

Product datasheet

Specifications



TeSys F contactor - 3P (3 NO) - AC-3 - <= 440 V 225 A - coil 24 V DC

LC1F225BD

⚠ Discontinued on: 13 Jan 2023

⚠ End-of-service on: 31 Mar 2024

⚠ Discontinued

Main

Range	TeSys
Range Of Product	TeSys F
Product Or Component Type	Contactor
Device Short Name	LC1F
Contactor Application	Resistive load Motor control
Utilisation Category	AC-1 AC-4 AC-3
Poles Description	3P
[Ue] Rated Operational Voltage	<= 460 V DC <= 690 V AC 50/60 Hz
[Uc] Control Circuit Voltage	24 V DC
[Ie] Rated Operational Current	315 A (at <40 °C) at <= 440 V AC-1 225 A (at <55 °C) at <= 440 V AC-3

Complementary

[Uimp] Rated Impulse Withstand Voltage	8 kV
[Ith] Conventional Free Air Thermal Current	315 A (at 40 °C)
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
Overvoltage Category	III
Power Pole Contact Composition	3 NO

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

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) 129 kW at 660...690 V AC 50/60 Hz (AC-3) 63 kW at 220...230 V AC 50/60 Hz (AC-3) 40 kW at 400 V AC 50/60 Hz (AC-4)
Control Circuit Voltage Limits	Operational: 0.85...1.1 Uc (at 55 °C) Drop-out: 0.15...0.2 Uc (at 55 °C)
Mechanical Durability	10 Mcycles
Inrush Power In W	800 W (at 20 °C)
Hold-In Power Consumption In W	5 W at 20 °C
Maximum Operating Rate	2400 cyc/h 55 °C
Operating Time	30...40 ms closing 30...50 ms opening
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: 32 x 4 mm Power circuit: lugs-ring terminals 1 cable(s) 185 mm² Power circuit: connector 1 cable(s) 185 mm² Power circuit: bolted connection
Tightening Torque	Control circuit: 1.2 N.m Power circuit: 35 N.m
Mounting Support	Plate
Heat Dissipation	5 W
Motor Power Range	55...100 kW at 200...240 V 3 phases 110...220 kW at 480...500 V 3 phases 110...220 kW at 380...440 V 3 phases
Motor Starter Type	Direct on-line contactor
Contactor Coil Voltage	24 V DC standard
Standards	IEC 60947-4-1 EN 60947-4-1 JIS C8201-4-1 EN 60947-1 IEC 60947-1
Product Certifications	CB DNV BV ABS UL CSA RMRoS RINA LROS (Lloyds register of shipping) UKCA
Compatibility Code	LC1F
Control Circuit Type	DC standard

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
Height	197 mm
Width	168.5 mm
Depth	181 mm
Operating Altitude	3000 m without derating
Net Weight	4.75 kg

Packing Units

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	21.5 cm
Package 1 Width	24.0 cm
Package 1 Length	26.0 cm
Package 1 Weight	5.42 kg

Contractual warranty

Warranty	18 months
----------	-----------

Sustainability

Green Premium™ label is Schneider Electric’s commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO₂ products.

Guide to assessing product sustainability is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

[Learn more about Green Premium >](#)

[Guide to assess a product’s sustainability >](#)



Transparency RoHS/REACH

Well-being performance

 Mercury Free

 RoHS Exemption Information [Yes](#)

 Pvc Free

Certifications & Standards

Reach Regulation [REACH Declaration](#)

Eu RoHS Directive Compliant with Exemptions

China RoHS Regulation [China RoHS declaration](#)
Product out of China RoHS scope. Substance declaration for your information

Environmental Disclosure [Product Environmental Profile](#)

