

Softstarters

ABB softstarters - The complete range

ABB offers four different ranges of softstarters to cover every customer need for solutions for motor sizes up to 1800 A. This page describes the main characteristics of the different softstarter ranges

PSR - The compact range

The PSR softstarter is the most compact of all the softstarter ranges, thereby making it possible to design compact starting equipments. The system concept with Manual Motor Starters and the PSR provides a far more compact starting solution than for instance a star delta starter.

Built-in by-pass reduces the energy loss and makes the connection easier and with only three potentiometers, the set-up couldn't be any easier. Still, the optimized ramping characteristics will ensure a very smooth start and stop for all applications.

PSE - The efficient range

The PSE softstarter is the world's first compact softstarter with both built-in electronic overload for motor protection and torque control for an excellent control of pumps. The compact design with the most important functionality integrated provides a very efficient starting solution.

The illuminated language neutral display and the four button keypad make it easy to take advantage of all the advanced functionality in the softstarter. The display will also provide all the necessary information both during

PST(B) - The advanced range

The PST(B) softstarter is the most advanced softstarter in the range with almost all imaginable functionality included. All the advanced protections for the motor, the softstarter and the load ensure a trouble free operation. Pre-warnings even allow problems to be detected before the motor needs to be stopped

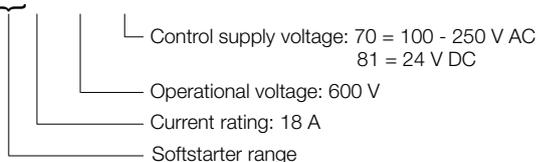
The torque control function has been developed and tested together with well known pump manufacturers to ensure the absolutely best possible stop of pumps without water hammering and pressure surges. and there by avoiding unnecessary downtime.

With the full text LCD display in your own language, pre-programmed

application settings and event logging, it couldn't be easier to set-up and operate.

By using the ABB FieldBusPlug, you can decide at any time which bus protocol to use. The fieldbus system will allow you to set-up, control and monitor the softstarter.

PSR18 - 600 -70



NEW

The PSTX combines many years of research and product development with extensive knowledge of application specific requirements and needs.

It is our latest advancement in motor control and protection and adds new functionality and increased reliability.

- Three-phase controlled
- Operational voltage: 208 – 690 VAC
- Wide rated control supply voltage: 100 – 250 V, 50/60 Hz
- PSTX rated operational current: 30 to 370 A (inside-delta: 640 A)
- Both in-line and inside-delta connection
- Coated circuit boards protecting from dust, moist and corrosive atmosphere
- Detachable keypad rated IP66 (Type 1, 4X,12)
- Graphical display with 14 languages for easy setup and operation
- Built-in bypass for energy saving and easy installation
- Built-in Modbus RTU for monitoring and control
- Support for all major communication protocols
- Analog output for measurement of current, voltage, power factor etc.

PSR	PSS	PSE	PST(B)	● Standard O Optional - Not available
●	-	●	● 1)	Built-in by-pass
-	●	-	●	Inside delta connection
-	-	●	O	Coated PCBs
-	-	●	●	Display and keypad
-	-	●	●	Torque control
-	O	●	●	Settable current limit function
-	-	●	●	Electronic motor overload protection
-	-	-	●	PTC input for motor protection
-	-	-	●	Phase imbalance protection
-	-	-	●	Phase reversal protection
-	-	●	●	Locked rotor protection
-	●	●	●	Thyristor overtemperature protection
-	-	●	●	Underload protection
-	-	-	●	Programmable warning functions
-	-	●	●	Analog output
O	-	O	●	FieldBus communication
-	-	O	●	Event log
-	-	O	O	External keypad

Quick guide for selection



Normal start Class 10

Heavy duty start class 30

Typical applications

- | | | | |
|----------------|-------------------------|-------------------|------------------------|
| • Bow thruster | • Centrifugal pump | • Centrifugal fan | • Conveyor belt (long) |
| • Compressor | • Conveyor belt (short) | • Crusher | • Mill |
| • Elevator | • Escalator | • Mixer | • Stirrer |

