### **DATASHEET - S811+T30N3S**



Soft starter, 304 A, 200 - 600 V AC, Us= 24 V DC, with control unit, Frame size T  $\,$ 



Part no. S811+T30N3S Catalog No. 168990

Alternate Catalog

S811PLUST30N3S

No.

**EL-Nummer** 4137474

(Norway)

### **Delivery program**

Delivery program			
			This item is only available for a limited time and will be replaced by the following item: 168991, S811+T30P3S
Description			With internal bypass contacts
Function			Soft starter for three-phase loads, with control unit
Mains supply voltage (50/60 Hz)	$U_{LN}$	V AC	200 - 600
Supply voltage	Us		24 V DC
Control voltage	U <sub>C</sub>		24 V DC
Assigned motor rating (Standard connection, In-Line)			
at 400 V, 50 Hz	P	kW	160
at 460 V, 60 Hz	P	HP	250
Rated operational current			
AC-53	I <sub>e</sub>	Α	304
AC-53, In-Delta	le	Α	526
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 <sub>e</sub>		200 V 230 V 400 V 480 V 600 V
Connection to SmartWire-DT			no
Frame size			Т
Ordering information			Terminal blocks for the terminals are required for frame sizes T, U, and V -> $\mbox{\sc Accessories}$

### **Technical data**

#### General

UL 50	X22.2-14-1995 I 4048
Angroyals	
CSA C-Ticl	ick
	np heat, constant, to IEC 60068-2-3 np heat, cyclic, to IEC 60068-2-10
Ambient temperature	
Operation 8 °C -30 -	- +50
Storage 8 °C -50 -	- +70
Altitude m 0 - 200	2000 m, above that each 100 m 0.5% Derating
Mounting position As re	required
Degree of protection	
Degree of Protection IP20 (	0 (terminals IP00)
	IP20 degree of protection can be achieved on all sides by using optional ninal covers SS-IP20-TU.
Protection against direct contact Finge	ger- and back-of-hand proof
Overvoltage category/pollution degree II/3	

