

Extreme duty Softstarters



General information

For ordinary jobs, the ABB series starters provide smooth reduced voltage starting. For those occasions and applications that go beyond the ordinary, the PST Extreme Series enclosed starters go right along, too.

Designed to perform reliably in nearly any environment, on almost any application, the PST Extreme Series softstarters combine the best of ABB's wide range of industrial low voltage controls.

What's Included:

Short circuit protection

To handle the role of short-circuit protection and disconnect, the PST Extreme series counts on the T-Max molded case circuit breakers (MCCB's). ABB MCCB's deliver big performance in small packages.

Emergency start bypass

For routine bypass or starting in event of an emergency, the PST Extreme series relies on the highly acclaimed AF contactor series. The AF series contactors are designed for reliable performance under the most adverse conditions. All AF contactors feature a wide voltage range electronic coil. In addition to extremely low pull-in and holding power requirement, the low (55%) dropout voltage prevents damaging chattering and insures consistent operation in poor power quality conditions.

Redundant electronic overload

Every PST softstarter features an adjustable electronic overload. The PST Extreme Series softstarters (50HP and larger) go one step further and come equipped with the ABB "E" range of adjustable electronic overloads. Used only in the event of emergency bypass operation, these overloads feature four classes of trip curves to insure the motor protection level matches the application demands.

The PST Softstarter

Designed for heavy-duty use and performance the ABB PST is optimized for extreme duty. While most softstarters offer voltage ramp starting, the PST series does more. By using closed loop current control in addition to voltage ramping the PST helps get every bit of performance from even weak power systems. Built and tested to provide 500% rated current for 30 seconds, using the PST means that typical applications can be sized based on Motor HP without resorting to complex, application based de-rate tables. Just check the Motor HP and Voltage, get the part number and order.

The often overlooked details

Overlooked little things can lead to big problems and so the PST Extreme Series pays attention to the details. Besides the major components every PST extreme series enclosed softstarter ships with:

- A UL 508A Label
- A UL Service entrance rating
- A door mounted ABB Hand-off-auto switch (NEMA 4 rated)
- Three (3) vibration resistant, LED type pilot lights (NEMA 4 rated)
- A door interlocked disconnect handle (NEMA 4 rated)
- Padlockable and Defeatable

PST Softstarters from ABB

Designed for critical applications in nearly any environment the ABB PST Extreme Series enclosed softstarters provide reliable, reduced voltage starting for the ordinary and full voltage starting for the extreme cases. Every PST Extreme Series softstarter package provide the best of ABB's combination starters integrated with the PST series softstarter, packaged in a weatherproof (NEMA Type 4) enclosure ready to perform the most extreme applications with complete reliability.



Features of the ABB PST Softstarter

Starting and Stopping

Motor Full load current	10-1839A
Start Ramp Time	0-120s
Initial Voltage (Start Ramp)	30-70%
Current Limit	2 - 7x Motor FLA
Kick Start (Voltage Level)	50-100%
Kick Start (time)	0.1-1.5 Seconds
Stop Ramp Time	0-120s
Stop Ramp Step Down Voltage	30-100%
Stop Ramp End Voltage	30-70%

Motor Protection

Electronic overload (starting) class settings Internal bypass AC 1 Rated	10a, 10, 20 ,30 or off
Electronic overload (running) class settings Emergency Rated bypass AC 3	10a, 10, 20, 30 or off
Locked rotor protection trip range	0.5 - 8.0x FLA or off
Locked rotor protection trip time delay	0.2 - 10s
Under load trip level	0.4-0.8 x FLA or off
Underload trip time	1-30s
Phase imbalance trip level	10-80% or off
Phase loss protection	Yes
Phase reversal protection	Yes-or off

Communications

Via ABB FieldbusPlug	
Available protocols include	Profibus, Devicenet, AS-I, Modbus RTU

