



## Main

Range	TeSys
Product name	TeSys F
Product or component type	Contactors
Device short name	LC1F
Contactors application	Resistive load Motor control
Utilisation category	AC-3 AC-1 AC-4
Poles description	3P
Power pole contact composition	3 NO
[Ue] rated operational voltage	$\leq 1000$ V AC 50/60 Hz $\leq 460$ V DC
[Ie] rated operational current	500 A (at $\leq 40$ °C) at $\leq 440$ V AC AC-1 400 A (at $\leq 55$ °C) at $\leq 440$ V AC AC-3
Motor power kW	185 kW at 1000 V AC 50/60 Hz (AC-3) 200 kW at 380...400 V AC 50/60 Hz (AC-3) 220 kW at 415 V AC 50/60 Hz (AC-3) 250 kW at 440 V AC 50/60 Hz (AC-3) 257 kW at 500 V AC 50/60 Hz (AC-3) 110 kW at 220...240 V AC 50/60 Hz (AC-3) 280 kW at 660...690 V AC 50/60 Hz (AC-3) 75 kW at 400 V AC 50/60 Hz (AC-4)

## Complementary

[Uc] control circuit voltage	48...1000 V AC 40...400 Hz with LX1/LX9 coil 48...440 V DC with LX4 coil 100...250 V AC 50/60 Hz with LXE coil 100...380 V DC with LXE coil
[Uimp] rated impulse withstand voltage	8 kV
Overtoltage category	III

[I <sub>th</sub> ] conventional free air thermal current	500 A (at 40 °C)
I <sub>rms</sub> rated making capacity	4000 A AC conforming to IEC 60947-4-1
Rated breaking capacity	3200 A conforming to IEC 60947-4-1
[I <sub>cw</sub> ] rated short-time withstand current	3600 A 40 °C - 10 s 2400 A 40 °C - 30 s 1700 A 40 °C - 1 min 1200 A 40 °C - 3 min 1000 A 40 °C - 10 min
Associated fuse rating	400 A aM at ≤ 440 V 500 A gG at ≤ 440 V
Average impedance	0.26 mOhm - I <sub>th</sub> 500 A 50 Hz
[U <sub>i</sub> ] rated insulation voltage	1000 V conforming to IEC 60947-4-1 1500 V conforming to VDE 0110 group C
Power dissipation per pole	65 W AC-1 42 W AC-3
Control circuit voltage limits	Operational: 0.85...1.1 U <sub>c</sub> AC 40...400 Hz with LX1/LX9 coil Drop-out: 0.3...0.5 U <sub>c</sub> AC 40...400 Hz with LX1/LX9 coil Operational: 0.85...1.1 U <sub>c</sub> DC with LX4 coil Drop-out: 0.2...0.35 U <sub>c</sub> DC with LX4 coil Operational: 85...275 V AC 50/60 Hz with LXE coil Drop-out: 0...60 V AC 50/60 Hz with LXE coil Operational: 85...418 V DC with LXE coil Drop-out: 0...45 V DC with LXE coil
Heat dissipation	14 W 2.2...5.5 W
Operating time	40...75 ms closing for with LX1/LX9 coil 100...170 ms opening for with LX1/LX9 coil 50...60 ms closing for with LX4 coil 45...60 ms opening for with LX4 coil 40...80 ms closing for with LXE coil 6...54 ms opening for with LXE coil
Mounting support	Plate
Standards	JIS C8201-4-1 IEC 60947-4-1 IEC 60947-1 EN 60947-4-1 EN 60947-1
Product certifications	CB ABS DNV RMRoS LROS (Lloyds register of shipping) BV RINA UL CSA UKCA
Connections - terminals	Power circuit: bar 2 cable(s) - busbar cross section: 30 x 5 mm Power circuit: lugs-ring terminals 2 cable(s) 150 mm <sup>2</sup> 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 with 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> solid without cable end Control circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> Control circuit: screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> Control circuit: screw clamp terminals 1.0 cable(s) 0.2...2.5 mm <sup>2</sup> flexible without cable end Control circuit: screw clamp terminals 1.0 cable(s) 0.25...2.5 mm <sup>2</sup> flexible with cable end Control circuit: screw clamp terminals 1.0 cable(s) 0.2...2.5 mm <sup>2</sup> solid without cable end
Tightening torque	Power circuit: 35 N.m Control circuit: 1.2 N.m Control circuit: 0.6 N.m
Mechanical durability	10 Mcycles
Inrush power in VA	1000...1150 VA, 40...400 Hz cos phi 0.9 (at 20 °C)with LX1/LX9 coil 920...1140 VA (at 20 °C)with LX4 coil 360...470 VA, 50/60 Hz cos phi 0.5 (at 20 °C)with LXE coil 410...450 VA (at 20 °C)with LXE coil
Hold-in power consumption in VA	12...18 VA, 40...400 Hz cos phi 0.9 (at 20 °C)with LX1/LX9 coil

4...7.5 VA (at 20 °C)with LX4 coil  
 4.5...7.0 VA, 50/60 Hz cos phi 0.5 (at 20 °C)with LXE coil  
 2.5...4.0 VA (at 20 °C)with LXE coil

Maximum operating rate	2400 cyc/h 55 °C
Compatibility code	LC1F

## Environment

IP degree of protection	IP20 front face with shrouds conforming to IEC 60529 IP20 front face with shrouds conforming to VDE 0106
Protective treatment	TH
Ambient air temperature for operation	-5...55 °C
Ambient air temperature for storage	-60...80 °C
Permissible ambient air temperature around the device	-40...70 °C
Operating altitude	3000 m without derating
Mechanical robustness	Vibrations contactor open: 1.5 Gn, 5...300 Hz Vibrations contactor closed: 5 Gn, 5...300 Hz Shocks contactor open: 6 Gn for 1/2 sine wave (11 ms) Shocks contactor closed: 15 Gn for 1/2 sine wave (11 ms)
Height	206 mm
Width	213 mm
Depth	219 mm
Net weight	8 kg

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	8.126 kg
Package 1 Height	25 cm
Package 1 width	25.6 cm
Package 1 Length	30.4 cm
Unit Type of Package 2	CAR
Number of Units in Package 2	1
Package 2 Weight	8.126 kg
Package 2 Height	26 cm
Package 2 width	24.5 cm
Package 2 Length	32.5 cm
Unit Type of Package 3	P06
Number of Units in Package 3	10
Package 3 Weight	90.12 kg
Package 3 Height	80 cm
Package 3 width	80 cm
Package 3 Length	60 cm

## Offer Sustainability

Sustainable offer status	Green Premium product
RECh Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Compliant <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
RoHS exemption information	<a href="#">Yes</a>
China RoHS Regulation	<a href="#">China RoHS declaration</a> Product out of China RoHS scope. Substance declaration for your information
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	<a href="#">End of Life Information</a>

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WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
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**Contractual warranty**

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Warranty	12 months
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