

# Product data sheet

Specifications



## TeSys F contactor - 3P (3 NO) - AC-3 - $\leq 440$ V 800 A - coil 220...230 V DC

LC1F800MW

### Main

Range	TeSys
Product name	TeSys F
Product or component type	Contacteur
Device short name	LC1F
Contacteur application	Motor control Resistive load
Utilisation category	AC-4 AC-1 AC-3
Poles description	3P
Power pole contact composition	3 NO
[Ie] rated operational current	1000 A (at $\leq 40$ °C) at $\leq 440$ V AC AC-1 800 A (at $\leq 55$ °C) at $\leq 440$ V AC AC-3
Motor power kW	450 kW at 1000 V AC 50/60 Hz (AC-3) 450 kW at 500 V AC 50/60 Hz (AC-3) 475 kW at 660...690 V AC 50/60 Hz (AC-3) 110 kW at 400 V AC 50/60 Hz (AC-4) 450 kW at 380...400 V AC 50/60 Hz (AC-3) 450 kW at 415 V AC 50/60 Hz (AC-3) 450 kW at 440 V AC 50/60 Hz (AC-3) 250 kW at 220...230 V AC 50/60 Hz (AC-3)
[Uc] control circuit voltage	220...230 V DC 220...240 V AC 40...400 Hz
Coil type	Standard

### Complementary

[Uimp] rated impulse withstand voltage	8 kV
Overvoltage category	III
[Ith] conventional free air thermal current	1000 A (at 40 °C)
Rated breaking capacity	6400 A conforming to IEC 60947-4-1
[Icw] rated short-time withstand current	5500 A 40 °C - 10 s 4600 A 40 °C - 30 s 3600 A 40 °C - 1 min 2600 A 40 °C - 3 min 1700 A 40 °C - 10 min
Associated fuse rating	1000 A gG at $\leq 440$ V 800 A aM at $\leq 440$ V

<b>Average impedance</b>	0.12 mOhm - lth 1000 A 50 Hz
<b>[Ui] rated insulation voltage</b>	1000 V conforming to IEC 60947-4-1 1500 V conforming to VDE 0110 group C
<b>Power dissipation per pole</b>	120 W AC-1 77 W AC-3
<b>Mounting support</b>	Plate
<b>Standards</b>	IEC 60947-1 JIS C8201-4-1 EN 60947-4-1 EN 60947-1 IEC 60947-4-1
<b>Product certifications</b>	ABS UL CCC CSA RMRoS CB UKCA
<b>Connections - terminals</b>	Control circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> flexible without cable end Control circuit: screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> flexible without cable end Control circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> flexible with cable end Control circuit: screw clamp terminals 2 cable(s) 1...2.5 mm <sup>2</sup> flexible with cable end Control circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> solid without cable end Control circuit: screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> solid without cable end Power circuit: bar 2 cable(s) - busbar cross section: 60 x 5 mm Power circuit: bolted connection
<b>Tightening torque</b>	Control circuit: 1.2 N.m Power circuit: 58 N.m
<b>Control circuit voltage limits</b>	Operational: 0.85...1.1 U <sub>c</sub> (at 55 °C) Drop-out: 0.3...0.5 U <sub>c</sub> (at 55 °C)
<b>Inrush power in W</b>	1900 W (at 20 °C)
<b>Hold-in power consumption in W</b>	12 W at 20 °C
<b>Heat dissipation</b>	12 W
<b>Operating time</b>	40...50 ms opening 60...80 ms closing
<b>Mechanical durability</b>	5 Mcycles
<b>Maximum operating rate</b>	600 cyc/h 55 °C
<b>Compatibility code</b>	LC1F
<b>Motor power range</b>	250...500 kW at 200...240 V 3 phases 250...500 kW at 380...440 V 3 phases 110...220 kW at 200...240 V 3 phases 250...500 kW at 480...500 V 3 phases
<b>Motor starter type</b>	Direct on-line contactor
<b>Contactors coil voltage</b>	220 V DC standard 230 V DC standard 220 V AC standard 230 V AC standard 240 V AC standard

## 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 operation</b>	-5...55 °C
<b>Ambient air temperature for storage</b>	-60...80 °C
<b>Permissible ambient air temperature around the device</b>	-5...55 °C
<b>Operating altitude</b>	3000 m without derating
<b>Height</b>	304 mm

Width	309 mm
Depth	255 mm
Net weight	18.75 kg

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	18.455 kg
Package 1 Height	33 cm
Package 1 width	33.5 cm
Package 1 Length	44 cm
Unit Type of Package 2	P06
Number of Units in Package 2	4
Package 2 Weight	82.32 kg
Package 2 Height	77 cm
Package 2 width	60 cm
Package 2 Length	80 cm

