

# Product datasheet

Specifications



## TeSys F - star delta starter - 3 x 3P (3 NO) - 185 A - 48 V AC coil

LC3F185E7

⚠ Discontinued on: 1 Nov 2020

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### Main

Range	TeSys
Product name	TeSys F
Product or component type	Star delta starter
Device short name	LC3F
Contactors application	Motor control
Utilisation category	AC-3
Device presentation	Pre-wired
Poles description	3 x 3P
power pole contact composition	3 x 3 NO
[Ue] rated operational voltage	Power circuit: <= 1000 V AC 16 Hz 2/3...200 Hz
[Ie] rated operational current	185 A (at <55 °C) at <= 440 V AC AC-3 for power circuit
Motor power kW	160 kW at 380/400 V AC 50/60 Hz 160 kW at 415 V AC 50/60 Hz 185 kW at 440 V AC 50/60 Hz 90 kW at 220/230 V AC 50/60 Hz
Control circuit type	AC at 50/60 Hz
[Uc] control circuit voltage	48 V AC 50/60 Hz
Auxiliary contact composition	1 NC for KM1 star contactor 1 NO for KM1 star contactor 2 NC for KM2 line contactor 1 NO for KM2 line contactor 1 NC for KM3 delta contactor 2 NO for KM3 delta contactor
[Uimp] rated impulse withstand voltage	8 kV
[Ui] rated insulation voltage	1000 V conforming to IEC 60947-4-1 1500 V conforming to VDE 0110 group C
Interlocking type	Without start delta mechanical interlock
Mounting support	Plate
Standards	IEC 60947-1 EN 60947-4-1 JIS C8201-4-1 IEC 60947-4-1 EN 60947-1

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

<b>Product certifications</b>	RINA UL CSA ABS DNV RMRoS CB LROS (Lloyds register of shipping) CCC
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## Complementary

<b>[I<sub>th</sub>] conventional free air thermal current</b>	275 A 40 °C
<b>Irms rated making capacity</b>	1850 A conforming to IEC 60947-4-1
<b>Rated breaking capacity</b>	1480 A conforming to IEC 60947-4-1
<b>[I<sub>cw</sub>] 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>	315 A gG at ≤ 440 V 200 A aM at ≤ 440 V
<b>Connections - terminals</b>	Power circuit: lugs-ring terminals 1 150 mm <sup>2</sup> Power circuit: connector 1 150 mm <sup>2</sup> Control circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 2 1...2.5 mm <sup>2</sup> - cable stiffness: flexible with cable end Control circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 2 1...4 mm <sup>2</sup> - cable stiffness: flexible without cable end Control circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: solid without cable end Control circuit: screw clamp terminals 2 1...4 mm <sup>2</sup> - cable stiffness: solid without cable end Power circuit: bar 2 - busbar cross section: 25 x 3 mm Power circuit: bolted connection
<b>connections bolt diameter</b>	M8
<b>Tightening torque</b>	Control circuit: 1.2 N.m Power circuit: 18 N.m
<b>Operating time</b>	20...35 ms closing 7...15 ms opening
<b>Mechanical durability</b>	10 Mcycles
<b>Maximum operating rate</b>	2400 cyc/h 55 °C
<b>Starting time</b>	20 s
<b>Control circuit voltage limits</b>	Operational: 0.85...1.1 U <sub>c</sub> at 50/60 Hz (at <55 °C) Drop-out: 0.35...0.55 U <sub>c</sub> at 50/60 Hz (at <55 °C)
<b>Inrush power in VA</b>	805 VA 50 Hz cos phi 0.3 (at 20 °C) 970 VA 60 Hz cos phi 0.3 (at 20 °C)
<b>Hold-in power consumption in VA</b>	55 VA 50 Hz cos phi 0.3 (at 20 °C) 66 VA 60 Hz cos phi 0.3 (at 20 °C)
<b>Heat dissipation</b>	18...24 W
<b>Width</b>	525 mm
<b>Height</b>	110 mm
<b>Depth</b>	235 mm
<b>Net weight</b>	16.5 kg

## 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 storage</b>	-60...80 °C
<b>Ambient air temperature for operation</b>	-5...55 °C -40...70 °C at Uc
<b>Operating altitude</b>	3000 m without derating
<b>Mechanical robustness</b>	Vibrations contactor open: 2 Gn, 5...300 Hz Shocks contactor closed: 15 Gn for 11 ms

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Height</b>	29 cm
<b>Package 1 Width</b>	54.5 cm
<b>Package 1 Length</b>	64.5 cm
<b>Package 1 Weight</b>	19 kg

## Contractual warranty

<b>Warranty (in months)</b>	18
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## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

### Use Better



#### Materials and Substances

PVC free

Yes

### Use Longer



#### Lifetime extension

Repair

No

### Use Again



#### Repack and remanufacture

WEEE Label



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

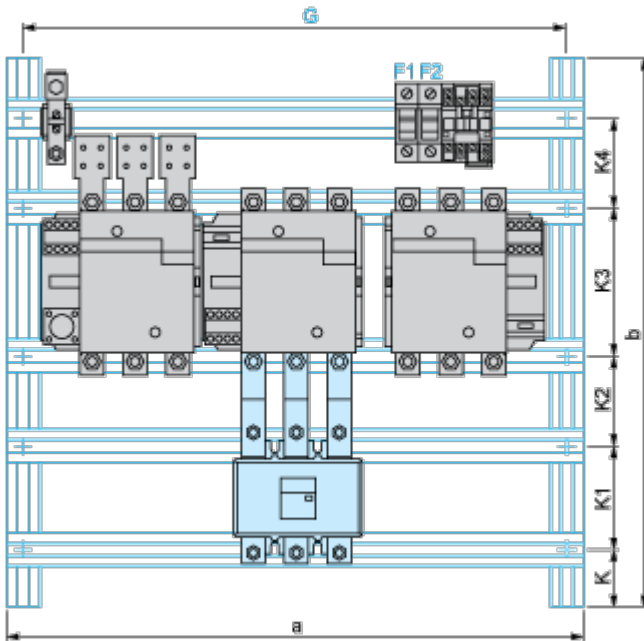
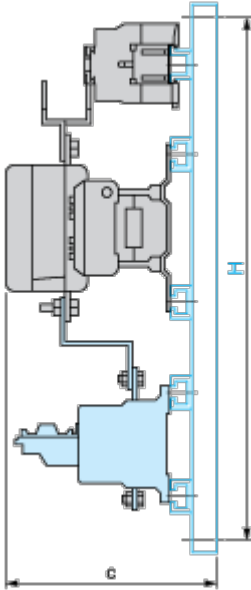
Dimensions Drawings

Dimensions and Drawings

Chassis mounted starters

Pre-assembled: LC3 F185 to LC3 F400

For customer assembly: 2 x LC1 F●●● and 1 x LC1 D150 or 3 x LC1 F●●●



	a	b	c	G	H	K	K1	K2	K3	K4
LC3 F185 or 2 x LC1 F●●● + 1 x LC1 D with components F185	565	675	235	525	625	160	110	80	110	80
LC3 F225 or 3 x LC1 F●●● with components F225	565	675	235	525	625	160	110	80	110	80

	a	b	c	G	H	K	K1	K2	K3	K4
LC3 F265 or 3 x LC1 F●●● with components F265	665	775	266	625	725	165	110	100	110	110
LC3 F330 or 3 x LC1 F●●● with components F330	765	975	276	725	825	195	140	100	110	180
LC3 F400 or 3 x LC1 F●●● with components F400	765	975	276	725	925	195	140	100	180	110