

# Product data sheet

Specifications



## TeSys F contactor - 3P (3 NO) - AC-3 - $\leq 440$ V 780 A - coil 110 V AC

LC1F780F7

### 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-4 AC-1 AC-3
Poles description	3P
Power pole contact composition	3 NO
[Ie] rated operational current	1600 A (at $\leq 40$ °C) at $\leq 440$ V AC AC-1 780 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) 400 kW at 380...400 V AC 50/60 Hz (AC-3) 425 kW at 415 V AC 50/60 Hz (AC-3) 425 kW at 440 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) 220 kW at 220...230 V AC 50/60 Hz (AC-3) 110 kW at 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	1600 A (at 40 °C)
Rated breaking capacity	6240 A conforming to IEC 60947-4-1
[Icw] rated short-time withstand current	3000 A 40 °C - 3 min 6250 A 40 °C - 10 s 5600 A 40 °C - 30 s 4600 A 40 °C - 1 min 2200 A 40 °C - 10 min
Associated fuse rating	1600 A gG at $\leq 440$ V 800 A aM at $\leq 440$ V
Average impedance	0.1 mOhm - Ith 1600 A 50 Hz
[Ui] rated insulation voltage	1000 V conforming to IEC 60947-4-1

1500 V conforming to VDE 0110 group C

<b>Power dissipation per pole</b>	250 W AC-1 60 W AC-3
<b>Mounting support</b>	Plate
<b>Standards</b>	EN 60947-1 JIS C8201-4-1 IEC 60947-4-1 IEC 60947-1 EN 60947-4-1
<b>Product certifications</b>	UL RINA ABS CB RMRoS CSA LROS (Lloyds register of shipping) DNV BV 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: 100 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> 40...400 Hz (at 55 °C) Drop-out: 0.2...0.4 U <sub>c</sub> 40...400 Hz (at 55 °C)
<b>Inrush power in VA</b>	2100 VA 40...400 Hz cos phi 0.9 (at 20 °C)
<b>Hold-in power consumption in VA</b>	50 VA 40...400 Hz cos phi 0.9 (at 20 °C)
<b>Heat dissipation</b>	44 W
<b>Operating time</b>	40...80 ms closing 130...230 ms opening
<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 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>Contactor coil voltage</b>	110 V AC standard 120 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>	-40...70 °C
<b>Operating altitude</b>	3000 m without derating
<b>Height</b>	434 mm
<b>Width</b>	702 mm
<b>Depth</b>	255 mm

Net weight	39.5 kg
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## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	57 kg
Package 1 Height	40 cm
Package 1 width	44.5 cm
Package 1 Length	95 cm
Unit Type of Package 2	PAL
Number of Units in Package 2	2
Package 2 Weight	141 kg
Package 2 Height	195 cm
Package 2 width	120 cm
Package 2 Length	80 cm

## Offer Sustainability

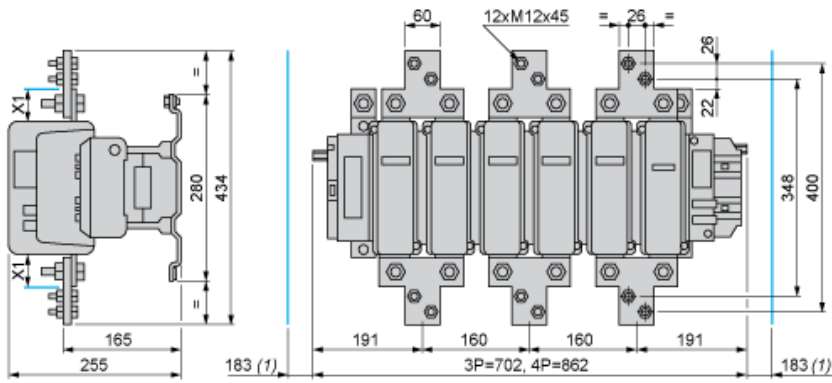
Sustainable offer status	Green Premium product
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Compliant <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
RoHS exemption information	<a href="#">Yes</a>
China RoHS Regulation	<a href="#">China RoHS declaration</a> Product out of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

**LC1 F780**

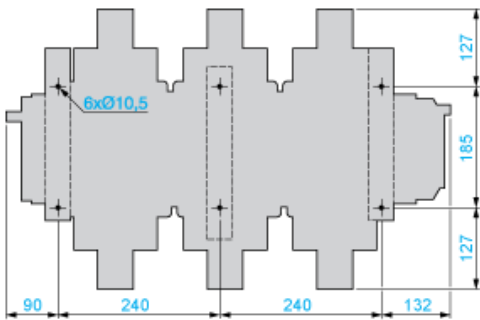


(1) Minimum distance required for coil removal.

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

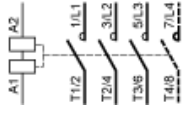
Voltage	200...500 V	690...1000 V
X1 (mm)	30	35

**Fixing centers of LC1 F780**



Connections and Schema

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LC1 F780 ~ or ☰