

Panorama

Softstarters
The complete range

Power and productivity
for a better world™

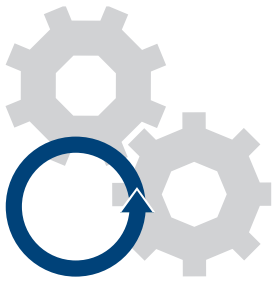
Why does soft starting matter?

Controlling industrial electricity. The vast majority of the world's industrial applications are driven by motors. It is estimated that 28 percent of all electricity used in one year is dedicated to run industrial motors. Controlling this important resource is what ABB's softstarters does in an excellent way.

Secure motor

Reliability

With ABB's softstarters current peaks are eliminated and the starting current is reduced significantly. The load and voltage protections keep your motor protected from load and network irregularities. More features that will improve the overall reliability of the motor are three types of current limit and earth fault protection, amongst others.



Improve installation

Efficiency

The built-in bypass will reduce both energy consumption and heat generation while running motors at full speed. It saves both time on installation, space inside the panels, and it reduces the cost of extra cooling equipment. ABB's softstarters also come with HMI's that are easy to learn, improving the efficiency of the softstarters once they are in use.



Increase application

Productivity

ABB's softstarters will reduce mechanical wear and tear and increase the productivity of your applications. With torque control damage to pump systems from problems like water hammering can be completely avoided. The continuous operation of applications can also be increased by features like jog with slow speed, pump cleaning and limp mode, which allows your application to do more.



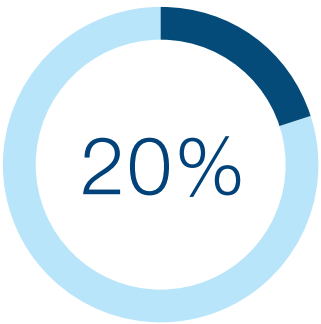


Yantai Guhe Electric
Improving water supply reliability

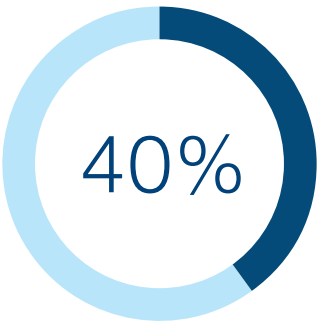
Manufacturing over 1,000 installation panels for pump systems annually requires the use of reliable motor starting solutions. In the past Yantai Guhe Electric experienced problems with water hammering when stopping pumps with the panels it built. However, since using ABB's softstarters with torque control this problem has been eliminated. This lead to a 20 percent reduction of downtime and a 40 percent reduction of cost. Benefits as a result of using ABB's softstarters.

Why soft starting matters to Yantai Guhe Electric

Reduction of pump system downtime by



Maintenance cost for pump system reduced by



For more examples of ABB's softstarters helping the industry, visit: new.abb.com/low-voltage/launches/pstx

PSR — The compact range






Normal start In-Line connected	PSR3	PSR6	PSR9	PSR12	PSR16	PSR25	PSR30	PSR37	PSR45	PSR60	PSR72	PSR85	PSR105
(400 V) kW	1.5	3	4	5.5	7.5	11	15	18.5	22	30	37	45	55
IEC, Max. A	3.9	6.8	9	12	16	25	30	37	45	60	72	85	105
(440-480 V) hp	2	3	5	7.5	10	15	20	25	30	40	50	60	75
UL, Max. A	3.4	6.1	9	11	15.2	24.2	28	34	46.2	59.4	68	80	104
	400 V, 40 °C												
Using manual motor starter or MCCB, type 1 coordination will be achieved. [1]	Manual motor starters (50 kA)												
	MS116			MS132				MS450		MS495			–
Using gG fuses, type 1 coordination will be achieved. To achieve type 2 coordination, semiconductor fuses must be used. [1]	Fuse protection (50 kA) gG Fuse												
	10 A	16 A	25 A	32 A		50 A	63 A	100 A	125 A		200 A		250 A
Suitable switch fuse for the recommended semiconductor fuses. [1]	Switch fuse												
	OS32G							OS125G			OS250		
The line contactor is not required for the softstarter itself but often used to open if OL trips. [1]	Line contactor												
	AF9			AF12	AF16	AF26	AF30	AF38	AF52	AF65	AF80	AF96	AF116
Overload protection is always required to protect the motor: [1]	Thermal overload relay												
	TF42								TF65		TF96		TF140DU

