

Soft starter, 3p, 135A, Ue= 200-600VAC

 Part no.
 S811+R13P3S

 Article no.
 168983

 Catalog No.
 S811PLUSR13P3S



Delivery program

Description			With internal bypass contacts
Function			Soft starter for three-phase loads, with control unit and pump algorithm
Mains supply voltage (50/60 Hz)	U_{LN}	V AC	200 - 600
Supply voltage	U_{s}		24 V DC
Control voltage	U _C		24 V DC
Assigned motor rating (Standard connection, In-Line)			
at 400 V, 50 Hz	P	kW	75
at 460 V, 60 Hz	P	HP	100
Rated operational current			
AC-53	I _e	Α	135
AC-53, In-Delta	l _e	Α	234
Startup class			CLASS 10 (star-delta replacement) CLASS 20 (heavy starting duty 3 x I_e for 45 s) CLASS 30 (6 x I_e for 30 s)
Rated operational voltage	U _e		200 V 230 V 400 V 480 V 600 V
Connection to SmartWire-DT			no
Frame size			R

Technical data

Supply frequency

General

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Standards			IEC/EN 60947-4-2 UL 508 CSA22.2-14-1995 GB14048
Approvals			CE
Approvals			UL CSA C-Tick CCC
Climatic proofing			Damp heat, constant, to IEC 60068-2-3 Damp heat, cyclic, to IEC 60068-2-10
Ambient temperature			
Operation	θ	°C	-30 - +50
Storage	θ	°C	-50 - +70
Altitude		m	0 - 2000 m, above that each 100 m 0.5% Derating
Mounting position			As required
Degree of protection			
Degree of Protection			IP20 (terminals IP00)
Integrated			Protection type IP40 can be achieved on all sides with covers SS-IP20-N.
Protection against direct contact			Finger- and back-of-hand proof
Overvoltage category/pollution degree			11/3
Shock resistance			15 g
Radio interference level (IEC/EN 55011)			A
Static heat dissipation, non-current-dependent	P_{vs}	W	25
Weight		kg	4.8
Main conducting paths			
Rated operating voltage	U _e	V AC	200 - 600

50/60

Rated operational current	I _e	Α	
AC-53, In-Delta	I _e	Α	234
AC-53	I _e	A	135
Assigned motor rating (Standard connection, In-Line)	·e		
at 230 V, 50 Hz	Р	kW	37
at 400 V, 50 Hz	P	kW	75
at 500 V, 50 Hz	P	kW	90
at 200 V, 60 Hz	P	НР	40
at 230 V, 60 Hz	P	НР	50
at 460 V, 60 Hz	Р	НР	100
at 600 V, 60 Hz	Р	НР	125
Assigned motor rating (delta connection)			
at 230 V, 50 Hz	Р	kW	75
at 400 V, 50 Hz	Р	kW	132
at 500 V, 50 Hz	Р	kW	160
at 230 V, 60 Hz		НР	75
at 480 V, 60 Hz		НР	150
at 600 V, 60 Hz	Р	НР	200
Overload cycle to IEC/EN 60947-4-2			
AC-53a			135 A: AC-53a: 4.0 - 32: 99 - 3
Internal bypass contacts			✓
			•
Short-circuit rating			NAMES OF STREET
Type "1" coordination Terminal capacities			NZMN2-S160
Cable lengths			
Solid		mm ²	1 x (2.5 - 95)
Flexible with ferrule			1 x (2.5 - 95)
		mm ²	
Stranded		mm ²	1 x (2.5 - 95)
Solid or stranded		AWG	1 x (14 - 4/0)
Tightening torque		Nm	11.3
Screwdriver (PZ: Pozidriv)		mm	4 mm Innensechskant
Control cables			
Solid		mm ²	1 x (2.5 - 4) 2 x (1.0 - 2.5)
Flexible with ferrule		mm ²	1 x (2.5 - 4)
			2 x (1.0 - 2.5)
Stranded		mm^2	1 x (2.5 - 4) 2 x (1.0 - 2.5)
Solid or stranded		AWG	8 x (12 - 14)
Cond of stranged		71170	2 x (12 - 14)
Tightening torque		Nm	0.4
Screwdriver		mm	0,6 × 3,5
Control circuit			
Digital inputs			
Control voltage		V/ D.O.	24 V DO -10 W / 10 W
DC-operated		V DC	24 V DC +10 %/- 10 %
Current consumption 24 V		mA	150
External 24 V		mA	150
External 24 V (no-load)		mA	100
Pick-up voltage		x U _s	21.6. 26.4
DC-operated		V DC	21.6 - 26.4
Drop-out voltage	x U _s	14.5.5	
DC operated		V DC	
Drop-out voltage, DC-operated, max.		V DC	3
Pick-up time			
DC operated		ms	100

