Product data sheet
Characteristics

LF4P00E
TeSys LF - enclosed DOL reversing starter - 12 A

Main

Range	TeSys
Product name	TeSys LF
Device short name	LF4P
Product or component type	Enclosed DOL reversing starter
Device application	AS interface
Device composition	AS interface module Reversing contactor Circuit-breakerto be ordered separately
Utilisation category	AC-3
Network type	AC
Control circuit voltage	24 V for AC circuit at 50/60 Hz
Control type	Selector switch 3 positions for start/stop/start - 1 - 0 - 2 Rotary handle for protection control - OFF - Trip - ON

Complementary

Network frequency	50/60 Hz
[Ue] rated operational voltage	30 V - DC for output control relay 250 V - AC at 50/60 Hz for output control relay 415 V - AC at 50/60 Hz for power circuit
[Uimp] rated impulse withstand voltage	2.5 kV for AS-Interface conforming to IEC 60947-1 2.5 kV for sensor conforming to IEC 60947-1 2.5 kV for 24 V conforming to IEC 60947-1 6 kV for power circuit conforming to IEC 60947-1
Insulation resistance	> 1000 mOhm between output and communication
Insulation	Between input and communication 1500 V between output and internal logic 1500 V between output and ground
[Ui] rated insulation voltage	415 V AC at 50/60 Hz conforming to IEC 60947
[Ithe] conventional enclosed thermal current	5 A for output control relay at 40 °C
Protection type	Phase failure Inductive overvoltage
Breaking capacity	At 400/415 V conforming to IEC 60947-2 At 230/240 V conforming to IEC 60947-2
Mechanical durability	Contactor : 30 Mcycles Circuit breaker : 0.1 Mcycles
Electrical durability	Relay : >= 1 Mcycles - 24 V with 30 cyc/mn - DC-3 - 0.25 A Relay : 0.5 Mcycles - 24 V with 15 cyc/mn - DC-3 - 1 A Relay : 0.2 Mcycles - 24 V with 6 cyc/mn - DC-12 - 2 A Relay : 0.1 Mcycles - 24 V with 6 cyc/mn - DC-12 - 5 A Relay : 5 Mcycles - 24 V with 30 cyc/mn - AC-14 - 0.25 A Relay : 1 Mcycles - 24 V with 15 cyc/mn - AC-14 - 0.5 A Relay : 0.5 Mcycles - 24 V with 15 cyc/mn - AC-14 - 1 A Relay : 1 Mcycles - 24 V with 15 cyc/mn - AC-12 - 1 A Relay : 0.1 Mcycles - 24 V with 6 cyc/mn - AC-12 - 5 A Contactor : 0.8 Mcycles - AC-3 - 8.5 A Circuit breaker : 0.1 Mcycles
Current consumption	20 mA for output relay 110 mA at 24 V for supply circuit inrush 30 mA at 24 V for supply circuit maintained mode 0 mA at 24 V for supply circuit de-energisation 60 mA for communication bus sensor 20 mA for communication bus during operation
Local signalling	Input/Output status by LED Product status by 3 LEDs