If more than 10 starts/h
Select one size larger than the standard selection

PSR - The compact and cost effective solution integrated bypass

PSR3 ... PSR105

Rated operational voltage U_e , 208-600 V AC

Rated control supply voltage, U_s , 100 - 240 V AC



415V P_e kW"	IEC Max rated operational I_e A	Type	Order Code	M.R.P
1.5	3.9	PSR3-600-70	1SFA896103R7000	
3	6.8	PSR6-600-70	1SFA896104R7000	
4	9	PSR9-600-70	1SFA896105R7000	
5.5	12	PSR12-600-70	1SFA896106R7000	
7.5	16	PSR16-600-70	1SFA896107R7000	
11	25	PSR25-600-70	1SFA896108R7000	
15	30	PSR30-600-70	1SFA896109R7000	
18.5	37	PSR37-600-70	1SFA896110R7000	
22	45	PSR45-600-70	1SFA896111R7000	
30	60	PSR60-600-70	1SFA896112R7000	
37	72	PSR72-600-70	1SFA896113R7000	
45	85	PSR85-600-70	1SFA896114R7000	
55	105	PSR105-600-70	1SFA896115R7000	

For Rated control supply voltage, U_s , 24 V Dc replace R7000 by R8100

PSE - The efficient range with integrated bypass

Normal Starts , Class 10, In-Line



415V P_e kW	IEC Max rated operational I_e A	Type	Order Code	M.R.P
7.5	18	PSE18-600-70	1SFA897101R7000	
11	25	PSE25-600-70	1SFA897102R7000	
15	30	PSE30-600-70	1SFA897103R7000	
18.5	37	PSE37-600-70	1SFA897104R7000	
22	45	PSE45-600-70	1SFA897106R7000	
30	60	PSE60-600-70	1SFA897106R7000	
37	72	PSE72-600-70	1SFA897107R7000	
45	85	PSE85-600-70	1SFA897108R7000	
55	106	PSE105-600-70	1SFA897109R7000	
75	143	PSE142-600-70	1SFA897110R7000	
90	171	PSE170-600-70	1SFA897111R7000	
110	210	PSE210-600-70	1SFA897112R7000	
132	250	PSE250-600-70	1SFA897113R7000	
160	300	PSE300-600-70	1SFA897114R7000	
200	370	PSE370-600-70	1SFA897115R7000	

For accessories please consult

Normal starts, class 10, In-Line

PST30 ... PSTB1050

Rated operational voltage U_e , 208 - 600 V

Rated control supply voltage, U_s , 100 - 250 V AC, 50/60 Hz



415V Pe kW	IEC Max rated operational Ie A	Type*)	Order code**)	M.R.P
15	30	PST30-600-70■	1SFA894002R70▼0	
18.5	37	PST37-600-70■	1SFA894003R70▼0	
22	44	PST44-600-70■	1SFA894004R70▼0	
25	50	PST50-600-70■	1SFA894005R70▼0	
30	60	PST60-600-70■	1SFA894006R70▼0	
37	72	PST72-600-70■	1SFA894007R70▼0	
45	85	PST85-600-70■	1SFA894008R70▼0	
55	105	PST105-600-70■	1SFA894009R70▼0	
75	142	PST142-600-70■	1SFA894010R70▼0	
90	175	PST175-600-70■	1SFA894011R70▼0	
110	210	PST210-600-70■	1SFA894012R70▼0	
132	250	PST250-600-70■	1SFA894013R70▼0	
160	300	PST300-600-70■	1SFA894014R70▼0	
200	370	PSTB370-600-70■	1SFA894015R70▼0	
250	470	PSTB470-600-70■	1SFA894016R70▼0	
315	570	PSTB570-600-70■	1SFA894017R70▼0	
400	720	PSTB720-600-70■	1SFA894018R70▼0	
450	840	PSTB840-600-70■	1SFA894019R70▼0	
560	1050	PSTB1050-600-70■	1SFA894020R70▼0	

