

Product data sheet

Specifications



TeSys F contactor - 3P (3 NO) - AC-3 - <= 440 V 185 A - coil 48 V DC

LC1F185ED

To be discontinued on: Jun 30, 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-4 AC-1 AC-3
Poles Description	3P
[Ue] Rated Operational Voltage	<= 460 V DC <= 690 V AC 50/60 Hz
[Uc] Control Circuit Voltage	48 V DC
[Ie] Rated Operational Current	275 A (at <104 °F (40 °C)) at <= 440 V AC-1 185 A (at <131 °F (55 °C)) at <= 440 V AC-3

Complementary

[Uimp] Rated Impulse Withstand Voltage	8 kV
[Ith] Conventional Free Air Thermal Current	275 A (at 104 °F (40 °C))
Rated Breaking Capacity	1480 A conforming to IEC 60947-4-1
[Icw] Rated Short-Time Withstand Current	1500 A 104 °F (40 °C) - 10 s 920 A 104 °F (40 °C) - 30 s 740 A 104 °F (40 °C) - 1 min 500 A 104 °F (40 °C) - 3 min 400 A 104 °F (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 IEC 60947-4-1 1500 V VDE 0110 group C
Power Dissipation Per Pole	12 W AC-3 25 W AC-1
Overvoltage Category	III
Power Pole Contact Composition	3 NO

Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

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	90 kW at 380...400 V AC 50/60 Hz (AC-3) 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) 110 kW at 660...690 V AC 50/60 Hz (AC-3) 55 kW at 220...230 V AC 50/60 Hz (AC-3) 33 kW at 400 V AC 50/60 Hz (AC-4)
Control Circuit Voltage Limits	Operational 0.85...1.1 Uc 131 °F (55 °C)) Drop-out 0.15...0.2 Uc 131 °F (55 °C))
Mechanical Durability	10 Mcycles
Inrush Power In W	800 W 68 °F (20 °C))
Hold-In Power Consumption In W	5 W 68 °F (20 °C)
Maximum Operating Rate	2400 cyc/h 131 °F (55 °C)
Operating Time	30...40 ms closing 30...50 ms opening
Connections - Terminals	Control circuit screw clamp terminals 1 0.00...0.01 in² (1...4 mm²)flexible without cable end Control circuit screw clamp terminals 2 0.00...0.01 in² (1...4 mm²)flexible without cable end Control circuit screw clamp terminals 1 0.00...0.01 in² (1...4 mm²)flexible with cable end Control circuit screw clamp terminals 2 0.00...0.00 in² (1...2.5 mm²)flexible with cable end Control circuit screw clamp terminals 1 0.00...0.01 in² (1...4 mm²)solid without cable end Control circuit screw clamp terminals 2 0.00...0.01 in² (1...4 mm²)solid without cable end Power circuit bar 2 25 x 3 mm Power circuit lugs-ring terminals 1 0.23 in² (150 mm²) Power circuit connector 1 0.23 in² (150 mm²) Power circuit bolted connection
Tightening Torque	Control circuit 10.62 lbf.in (1.2 N.m) Power circuit 159.31 lbf.in (18 N.m)
Mounting Support	Plate
Heat Dissipation	5 W
Motor Power Range	30...50 kW 200...240 V 3 phase 55...100 kW 200...240 V 3 phase 55...100 kW 380...440 V 3 phase 55...100 kW 480...500 V 3 phase 110...220 kW 480...500 V 3 phase
Motor Starter Type	Direct on-line contactor
Contactor Coil Voltage	48 V DC standard
Standards	EN 60947-1 JIS C8201-4-1 IEC 60947-1 EN 60947-4-1 IEC 60947-4-1
Product Certifications	RMRoS UL RINA LROS (Lloyds register of shipping) CB BV ABS CSA DNV UKCA
Compatibility Code	LC1F
Control Circuit Type	DC standard

Environment

Ip Degree Of Protection	IP2X front face with shrouds IEC 60529 IP2X front face with shrouds VDE 0106
Protective Treatment	TH
Ambient Air Temperature For Operation	23...131 °F (-5...55 °C)
Ambient Air Temperature For Storage	-76...176 °F (-60...80 °C)
Permissible Ambient Air Temperature Around The Device	-40...158 °F (-40...70 °C)
Height	6.85 in (174 mm)
Width	6.63 in (168.5 mm)
Depth	7.13 in (181 mm)
Operating Altitude	9842.52 ft (3000 m) without derating
Net Weight	10.25 lb(US) (4.65 kg)

Ordering and shipping details

Category	22331-CTR,F-LINE,DC,OPEN,NONREV
Discount Schedule	I12
Gtin	3389110788105
Returnability	No
Country Of Origin	CZ

Packing Units

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	8.66 in (22.0 cm)
Package 1 Width	7.87 in (20.0 cm)
Package 1 Length	9.65 in (24.5 cm)
Package 1 Weight	11.40 lb(US) (5.17 kg)

Contractual warranty

Warranty	18 months
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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

