

# PSTX, PSTB The advanced range

## Overview



PSTX30 ... PSTX105



PSTX142 ... PSTX170

	PSTX30 ... PSTX105						PSTX142 ... PSTX170		
	<b>Softstarter, type</b>								
<b>Normal start</b>	<b>PSTX30</b>	<b>PSTX37</b>	<b>PSTX45</b>	<b>PSTX60</b>	<b>PSTX72</b>	<b>PSTX85</b>	<b>PSTX105</b>	<b>PSTX142</b>	<b>PSTX170</b>
<b>In-line connected</b>									
(400 V) kW	15	18.5	22	30	37	45	55	75	90
IEC, max. A	30	37	45	60	72	85	106	143	171
(440-480 V) hp	20	25	30	40	50	60	75	100	125
UL, max FLA	28	34	42	60	68	80	104	130	169
	<b>400 V, 40 °C</b>								
	<b>MCCB (50 kA), type</b>								
Using MCCB only, type 1 coordination will be achieved.	T2S160			T3S250			T4S250		
	<b>Fuse protection (65 kA), Semiconductor fuses, Bussmann, type</b>								
To achieve a type 2 coordination, semi-conductor fuses must be used.	170M1567	170M1568	170M1569	170M1571	170M1572	170M3819	170M5810	170M5812	
	<b>Switch fuse, type</b>								
Suitable switch fuse for recommended semi-conductor fuses.	OS32GD03P	OS63GD03P	OS125GD03P	OS250D03P	OS400D03P				
	<b>Line contactor, type</b>								
The line contactor is not required for the softstarter itself but is often used to open if OL trips	AF30	AF38	AF52	AF65	AF80	AF96	AF116	AF140	AF190
	<b>Electronic overload relay</b>								
Overload protection is used to protect the motor from over heating	Built-in								
	<b>Bypass component, type</b>								
The bypass component will reduce the power loss of the softstarter at full speed.	Built-in								

The table above is an overview of possible combinations of devices.  
Complete coordination tables are available at [www.abb.com/lowvoltage](http://www.abb.com/lowvoltage)



PSTX210 ... PSTX370



PSTB470



PSTB570 ... PSTB1050

**Softstarter, type**

Normal start  
In-line connected

(400 V) kW  
IEC, max. A  
(440-480 V) hp  
UL, max FLA

PSTX210	PSTX250	PSTX300	PSTX370	PSTB470	PSTB570	PSTB720	PSTB840	PSTB1050
110	132	160	200	250	315	400	450	560
210	250	300	370	470	570	720	840	1050
150	200	250	300	400	500	600	700	900
192	248	302	361	480	590	720	840	1062

**400 V, 40 °C**

Using MCCB only, type 1 coordination will be achieved.

**MCCB (50 kA), type**

T4S250	T5S400	T5S630	T6S630	T6S800	T7S1250	T7S1600
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To achieve a type 2 coordination, semi-conductor fuses must be used.

**Fuse protection (65 kA), Semiconductor fuses, Bussmann, type**

170M5812	170M5813	170M6812	170M6813	170M8554	170M6018	170M6020 <sup>2)</sup>
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Suitable switch fuse for recommended semi-conductor fuses.

**Switch fuse, type**

OS400D03P	OS630D03P	OS800D03P	<sup>1)</sup>
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The line contactor is not required for the softstarter itself but is often used to open if OL trips

**Line contactor, type**

AF205	AF265	AF305	AF370	AF460	AF580	AF750	AF1350	AF1650
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Overload protection is used to protect the motor from over heating

**Electronic overload relay, type**

Built-in
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The bypass component will reduce the power loss of the softstarter at full speed.

**Bypass component, type**

Built-in
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<sup>1)</sup> Switch fuse not available. Use Bussmann fuse base 170H3004

<sup>2)</sup> PSTB1050-690-70 has 170M6019

# PSTX range

## Features



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.

### Secure motor

## Reliability

#### Complete motor protection

The PSTX offers complete motor protection in only one unit and is able to handle both load and network irregularities. PT-100, earth fault protection and over/under voltage protection along with many other functions keep your motor safer than ever.

#### Three types of current limit

PSTX offers three types of current limit standard, dual and ramp. This gives you full control of your motor during start. It also allows you to use your motor in weaker networks.