Section   Part   Description   Part   Part   Part	
Weight         kg         18.6           Main conducting paths         Name         Vol.         VAC         200-1600           Supply frequency         fut         HZ         5000           Rated operational current         ls         A         A           AC-53. In-Deta         ls         A         304           AC-53. In-Deta         ls         A         304           Ac-53.         P         kW         90         400           Assigned motor rating [Standard connection, In-Line]         at 200 V, 50 Hz         P         kW         90           at 400 V, 50 Hz         P         kW         200         400           at 200 V, 50 Hz         P         kW         200           at 200 V, 60 Hz         P         HP         100           at 200 V, 60 Hz         P         HP         300           at 200 V, 60 Hz         P         HP         300           at 200 V, 50 Hz         P         kW         180           at 200 V, 50 Hz         P         kW         250           at 200 V, 50 Hz         P         kW         250           at 400 V, 60 Hz         P         KW         250           <	
Maint conducting paths         Val.         VAC         200 - 6000           Rated operating olluge         Val.         VAC         200 - 6000           Rated operational current         Ia.         A         S56           AC-S3, In-Delta         Ia.         A         S26           AC-S3, In-Delta         Ia.         A         304           AC-S3, In-Delta         In-Delta         A         304           AC-S3, In-Delta         In-Delta         A         304           AC-S30, In-Delta         In-Delta         A         304           at 400, V.50 In         In-Delta         B         In-Delta         300           at 200, V.50 In         In-Delta         In-Delta         300         300           Assigned motar rating (delta connection)         In-Delta         In-Del	
Rated operating voltage         U <sub>o</sub> V AC         200 - 9000           Supply requency         1 <sub>A</sub> 1         Hz         5000           AC - 53. The Data         Ig         A         526           AC - 53. The Data         Ig         A         304           Assigned motor rating [Standard connection, In-Line)         Image:	
Supply fraquency   Fult   Hz   Solution   Rated operational current   I.e.   A   A   A   A   A   A   A   A   A	
Retset operational current         I <sub>e</sub> A           AC-53. In-Delta         I <sub>e</sub> A         526           AE-53         I <sub>e</sub> A         304           Assigned motor rating (Standard connection, In-Line)         Tender of the control of t	
AC-53 In-Delta	
AC-53 Assigned motor rating (Standard connection, In-Line) at 230 V, 50 Hz at 400 V, 50 Hz by Control Called Connection, In-Line) at 230 V, 50 Hz by Control Called Connection, In-Line) at 230 V, 50 Hz by Control Called Connection, In-Line) at 230 V, 50 Hz by Control Called Connection, In-Line) by Control Called Connection, In-Line) at 400 V, 50 Hz by Control Called Connection, In-Line) by Control Called Connection, In-Line) at 230 V, 50 Hz by Control Called Connection, In-Line) by	
Assigned motor rating (Standard connection, In-Line) at 230 V, 50 Hz	
at 230 V, 50 Hz	
at 400 V, 50 Hz at 500 V, 50 Hz at 200 V, 50 Hz at 200 V, 60 Hz at 200 V, 60 Hz p HP 100 at 230 V, 60 Hz p HP 100 at 230 V, 60 Hz p HP 250 at 600 V, 60 Hz p HP 300 Assigned motor rating (deta connection) at 230 V, 50 Hz p HP 300 Assigned motor rating (deta connection) at 230 V, 50 Hz p HP 250 at 400 V, 50 Hz p WW 250 at 400 V, 50 Hz p WW 250 at 400 V, 50 Hz p WW 250 at 400 V, 50 Hz p HP 200 at 480 V, 60 Hz at 480 V, 60 Hz p HP 300  Overload cycle to IEC/EN 60947-4-2 AC-53a internal bypass contacts  Short-circuit rating Type "1" coordination  Terminal capacities  Cable lengths  Scrended  Stranded  Stranded  Scrended  NM 255 Is 150 mm²; 28.3 I-150 mm² a mm 1 ix (2.5 - 4)  Sclid or stranded  Am Innensechskant  Nm 4 mm Innensechskant	
