

# Product data sheet

Specifications



## TeSys F contactor - 3P (3 NO) - AC-3 - <= 440 V 500 A - coil 110 V AC

LC1F500F7

! To be discontinued on: 31 December 2023

! To be end-of-service on: 31 December 2023

! To be discontinued

Product availability : Stock - Normally stocked in distribution facility

Price\* : 4,970.00 USD

### Main

Range	TeSys
Product name	TeSys F
Product or Component Type	Contacteur
Device short name	LC1F
Contacteur application	Resistive load Motor control
Utilisation category	AC-1 AC-3 AC-4
Poles description	3P
Power pole contact composition	3 NO
[Ie] rated operational current	700 A 104 °F (40 °C) <= 440 V AC AC-1 500 A 131 °F (55 °C) <= 440 V AC AC-3
Motor power kW	250 kW 380...400 V AC 50/60 Hz AC-3) 280 kW 415 V AC 50/60 Hz AC-3) 295 kW 440 V AC 50/60 Hz AC-3) 355 kW 500 V AC 50/60 Hz AC-3) 335 kW 660...690 V AC 50/60 Hz AC-3) 335 kW 1000 V AC 50/60 Hz AC-3) 147 kW 220...230 V AC 50/60 Hz AC-3) 80 kW 400 V AC 50/60 Hz AC-4)
[Uc] control circuit voltage	110 V AC 40...400 Hz

### Complementary

[Uimp] rated impulse withstand voltage	8 kV
Overvoltage category	III
[Ith] conventional free air thermal current	700 A 104 °F (40 °C)
Rated breaking capacity	4000 A IEC 60947-4-1
[Icw] rated short-time withstand current	4200 A 104 °F (40 °C) - 10 s 3200 A 104 °F (40 °C) - 30 s 2400 A 104 °F (40 °C) - 1 min 1500 A 104 °F (40 °C) - 3 min 1200 A 104 °F (40 °C) - 10 min

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

<b>Associated fuse rating</b>	500 A aM <= 440 V 800 A gG <= 440 V
<b>Average impedance</b>	0.18 mOhm - lth 700 A 50 Hz
<b>[Ui] rated insulation voltage</b>	1000 V IEC 60947-4-1 1500 V VDE 0110 group C
<b>Power dissipation per pole</b>	88 W AC-1 45 W AC-3
<b>Mounting Support</b>	Plate
<b>Standards</b>	IEC 60947-4-1 JIS C8201-4-1 IEC 60947-1 EN 60947-1 EN 60947-4-1
<b>Product certifications</b>	UL CSA ABS DNV LROS (Lloyds register of shipping) RMRoS RINA CB BV UKCA
<b>Connections - terminals</b>	Control circuit screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> )flexible without cable end Control circuit screw clamp terminals 2 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> )flexible without cable end Control circuit screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> )flexible with cable end Control circuit screw clamp terminals 2 0.00...0.00 in <sup>2</sup> (1...2.5 mm <sup>2</sup> )flexible with cable end Control circuit screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> )solid without cable end Control circuit screw clamp terminals 2 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> )solid without cable end Power circuit bar 2 40 x 5 mm Power circuit lugs-ring terminals 2 0.37 in <sup>2</sup> (240 mm <sup>2</sup> ) Power circuit bolted connection
<b>Tightening torque</b>	Control circuit 10.62 lbf.in (1.2 N.m) Power circuit 309.78 lbf.in (35 N.m)
<b>Control circuit voltage limits</b>	Operational 0.85...1.1 Uc 40...400 Hz 131 °F (55 °C)) Drop-out 0.3...0.5 Uc 40...400 Hz 131 °F (55 °C))
<b>Inrush power in VA</b>	1100 VA 40...400 Hz 0.9 68 °F (20 °C))
<b>Hold-in power consumption in VA</b>	18 VA 40...400 Hz 0.9 68 °F (20 °C))
<b>Heat dissipation</b>	18 W
<b>Operating time</b>	40...65 ms closing 100...170 ms opening
<b>Mechanical durability</b>	10 Mcycles
<b>Maximum operating rate</b>	2400 cyc/h 131 °F (55 °C)
<b>Compatibility code</b>	LC1F
<b>Motor power range</b>	250...500 kW 380...440 V 3 phase 110...220 kW 380...440 V 3 phase 110...220 kW 200...240 V 3 phase 250...500 kW 480...500 V 3 phase
<b>Motor starter type</b>	Direct on-line contactor
<b>Contacting coil voltage</b>	110 V AC standard

## Environment

<b>IP degree of protection</b>	IP20 front face with shrouds IEC 60529 IP20 front face with shrouds VDE 0106
<b>Protective treatment</b>	TH
<b>Ambient Air Temperature for Operation</b>	23...131 °F (-5...55 °C)
<b>Ambient Air Temperature for Storage</b>	-76...176 °F (-60...80 °C)
<b>Permissible ambient air temperature around the device</b>	-40...158 °F (-40...70 °C)

Operating altitude	9842.52 ft (3000 m) without derating
Height	9.37 in (238 mm)
Width	9.17 in (233 mm)
Depth	9.13 in (232 mm)
Net weight	25.02 lb(US) (11.35 kg)

## Ordering and shipping details

Category	22336 - CTR,F-LINE,AC,OPEN,NONREV
Discount Schedule	I12
GTIN	3389110227031
Nbr. of units in pkg.	1
Package weight(Lbs)	25.96 lb(US) (11.775 kg)
Returnability	Yes
Country of origin	CZ