Number of inputs	2 M12
Nominal input value	19...30 V 0...50 mA - DC
Input description	Status D3 : unused - bit value 1 Status D2 : enable relay - bit value 1 Status D1 : reverse start - bit value 1 Status D0 : forward start - bit value 1 Status D3 : unused - bit value 0 Status D2 : disable relay - bit value 0 Status D1 : reverse stop - bit value 0 Status D0 : forward stop - bit value 0
Input type	Resistive
Sensor compatibility	2 or 3-wire PNP
Output description	Command D3 : sensor 2 present - bit value 1 Command D2 : sensor 1 present - bit value 1 Command D1 : started - bit value 1 Command D0 : ready - bit value 1 Command D3 : sensor 2 missing - bit value 0 Command D2 : sensor 1 missing - bit value 0 Command D1 : stopped - bit value 0 Command D0 : not ready - bit value 0
Response time	Output control relay : <= 15 ms during opening Output control relay : <= 10 ms during closing
Contacts type and composition	1 C/O
AS-interface profile	7A70 - extended A/B
Cable gland type	Output control relay : Pg 16 - 10...15 mm Output control relay : Pg 13 - 10...15 mm Power circuit : Pg 16 - 10...15 mm Supply circuit : Pg 16 - 10...15 mm
Connections - terminals	Output control relay : screw clamp terminals with 1 cables of 0.5...1.5 mm² - flexible with cable end Output control relay : screw clamp terminals with 1 cables of 0.5...1.5 mm² - flexible without cable end Output control relay : screw clamp terminals with 1 cables of 0.5...1.5 mm² - rigid Power circuit : screw clamp terminals with 1...2 cables of 1.5...2.5 mm² - flexible with cable end Power circuit : screw clamp terminals with 1...2 cables of 1.5...4 mm² - flexible without cable end Power circuit : screw clamp terminals with 1...2 cables of 1.5...4 mm² - rigid Supply circuit : screw clamp terminals with 1...2 cables of 1.5...4 mm² - flexible with cable end Supply circuit : screw clamp terminals with 1...2 cables of 1.5...6 mm² - flexible without cable end Supply circuit : screw clamp terminals with 1...2 cables of 1.5...6 mm² - rigid
Tightening torque	Output control relay : 0.7 N.m - with screwdriver flat Ø 3.5 mm Power circuit : 0.8 N.m - with screwdriver flat Ø 5.5 mm Supply circuit : 1.7 N.m - with screwdriver flat Ø 5.5 mm
Width	175 mm
Height	195 mm
Depth	175 mm
Product weight	1.02 kg

Environment

Electromagnetic compatibility	Disturbing field emission class B conforming to CISPR 11 Disturbing field emission class B conforming to ENV 55011 Radiated radio-frequency electromagnetic field immunity test 10 V/m conforming to ENV 50140 Radiated radio-frequency electromagnetic field immunity test 10 V/m conforming to ENV 50204 Radiated radio-frequency electromagnetic field immunity test 10 V/m conforming to IEC 61000-4-3 Conducted RF disturbances 10 V/m conforming to ENV 50141 Conducted RF disturbances 10 V/m conforming to IEC 61000-4-6 Electrical fast transient/burst immunity test 2 kV level 3 conforming to EN/IEC 61000-4-4 Surge immunity test 500 V level 2 - control circuit, line to line - conforming to EN/IEC 61000-4-5 Surge immunity test 2 kV level 2 - control circuit, line to ground - conforming to IEC 61000-4-5 Surge immunity test 2 kV level 4 - power, line to line - conforming to EN/IEC 61000-4-5 Surge immunity test 4 kV level 4 - power, line to ground - conforming to IEC 61000-4-5 Electrostatic discharge 4 kV level 2 - in indirect mode - conforming to EN/IEC 61000-4-2 Electrostatic discharge 8 kV level 3 - in air - conforming to EN/IEC 61000-4-2
Mechanical robustness	Vibrations : 4 Gn during contactor closed conforming to IEC 60068-2-6 Vibrations : 2 Gn during contactor open conforming to IEC 60068-2-6 Shocks : 15 gn during contactor closed conforming to IEC 60068-2-27 Shocks : 10 Gn during contactor open conforming to IEC 60068-2-27
IP degree of protection	IP54 conforming to IEC 60529
Protective treatment	TC
Fire resistance	960 °C conforming to IEC 60695-2-1
Operating altitude	2000 m
Standards	EN 60204-1 EN 60439-1 EN 60947-1 IEC 60204-1 IEC 60439-1 IEC 60947-1
Material	Top : polycarbonate + 20 % FG - white : RAL 9001 Bottom : polycarbonate + 20 % FG - black
Ambient air temperature for operation	-5...40 °C conforming to IEC 61439-1
Ambient air temperature for storage	-40...80 °C conforming to IEC 61439-1

Offer Sustainability

Sustainable offer status	Not Green Premium product
RoHS (date code: YYWW)	Compliant - since 0925 - Schneider Electric declaration of conformity
Product end of life instructions	Need no specific recycling operations