

# Product datasheet

Specifications



TeSys F contactor - 3P(3 NO)-  
AC-3 <= 440V 185A with coil LX9  
- 24...600V AC 40/400Hz, LX4 -  
24...460V DC, LXE - 100...250V AC  
50/60Hz or 100...380V DC

LC1F185

⚠ 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	Resistive load Motor control
Utilisation category	AC-3 AC-4 AC-1
Poles description	3P
Power pole contact composition	3 NO
[Ue] rated operational voltage	<= 690 V AC 50/60 Hz <= 460 V DC
[Ie] rated operational current	275 A (at <40 °C) at <= 440 V AC-1 185 A (at <55 °C) at <= 440 V AC-3
Motor power kW	100 kW at 415 V AC 50/60 Hz (AC-3) 100 kW at 440 V AC 50/60 Hz (AC-3) 110 kW at 500 V AC 50/60 Hz (AC-3) 90 kW at 380...400 V AC 50/60 Hz (AC-3) 55 kW at 220...240 V AC 50/60 Hz (AC-3) 110 kW at 660...690 V AC 50/60 Hz (AC-3) 33 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	275 A (at 40 °C)
Irms rated making capacity	1850 A conforming to IEC 60947-4-1
Rated breaking capacity	1480 A conforming to IEC 60947-4-1

<b>[Icw] rated short-time withstand current</b>	1500 A 40 °C - 10 s 920 A 40 °C - 30 s 740 A 40 °C - 1 min 500 A 40 °C - 3 min 400 A 40 °C - 10 min
<b>Associated fuse rating</b>	200 A aM at <= 440 V 315 A gG at <= 440 V
<b>Average impedance</b>	0.33 mOhm - Ith 275 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>	25 W AC-1 12 W AC-3
<b>Control circuit voltage limits</b>	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
<b>Heat dissipation</b>	8...9.8 W 2.2...2.5 W
<b>Operating time</b>	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
<b>Mounting support</b>	Plate
<b>Standards</b>	IEC 60947-4-1 EN 60947-1 JIS C8201-4-1 EN 60947-4-1 IEC 60947-1
<b>Product certifications</b>	ABS LROS (Lloyds register of shipping) RINA CSA CB UL BV RMRoS DNV UKCA
<b>Connections - terminals</b>	Power circuit: bar 2 cable(s) - busbar cross section: 25 x 3 mm Power circuit: lugs-ring terminals 1 cable(s) 150 mm² Power circuit: connector 1 cable(s) 150 mm² Power circuit: bolted connection Control circuit: screw clamp terminals 1 cable(s) 1...4 mm²flexible without cable end Control circuit: screw clamp terminals 2 cable(s) 1...4 mm²flexible with cable end Control circuit: screw clamp terminals 1 cable(s) 1...4 mm²flexible with cable end Control circuit: screw clamp terminals 2 cable(s) 1...2.5 mm²solid without cable end Control circuit: screw clamp terminals 1 cable(s) 1...4 mm² Control circuit: screw clamp terminals 2 cable(s) 1...4 mm² Control circuit: screw clamp terminals 1.0 cable(s) 0.2...2.5 mm²flexible without cable end Control circuit: screw clamp terminals 1.0 cable(s) 0.25...2.5 mm²flexible with cable end Control circuit: screw clamp terminals 1.0 cable(s) 0.2...2.5 mm²solid without cable end
<b>Tightening torque</b>	Power circuit: 18 N.m Control circuit: 1.2 N.m Control circuit: 0.6 N.m
<b>Mechanical durability</b>	10 Mcycles
<b>Inrush power in VA</b>	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
<b>Hold-in power consumption in VA</b>	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
<b>Compatibility code</b>	LC1F

Environment

IP degree of protection	IP2X front face with shrouds conforming to IEC 60529 IP2X 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
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	174 mm
Width	168.5 mm
Depth	181 mm
Net weight	5.45 kg
Colour	-

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	24.000 cm
Package 1 Width	27.000 cm
Package 1 Length	25.000 cm
Package 1 Weight	4.379 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	61.048 kg

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
China RoHS Regulation	<a href="#">China RoHS declaration</a> Product out of China RoHS scope. Substance declaration for your information
RoHS exemption information	<a href="#">Yes</a>
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
PVC free	Yes

Contractual warranty

Warranty18 months

Recommended replacement(s)

LC1F185 is replaced by the following group of products:

1x		High power contactor, TeSys Giga, 3 pole (3NO), AC-3 <=440V 185A, standard version, 48...130V wide band AC/DC coil LC1G185EHEN
1x		High power contactor, TeSys Giga, 3 pole (3NO), AC-3 <=440V 185A, standard version, 100...250V wide band AC/DC coil LC1G185KUEN
1x		High power contactor, TeSys Giga, 3 pole (3NO), AC-3 <=440V 185A, advanced version, 200...500V wide band AC/DC coil LC1G185LSEA

Or LC1F185 may be replaced by any of the following products:

1x		High power contactor, TeSys Giga, 3 pole (3NO), AC-3 <=440V 185A, standard version, 48...130V wide band AC/DC coil LC1G185EHEN
1x		High power contactor, TeSys Giga, 3 pole (3NO), AC-3 <=440V 185A, advanced version, 200...500V wide band AC/DC coil LC1G185LSEA
1x		High power contactor, TeSys Giga, 3 pole (3NO), AC-3 <=440V 185A, standard version, 100...250V wide band AC/DC coil LC1G185KUEN