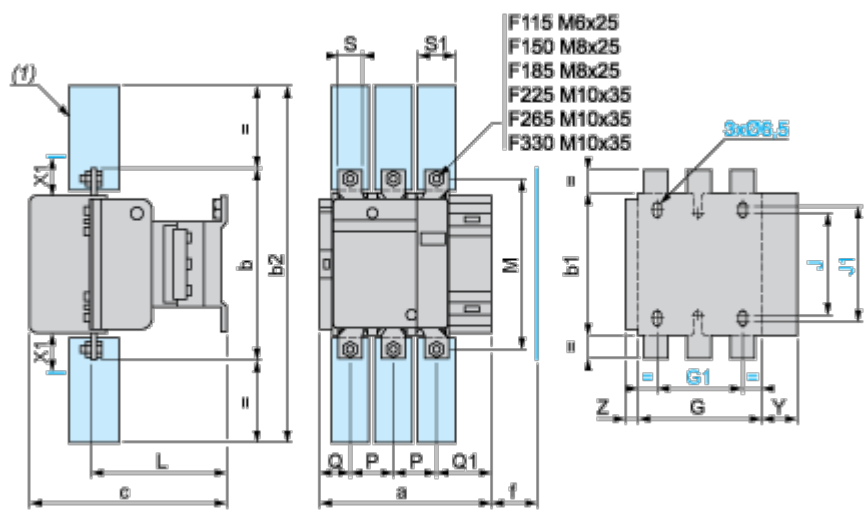
Weee The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

Circularity Profile [End of Life Information](#)

Dimensions Drawings

Dimensions and Drawings

LC1 F115 to F330



(1) Power terminal protection shroud

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

LC1	200...500 V	600...1000 V
F115, F150	10	15
F185	10	15
F225, F265	10	15
F330	10	15

LC1		a	b	b1	b2	c	f	G	G1	J	J1	L	M	P	Q	Q1	S	S1	Y
F115	3P	163.5	162	137	265	171	131	106	80	106	120	107	147	37	29.5	60	20	26	4
	4P	200.5	162	137	265	171	131	143	80	106	120	107	147	37	29.5	60	20	26	4
F150	3P	163.5	170	137	301	171	131	106	80	106	120	107	150	40	26	57.5	20	34	4
	4P	200.5	170	137	301	171	131	143	80	106	120	107	150	40	26	55.5	20	34	4
F185	3P	168.5	174	137	305	181	130	111	80	106	120	113.5	154	40	29	59.5	20	34	4
	4P	208.5	174	137	305	181	130	151	80	106	120	113.5	154	40	29	59.5	20	34	4
F225	3P	168.5	197	137	364	181	130	111	80	106	120	113.5	172	48	21	51.5	25	44.5	4
	4P	208.5	197	137	364	181	130	151	80	106	120	113.5	172	48	17	47.5	25	44.5	4
F265	3P	201.5	203	145	375	213	147	142	96	106	120	141	178	48	39	66.5	25	44.5	3

Product datasheet

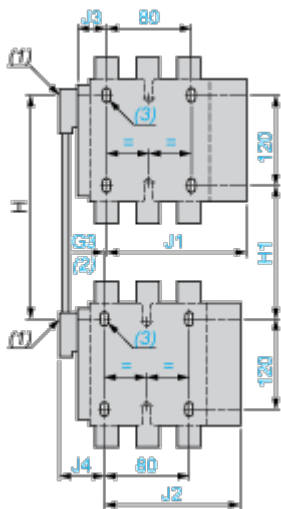
LC1F225BD

LC1		a	b	b1	b2	c	f	G	G1	J	J1	L	M	P	Q	Q1	S	S1	Y
	4P	244.5	203	145	375	213	147	190	96	106	120	141	178	48	34	66.5	25	44.5	3
F330	3P	213	206	145	375	219	147	154.5	96	106	120	145	181	48	43	74	25	44.5	3
	4P	261	206	145	375	219	147	202.5	96	106	120	145	181	48	43	74	25	44.5	3

TeSys F reversing contactors and changeover contactor pairs, vertically mounted

NOTE: For customer assembly, with mechanical interlock (MI) LA9 F, fixing recommended on AM1 EC uprights (please consult your Regional Sales Office). 2 x LC1 identical or different ratings (LC1 F115 to F630 and F800).