at 500 V, 50 Hz  at 200 V, 50 Hz  at 400 V, 50 Hz  at 500 V, 50 Hz  p HP  100  at 500 V, 50 Hz  p HP  250  Assigned motor rating (deha connection)  at 230 V, 50 Hz  p HP  300  Assigned motor rating (deha connection)  at 230 V, 50 Hz  p KW  160  at 400 V, 50 Hz  p KW  250  at 500 V, 50 Hz  p KW  250  at 500 V, 50 Hz  p KW  315  at 230 V, 50 Hz  p HP  200  at 480 V, 60 Hz  at 480 V, 60 Hz  at 480 V, 60 Hz  at 600 V, 80 Hz  p HP  500  Overload cycle to IEC/EN 80947-4-2  AC-53a  Internal bypass contacts  Short-circuit recordination  Type "Ir coordination  Type "To coordination  Torminal capacities  Cable lengths  Solid  Solid mm²  1 x (70 - 240) 2 x (25 - 240)  Stranded  AWG  1 x (4 - 500 kcmil) 2 x (25 - 240)  Tightening torque  Screwdriver (PZ: Pozidriv)  Control cables  Solid  mm²  1 x (25 - 4)  Amm Innensechskant	
at 200 V, 60 Hz at 230 V, 60 Hz at 460 V, 60 Hz at 460 V, 60 Hz at 600 V, 60 Hz at 600 V, 60 Hz at 600 V, 60 Hz by P HP 250  Assigned motor rating (debta connection) at 230 V, 50 Hz by P NW 250 at 500 V, 50 Hz by P NW 250 at 500 V, 50 Hz by P NW 250 at 500 V, 50 Hz by P NW 315 at 230 V, 60 Hz by P NW 315 at 230 V, 60 Hz by P NW 315 at 230 V, 60 Hz by P NP 450 at 600 V, 60 Hz by P NP 500  Overload cycle to IEC/EN 60947-4-2 AC-53a Internal bypass contacts  Not-circuit rating Type "1" coordination  Terminal capacities  Solid Flexible with ferrule  Solid Stranded  AWG 1x (70 - 240) 2x (25 - 240)  Flexible with ferrule  Solid or stranded  AWG 1x (7-500 kcmil) 2x (4-500 kcmil) 2x (4-	
at 230 V, 60 Hz at 460 V, 60 Hz at 600 V, 50 Hz at 600 V, 50 Hz at 200 V, 50 Hz at 400 V, 50 Hz at 200 V, 50 Hz at 200 V, 60 Hz at 400 V, 60 Hz at 600 V, 60 V	
A 1 460 V, 60 Hz	
at 600 V, 60 Hz  Assigned motor rating (delta connection)  at 230 V, 50 Hz  at 400 V, 50 Hz  at 400 V, 50 Hz  at 500 V, 50 Hz  at 500 V, 50 Hz  at 500 V, 50 Hz  at 600 V, 60 Hz  at 600 V, 60 Hz  by the following	
Assigned motor rating (delta connection)  at 230 V, 50 Hz  at 400 V, 50 Hz  at 400 V, 50 Hz  at 400 V, 50 Hz  at 480 V, 50 Hz  at 480 V, 50 Hz  at 480 V, 50 Hz  at 600 V, 60 Hz  AC-53a: 40 - 32: 99 - 3  Internal bypass contacts  Short-circuit rating  Type "1" coordination  Type "1" coordination  Terminal capacities  Cable lengths  Solid  mm² 1 × (70 - 240) 2 × (25 - 240)  Elexible with ferrule  Stranded  Stranded  AWG 1 × (4 - 500 kcmil) 2 × (5 - 40)  Mm 1 × (25 - 40)  Mm 2 Screwdriver (PZ- Pozidriv)  Mm 4 minensechskant  Control cables  Solid  mm² 1 × (25 - 4)	
at 230 V, 50 Hz  at 400 V, 50 Hz  at 400 V, 50 Hz  at 500 V, 50 Hz  at 400 V, 50 Hz  at 600 V, 60 Hz  at 600 V, 60 Hz  by HP  450  Overload cycle to IEC/EN 60947-4-2  AC-53a  304 A: AC-53a: 4.0 - 32: 99 - 3  Internal bypass contacts  Short-circuit rating  Type "1" coordination  Type "1" coordination  Terminal capacities  Cable lengths  Solid  mm²  1 x (70 - 240) 2 x (25 - 240)  Flexible with ferrule  Stranded  Tyne "1" (20 - 240) 2 x (25 - 240)  Stranded  Tightening torque Solid or stranded  AWG 1 x (4 - 500 kcmil) 2 x (5 - 240)  Control cables  Solid  mm² 1 x (2.5 - 4)	