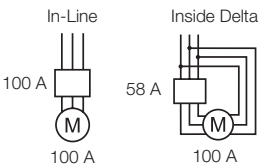
[1] This is an example of short circuit coordination. For more examples see: applications.it.abb.com/SOC

Select softstarter according to load

Normal start class 10	Heavy duty start class 30
• Bow thruster • Centrifugal pump • Compressor • Conveyor belt (short) • Elevator	• Centrifugal fan • Crusher • Conveyor belt (long) • Mill • Mixer • Stirrer
Select size according to the motor kW ratings.	Select a softstarter **one size larger** compared to the motor kW ratings.

In-line or inside delta for PSTX

The PSTX softstarter can be connected inside the motor delta. In this case the current through the softstarter is reduced by 42 %. It will then be possible, for example, to run a 100 A motor using a 58 A softstarter.



PSE — The efficient range







PSE18	PSE25	PSE30	PSE37	PSE45	PSE60	PSE72	PSE85	PSE105	PSE142	PSE170	PSE210	PSE250	PSE300	PSE370
7.5	11	15	18.5	22	30	37	45	55	75	90	110	132	160	200
18	25	30	37	45	60	72	85	106	143	171	210	250	300	370
10	15	20	25	30	40	50	60	75	100	125	150	200	250	300
18	25	28	34	42	60	68	80	104	130	169	192	248	302	361
400 V, 40 °C														
MCCB (50 kA)														
XT2S160										XT4S250	T4S320	T5S400		T5S630
Fuse protection (85 kA), Semiconductor fuses, Bussmann														
170M1563	170M1564	170M1566	170M1567	170M1568	170M1569	170M1571	170M1572	170M3819	170M5809	170M5810	170M5812	170M5813	170M6812	170M6813
Switch fuse														
OS32G			OS63G			OS125G		OS250	OS400				OS630	
Line Contactor														
AF26	AF30	AF38	AF52	AF65	AF80	AF96	AF116	AF140	AF190	AF205	AF265	AF305	AF400	
Electronic overload relay														
Built-in														

PSR



- Screw or DIN-rail mounted
- LED indicators
- Three potentiometers for settings
- Output signal relays

PSE



- Screw mounting
- Digital input for start, stop and reset
- Output signal relays for run, top of ramp and event
- Clear markings on the front for easy installation

PSTX — The advanced range







PSTX30	PSTX37	PSTX45	PSTX60	PSTX72	PSTX85	PSTX105	PSTX142	PSTX170	PSTX210	PSTX250	PSTX300	PSTX370
15	18.5	22	30	37	45	55	75	90	110	132	160	200
30	37	45	60	72	85	106	143	171	210	250	300	370
20	25	30	40	50	60	75	100	125	150	200	250	300
28	34	42	60	68	80	104	130	169	192	248	302	361
400 V, 40 °C												
MCCB (50 kA)												
XT2S160								XT4S250	T4S320	T5S400		T5S630
Fuse protection (80 kA), Semiconductor fuses, Bussmann												
170M1567	170M1568	170M1569		170M1571	170M1572	170M3819	170M5810	170M5812		170M5813	170M6812	170M6813
Switch fuse												
OS32G	OS63G			OS125G		OS250	OS400					OS
Line contactor												
AF30	AF38	AF52	AF65	AF80	AF96	AF116	AF140	AF190	AF205	AF265	AF305	AF370
Electronic overload relay												
Built-in												