Assembly A



- (1) Mechanical interlock shaft.
- (2) For assembly of contactors of different ratings only.
- (3) 4 x Ø6.5 for LC1 F115 to F225.

Assembly A⁽⁷⁾ - Mechanical interlock reference

	G3 3P	G3 4P	H min.	H max.	H1 min.	H1 max.	J1 3P	J1 4P
LA9 FF4F	0	0	200	310	80	190	137	155.5
LA9 FG4F	3	4	210	300	90	180	139.5	159.5
LA9 FG4G	0	0	220	310	100	190	139.5	159.5

	J2 3P	J2 4P	J3 3P	J3 4P	J4 3P	J4 4P
LA9 FF4F	137	155.5	48.5	67	48.5	67
LA9 FG4F	137	155.5	53	73	54	69
LA9 FG4G	139.5	159.5	53	73	53	73

LC1F225BD

Technical drawing of the F400/F500/F600/F800 series hydraulic cylinder, showing front and side views with dimensions and callouts.

Dimensions:

- Top view: 12.5, G5, G1, 120, 160, 180, 200, 220, 240, 260, 280, 300, 320, 340, 360, 380, 400, 420, 440, 460, 480, 500, 520, 540, 560, 580, 600, 620, 640, 660, 680, 700, 720, 740, 760, 780, 800, 820, 840, 860, 880, 900, 920, 940, 960, 980, 1000.
- Side view: 120, 160, 180, 200, 220, 240, 260, 280, 300, 320, 340, 360, 380, 400, 420, 440, 460, 480, 500, 520, 540, 560, 580, 600, 620, 640, 660, 680, 700, 720, 740, 760, 780, 800, 820, 840, 860, 880, 900, 920, 940, 960, 980, 1000.

Callouts:

- (1) Port connection detail.
- (2) Port connection detail.
- (3) Port connection detail.
- (4) Port connection detail.
- (5) Port connection detail.
- (6) Port connection detail.

- ### Assembly B⁽⁷⁾ - Mechanical interlock reference

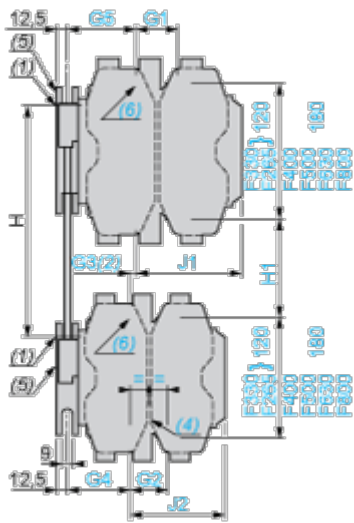
	H1 min.	H1 max.	J1 3P	J1 4P	J2 3P	J2 4P	J4 3P	J4 4P
LA9 FH4F	110	250	157.5	181.5	137	155.5	48.5	67
LA9 FJ4F	80	210	144.5	192.5	137	155.5	48.5	67
LA9 FK4F	100	210	164.5	219.5	137	155.5	48.5	67
LA9 FL4F	140	210	248.5	328.5	137	155.5	48.5	67
LA9 FH4G	120	250	157.5	181.5	139.5	159.5	53	73
LA9 FJ4G	90	220	144.5	192.5	139.5	159.5	53	73
LA9 FK4G	110	220	164.5	219.5	139.5	159.5	53	73