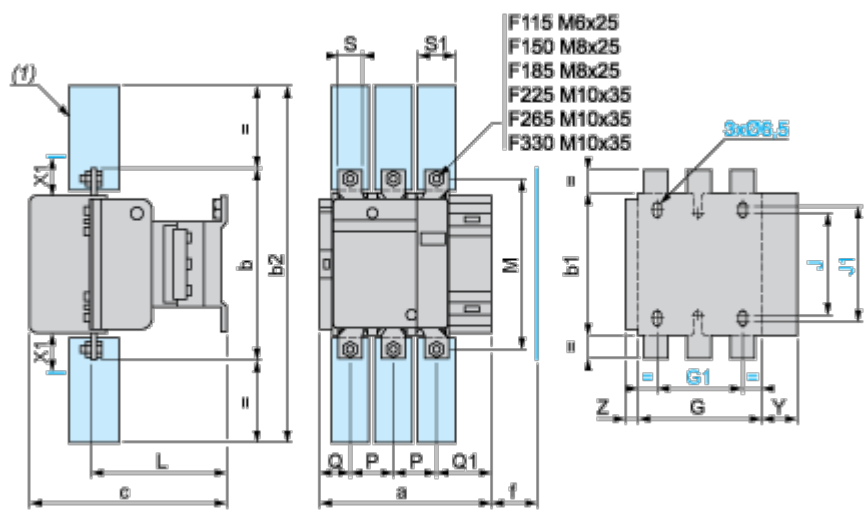
Certifications & Standards

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
California Proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

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

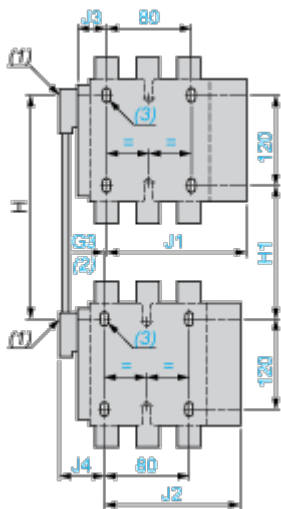
LC1		a	b	b1	b2	c	f	G	G1	J	J1	L	M	P	Q	Q1	S	S1	Y
F115	3P	163.5	162	137	265	171	131	106	80	106	120	107	147	37	29.5	60	20	26	4
	4P	200.5	162	137	265	171	131	143	80	106	120	107	147	37	29.5	60	20	26	4
F150	3P	163.5	170	137	301	171	131	106	80	106	120	107	150	40	26	57.5	20	34	4
	4P	200.5	170	137	301	171	131	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

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

LC1F185ED

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, 130, 120, 160, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000.
- Side view: 120, 160, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 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

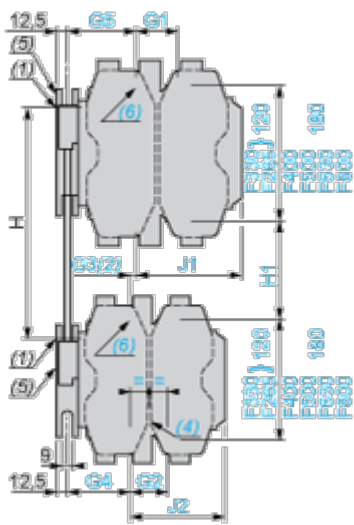
	H1 min.	H1 max.	J1 3P	J1 4P	J2 3P	J2 4P	J4 3P	J4 4P
LA9 FH4F	110	250	157.5	181.5	137	155.5	48.5	67
LA9 FJ4F	80	210	144.5	192.5	137	155.5	48.5	67
LA9 FK4F	100	210	164.5	219.5	137	155.5	48.5	67
LA9 FL4F	140	210	248.5	328.5	137	155.5	48.5	67
LA9 FH4G	120	250	157.5	181.5	139.5	159.5	53	73
LA9 FJ4G	90	220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

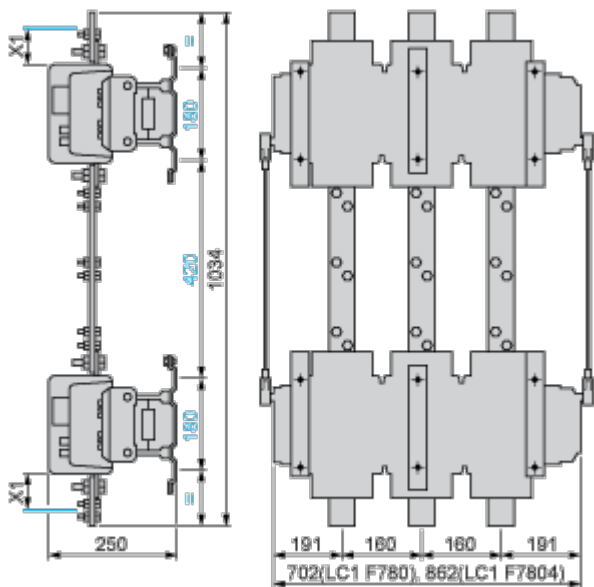
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	H1 min.	H1 max.	J1 3P	J1 4P	J2 3P	J2 4P	J4 3P	J4 4P
LA9 FL4G	150	220	248.5	328.5	139.5	159.5	53	73

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 data sheet

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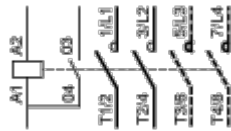
	G1 3P	G1 4P	G2 3P	G2 4P	G3 3P	G3 4P	G4 3P	G4 4P	G5 3P	G5 4P
LA9 FL4H	180	240	96	96	14	g ⁽⁸⁾	60	83	74	74
LA9 FJ4J	80	80	80	80	0	0	83	83	83	83
LA9 FK4J	80	140	80	80	0	0	83	83	83	83
LA9 FL4J	180	240	80	80	g ⁽⁸⁾	g ⁽⁸⁾	83	83	74	74
LA9 FK4K	80	140	80	140	0	0	83	83	83	83
LA9 FL4K	180	240	80	140	g ⁽⁸⁾	g ⁽⁸⁾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

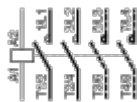
Connections and Schema

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