Drop-out time			
DC operated		ms	100
Regulator supply			
Voltage	U _s	V	24 V DC +10 %/- 10 %
Current consumption	I _e	mA	1000
Current consumption at peak performance (close bypass) at 24 V DC		A/ms	10/150
	I _{Peak}	A/IIIS	
Notes			External supply voltage
Analog inputs			
Number of current inputs			1
0			4.00
Current input		mA	4 - 20
Relay outputs			
Number			2
of which programmable			2
Voltage range		V AC	120 V AC/DC
AC-11 current range		Α	3 A, AC-11
Soft start function Ramp times			
Ramp times Acceleration			
Acceleration		s	260
Ramp time, max.		S	360
Deceleration		S o/	0 - 120
Start voltage (= turn-off voltage)		%	
Start voltage, max.		%	85
Start pedestal		%	
Start voltage, max.		%	85
Kickstart			
Voltage		%	
Kickstart voltage, max.		%	100
Duration			
50 Hz		ms	
Kickstart Duration 50 Hz max.		ms	2000
60 Hz		ms	
Kickstart Duration 60 Hz max.		ms	2000
Fields of application			
Fields of application			Soft starting of three-phase asynchronous motors
3-phase motors			1
Functions			
Fast switching (semiconductor contactor)			- (minimum ramp time 1s)
Soft start function			1
			•
Reversing starter			External solution required (reversing contactor)
Suppression of closing transients			1
Current limitation			1
			•
Overload monitoring			1
Underload monitoring			/
		Fault	10
Fault memory		Faults	10
Suppression of DC components for motors			✓
Potential isolation between power and control sections			1
			M. II. DTII
Communication Interfaces			Modbus RTU

