

PSTX enclosed extreme duty softstarters

For heavy-duty applications with emergency bypass



Designed to perform reliably in nearly any environment and on almost any application, the PSTX-XD series softstarters combine the best of ABB's wide range of industrial low voltage controls.

Short circuit protection

To handle the role of short-circuit protection and disconnection, the PSTX-XD series utilizes the Tmax® XT molded case circuit breaker to provide the utmost protection under short circuit conditions, with a short circuit rating of 65 kAIC up to the X600 unit. The X700 and X900 units are protected with Class L fuses with a short circuit rating of 100 kAIC.

AC3 rated bypass for emergency starting

The PSTX-XD series relies on the highly acclaimed AF series contactor for routine bypass or starting in the event of an emergency. All AF contactors feature a wide voltage range electronic coil. In addition to the extremely low pull-in and holding power requirements, the low 55% dropout voltage prevents damaging chatter and helps ensure consistent operation in poor power quality conditions.

Electronic overload protection

Every PSTX softstarter comes with integral electronic overload protection that is adjustable to four different tripping classes, preset to Class 30 tripping for extreme applications. This feature also allows for the extreme duty softstarter to be used in less demanding Class 10 applications. In bypass mode, the motor is protected by ABB's thermal overload relay that provides reliable protection in the event of overload or phase failure.

The PSTX softstarter

Designed around the PSTX softstarter for heavy-duty use with all the exceptional standard features inherent to the open PSTX shown below. The enclosed offering also comes with the following additional features:

- UL 508A label
- UL 3-wire service entrance rating
- NEMA Type 4 enclosure
- Door-mounted keypad and 10 pilot devices
- Built-in Modbus-RTU communications with optional Anybus communication modules available

PSTX open softstarter standard features

Current limit	Graphical display and keypad	Multiple languages
Current limit ramp and dual current limit	Detachable display and keypad	Electricity metering
Electronic motor overload protection	Motor runtime and start count	Torque control
Dual overload protection	Programmable and start count	Torque limit
Underload protection	Diagnosics	Coated PCBA
Power factor protection	Overload warning functions	Limp mode
Locked rotor-underload protection	Overload time-to-trip	Jog with slow speed forward/ reverse
Current/ Voltage protection	Analog time-to-cool	Dynamic brake
Phase reversal protection	Fieldbus communication	Stand still brake
Customer-defined protection	Event log	Sequence start
Motor-heating	Multiple languages	Full voltage start
PTC/PT100 input for motor protection	Electricity metering	Kick start
Overvoltage/ undervoltage protection	Torque control	Automatic pump cleaning
Earth-fault protection	Torque limit	
Built-in bypass	Coated PCBA	
Inside-delta connection possible	Limp mode	
Graphical display and keypad	Jog with slow speed forward/ reverse	
Detachable display and keypad	Dynamic brake	
Motor runtime and start count	Stand still brake	
Programmable and start count	Sequence start	
Diagnosics	Full voltage start	
Overload warning functions	Kick start	
Overload time-to-trip	Automatic pump cleaning	
Analog time-to-cool		
Fieldbus communication		
Event log		
Multiple languages		
Electricity metering		
Torque control		
Torque limit		
Coated PCBA		
Limp mode		
Jog with slow speed forward/ reverse		
Dynamic brake		
Stand still brake		
Sequence start		
Full voltage start		
Kick start		
Automatic pump cleaning		

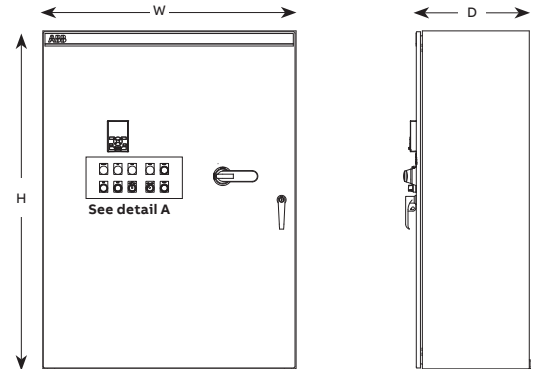
• Standard

Selection guide

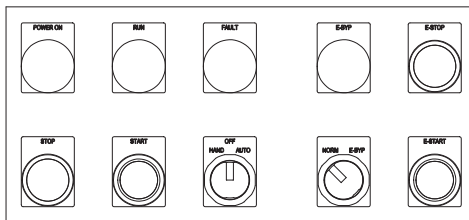
Ratings and dimensions

Type code	Heavy-duty HP Class 30 starts	Normal-duty HP Class 10 starts	Volts	Amps	SCCR rating (kA)	Enclosure size H" x W" x H"
X50-B4-48-XD	50	60	480	80	65	24 x 20 x 12
X75-B4-48-XD	75	100	480	130	65	30 x 30 x 12
X100-B4-48-XD	100	125	480	169	65	30 x 30 x 12
X125-B4-48-XD	125	150	480	192	65	48 x 36 x 16
X150-B4-48-XD	150	200	480	248	65	48 x 36 x 16
X200-B4-48-XD	200	250	480	302	65	48 x 36 x 16
X250-B4-48-XD	250	300	480	361	65	48 x 36 x 16
X300-B4-48-XD	300	400	480	480	65	72 x 36 x 24
X400-B4-48-XD	400	500	480	590	65	72 x 36 x 24
X500-B4-48-XD	500	600	480	720	65	72 x 36 x 24
X600-B4-48-XD	600	700	480	840	65	85 x 72 x 24 *
X700-F4-48-XD	700	900	480	1062	100	85 x 72 x 24 *
X900-F4-48-XD	900	1000	480	1250	100	85 x 72 x 24 *

*Includes pedestal base for floor mounting



Detail A



Door-mounted pilot devices include:

- PSTX keypad
- Hand-off-auto selector switch
- Start and stop pushbuttons
- Power on pilot light
- Run pilot light
- Fault pilot light
- Normal - E-bypass selector switch
- E-bypass start and stop pushbuttons
- E-bypass pilot light

Typical heavy-duty applications include:

- Centrifugal fan
- Conveyor belt (long)
- Crusher
- Mill
- Mixer
- Stirrer

Typical normal-duty applications include:

- Belt thruster
- Centrifugal pump
- Compressor
- Conveyor belt (short)
- Elevator