Product data sheet

Specifications

Motor starter, TeSys island, 40A at AC-1, 38A at AC-3, 18.5kW, 20hp, DOL type

TPRST038

Main

Range	TeSys
Product name	TeSys island
Device short name	TPRST
Product or component type	Motor starter
Motor starter type	Direct on line
Device presentation	Direct starter connected to an automation controller through a bus coupler Operational only when connected to a bus coupler
Function available	Upstream voltage presence detection Electrical line and load protection Power and energy monitoring when connected with TPRVM voltage module
Product compatibility	TPRBC bus coupler TPRVM voltage interface module
Poles description	3P (3 NO)
Utilisation category	AC-1 AC-2 AC-3 AC-4 AC-3e
Motor power kW	9 kW at 230 V 50 Hz (AC-3) 18.5 kW at 380...415 V 50 Hz (AC-3) 18.5 kW at 440 V 50 Hz (AC-3) 18.5 kW at 500 V 50 Hz (AC-3) 18.5 kW at 690 V 50 Hz (AC-3)
motor power HP (UL / CSA)	2 hp at 120 V AC 60 Hz for 1 phase motors 5 hp at 240 V AC 60 Hz for 1 phase motors 10 hp at 208 V AC 60 Hz for 3 phases motors 10 hp at 240 V AC 60 Hz for 3 phases motors 20 hp at 480 V AC 60 Hz for 3 phases motors 25 hp at 600 V AC 60 Hz for 3 phases motors
[Ue] rated operational voltage	<= 480 V AC 47...63 Hz for overvoltage cat. III <= 690 V AC 47...63 Hz for overvoltage cat. II
[Ie] rated operational current	38 A (at <50 °C) at <= 440 V AC-3 40 A (at <50 °C) at <= 440 V AC-1
[Ith] conventional free air thermal current	40 A (at 50 °C)
[Ui] rated insulation voltage	690 V conforming to IEC 60947-4-1 600 V conforming to UL 60947-4-1 600 V conforming to CSA C22.2 No 60947-4-1
[Uimp] rated impulse withstand voltage	6 kV conforming to IEC 60947-1
Overvoltage category	III for Ue <= 480 V II for Ue <= 690 V
Thermal protection adjustment range	0.76…38 A

Thermal overload class	Class 5…30
Reset	Remotely or automatically
Irms rated making capacity	550 A at 440 V conforming to IEC 60947
Rated breaking capacity	550 A at 440 V conforming to IEC 60947
[Icw] rated short-time withstand current	430 A 40 °C - 1 s 310 A 40 °C - 10 s 150 A 40 °C - 1 min 60 A 40 °C - 10 min
Average impedance	2 mOhm - Ith 40 A 50 Hz
Power dissipation per pole	2.9 W AC-3 - Ith 38 A 3.2 W AC-1 - Ith 40 A
[Uc] control circuit voltage	24 V DC supplied by the bus coupler
Current consumption	160 mA contactor sealed 160 mA contactor closing
Power dissipation in W	11.8 W at Ie AC-3

Complementary

Mechanical durability	30 Mcycles
Electrical durability	1.4 Mcycles 38 A AC-3 at Ue 440 V 2 Mcycles 40 A AC-1 at Ue 440 V
Maximum operating rate	3600 cyc/mn AC-3
Operating time	< 100 ms closing < 30 ms opening
Safety performance level	B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1 B10d = 20000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1
Protection type	Thermal overload protection Motor overheat Overcurrent Undercurrent Jam Long start Stall Rapid cycle lockout Phase sequence Rapid restart lockout Phase loss Phase reversal Phase unbalance Ground current
Monitoring type	Time device ON Time device switch ON Number of faults Number of switching cycles Number of device power cycles Average current Iavg Average voltage Vavg Max current Imax Max voltage Vmax Active and reactive power with voltage module Active and reactive energy with voltage module True power factor with voltage module
Local signalling	1 LED (green/red) for DS (device status) 1 LED (green/red) for LS (load status)
Standards	EN/IEC 60947-1 EN/IEC 60947-4-1 UL 60947-4-1 CSA C22.2 No 60947-4-1

Product certifications	CCC EAC UL CSA
Mounting mode	Horizontal and vertical (35 mm symmetrical DIN rail)
Connections - terminals	Screw-clamp terminals 1 cable(s) 1.5…10 mm² (AWG 16...AWG 8) rigid Screw-clamp terminals 2 cable(s) 1.5…10 mm² (AWG 16...AWG 8) rigid Screw-clamp terminals 1 cable(s) 2.5…10 mm² (AWG 14...AWG 8) flexible without cable end Screw-clamp terminals 2 cable(s) 2.5…10 mm² (AWG 14...AWG 8) flexible without cable end Screw-clamp terminals 1 cable(s) 1.5…10 mm² (AWG 16...AWG 10) flexible with cable end Screw-clamp terminals 2 cable(s) 1.5…6 mm² (AWG 16...AWG 10) flexible with cable end
Tightening torque	2.5 N.m - with screwdriver flat Ø 6 mm 2.5 N.m - with screwdriver Philips No 3
Width	45 mm
Height	121 mm
Depth	115 mm
Net weight	0.718 kg

Environment

Ambient air temperature for storage	-25…70 °C
Ambient air temperature for operation	-10…50 °C without derating 50…60 °C with current derating
Relative humidity	5…95 %
Operating altitude	0...2000 m without derating
IP degree of protection	IP20
Pollution degree	2
Protective treatment	TC
Fire resistance	960 °C conforming to UL 94 850 °C conforming to IEC 60695-2-1 650 °C conforming to IEC 60695-2-12
Shock resistance	15 gn (duration = 11 ms) conforming to IEC 60068-2-27
Vibration resistance	1.5 mm peak to peak (f= 3…13 Hz) conforming to IEC 60068-2-6 1 gn (f= 13…200 Hz) conforming to IEC 60068-2-6
Electromagnetic compatibility	Electrostatic discharge immunity test, level 3, 8 kV air, 6 kV contact, conforming to EN/IEC 61000-4-2 Radiated RF field immunity test, level 3, 10 V/m, conforming to EN/IEC 61000-4-3 Fast transient immunity test, level 4, 4 kV, conforming to EN/IEC 61000-4-4 Surge immunity test (differential mode), level 3, 2 kV, conforming to EN/IEC 61000-4-5 Surge immunity test (common mode), level 4, 4 kV, conforming to EN/IEC 61000-4-5 Conducted RF disturbance immunity test, 20 V, conforming to EN/IEC 61000-4-6

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	5.0 cm
Package 1 Width	12.5 cm
Package 1 Length	13.0 cm
Package 1 Weight	770.0 g

Unit Type of Package 2	S02
Number of Units in Package 2	14
Package 2 Height	15.0 cm
Package 2 Width	30.0 cm
Package 2 Length	40.0 cm
Package 2 Weight	11.1 kg

Contractual warranty

Warranty	18 months

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

Environmental Disclosure	Product Environmental Profile

Use Better

Materials and Substances

Packaging made with recycled cardboard	Yes
Packaging without single use plastic	Yes
EU RoHS Directive	Compliant with Exemptions
SCIP Number	0bda50ae-711f-4024-bff6-ce0577049f63
REACh Regulation	REACh Declaration
Halogen-free status	Halogen free plastic parts product

Use Again

Repack and remanufacture

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

Technical Illustration

Assembly's dimensions