Design verification as per IEC/EN 61439

Technical data for design verification			
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Heat dissipation per pole, current-dependent Ped W 25 Static heat dissipation, current-dependent Ped W 25 Static heat dissipation, current-dependent Ped W 25 Static heat dissipation, con-current-dependent Ped W 25 Static heat dissipation, con-current-dependent Ped W 25 Static heat dissipation capacity Peds W 0 Operating ambient temperature min. Operating ambient temperature max. C 26 Operating ambient temperature max. C 26 Strength of materials and parts 10.2.2 Strength of materials and parts 10.2.2 Corrosion resistance 10.2.3 Iverification of flemial stability of enclosures 10.2.3.1 Verification of fesistance of insulating materials to normal heat and fire due to internal electric effects 10.2.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects 10.2.4 Resistance to ultra-violet (UV) radiation 10.2.5 Lifting 10.2.6 Mechanical impact 10.2.7 Inscriptions 10.3 Degree of protection of ASSEMBLIES 10.3 Degree of protection of ASSEMBLIES 10.4 Clearances and creepage distances 10.5 Protection against electric shock 10.5 Protection against electric shock 10.6 Incorporation of switching devices and components 10.7 Internal electrical circuits and components 10.8 Connections for external conductors 10.9 Insulation properties 10.9 Power-frequency electric strength 10.1 Temperature rise 10.2 Power-frequency electric strength 10.3 Temperature rise 10.4 Resistance and creepage distances 10.5 Insulation properties 10.5 Insulation of evaluation and evaluation and evaluation of evaluation				
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10.7 Internal electrical circuits and connections 10.8 Connections for external conductors 10.9 Insulation properties 10.9.2 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function Is the panel builder's responsibility. Is the panel builder's responsibility. Is the panel builder's responsibility. Is the panel builder is responsibility. The specifications for the switchgear must be observed. In the panel builder's responsibility. The specifications for the switchgear must be observed. In the device meets the requirements, provided the information in the instruction	10.5 Protection against electric shock			Does not apply, since the entire switchgear needs to be evaluated.
10.8 Connections for external conductors 10.9 Insulation properties 10.9.2 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 10.13 Mechanical function Is the panel builder's responsibility. The specifications for the switchgear must be observed. 10.13 Mechanical function The device meets the requirements, provided the information in the instruction	10.6 Incorporation of switching devices and components			Does not apply, since the entire switchgear needs to be evaluated.
10.9.2 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 10.14 Short-circuit ration 10.15 The device meets the requirements, provided the information in the instruction	10.7 Internal electrical circuits and connections			Is the panel builder's responsibility.
10.9.2 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 10.13 Mechanical function Is the panel builder's responsibility. Is the panel builder is responsibility. The panel builder is responsibility. The specifications for the switchgear must be observed. Is the panel builder's responsibility. The specifications for the switchgear must be observed. The device meets the requirements, provided the information in the instruction	10.8 Connections for external conductors			Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage Is the panel builder's responsibility. 10.9.4 Testing of enclosures made of insulating material Is the panel builder's responsibility. The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. 10.11 Short-circuit rating Is the panel builder's responsibility. The specifications for the switchgear must be observed. 10.12 Electromagnetic compatibility Is the panel builder's responsibility. The specifications for the switchgear must be observed. 10.13 Mechanical function The device meets the requirements, provided the information in the instruction	10.9 Insulation properties			
10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise The panel builder is responsibility. The panel builder is responsibility for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. 10.11 Short-circuit rating Is the panel builder's responsibility. The specifications for the switchgear must be observed. 10.12 Electromagnetic compatibility Is the panel builder's responsibility. The specifications for the switchgear must be observed. 10.13 Mechanical function The device meets the requirements, provided the information in the instruction	10.9.2 Power-frequency electric strength			Is the panel builder's responsibility.
10.10 Temperature rise The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. 10.11 Short-circuit rating Is the panel builder's responsibility. The specifications for the switchgear must be observed. 10.12 Electromagnetic compatibility Is the panel builder's responsibility. The specifications for the switchgear must be observed. 10.13 Mechanical function The device meets the requirements, provided the information in the instruction	10.9.3 Impulse withstand voltage			Is the panel builder's responsibility.
provide heat dissipation data for the devices. 10.11 Short-circuit rating 15 the panel builder's responsibility. The specifications for the switchgear must be observed. 16.12 Electromagnetic compatibility 16 the panel builder's responsibility. The specifications for the switchgear must be observed. 17 the device meets the requirements, provided the information in the instruction.	10.9.4 Testing of enclosures made of insulating material			Is the panel builder's responsibility.
observed. 10.12 Electromagnetic compatibility Is the panel builder's responsibility. The specifications for the switchgear must be observed. 10.13 Mechanical function The device meets the requirements, provided the information in the instruction	10.10 Temperature rise			· · · · · · · · · · · · · · · · · · ·
observed. 10.13 Mechanical function The device meets the requirements, provided the information in the instruction	10.11 Short-circuit rating			Is the panel builder's responsibility. The specifications for the switch gear must be observed. $\label{eq:constraint}$
	10.12 Electromagnetic compatibility			Is the panel builder's responsibility. The specifications for the switch gear must be observed. $\label{eq:constraint}$
	10.13 Mechanical function			

Technical data ETIM 6.0

Low-voltage industrial components (EG000017) / Soft starter (EC000640)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Load breakout, motor breakout / Semiconductor motor controller or soft starter (ecl@ss8 1-77-37-09-07 [AC0300008])

(ecl@ss8.1-27-37-09-07 [AC0300008])		
Rated operation current le at 40 °C Tu	Α	135
Rated operating voltage Ue	V	200 - 600
Rated power three-phase motor, inline, at 230 V	kW	37
Rated power three-phase motor, inline, at 400 V	kW	75
Rated power three-phase motor, inside delta, at 230 V	kW	75
Rated power three-phase motor, inside delta, at 400 V	kW	132
Internal bypass		Yes
With display		Yes
Torque control		No
Rated surrounding temperature without derating	°C	50
Rated control supply voltage Us at AC 50HZ	V	0 - 0
Rated control supply voltage Us at AC 60HZ	V	0 - 0
Rated control supply voltage Us at DC	V	24 - 24
Voltage type for actuating		DC
Integrated motor overload protection		Yes

Approvals	
Product Standards	IEC/EN 60947-4-2; UL 508; CSA C22.2 No. 14; CE marking
UL File No.	E202571
UL Category Control No.	NMFT
CSA File No.	LR 353
CSA Class No.	3211-06, 2411-01
North America Certification	UL listed, CSA certified
Suitable for	Branch Circuits, not as BCPD
Max. Voltage Rating	600 Vac

IP20 with kit

Dimensions

Degree of Protection