at 400 V, 50 Hz  at 500 V, 50 Hz  at 500 V, 50 Hz  at 230 V, 60 Hz  at 480 V, 60 Hz  at 480 V, 60 Hz  at 600 V, 60 Hz  AC-53a  Internal bypass contacts   Short-circuit rating  Type *1" coordination  Terminal capacities  Cable lengths  Solid  Stranded  Stranded  Stranded  AWG  Tightening torque  Screwdriver (PZ- Pozidriv)  Control cables  Solid  P kW 315  HP 200  HP 450  AKW 315  HP 500  NAW 315  HP 200  HP 450  NAW 315  HP 200  HP 450  NAW 315  HP 200  NAW 315  HP 200  NAW 315  HP 200  NAW 315  NAW 310  NAW 31	
at 500 V, 50 Hz at 230 V, 60 Hz at 480 V, 60 Hz at 480 V, 60 Hz at 600 V, 60 Hz  AC-53a  Internal bypass contacts  Short-circuit rating Type "1" coordination  Terminal capacities  Cable lengths  Solid  Flexible with ferrule  Stranded  Stranded  Solid or stranded  Tightening torque Screwdriver (PZ: Pozidriv)  Control cables  Solid  Type "1" capacities  Cable lengths  Solid  Terminal capacities  Type "1" coordination  Terminal capacities  Type "1" coordination  Terminal capacities  Type "1" coordination  Tightening torque Screwdriver (PZ: Pozidriv)  Control cables  Solid  Tightening torque Solid  Type "1" capacities  Type "1" capacities  Type "1" capacities  Type "1" coordination	
at 230 V, 60 Hz at 480 V, 60 Hz at 600 V, 60 Hz  P HP 500  Overload cycle to IEC/EN 60947-4-2  AC-53a Internal bypass contacts  Short-circuit rating Type "1" coordination  Terminal capacities  Cable lengths  Solid  mm² 1 x (70 - 240) 2 x (25 - 240)  Stranded  Flexible with ferrule  Solid or stranded  AWG 1 x (4 - 500 kcmil) 2 x (4 - 500 kcmil) 2 x (5 - 500 kmil) Tightening torque Screwdriver (PZ: Pozidriv)  Control cables  Solid  mm² 4 mm Innensechskant	
at 480 V, 60 Hz  at 600 V, 60 Hz  P HP 500  Overload cycle to IEC/EN 60947-4-2  AC-53a  Internal bypass contacts  Short-circuit rating Type "1" coordination  Terminal capacities  Cable lengths  Solid  mm² 1 × (70 - 240) 2 × (25 - 240)  Flexible with ferrule  Stranded  mm² 1 × (70 - 240) 2 × (25 - 240)  Stranded  mm² 1 × (70 - 240) 2 × (25 - 240)  Stranded  Mm² 1 × (70 - 240) 2 × (25 - 240)  Stranded  mm² 1 × (70 - 240) 2 × (25 - 240)  Stranded  mm² 1 × (70 - 240) 2 × (25 - 240)  Stranded  mm² 1 × (70 - 240) 2 × (25 - 240)  Stranded  mm² 1 × (70 - 240) 2 × (25 - 240)  Stranded  mm² 1 × (70 - 240) 2 × (25 - 240)  Stranded  mm² 1 × (70 - 240) 2 × (25 - 240)  Stranded  mm² 1 × (70 - 240) 2 × (25 - 240)  Stranded  mm² 1 × (70 - 240) 2 × (25 - 240)  Solid or stranded  mm² 1 × (50 kcmil) 2 × (4 - 500 kcmil) 3 × (4 - 500 kcmil) 4 mm Innensechskant  Control cables  Solid	
at 600 V, 60 Hz  Overload cycle to IEC/EN 60947-4-2  AC-53a  Internal bypass contacts  Short-circuit rating Type "1" coordination  Terminal capacities  Cable lengths  Solid  Flexible with ferrule  Stranded  Suranded  Solid or stranded  Tightening torque Screwdriver (PZ: Pozidriv)  Solid  Solid  NEMP 500  HP 500  NZMN3-S32.99 - 3  NZMN3-S32.99 - 3  NZMN3-S320  NMm² 1 x (70 - 240) 2 x (25 - 240)  Nmm² 1 x (70 - 240) 2 x (25 - 240)  NMm² 2 x (25 - 240)  NMm² 2 x (25 - 240)  NMm² 2 x (4 - 500 kcmil) 3 x (5 - 50 mm²); 28.3 (> 150 mm²); 28.3 (> 150 mm²)  Nmm² 4 mm Innensechskant  Control cables	
Overload cycle to IEC/EN 60947-4-2       304 A: AC-53a: 4.0 - 32: 99 - 3         Internal bypass contacts       ✓         Short-circuit rating       NZMN3-S320         Terminal capacities       NZMN3-S320         Cable lengths       Ix (70 - 240)         Solid       mm² 1x (70 - 240)         2x (25 - 240)       2x (25 - 240)         Stranded       mm² 1x (70 - 240)         2x (25 - 240)       2x (25 - 240)         Solid or stranded       AWG 1x (4 - 500 kcmil)         2x (25 - 240)       2x (25 - 240)         Scewdriver (PZ: Pozidriv)       mm 4 mm Innensechskant         Control cables       mm² 1x (2.5 - 4)	
