Product datasheet

Specifications



TeSys F contactor - 3P (3 NO) - AC-3 - <= 440 V 780 A - coil 220 V AC

Local distributor code:

402886505 LC1F780M7

Discontinued on: 9 Feb 2023

Discontinued

EAN Code: 3389110227260

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-3 AC-1 AC-4
Poles description	3P
[Ue] rated operational voltage	<= 1000 V AC 50/60 Hz <= 460 V DC
[Uc] control circuit voltage	220 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

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	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)
Control circuit voltage limits	Operational: 0.85...1.1 Uc 40...400 Hz (at 55 °C) Drop-out: 0.2...0.4 Uc 40...400 Hz (at 55 °C)
Mechanical durability	5 Mcycles
Inrush power in VA	2100 VA, 40...400 Hz cos phi 0.9 (at 20 °C)
Hold-in power consumption in VA	50 VA, 40...400 Hz cos phi 0.9 (at 20 °C)
Maximum operating rate	600 cyc/h 55 °C
Operating time	40...80 ms closing 130...230 ms opening
Connections - terminals	Control circuit: screw clamp terminals 1 cable(s) 1…4 mm^2flexible without cable end Control circuit: screw clamp terminals 2 cable(s) 1…4 mm^2flexible without cable end Control circuit: screw clamp terminals 1 cable(s) 1…4 mm^2flexible with cable end Control circuit: screw clamp terminals 2 cable(s) 1…2.5 mm^2flexible with cable end Control circuit: screw clamp terminals 1 cable(s) 1…4 mm^2solid without cable end Control circuit: screw clamp terminals 2 cable(s) 1…4 mm^2solid without cable end Power circuit: bar 2 cable(s) - busbar cross section: 100 x 5 mm Power circuit: bolted connection
Tightening torque	Control circuit: 1.2 N.m Power circuit: 58 N.m
Mounting support	Plate
Heat dissipation	44 W
motor power range	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
Motor starter type	Direct on-line contactor
Contactor coil voltage	220 V AC standard
Standards	EN 60947-4-1 IEC 60947-1 EN 60947-1 JIS C8201-4-1 IEC 60947-4-1
Product certifications	DNV RMRoS LROS (Lloyds register of shipping) CSA CB UL RINA ABS BV
Compatibility code	LC1F
Control circuit type	AC at 40...400 Hz

Environment

IP degree of protection	IP20 front face with shrouds conforming to IEC 60529 IP20 front face with shrouds conforming to VDE 0106
Protective treatment	TH
Ambient air temperature for operation	-5…55 °C
Ambient air temperature for storage	-60…80 °C

Permissible ambient air temperature around the device	-40…70 °C
Height	434 mm
Width	702 mm
Depth	255 mm
Operating altitude	3000 m without derating
Net weight	39.5 kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	44.0 cm
Package 1 Width	41.0 cm
Package 1 Length	95.0 cm
Package 1 Weight	47.59 kg
Unit Type of Package 2	PAL
Number of Units in Package 2	2
Package 2 Height	195.0 cm
Package 2 Width	120.0 cm
Package 2 Length	80.0 cm
Package 2 Weight	122.2 kg

Contractual warranty

Warranty (in months)	18

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	Product Environmental Profile

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	Compliant By Exemption
REACh Regulation	Reference contains Substances of Very High Concern above the threshold

Use Again

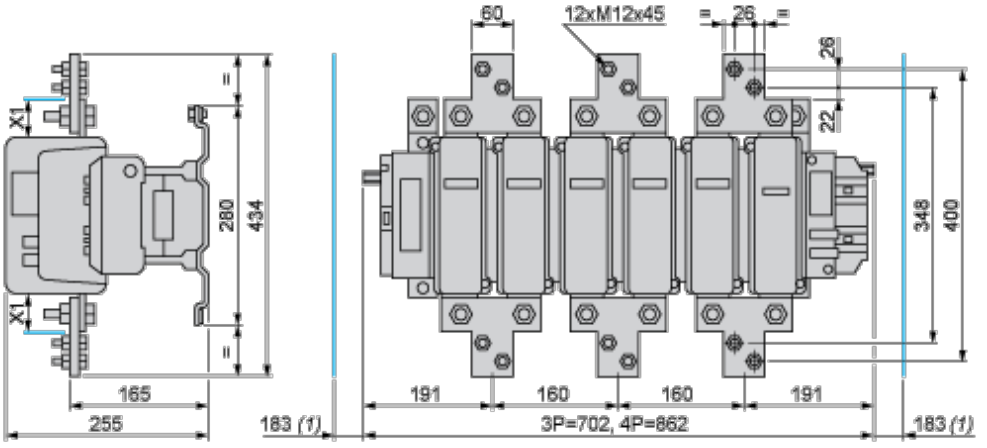
Repack and remanufacture

Recyclability potential, in %	**92**
End of life manual availability	End of Life Information
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

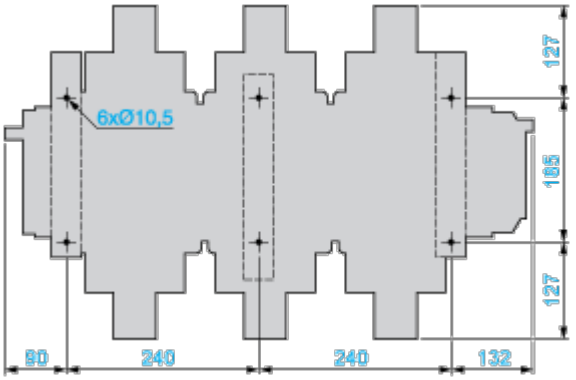


(1) Minimum distance required for coil removal.

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

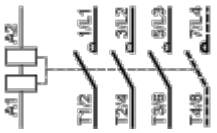
Voltage	200…500 V	690…1000 V
X1 (mm)	30	35

Fixing centers of LC1 F780



Connections and Schema

Connections and Schema



LC1 F780 ~ or ⎓