*) Add code number in Type acc. to: ■ No code letter = Normal | T = Coated PCBs

*) Add code number in Type acc. to: ▼ 0 = Normal | 2 = Coated PCBs

PST(B) – The advanced range -Heavy Duty, class 30, In-Line, ordering details

PST30 ... PSTB1050 / Rated operational voltage U_e , 400 - 690 V e

Rated control supply voltage, U_s , 100 - 250 V AC, 50/60 Hz



415V Pe kW	IEC Max rated operational Ie A	Type*)	Order code**)	M.R.P
11	22	PST30-690-70■	1SFA895002R70▼0	
15	3	PST37-690-70■	1SFA895003R70▼0	
18.5	37	PST44-690-70■	1SFA895004R70▼0	
22	44	PST50-690-70■	1SFA895005R70▼0	
25	50	PST60-690-70■	1SFA895006R70▼0	
30	60	PST72-690-70■	1SFA895007R70▼0	
37	72	PST85-690-70■	1SFA895008R70▼0	
45	85	PST105-690-70■	1SFA895009R70▼0	
55	105	PST142-690-70■	1SFA895010R70▼0	
75	142	PST175-690-70■	1SFA895011R70▼0	
90	175	PST210-690-70■	1SFA895012R70▼0	
110	210	PST250-690-70■	1SFA895013R70▼0	
132	250	PST300-690-70■	1SFA895014R70▼0	
160	300	PSTB370-690-70■	1SFA895015R70▼0	
200	370	PSTB470-690-70■	1SFA895016R70▼0	
250	470	PSTB570-690-70■	1SFA895017R70▼0	
315	570	PSTB720-690-70■	1SFA895018R70▼0	
400	720	PSTB840-690-70■	1SFA895019R70▼0	
450	840	PSTB1050-690-70■	1SFA895020R70▼0	

*) Add code number in Type acc. to: ■ No code letter = Normal | T = Coated PCBs

*) Add code number in Type acc. to: ▼ 0 = Normal | 2 = Coated PCBs

For accessories please consult

PSTX30 ... PSTX370 – The advanced range
Normal starts, class 10, in-line, ordering details

NEW

Three-phase controlled

- Operational voltage: 208 – 690 VAC
- Wide rated control supply voltage: 100 – 250 V, 50/60 Hz
- PSTX rated operational current: 30 to 370 A (inside-delta: 640 A)
- Both in-line and inside-delta connection
- Coated circuit boards protecting from dust, moist and corrosive atmosphere
- Detachable keypad rated IP66 (Type 1, 4X, 12)
- Graphical display for easy setup and operation
- Built-in bypass for energy saving
- Built-in Modbus RTU for monitoring and control
- Support for all major communication protocols
- Analog output for measurement of current, voltage, power factor etc.

Rated operational voltage U_e , 208-600 V
Rated control supply voltage U_s , 100-250 V AC, 50/60 Hz



415V Pe kW	IEC Max rated operational Ie A	Type*)	Order code**)	M.R.P
15	30	PSTX30-600-70	1SFA898103R7000	
18.5	37	PSTX37-600-70	1SFA898104R7000	
22	45	PSTX45-600-70	1SFA898105R7000	
30	60	PSTX60-600-70	1SFA898106R7000	
37	72	PSTX72-600-70	1SFA898107R7000	
45	85	PSTX85-600-70	1SFA898108R7000	
55	106	PSTX105-600-70	1SFA898109R7000	
75	143	PSTX142-600-70	1SFA898110R7000	
90	171	PSTX170-600-70	1SFA898111R7000	
110	210	PSTX210-600-70	1SFA898112R7000	
132	250	PSTX250-600-70	1SFA898113R7000	
160	300	PSTX300-600-70	1SFA898114R7000	
200	370	PSTX370-600-70	1SFA898115R7000	



1SFC132038V0001

PSTX30 ... PSTX105



1SFC132033V0001

PSTX142 ... PSTX170



1SFC132039V0001

PSTX210 ... PSTX370

Rated operational voltage U_e , 208-690 V
Rated control supply voltage U_s , 100-250 V AC, 50/60 Hz



415V Pe kW	IEC Max rated operational Ie A	Type*)	Order code**)	M.R.P
15	30	PSTX30-690-70	1SFA898203R7000	
18.5	37	PSTX37-690-70	1SFA898204R7000	
22	44	PSTX45-690-70	1SFA898205R7000	
30	60	PSTX60-690-70	1SFA898206R7000	
37	72	PSTX72-690-70	1SFA898207R7000	
45	85	PSTX85-690-70	1SFA898208R7000	
55	106	PSTX105-690-70	1SFA898209R7000	
75	143	PSTX142-690-70	1SFA898210R7000	
90	171	PSTX170-690-70	1SFA898211R7000	
110	210	PSTX210-690-70	1SFA898212R7000	
132	250	PSTX250-690-70	1SFA898213R7000	
160	300	PSTX300-690-70	1SFA898214R7000	
200	370	PSTX370-690-70	1SFA898215R7000	