

# Product datasheet

Specifications



contactor, TeSys F, 3P(3NO), AC-3,  
<=440V 780A, coil 230V AC

LC1F780P7

⚠ Discontinued on: Jul 4, 2022 AD

⚠ Discontinued

## Main

Range	TeSys
Range of product	TeSys F
Product or component type	Contacteur
Device short name	LC1F
Contacteur application	Resistive load Motor control
Utilisation category	AC-1 AC-4 AC-3
Poles description	3P
[Ue] rated operational voltage	<= 1000 V AC 50/60 Hz <= 460 V DC
[Uc] control circuit voltage	230 V AC 40...400 Hz
[Ie] rated operational current	1600 A (at <40 °C) at <= 440 V AC AC-1 780 A (at <55 °C) at <= 440 V AC AC-3

## Complementary

[Uimp] rated impulse withstand voltage	8 kV
[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 <= 440 V 800 A aM at <= 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
Power dissipation per pole	250 W AC-1 60 W AC-3
Overvoltage category	III
power pole contact composition	3 NO

<b>Motor power kW</b>	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)
<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>Mechanical durability</b>	5 Mcycles
<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>Maximum operating rate</b>	600 cyc/h 55 °C
<b>Operating time</b>	40...80 ms closing 130...230 ms opening
<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>Mounting support</b>	Plate
<b>Heat dissipation</b>	44 W
<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>	230 V AC standard
<b>Standards</b>	JIS C8201-4-1 EN 60947-1 IEC 60947-1 IEC 60947-4-1 EN 60947-4-1
<b>Product certifications</b>	CSA RMRoS BV UL DNV LROS (Lloyds register of shipping) CB RINA ABS
<b>Compatibility code</b>	LC1F
<b>Control circuit type</b>	AC at 40...400 Hz

## 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

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<b>Permissible ambient air temperature around the device</b>	-40...70 °C
<b>Height</b>	434 mm
<b>Width</b>	702 mm
<b>Depth</b>	255 mm
<b>Operating altitude</b>	3000 m without derating
<b>Product weight</b>	39.5 kg

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## Packing Units

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<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Height</b>	42.000 cm
<b>Package 1 Width</b>	44.000 cm
<b>Package 1 Length</b>	97.000 cm
<b>Package 1 Weight</b>	43.000 kg
<b>Unit Type of Package 2</b>	P12
<b>Number of Units in Package 2</b>	2
<b>Package 2 Height</b>	160.000 cm
<b>Package 2 Width</b>	80.000 cm
<b>Package 2 Length</b>	120.000 cm
<b>Package 2 Weight</b>	98.000 kg

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## Contractual warranty

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<b>Warranty (in months)</b>	18
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## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)



### Environmental footprint

Total lifecycle Carbon footprint	7 135 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	238 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	16 kg CO2 eq.
Carbon footprint of the installation phase [A5]	7 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	6 806 kg CO2 eq.
Carbon footprint of the end-of-life phase [C1 to C4]	68 kg CO2 eq.
Environmental Disclosure	<a href="#">Product Environmental Profile</a>

## Use Better



### Materials and Substances

Packaging made with recycled cardboard	Yes
Packaging without single use plastic	No
SCIP Number	975ba4d0-bc82-40e2-8faa-6f6819f63b0c
EU RoHS Directive	<a href="#">Compliant By Exemption</a>
REACH Regulation	<a href="#">Reference contains Substances of Very High Concern above the threshold</a>

## Use Longer




### Lifetime extension

Repair	No
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## Use Again



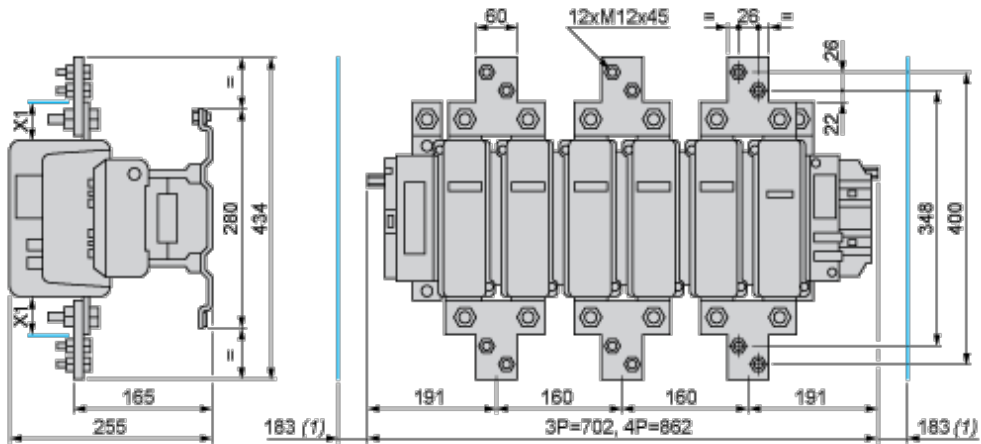
### Repack and remanufacture

Recyclability potential, in %	92
End of life manual availability	<a href="#">End of Life Information</a>
Take-back	No
WEEE Label	 The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

Dimensions Drawings

Dimensions and Drawings

LC1 F780

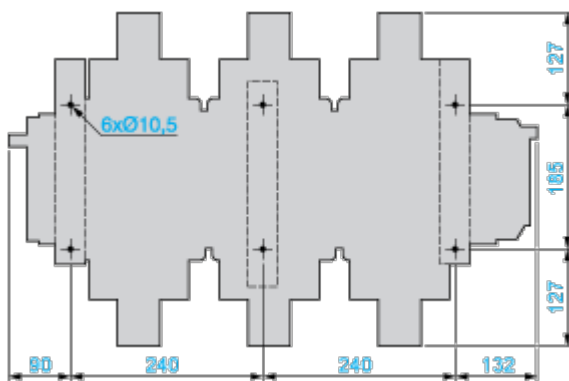


(1) Minimum distance required for coil removal.

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

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

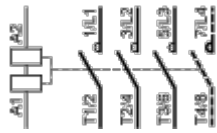
Fixing centers of LC1 F780




Connections and Schema

Connections and Schema

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LC1 F780  or 