25 mm² hexagonal 4 mm
B10d = 20000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1	Operating time	
Operating rate 3600 cyc/h at <= 60 °C	Safety reliability level	, , , , , , , , , , , , , , , , , , ,
	Operating rate	3600 cyc/h at <= 60 °C

Complementary

Coil technology	Built-in bidirectional peak limiting
Control circuit voltage limits	<= 0.1 Uc drop-out at 60 °C 0.851.1 Uc operational at 60 °C
Inrush power in VA	23 VA at 20 °C 50/60 Hz
Inrush power in W	19 W at 20 °C
Hold-in power consumption in VA	1.5 VA at 20 °C 50/60 Hz
Hold-in power consumption in W	0.9 W at 20 °C

Heat dissipation	0.9 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	25400 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	-2560 °C
Ambient air temperature for storage	-6080 °C
Permissible ambient air temperature around the device	-4070 °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	Shocks contactor open 15 Gn for 11 ms Vibrations contactor open 2 Gn, 5300 Hz Vibrations contactor closed 4 Gn, 5300 Hz Shocks contactor closed 10 Gn for 11 ms
Height	122 mm
Width	119 mm
Depth	120 mm
Product weight	2.164 kg
Colour	Grey SE GREY 6 Green SE GREEN 2

Offer Sustainability

Sustainable offer status	Green Premium product	
RoHS (date code: YYWW)	Compliant - since 1625 - Schneider Electric declaration of conformity	
	Schneider Electric declaration of conformity	
REACh	Reference not containing SVHC above the threshold	
	Reference not containing SVHC above the threshold	
Product environmental profile	Available	
	Product environmental	
Product end of life instructions	Available	
	🚰 End of life manual	