

Product datasheet

Specifications



TeSys F reversing contactor - 3P(3 NO) AC-3 <= 440 V 185 A 110 V AC 40...400 Hz

LC2F185F7

To be discontinued on: 31 December 2023

To be discontinued

Main

Range	TeSys
Product name	TeSys F
Product or component type	Reversing contactor
Device short name	LC2F
Contactor application	Resistive load Motor control
Utilisation category	AC-1 AC-3
Device presentation	Preamsembled with reversing power busbar
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	185 A (at <40 °C) at <= 440 V AC AC-3 275 A (at <40 °C) at <= 440 V AC AC-1
Motor power kW	100 kW at 1000 V AC 50/60 Hz 100 kW at 415 V AC 50/60 Hz 100 kW at 440 V AC 50/60 Hz 110 kW at 500 V AC 50/60 Hz 90 kW at 380...400 V AC 50/60 Hz 55 kW at 220...240 V AC 50/60 Hz 110 kW at 660...690 V AC 50/60 Hz
Control circuit type	AC at 40...400 Hz
[Uc] control circuit voltage	110 V AC 40...400 Hz
[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	1150 A AC 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 - lth 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	12 W AC-3
Interlocking type	Mechanical
Mounting support	Plate
Standards	EN 60947-4-1 IEC 60947-1 JIS C8201-4-1 EN 60947-1 IEC 60947-4-1
Product certifications	CCC LROS (Lloyds register of shipping) DNV CB UL RMRoS ABS CSA RINA UKCA
Connections - terminals	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 without 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 mm²flexible with cable end Control circuit: screw clamp terminals 1 cable(s) 1...4 mm²solid without cable end Control circuit: screw clamp terminals 2 cable(s) 1...4 mm²solid without cable end 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
Tightening torque	Control circuit: 1.2 N.m Power circuit: 18 N.m
Operating time	20...35 ms closing 7...15 ms opening
Mechanical durability	10 Mcycles
Maximum operating rate	2400 cyc/h 55 °C

Complementary

Control circuit voltage limits	Operational: 0.85...1.1 Uc at 50/60 Hz (at <55 °C) Drop-out: 0.2...0.55 Uc at 50/60 Hz (at <55 °C)
Inrush power in VA	805 VA 50 Hz cos phi 0.3 (at 20 °C) 970 VA 60 Hz cos phi 0.3 (at 20 °C)
Hold-in power consumption in VA	55 VA 50 Hz cos phi 0.3 (at 20 °C) 66 VA 60 Hz cos phi 0.3 (at 20 °C)
Heat dissipation	18...24 W

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
Operating altitude	3000 m without derating
Mechanical robustness	Vibrations contactor open: 2 Gn, 5...300 Hz Shocks contactor closed: 15 Gn for 11 ms Vibrations contactor closed: 5 Gn, 5...300 Hz Shocks contactor open: 7 Gn for 11 ms

Height	174 mm
Width	357 mm
Depth	181 mm
Net weight	10.9 kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	22.0 cm
Package 1 Width	36.0 cm
Package 1 Length	54.0 cm
Package 1 Weight	11.46 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
----------	-----------