## Offer Sustainability

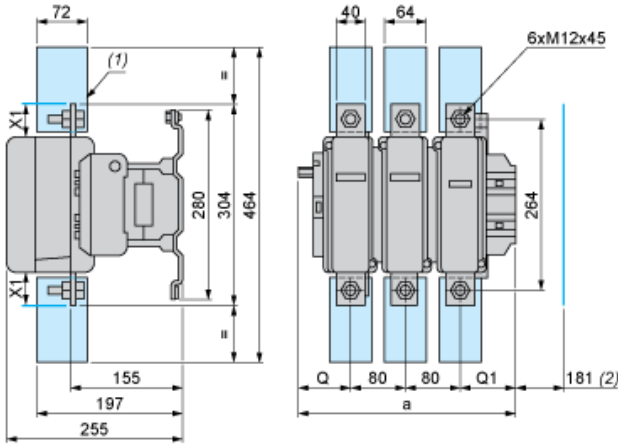
Sustainable offer status	Green Premium product
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Compliant <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
RoHS exemption information	<a href="#">Yes</a>
China RoHS Regulation	<a href="#">China RoHS declaration</a> Product out of 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
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>

## Contractual warranty

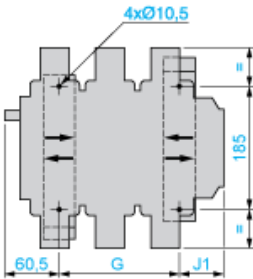
Warranty	18 months
----------	-----------

Dimensions and Drawings

LC1 F630 and F800



- (1) Power terminal protection shroud.
- (2) Minimum distance required for coil removal.



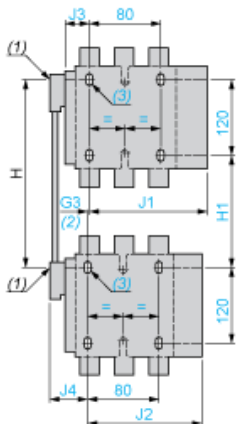
NOTE: X1 (mm) = Minimum electrical clearance according to operating voltage and breaking capacity.

LC1		a	G supplied	G min.	G max.	J1	Q	Q1
F630	2P	309	180	100	195	68.5	102	127
F630, F800	3P	309	180	100	195	68.5	60	89
F630	4P	389	240	150	275	88.5	60	89
Voltage		200...500 V	690...1000 V		200...690 V			1000 V
LC1 F630		20	30		-			-
LC1 F800		-	-		10			20

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

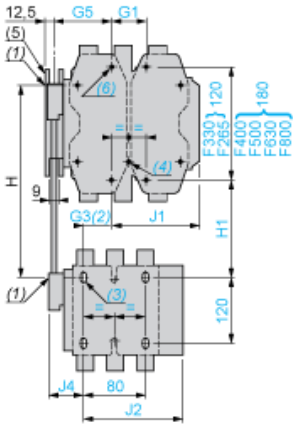
	G3 3P	G3 4P	H min.	H max.	H1 min.	H1 max.	J1 3P	J1 4P
LA9 FF4F	0	0	200	310	80	190	137	155.5
LA9 FG4F	3	4	210	300	90	180	139.5	159.5

	G3 3P	G3 4P	H min.	H max.	H1 min.	H1 max.	J1 3P	J1 4P
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**



- (4) 4 x Ø6.5 for LC1 F265.
- (5) Mechanical interlock guide bracket.

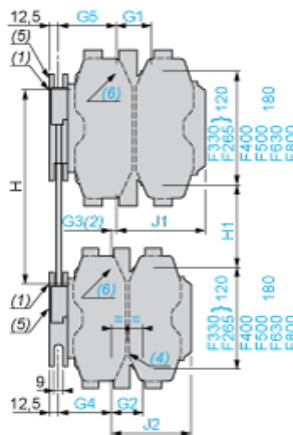
Assembly B<sup>(7)</sup> - Mechanical interlock reference

	G1 3P	G1 4P	G3 3P	G3 4P	G5 3P	G5 4P	H min.	H max.
LA9 FH4F	96	96	21	27	60	83	240	380
LA9 FJ4F	80	80	45	26	83	83	250	380
LA9 FK4F	80	140	45	26	83	83	270	380
LA9 FL4F	180	240	35	17	74	74	310	380
LA9 FH4G	96	96	19	23	60	83	250	380
LA9 FJ4G	80	80	42	22	83	83	250	380
LA9 FK4G	80	140	42	22	83	83	270	380
LA9 FL4G	180	240	33	13	74	74	310	380

	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
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<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

---

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 ~ / ≡)