Product datasheet

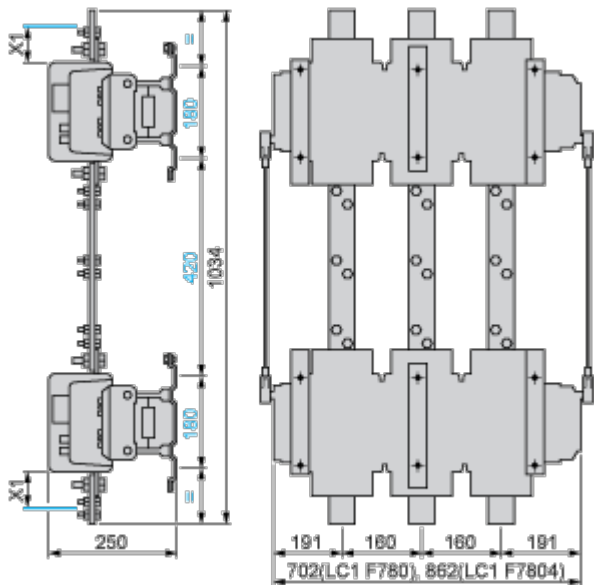
LC1F225BD

	H1 min.	H1 max.	J1 3P	J1 4P	J2 3P	J2 4P	J4 3P	J4 4P
LA9 FL4G	150	220	248.5	328.5	139.5	159.5	53	73

Assembly C



(6) 4 x Ø8.5 for LC1 F400, F500 or 4 x Ø10.5 for LC1 F630 and F800.



- (7) Only 3P for F800.
- (8) In this case, G4 is greater than G5.

Assembly C⁽⁷⁾

	G1 3P	G1 4P	G2 3P	G2 4P	G3 3P	G3 4P	G4 3P	G4 4P	G5 3P	G5 4P
LA9 FH4H	96	96	96	96	0	0	60	83	60	83
LA9 FJ4H	80	80	96	96	23	0	60	83	83	83
LA9 FK4H	80	140	96	96	23	0	60	83	83	83

Product datasheet

LC1F225BD

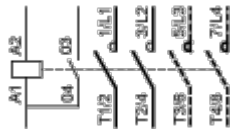
	G1 3P	G1 4P	G2 3P	G2 4P	G3 3P	G3 4P	G4 3P	G4 4P	G5 3P	G5 4P
LA9 FL4H	180	240	96	96	14	g ⁽⁸⁾	60	83	74	74
LA9 FJ4J	80	80	80	80	0	0	83	83	83	83
LA9 FK4J	80	140	80	80	0	0	83	83	83	83
LA9 FL4J	180	240	80	80	g ⁽⁸⁾	g ⁽⁸⁾	83	83	74	74
LA9 FK4K	80	140	80	140	0	0	83	83	83	83
LA9 FL4K	180	240	80	140	g ⁽⁸⁾	g ⁽⁸⁾	83	83	74	74
LA9 FL4L	180	240	180	240	0	0	74	74	74	74

	H min.	H max.	H1 min.	H1 max.	J1 3P	J1 4P	J2 3P	J2 4P
LA9 FH4H	250	380	130	260	157.5	181.5	157.5	181.5
LA9 FJ4H	260	380	110	230	144.5	192.5	157.5	181.5
LA9 FK4H	280	380	130	230	164.5	219.5	157.5	181.5
LA9 FL4H	330	380	170	220	248.5	328.5	157.5	181.5
LA9 FJ4J	260	380	60	200	144.5	192.5	144.5	192.5
LA9 FK4J	280	380	100	200	164.5	219.5	144.5	192.5
LA9 FL4J	325	380	140	195	248.5	329.5	144.5	192.5
LA9 FK4K	300	380	120	200	164.5	329.5	164.5	219.5
LA9 FL4K	345	380	160	195	248.5	328.5	164.5	219.5
LA9 FL4L	380	380	200	200	248.5	328.5	248.5	328.5

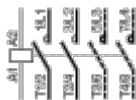
Connections and Schema

Connections and Schema

2, 3, and 4-pole Contactors



LC1 F115 to F630, F1250(coil LX1 F ~)



LC1 F115 to F630 , F1250 (coil LX4 F ---)

LC1 F115 to F265 (coil LX9 F ~)

LC1 F800 (coil LX8 F ~ / ---)

Motor Starter BOM
Motor Starter BOM