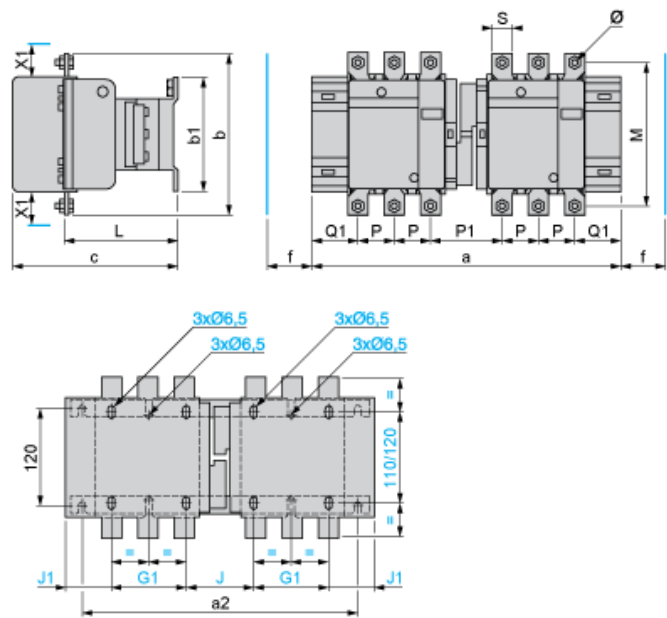
Product datasheet

LC2F185F7

Dimensions Drawings

Dimensions and Drawings

Pre-assembled: LC2 F115 to F265 (Reverser supplied on 2 bars which can be used for fixing the device)



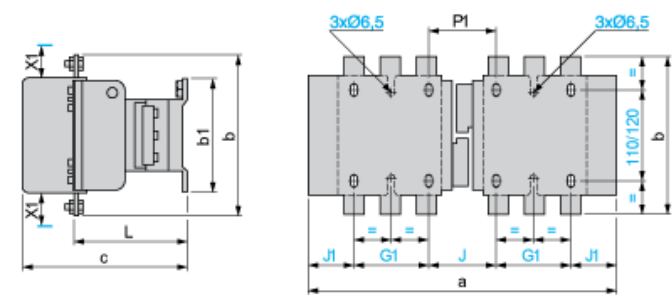
NOTE: Bar fixing centers Vertical: 120 mm, Horizontal: a2 see table.
NOTE: X1 (mm) = Minimum electrical clearance according to operating voltage and breaking capacity.

LC1	200...500 V	660...1000 V
F115, F150	10	15
F185	10	15
F225, F265	10	15

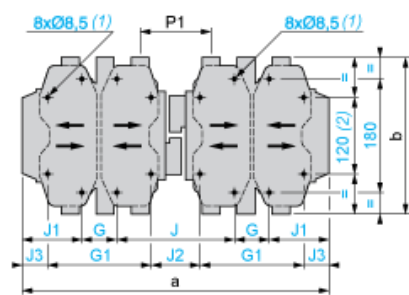
LC2		a	a2	b	b1	c	G1	J	J1	L	M	P	P1	Q1	S	f	Ø
F115	3P	345	317	162	137	171	80	71	57	107	147	37	77	60	20	131	M6
	4P	419	378	162	137	171	80	108	75.5	107	147	37	77	60	20	131	M6
F150	3P	345	317	170	137	171	80	71	57	107	150	40	71	57	20	131	M8
	4P	422	381	170	137	171	80	111	75.5	107	150	40	71	55.5	20	131	M8
F185	3P	357	326	174	137	181	80	78	59.5	113.5	154	40	78	59.5	20	130	M8
	4P	437	390	174	137	181	80	118	79.5	113.5	154	40	78	59.5	20	130	M8
F225	3P	357	326	197	137	181	80	78	59.5	113.5	172	48	62	51.5	25	130	M10
	4P	437	390	197	137	181	80	118	79.5	113.5	172	48	54	47.5	25	130	M10
F265	3P	425	386	203	145	213	96	109	61.5	141	178	48	100	66.5	25	147	M10
	4P	521	464	203	145	213	96	157	85.5	141	178	48	100	66.5	25	147	M10

NOTE: For customer assembly, fixing recommended on AM1 EC uprights, please consult your Regional Sales Office.

2 x LC1 F115 to F330



2 x LC1 F400, F500, F630, F800



- (1) Except LC1 F630 and F800: 4 x Ø10.5.
- (2) Except LC1 F630 and F800.

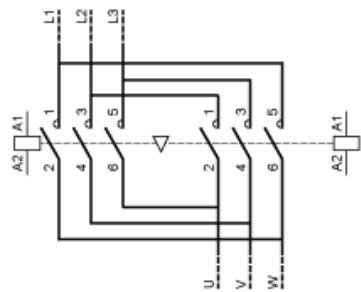
NOTE: X1 (mm) = Minimum electrical clearance according to operating voltage and breaking capacity.