AC-53a Internal bypass contacts  Short-circuit rating Type "1" coordination  Terminal capacities  Cable lengths  Solid  mm² 1 x (70 - 240) 2 x (25 - 240)  Flexible with ferrule  mm² 1 x (70 - 240) 2 x (25 - 240)  Stranded  mm² 1 x (70 - 240) 2 x (25 - 240)  Stranded  mm² 1 x (70 - 240) 2 x (25 - 240)  Stranded  mm² 1 x (70 - 240) 2 x (25 - 240)  Stranded  mm² 1 x (70 - 240) 2 x (25 - 240)  Stranded  mm² 1 x (70 - 240) 2 x (25 - 240)  Solid or stranded  AWG 1 x (4 - 500 kcmil) 2 x (4 - 500 kcmil) 2 x (4 - 500 kcmil)  Screwdriver (PZ: Pozidriv)  mm 4 mm Innensechskant  Control cables  Solid	
Internal bypass contacts	
Short-circuit rating         NZMN3-S320           Terminal capacities         Image: capacities of the provided in the pro	
Short-circuit rating         NZMN3-S320           Terminal capacities         Image: capacities of the provided in the pro	
Terminal capacities         Cable lengths $mm^2$ $1 \times (70 - 240)$ $2 \times (25 - 240)$ Flexible with ferrule $mm^2$ $1 \times (70 - 240)$ $2 \times (25 - 240)$ Stranded $mm^2$ $1 \times (70 - 240)$ $2 \times (25 - 240)$ Solid or stranded $am^2$ $am$	
Terminal capacities         Cable lengths $mm^2$ $1 \times (70 - 240)$ $2 \times (25 - 240)$ Flexible with ferrule $mm^2$ $1 \times (70 - 240)$ $2 \times (25 - 240)$ Stranded $mm^2$ $1 \times (70 - 240)$ $2 \times (25 - 240)$ Solid or stranded $am^2$ $am$	
Solid $mm^2 = \frac{1 \times (70 - 240)}{2 \times (25 - 240)}$ Flexible with ferrule $mm^2 = \frac{1 \times (70 - 240)}{2 \times (25 - 240)}$ Stranded $mm^2 = \frac{1 \times (70 - 240)}{2 \times (25 - 240)}$ Solid or stranded $mm^2 = \frac{1 \times (70 - 240)}{2 \times (25 - 240)}$ Solid or stranded $4WG = \frac{1 \times (4 - 500 \text{ kcmil})}{2 \times (4 - 500 \text{ kcmil})}$ Tightening torque $Nm = \frac{25.5 (≤ 150 \text{ mm}^2)}{2 \times (25 - 4)}$ Screwdriver (PZ: Pozidriv) $mm = \frac{4 \text{ mm Innensechskant}}{4 \text{ mm Innensechskant}}$ Control cables $mm^2 = \frac{1 \times (2.5 - 4)}{4 \times (2.5 - 4)}$	
Flexible with ferrule   $2 \times (25 - 240)$   $2 \times (4 - 500 \text{ kcmil})$   $2 \times (25 - 240)$   $2 \times (25 - 240)$	
Flexible with ferrule $mm^2$ $1 \times (70 - 240)$ Stranded $mm^2$ $1 \times (70 - 240)$ Solid or stranded $2 \times (25 - 240)$ AWG $1 \times (4 - 500 \text{ kcmil})$ $2 \times (4 - 500 \text{ kcmil})$ $2 \times (4 - 500 \text{ kcmil})$ Tightening torque       Nm $25.5 \le 150 \text{ mm}^2$ ); $28.3 < 150 \text{ mm}^2$ )         Screwdriver (PZ: Pozidriv)       mm       4 mm Innensechskant         Control cables       mm² $1 \times (2.5 - 4)$	
Stranded $2 \times (25 - 240)$ $mm^2                                   $	
Solid or stranded $2 \times (25 - 240)$ AWG $1 \times (4 - 500 \text{ kcmil})$ $2 \times (4 - 500 \text{ kcmil})$ Tightening torque $2 \times (4 - 500 \text{ kcmil})$ Screwdriver (PZ: Pozidriv) $2 \times (4 - 500 \text{ kcmil})$ Tontrol cables $2 \times (25 - 240)$ $2 \times (25 - 240)$ Nm $2 \times (4 - 500 \text{ kcmil})$ $2 \times (4 - 500 \text{ kcmil})$ $2 \times (4 - 500 \text{ kcmil})$ $2 \times (25 - 240)$	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	
Screwdriver (PZ: Pozidriv)  Control cables  Solid  mm 4 mm Innensechskant  mm² 1 x (2.5 - 4)	
Control cables  Solid  mm² 1 x (2.5 - 4)	
Solid mm <sup>2</sup> 1 x (2.5 - 4)	
2 x (1.0 - 2.5)	
Flexible with ferrule $mm^2 \qquad 1 \times (2.5 - 4) \\ 2 \times (1.0 - 2.5)$	
Stranded mm <sup>2</sup> 1 x (2.5 - 4) 2 x (1.0 - 2.5)	
Solid or stranded AWG 15 x (12 - 14) 2 x (12 - 14)	
Tightening torque Nm 0.4	
Screwdriver mm 0,6 x 3,5	
Control circuit	
Digital inputs	
Control voltage	
DC-operated V DC 24 V DC +10 %/- 10 %	
Current consumption 24 V mA	
External 24 V mA 150	

