Product data sheet
Characteristics

LC1F185
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

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
[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
[Icw] rated short-time withstand current	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
Associated fuse rating	200 A aM at <= 440 V 315 A gG at <= 440 V
Average impedance	0.33 mOhm - Ith 275 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	25 W AC-1 12 W AC-3

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein.
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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	IEC 60947-4-1 EN 60947-1 JIS C8201-4-1 EN 60947-4-1 IEC 60947-1
Product certifications	ABS LROS (Lloyds register of shipping) RINA CSA CB UL BV RMRoS DNV
Connections - terminals	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
Tightening torque	Power circuit: 18 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
Compatibility code	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

Package 1 Weight	4.379 kg
Package 1 Height	2.400 dm
Package 1 width	2.700 dm
Package 1 Length	2.500 dm

Offer Sustainability

Sustainable offer status	Green Premium product
REACh Regulation	REACh Declaration
EU RoHS Directive	Compliant EU RoHS Declaration
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS Declaration
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