LC1		200...500 V		660... 1000 V		200...690 V		1000 V	
F115, F150		10		15		–		–	
F185		10		15		–		–	
F225, F265		10		15		–		–	
F330		10		15		–		–	
F400		15		20		–		–	
F500		15		20		–		–	
F630		20		30		–		–	
F800		–		–		10		20	

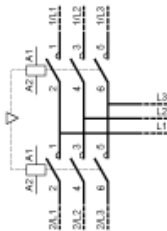
2 x LC1		a	b	b1	c	G	G1	J	J1	J2	J3	L	P1
F115	3P	345	162	137	171	–	80	71	57	–	–	107	77
	4P	419	162	137	171	–	80	108	75.5	–	–	107	77
F150	3P	345	170	137	171	–	80	71	57	–	–	107	71
	4P	422	170	137	171	–	80	111	75.5	–	–	107	71
F185	3P	357	174	137	181	–	80	78	59.5	–	–	113.5	78
	4P	437	174	137	181	–	80	118	79.5	–	–	113.5	78
F225	3P	357	197	137	181	–	80	78	59.5	–	–	113.5	62
	4P	437	197	137	181	–	80	118	79.5	–	–	113.5	54
F265	3P	425	203	145	213	–	96	109	61.5	–	–	141	100
	4P	521	203	145	213	–	96	157	85.5	–	–	141	100
F330	3P	447	206	145	219	–	96	124	65.5	–	–	145	107
	4P	543	206	145	219	–	96	172	89.5	–	–	145	107
F400	3P	446	206	209	219	80	170	157	64.5	67	19.5	145	107
	4P	542	206	209	219	80	170	157	112.5	67	67.5	145	107
F500	3P	485	238	209	232	80	170	156	84.5	66	39.5	146	112
	4P	595	238	209	232	140	230	156	79.5	66	34.5	146	112
F630	3P	636	304	280	255	180	–	139	68.5	–	–	155	137
	4P	796	304	280	255	240	–	139	88.5	–	–	155	137
F800	3P	636	304	280	255	180	–	139	68.5	–	–	155	137

Connections and Schema

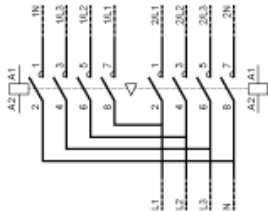
Reversing contactors for motor control LC2 F: 2xLC1 F Horizontally mounted



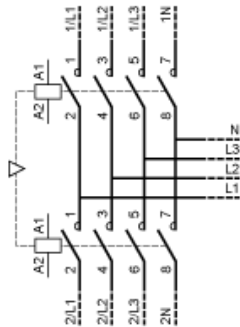
Reversing contactors for motor control LC2 F: 2xLC1 F Vertically mounted



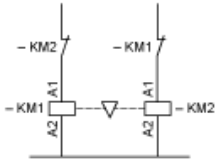
Changeover contactor pairs for distribution LC2 F: 2xLC1 F Horizontally mounted



Changeover contactor pairs for distribution LC2 F: 2xLC1 F Vertically mounted



Electrical interlocking of reversers fitted with mechanical interlock without integral electrical contacts:
LA9 F



Recommended replacement(s)

LC2F185F7 is replaced by the following group of products:

1x		Change-over connection bar, for TeSys Giga contactor LC1G115-225, 3 pole LA9G3750
----	---	--

1x



Mechanical Interlock, for TeSys Giga contactor LC1G115-500, IP20
LA9G970

2x



High power contactor, TeSys Giga, 3 pole (3NO), AC-3 <=440V 185A, standard version, 48...130V wide band AC/DC coil
LC1G185EHEN

Or LC2F185F7 is replaced by the following group of products:

1x



Reverser connection bar, TeSys Giga contactor, for LC1G115-225, 3 pole
LA9G3760

1x



Mechanical Interlock, for TeSys Giga contactor LC1G115-500, IP20
LA9G970

2x



High power contactor, TeSys Giga, 3 pole (3NO), AC-3 <=440V 185A, standard version, 48...130V wide band AC/DC coil
LC1G185EHEN