External 24 V (no-load)		mA	100
Pick-up voltage		x U <sub>s</sub>	
DC-operated		V DC	21.6 - 26.4
Drop-out voltage	x U <sub>s</sub>		
DC operated	05	V DC	
Drop-out voltage, DC-operated, max.		V DC	3
		V DC	
Pick-up time			400
DC operated		ms	100
Drop-out time			
DC operated		ms	100
Regulator supply			
Voltage	Us	V	24 V DC +10 %/- 10 %
Current consumption	l <sub>e</sub>	mA	1000
Current consumption at peak performance (close bypass) at 24 V DC	I <sub>Peak</sub>	A/ms	10/150
Notes			External supply voltage
Analog inputs			
Number of current inputs			1
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		A	3 A, AC-11
Soft start function		, ·	oryne ii
Ramp times			
Acceleration		s	
Ramp time, max.		s	180
Deceleration		s	0 - 60
Start voltage (= turn-off voltage)		%	
Start voltage, max.		%	85
Start pedestal		%	
Start voltage, max.		%	85
Kickstart			
Voltage		%	
Kickstart voltage, max.		%	100
Duration		,,,	
50 Hz		me	
Kickstart Duration 50 Hz max.		ms ms	2000
60 Hz			
Kickstart Duration 60 Hz max.		ms	2000
		ms	2000
Fields of application			Soft starting of three phase asymphysical maters
Fields of application			Soft starting of three-phase asynchronous motors
3-phase motors Functions			/
Fast switching (semiconductor contactor)			- (minimum ramp time 1s)
Soft start function			✓
Reversing starter			External solution required (reversing contactor)
Suppression of closing transients			Chemial Solution required (reversing contactor)
Current limitation			<u>'</u>
Overload monitoring			<i>y</i>
Underload monitoring		F 1:	10
Fault memory		Faults	10
Suppression of DC components for motors			
Potential isolation between power and control sections			

