

Product datasheet

Specifications



TeSys F contactor - 3P(3 NO)-
AC-3 \leq 440V 225A with coil LX9
- 24...600V AC 40/400Hz, LX4 -
24...460V DC, LXE - 100...250V AC
50/60Hz or 100...380V DC

LC1F225

⚠ To be discontinued

⚠ To be discontinued on: 31 December 2023

Main

Range	TeSys
Product name	TeSys F
Product or component type	Contactor
Device short name	LC1F
Contactor application	Motor control Resistive load
Utilisation category	AC-4 AC-1 AC-3
Poles description	3P
Power pole contact composition	3 NO
[Ue] rated operational voltage	\leq 690 V AC 50/60 Hz \leq 460 V DC
[Ie] rated operational current	315 A (at \leq 40 °C) at \leq 440 V AC-1 225 A (at \leq 55 °C) at \leq 440 V AC-3
Motor power kW	110 kW at 380...400 V AC 50/60 Hz (AC-3) 110 kW at 415 V AC 50/60 Hz (AC-3) 110 kW at 440 V AC 50/60 Hz (AC-3) 129 kW at 500 V AC 50/60 Hz (AC-3) 63 kW at 220...240 V AC 50/60 Hz (AC-3) 129 kW at 660...690 V AC 50/60 Hz (AC-3) 40 kW at 400 V AC 50/60 Hz (AC-4)

Complementary

[Uc] control circuit voltage	24...575 V AC 40...400 Hz with LX9 coil 24...460 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
Overvoltage category	III
[Ith] conventional free air thermal current	315 A (at 40 °C)
Irms rated making capacity	2250 A conforming to IEC 60947-4-1
Rated breaking capacity	1800 A conforming to IEC 60947-4-1

[Icw] rated short-time withstand current	1800 A 40 °C - 10 s 1000 A 40 °C - 30 s 850 A 40 °C - 1 min 560 A 40 °C - 3 min 440 A 40 °C - 10 min
Associated fuse rating	315 A gG at ≤ 440 V 250 A aM at ≤ 440 V
Average impedance	0.32 mOhm - Ith 315 A 50 Hz
[Ui] rated insulation voltage	1000 V conforming to IEC 60947-4-1 1500 V conforming to VDE 0110 group C
Power dissipation per pole	32 W AC-1 16 W AC-3
Control circuit voltage limits	Operational: 0.85...1.1 Uc AC 40...400 Hz with LX9 coil Drop-out: 0.2...0.55 Uc AC 40...400 Hz with LX9 coil Operational: 0.85...1.1 Uc DC with LX4 coil Drop-out: 0.15...0.2 Uc 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	8...9.8 W 2.2...2.5 W
Operating time	35 ms closing for with LX9 coil 130 ms opening for with LX9 coil 30...40 ms closing for with LX4 coil 30...50 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	UL LROS (Lloyds register of shipping) BV CB ABS DNV CSA RMRoS RINA UKCA
Connections - terminals	Power circuit: lugs-ring terminals 1 cable(s) 185 mm ² Power circuit: connector 1 cable(s) 185 mm ² Power circuit: bar 2 cable(s) - busbar cross section: 32 x 4 mm Power circuit: bolted connection Control circuit: screw clamp terminals 1 cable(s) 1...4 mm ² flexible without cable end Control circuit: screw clamp terminals 2 cable(s) 1...4 mm ² flexible with cable end Control circuit: screw clamp terminals 1 cable(s) 1...4 mm ² flexible with cable end Control circuit: screw clamp terminals 2 cable(s) 1...2.5 mm ² solid without cable end Control circuit: screw clamp terminals 1 cable(s) 1...4 mm ² Control circuit: screw clamp terminals 2 cable(s) 1...4 mm ² Control circuit: screw clamp terminals 1.0 cable(s) 0.2...2.5 mm ² flexible without cable end Control circuit: screw clamp terminals 1.0 cable(s) 0.25...2.5 mm ² flexible with cable end Control circuit: screw clamp terminals 1.0 cable(s) 0.2...2.5 mm ² 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	950...1180 VA, 40...400 Hz cos phi 0.9 (at 20 °C)with LX9 coil 737...902 VA (at 20 °C)with LX4 coil 280...310 VA, 50/60 Hz cos phi 0.5 (at 20 °C)with LXE coil 270...320 VA (at 20 °C)with LXE coil
Hold-in power consumption in VA	8.9...10.9 VA, 40...400 Hz cos phi 0.9 (at 20 °C)with LX9 coil 4.13...5.07 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: 2 Gn, 5...300 Hz Vibrations contactor closed: 5 Gn, 5...300 Hz Shocks contactor open: 7 Gn for 1/2 sine wave (11 ms) Shocks contactor closed: 15 Gn for 1/2 sine wave (11 ms)
Height	197 mm
Width	168.5 mm
Depth	181 mm
Net weight	5.55 kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	23.000 cm
Package 1 Width	25.000 cm
Package 1 Length	29.000 cm
Package 1 Weight	4.694 kg
Unit Type of Package 2	P06
Number of Units in Package 2	12
Package 2 Height	75.000 cm
Package 2 Width	60.000 cm
Package 2 Length	80.000 cm
Package 2 Weight	64.000 kg

Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	REACH Declaration
EU RoHS Directive	Compliant EU RoHS Declaration
Mercury free	Yes
China RoHS Regulation	China RoHS declaration Product out of China RoHS scope. Substance declaration for your information
RoHS exemption information	Yes
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End of Life Information
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
PVC free	Yes




Contractual warranty

Warranty


18 months

Recommended replacement(s)

LC1F225 is replaced by the following group of products:

1x		High power contactor, TeSys Giga, 3 pole (3NO), AC-3 <=440V 225A, standard version, 48...130V wide band AC/DC coil LC1G225EHEN
1x		High power contactor, TeSys Giga, 3 pole (3NO), AC-3 <=440V 225A, standard version, 100...250V wide band AC/DC coil LC1G225KUEN
1x		High power contactor, TeSys Giga, 3 pole (3NO), AC-3 <=440V 225A, advanced version, 200...500V wide band AC/DC coil LC1G225LSEA

Or LC1F225 may be replaced by any of the following products:

1x		High power contactor, TeSys Giga, 3 pole (3NO), AC-3 <=440V 225A, standard version, 48...130V wide band AC/DC coil LC1G225EHEN
1x		High power contactor, TeSys Giga, 3 pole (3NO), AC-3 <=440V 225A, advanced version, 200...500V wide band AC/DC coil LC1G225LSEA
1x		High power contactor, TeSys Giga, 3 pole (3NO), AC-3 <=440V 225A, standard version, 100...250V wide band AC/DC coil LC1G225KUEN