## Packing Units

Unit Type of Package 1	PCE
Package 1 Height	10.83 in (27.5 cm)
Package 1 width	11.81 in (30 cm)
Package 1 Length	11.81 in (30 cm)
Unit Type of Package 2	P06
Number of Units in Package 2	8
Package 2 Weight	227.21 lb(US) (103.06 kg)
Package 2 Height	30.31 in (77 cm)
Package 2 width	31.50 in (80 cm)
Package 2 Length	23.62 in (60 cm)

## Offer Sustainability

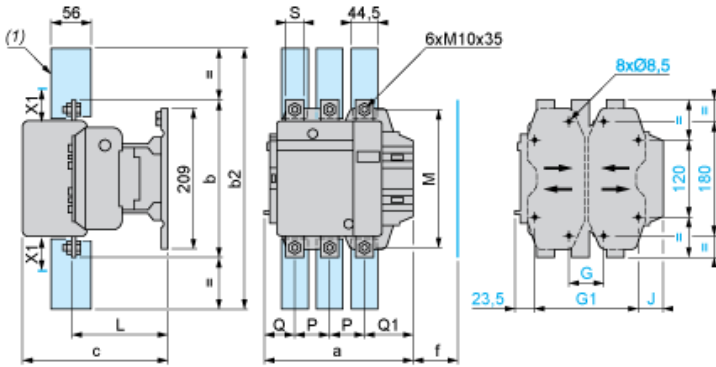
Sustainable offer status	Green Premium product
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Compliant <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
RoHS exemption information	<a href="#">Yes</a>
China RoHS Regulation	<a href="#">China RoHS declaration</a> Product out of China RoHS scope. Substance declaration for your information.
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	<a href="#">End of Life Information</a>
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.

## Contractual warranty

Warranty	18 months
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**Dimensions and Drawings**

**LC1 F400 and F500**



(1) Power terminal protection shroud

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

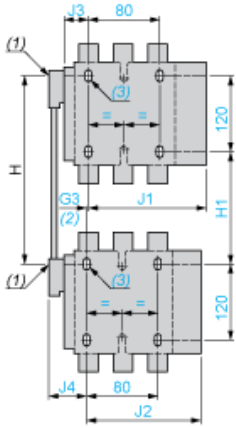
LC1	200...500 V	600...1000 V
F400	15	20
F500	15	20

LC1		a	b	b2	c	f	G suppl	G min.	G max	G1 sup	G1 mir	G1 ma	J	L	M	P	Q	Q1	S
F400	2P	213	206	375	219	146	80	66	102	170	156	192	19.5	145	181	48	69	96	25
	3P	213	206	375	219	146	80	66	102	170	156	192	19.5	145	181	48	43	74	25
	4P	261	206	375	219	146	80	66	150	170	156	240	67.5	145	181	48	43	74	25
F500	2P	233	238	400	232	150	80	66	120	170	156	210	39.5	146	208	55	76	102	30
	3P	233	238	400	232	150	80	66	120	170	156	210	39.5	146	208	55	46	77	30
	4P	288	238	400	232	150	140	66	175	230	156	265	34.5	146	208	55	46	77	30

**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.

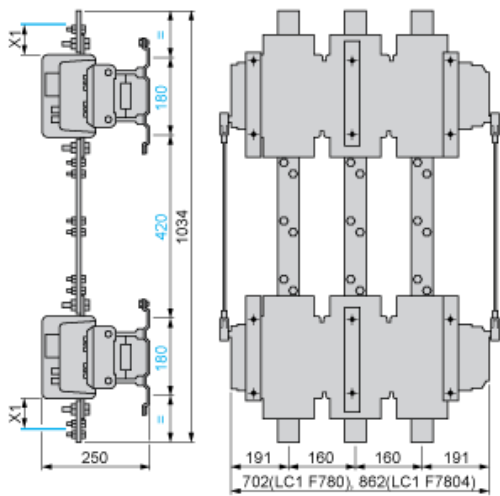
**Assembly A<sup>(7)</sup> - Mechanical interlock reference**

	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

**Assembly B**





(7) Only 3P for F800.

(8) In this case, G4 is greater than G5.

Assembly C<sup>(7)</sup>

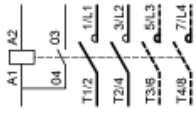
	G1 3P	G1 4P	G2 3P	G2 4P	G3 3P	G3 4P	G4 3P	G4 4P	G5 3P	G5 4P
LA9 FH4H	96	96	96	96	0	0	60	83	60	83
LA9 FJ4H	80	80	96	96	23	0	60	83	83	83
LA9 FK4H	80	140	96	96	23	0	60	83	83	83
LA9 FL4H	180	240	96	96	14	g <sup>(8)</sup>	60	83	74	74
LA9 FJ4J	80	80	80	80	0	0	83	83	83	83
LA9 FK4J	80	140	80	80	0	0	83	83	83	83
LA9 FL4J	180	240	80	80	g <sup>(8)</sup>	g <sup>(8)</sup>	83	83	74	74
LA9 FK4K	80	140	80	140	0	0	83	83	83	83
LA9 FL4K	180	240	80	140	g <sup>(8)</sup>	g <sup>(8)</sup>	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

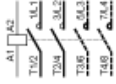
## Connections and Schema

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### 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 ~ / ≡ )

### Recommended replacement(s)

LC1F500F7 is replaced by:

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1x



High power contactor, TeSys Giga, 3 pole (3NO), AC-3 <=440V 500A, standard version, 100...250V wide band AC/DC coil

LC1G500KUEN

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