



## Main

Range of product	TeSys F
Product or component type	Contacteur
Device short name	LC1F
Contacteur application	Motor control Resistive load
Utilisation category	AC-1 AC-3
Control circuit type	AC
Coil type	Standard
Poles description	3P
Pole contact composition	3 NO
[Ie] rated operational current	185 A (<= 55 °C) AC AC-3 for power circuit 275 A (<= 40 °C) AC AC-1 for power circuit
Motor power kW	100 kW at 1000 V AC 50/60 Hz 100 kW at 415 V AC 50/60 Hz 100 kW at 440 V AC 50/60 Hz 110 kW at 500 V AC 50/60 Hz 110 kW at 660...690 V AC 50/60 Hz 55 kW at 220...230 V AC 50/60 Hz 90 kW at 380...400 V AC 50/60 Hz
Motor power hp	125 hp at 460/480 V AC 60 Hz conforming to CSA 125 hp at 460/480 V AC 60 Hz conforming to UL 150 hp at 575/600 V AC 60 Hz conforming to CSA 150 hp at 575/600 V AC 60 Hz conforming to UL 50 hp at 200/208 V AC 60 Hz conforming to CSA 50 hp at 200/208 V AC 60 Hz conforming to UL 60 hp at 230/240 V AC 60 Hz conforming to CSA 60 hp at 230/240 V AC 60 Hz conforming to UL
[Uc] control circuit voltage	220 V AC 40...400 Hz
Connections - terminals	Connector power circuit: 1 cable 150 mm <sup>2</sup> Ring lugs power circuit: 1 cable 150 mm <sup>2</sup> Control circuit: connector 1 cable 1...4 mm <sup>2</sup> - cable stiffness: flexible - with cable end Control circuit: connector 1 cable 1...4 mm <sup>2</sup> - cable stiffness: solid - without cable end Control circuit: connector 2 cable 1...2.5 mm <sup>2</sup> - cable stiffness: flexible - without cable end Control circuit: connector 2 cable 1...4 mm <sup>2</sup> - cable stiffness: flexible - with cable end Control circuit: connector 2 cable 1...4 mm <sup>2</sup> - cable stiffness: solid - without cable end Power circuit: bars 2 - without cable end

## Complementary

Coil technology	Without built-in bidirectional peak limiting diode suppressor
Auxiliary contacts type	Type integrated in coil (1 NO)
Auxiliary contact composition	1 NO
Control circuit voltage limits	0.35...0.55 U <sub>c</sub> at <= 55 °C drop-out 50 Hz 0.35...0.55 U <sub>c</sub> at <= 55 °C drop-out 60 Hz 0.85...1.1 U <sub>c</sub> at <= 55 °C operational 50 Hz 0.85...1.1 U <sub>c</sub> at <= 55 °C operational 60 Hz
[Ui] rated insulation voltage	1000 V conforming to IEC 60947-1 for power circuit 1500 V conforming to VDE 0110 group C for power circuit
[Uimp] rated impulse withstand voltage	8 kV coil not connected to the power circuit

Mounting support	Plate Rail
Tightening torque	Power circuit: 18 N.m - on bars Power circuit: 18 N.m - on connector - cable 150 mm <sup>2</sup> Power circuit: 18 N.m - on ring lugs - cable 150 mm <sup>2</sup> Control circuit: 1.2 N.m - on connector - cable 1...2.5 mm <sup>2</sup> Control circuit: 1.2 N.m - on connector - cable 1...4 mm <sup>2</sup>
[Ue] rated operational voltage	≤ 1000 V AC 16 Hz 2/3...200 Hz for power circuit
[I <sub>th</sub> ] conventional free air thermal current	275 A at ≤ 40 °C for power circuit
I <sub>rms</sub> rated making capacity	1850 A at ≤ 1000 V AC for power circuit conforming to IEC 60497-4-1
Rated breaking capacity	1480 A at ≤ 1000 V for power circuit conforming to IEC 60497-4-1
Permissible short-time rating	1500 A (≤ 40 °C) - short time current duration: 10 s - for power circuit 400 A (≤ 40 °C) - short time current duration: 10 min - for power circuit 500 A (≤ 40 °C) - short time current duration: 3 min - for power circuit 740 A (≤ 40 °C) - short time current duration: 1 min - for power circuit 920 A (≤ 40 °C) - short time current duration: 30 s - for power circuit
Associated fuse rating	200 A aM at ≤ 440 V for power circuit 315 A gG at ≤ 440 V for power circuit
Average impedance	0.33 mOhm at 50 Hz - I <sub>th</sub> 275 A for power circuit
Power dissipation per pole	12 W AC-3 25 W AC-1
Inrush power in VA	805 VA at 20 °C (cos φ 0.3 ) 970 VA at 20 °C (cos φ 0.3 )
Hold-in power consumption in VA	55 VA at 20 °C (cos φ 0.3 ) 50 Hz 66 VA at 20 °C (cos φ 0.3 ) 60 Hz
Operating time	20...35 ms on closing 7...15 ms on opening
Mechanical durability	10000000 cycles
Operating rate	2400 cyc/h at ≤ 55 °C
Height	168.5 mm
Width	174 mm
Depth	181 mm
Product weight	4.65 kg

## Environment

Standards	EN 60947-1 EN 60947-4-1 IEC 60947-1 IEC 60947-4-1 JEM 1038
Product certifications	BV CCC CSA DNV (Det Norske Veritas) GL GOST LROS (Lloyds register of shipping) RINA RMR0S UL
IP degree of protection	IP20 front face with cover conforming to IEC 60529 IP20 front face with cover conforming to VDE 0106
Protective treatment	TH
Ambient air temperature for operation	-60...80 °C
Ambient air temperature for storage	-5...55 °C
Permissible ambient air temperature around the device	-40...70 °C at U <sub>c</sub>
Operating altitude	3000 m without derating in temperature
Fire resistance	850 °C conforming to IEC 60695-2-1
Shock resistance	15 gn contactor closed 7 gn contactor opened
Vibration resistance	2 gn 5...300 Hz contactor opened 5 gn 5...300 Hz contactor closed
Heat dissipation	18...24 W at 40...400 Hz for control circuit