Communication Interfaces	Modbus RTU

# Design verification as per IEC/EN 61439

boolgii vormoution do por 120/211 or 100			
Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	304
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	0
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	45
Static heat dissipation, non-current-dependent	P <sub>vs</sub>	W	45
Heat dissipation capacity	P <sub>diss</sub>	W	0
Operating ambient temperature min.		°C	-30
Operating ambient temperature max.		°C	50
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures			Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat			Meets the product standard's requirements.
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects $$			Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation			Meets the product standard's requirements.
10.2.5 Lifting			Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact			Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 Inscriptions			Meets the product standard's requirements.
10.3 Degree of protection of ASSEMBLIES			Does not apply, since the entire switchgear needs to be evaluated.
10.4 Clearances and creepage distances			Meets the product standard's requirements.
10.5 Protection against electric shock			Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components			Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections			Is the panel builder's responsibility.
10.8 Connections for external conductors			Is the panel builder's responsibility.
10.9 Insulation properties			
10.9.2 Power-frequency electric strength			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.
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 leaflet (IL) is observed.
			leaflet (IL) is observed.

## **Technical data ETIM 7.0**

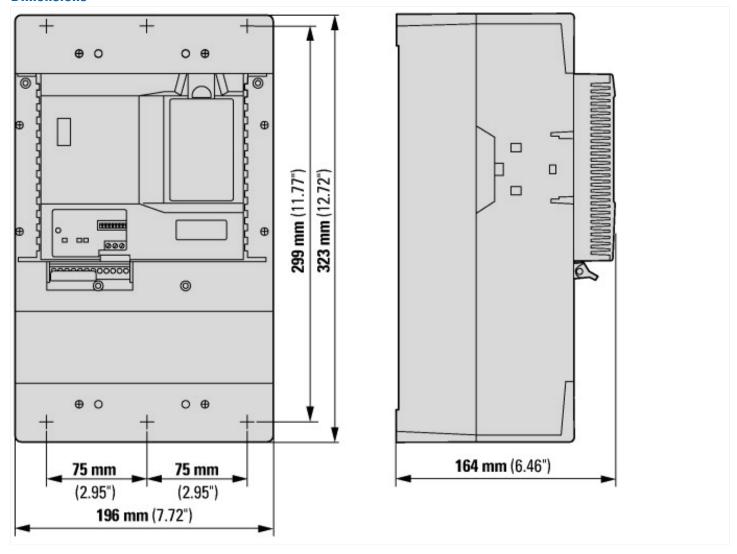
Low-voltage industrial components (EG000017) / Soft starter (EC000640)				
Electric engineering, automation, process control engineering / Low-voltage switch technology / Load breakout, motor breakout / Semiconductor motor controller or soft starter (ecl@ss10.0.1-27-37-09-07 [AC0300011])				
Rated operation current le at 40 °C Tu	Д	4	304	
Rated operating voltage Ue	V	<b>/</b>	200 - 600	
Rated power three-phase motor, inline, at 230 V	k	κW	90	
Rated power three-phase motor, inline, at 400 V	k	κW	160	
Rated power three-phase motor, inside delta, at 230 V	k	κW	160	
Rated power three-phase motor, inside delta, at 400 V	k	κW	250	
Function			Single direction	
Internal bypass			Yes	
With display			Yes	
Torque control			No	
Rated surrounding temperature without derating	0	°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
Release class			Adjustable
Degree of protection (IP)			IP00
Degree of protection (NEMA)			Other

## **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
Degree of Protection	IP20 with kit

### **Dimensions**



# **Additional product information (links)**

Documentation http://www.eaton.eu/Europe/Electrical/ProductsServices/AutomationControl/SwitchingProtectingDrivingMotors/SoftStarters/S811/index.htm#tabs-4