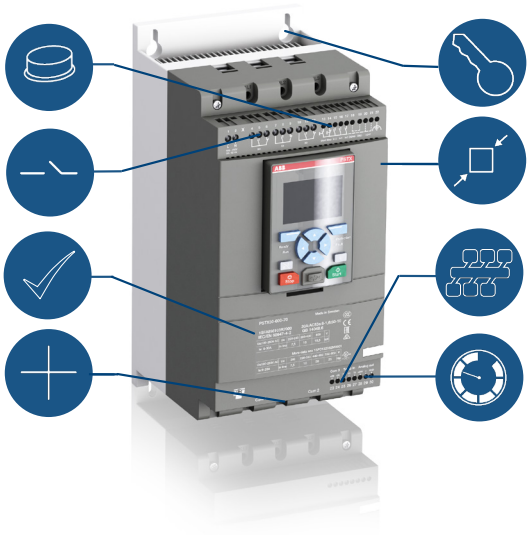
PSTX

Three programmable digital inputs and start and stop

Three programmble output signal relays

Clear markings on the front for easy installation and handling

Extension I/O for extra inputs and outputs



Keyhole mounting for quick installation

A compact motor starting solution with many features

Built-in Modbus and Anybus for other protocols

Chose between 15 different measurements for analog out





PSTX470	PSTX570	PSTX720 [2]	PSTX840 [2]	PSTX1050 [2]	PSTX1250 [2]
250	315	400	450	560	710
470	570	720	840	1050	1250
400	500	600	700	900	1000
480	590	720	840	1062	1250

T7S800	Contact ABB for more information

170M6813	170M6814	Contact ABB for more information

630	Contact ABB for more information

AF460	AF580	AF750	AF1350	AF1650	-

Built-in

[2] To be released Q4 2015

Softstarter feature selection guide

	PSR	PSE	PSTX	• Standard O Opional – Not available
Secure motor reliability	–	•	•	Current limit
	-	-	•	Current limit ramp and dual current limit
	-	•	•	Electronic motor overload protection
	-	-	•	Dual overload protection
	-	•	•	Underload protection
	-	-	•	Power factor underload protection
	-	•	•	Locked rotor protection
	-	-	•	Current/Voltage imbalance protection
	-	-	•	Phase reversal protection
	–	–	•	Customer defined protection
	–	–	•	Motor heating
	–	–	•	PTC/PT100 input for motor protection
	–	–	•	Overvoltage/undervoltage protection
	–	–	•	Earth-fault protection
Improve installation efficiency	•	•	•	Built-in bypass
	–	–	•	Inside-delta connection possible
	–	•	•	Graphical display and keypad
	–	–	•	Detachable keypad
	–	–	•	Motor runtime and start count
	–	–	•	Programmable warning functions
	–	–	•	Diagnostics
	–	–	•	Overload time-to-trip
	–	–	•	Overload time-to-cool
	–	•	•	Analog output
	O	O	•	Fieldbus communication
	–	O	•	Event log
	–	–	15	Multiple languages
	–	–	•	Electricity metering
Increase application productivity	–	•	•	Torque control
	–	–	•	Torque limit
	–	•	•	Coated PCBA
	–	–	•	Limp mode
	–	–	•	Jog with slow speed forward/ reverse
	–	–	•	Motor brake
	–	–	•	Anti-backspin
	–	–	•	Sequence start
	–	–	•	Full voltage start
	–	•	•	Kick start
	–	–	•	Manual pump cleaning

Customizable display for important status information

Backlit display makes status information easy to read

Application assistant for fast and easy set-up

IP66 (1, 4x outdoor, 12) protection against water and dust



Easy to use thanks to large graphical display

Detachable HMI for easy panel door mounting

Information button for built-in help function

USB connection

Contact us

ABB AB
Low Voltage Products
SE-721 61 Västerås / Sweden

new.abb.com/low-voltage/launches/pstx

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