Warnings

High Current
Low Current
Overload
SCR overtemp

480 & 240 V Extreme duty softstarters

Softstarters
Extreme duty

480 V

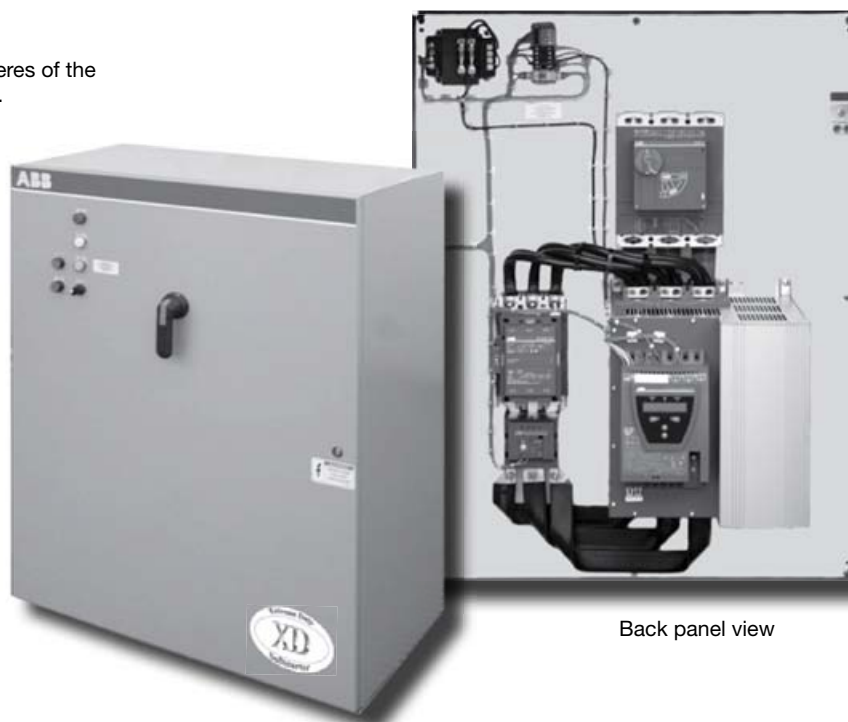
HP @ 480VAC	Enclosure size H x W x D	SCCR ratings @ 600V	Weight	Catalog number	List Price
50	24x24x12	10kA	35	T050LB4-48/XD	\$ 5,860
75	24x24x12	10kA	50	T075LB4-48/XD	6,678
100	36x36x12	18kA	65	T100LB4-48/XD	7,252
125	36x36x12	18kA	80	T125LB4-48/XD	7,765
150	36x36x12	18kA	95	T150LB4-48/XD	8,495
200	36x36x12	18kA	170	T200LB4-48/XD	9,292
250	48x36x16	18kA	180	T250LB4-48/XD	11,252
300	48x36x16	30kA	300	T300LB4-48/XD	12,025
400 ①	60x36x16	30kA	450	T400LB4-48/XD	16,465
500 ①	60x36x16	42kA	570	T500LB4-48/XD	20,171
600 ①	72x37x24	42kA	630	T600LB4-48/XD	20,658

240 V

HP @ 240VAC	Enclosure size H x W x D	SCCR ratings @ 600V	Weight	Catalog number	List Price
25	24x24x12	10kA	35	T025LB4-24/XD	\$ 5,860
30	24x24x12	10kA	50	T030LB4-24/XD	6,678
40	24x24x12	10kA	65	T040LB4-24/XD	7,252
50	36x36x12	18kA	80	T050LB4-24/XD	7,765
60	36x36x12	18kA	95	T060LB4-24/XD	8,495
75	36x36x12	18kA	170	T075LB4-24/XD	9,292
100	36x36x12	18kA	180	T100LB4-24/XD	11,252
150	48x36x16	18kA	300	T150LB4-24/XD	12,025
200 ①	60x36x16	30kA	450	T200LB4-24/XD	16,465
250 ①	60x36x16	30kA	570	T250LB4-24/XD	20,171
300 ①	72x37x24	42kA	630	T300LB4-24/XD	20,658

Features

- Softstarter is one size larger than required full load amperes of the motor to get additional starting capacity (Extreme Duty).
- Short circuit protection
- Redundant electronic overload
- Emergency start bypass
- Torque control
- A door interlocked disconnect handle (NEMA 4 rated)- Padlockable/Defeatable
- Door mounted ABB Hand-OFF-Auto switch (NEMA 4 rated)
- Three (3) vibration resistant, LED type pilot lights (NEMA 4 rated)
- A UL 508A Label
- Suitable for Service entrance 3 wire
- NEMA 4 enclosure



Back panel view

250 HP
Unit Shown

① Larger horsepower units will include floor mounting kit.