### Improve installation

## Efficiency

#### Built-in bypass saves time and energy

When reaching full speed, the PSTX will activate its bypass. This saves energy while reducing the softstarter's heat generation. On the PSTX, the bypass is built in and verified by ABB, saving you time during installation and space in your panel.

#### Easy-to-use and detachable keypad

A user-friendly and clear display saves you time and resources during both setup and operation. The detachable keypad is standard on all PSTX softstarters.

### Increase application

## Productivity

#### Complete control of pumps

Time to use your processes to their full potential. The PSTX features many application enhancing features, including torque control: the most efficient way to start and stop pumps. The pump cleaning feature can reverse pump flow and clean out pipes, securing uptime of your pump system.

#### Jog with slow speed

The slow speed forward and backward jog feature will make you more flexible when operating e.g. conveyor belts and cranes. The PSTX provides positioning capabilities letting you take control of your process.

# PSTB range

## Features

### Description

- Wide rated operational voltage 208–690 V AC
- Wide rated control supply voltage 100–250 V, 50/60 Hz
- Rated operational current 30 to 1050 A (Up to 1810 A inside delta)
- Both in line and inside delta connection
- Coated circuit boards available, for reliable operation even in harsh environments
- Full text display in 14 languages and 4 button keypad for easy setup and operation
- Optional external keypad, IP66
- Built-in by-pass contactor on PSTB (from 370 A) for energy saving and easy installation
- Prepared for external by-pass on PST (30–300 A)
- Torque control for excellent control of pumps
- Current limit, adjustable between 1.5–7 x I<sub>e</sub>
- Fieldbus communication using Profibus, Modbus, Devicenet or CANopen
- Dual motor overload protection with classes 10A, 10, 20 and 30
- Adaptable motor underload protection to detect pumps running dry
- Adaptable locked rotor protection to detect jammed pumps
- PTC protection to protect the motor from overheating
- Adjustable kick start to start jammed pumps
- Programmable output signal relays
- Programmable pre-warning functions
- Event log with time stamp
- Analog output showing current, voltage, power factor etc. 0–10 V, 0–20 mA, 4–20 mA

## PSTX & PSTB ranges

### Selection



PSTX30 ... PSTX105



PSTX142 ... PSTX170



PSTB570 ... PSTX1050

### PSTX30 ... PSTX370 and PSTB470 ... 1050 - The Advanced Range

Description	Part No.	Product Hierarchy 160001 Order Code
Advanced Softstarter with Overload 30A	PSTX30-600-70	1SFA898103R7000
Advanced Softstarter with Overload 37A	PSTX37-600-70	1SFA898104R7000
Advanced Softstarter with Overload 45A	PSTX44-600-70	1SFA898105R7000
Advanced Softstarter with Overload 60A	PSTX60-600-70	1SFA898106R7000
Advanced Softstarter with Overload 72A	PSTX72-600-70	1SFA898107R7000
Advanced Softstarter with Overload 85A	PSTX85-600-70	1SFA898108R7000
Advanced Softstarter with Overload 105A	PSTX105-600-70	1SFA898109R7000
Advanced Softstarter with Overload 142A	PSTX142-600-70	1SFA898110R7000
Advanced Softstarter with Overload 175A	PSTX175-600-70	1SFA898111R7000
Advanced Softstarter with Overload 210A	PSTX210-600-70	1SFA898112R7000
Advanced Softstarter with Overload 250A	PSTX250-600-70	1SFA898113R7000
Advanced Softstarter with Overload 300A	PSTX300-600-70	1SFA898114R7000
Advanced Softstarter with Overload 370A	PSTX370-600-70	1SFA898115R7000
Advanced Softstarter with Overload 470A	PSTB470-600-70	1SFA894016R7000
Advanced Softstarter with Overload 570A	PSTB570-600-70	1SFA894017R7000
Advanced Softstarter with Overload 720A	PSTB720-600-70	1SFA894018R7000
Advanced Softstarter with Overload 840A	PSTB840-600-70	1SFA894019R7000
Advanced Softstarter with Overload 1050A	PSTB1050-600-70	1SFA894020R7000
External Keypad for PSTB Softstarter	PST-EK	1SFA899003R1000

690V Versions available - Please contact us for further information