

# Product data sheet

Specifications



## TeSys F contactor - 3P(3 NO)-AC-3 ≤ 440V 1100A with coil LX1/ LX9 - 48...1000V AC 40/400Hz, LX4 - 48...440V DC

LC1F500

! To be discontinued on: 31 December 2023

! To be discontinued

### 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-4 AC-1 AC-3
Poles description	3P
Power pole contact composition	3 NO
[Ue] rated operational voltage	≤ 1000 V AC 50/60 Hz ≤ 460 V DC
[Ie] rated operational current	700 A (at <40 °C) at ≤ 440 V AC AC-1 500 A (at <55 °C) at ≤ 440 V AC AC-3
Motor power kW	250 kW at 380...400 V AC 50/60 Hz (AC-3) 280 kW at 415 V AC 50/60 Hz (AC-3) 295 kW at 440 V AC 50/60 Hz (AC-3) 335 kW at 1000 V AC 50/60 Hz (AC-3) 355 kW at 500 V AC 50/60 Hz (AC-3) 147 kW at 220...240 V AC 50/60 Hz (AC-3) 335 kW at 660...690 V AC 50/60 Hz (AC-3) 80 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
[Uimp] rated impulse withstand voltage	8 kV
Overvoltage category	III
[Ith] conventional free air thermal current	700 A (at 40 °C)
Irms rated making capacity	5000 A AC conforming to IEC 60947-4-1
Rated breaking capacity	4000 A conforming to IEC 60947-4-1
[Icw] rated short-time withstand current	4200 A 40 °C - 10 s 3200 A 40 °C - 30 s 2400 A 40 °C - 1 min 1500 A 40 °C - 3 min

1200 A 40 °C - 10 min

<b>Associated fuse rating</b>	500 A aM at <= 440 V 800 A gG at <= 440 V
<b>Average impedance</b>	0.18 mOhm - lth 700 A 50 Hz
<b>[Ui] rated insulation voltage</b>	1000 V conforming to IEC 60947-4-1 1500 V conforming to VDE 0110 group C
<b>Power dissipation per pole</b>	88 W AC-1 45 W AC-3
<b>Control circuit voltage limits</b>	Operational: 0.85...1.1 Uc AC 40...400 Hz with LX1/LX9 coil Drop-out: 0.3...0.5 Uc AC 40...400 Hz with LX1/LX9 coil Operational: 0.85...1.1 Uc DC with LX4 coil Drop-out: 0.2...0.35 Uc DC with LX4 coil
<b>Heat dissipation</b>	18 W
<b>Operating time</b>	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
<b>Mounting support</b>	Plate
<b>Standards</b>	JIS C8201-4-1 EN 60947-1 IEC 60947-1 EN 60947-4-1 IEC 60947-4-1
<b>Product certifications</b>	CSA LROS (Lloyds register of shipping) DNV BV ABS CB RMRoS RINA UL UKCA
<b>Connections - terminals</b>	Power circuit: lugs-ring terminals 2 cable(s) 240 mm <sup>2</sup> Power circuit: bar 2 cable(s) - busbar cross section: 40 x 5 mm Power circuit: bolted connection 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>
<b>Tightening torque</b>	Power circuit: 35 N.m Control circuit: 1.2 N.m
<b>Mechanical durability</b>	10 Mcycles
<b>Inrush power in VA</b>	1050...1150 VA, 40...400 Hz cos phi 0.9 (at 20 °C)with LX1/LX9 coil 990...1220 VA (at 20 °C)with LX4 coil
<b>Hold-in power consumption in VA</b>	16...20 VA, 40...400 Hz cos phi 0.9 (at 20 °C)with LX1/LX9 coil 4.54...8 VA (at 20 °C)with LX4 coil
<b>Maximum operating rate</b>	2400 cyc/h 55 °C
<b>Compatibility code</b>	LC1F

## Environment

<b>IP degree of protection</b>	IP20 front face with shrouds conforming to IEC 60529 IP20 front face with shrouds conforming to VDE 0106
<b>Protective treatment</b>	TH
<b>Ambient air temperature for operation</b>	-5...55 °C
<b>Ambient air temperature for storage</b>	-60...80 °C
<b>Permissible ambient air temperature around the device</b>	-40...70 °C
<b>Operating altitude</b>	3000 m without derating
<b>Mechanical robustness</b>	Vibrations contactor open: 2 Gn, 5...300 Hz

Vibrations contactor closed: 4 Gn, 5...300 Hz  
Shocks contactor open: 9 Gn for 1/2 sine wave (11 ms)  
Shocks contactor closed: 15 Gn for 1/2 sine wave (11 ms)

Height	238 mm
Width	233 mm
Depth	232 mm
Net weight	9.75 kg

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	10.398 kg
Package 1 Height	27.5 cm
Package 1 width	30 cm
Package 1 Length	30 cm
Unit Type of Package 2	P06
Number of Units in Package 2	8
Package 2 Weight	92.332 kg
Package 2 Height	77 cm
Package 2 width	80 cm
Package 2 Length	60 cm
Package 3 Height	80 cm

## Offer Sustainability

Sustainable offer status	Green Premium product
REACH 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>
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>

## Contractual warranty

Warranty	18 months
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## Recommended replacement(s)

LC1F500 is replaced by the following group of products:

Linking to group 1

1x



High power contactor, TeSys Giga, 3 pole (3NO), AC-3 <=440V 500A, advanced version, 24...48V wide band AC/DC coil

LC1G500BEEA

1x



High power contactor, TeSys Giga, 3 pole (3NO), AC-3 <=440V 500A, advanced version, 48...130V wide band AC/DC coil

LC1G500EHEA

1x



High power contactor, TeSys Giga, 3 pole (3NO), AC-3 <=440V 500A, standard version, 48...130V wide band AC/DC coil

LC1G500EHEN

1x



High power contactor, TeSys Giga, 3 pole (3NO), AC-3 <=440V 500A, standard version, 100...250V wide band AC/DC coil

LC1G500KUEN

1x



High power contactor, TeSys Giga, 3 pole (3NO), AC-3 <=440V 500A, advanced version, 200...500V wide band AC/DC coil

LC1G500LSEA