



SAFETY INSTRUCTIONS
PSTX30...PSTX1250
Softstarter



Dok.nr. 1SFC132428M0201 (03/23)		
	it	Attenzione: Tensione pericolosa! Fare riferimento alle istruzioni per l'uso. Prima di intervenire su questo dispositivo, scollegare e isolare tutte le fonti di alimentazione. Attenzione! L'installazione deve essere eseguita esclusivamente da un installatore qualificato.
	ar	تحذیر: جهد كهربائي خطراً راجع تعليمات التشغيل أفضل الكهرباء وقم بتأمينها قبل العمل في هذا الجهاز تنبيه! يجب عدم التركيب إلا من خلال شخص على دراية بمجال التقنية الكهربائية.
	bg	Предупреждение: Опасно напрежение! Вижте инструкциите за работа. Изключете и блокирайте захранването преди, да работите с устройството. Внимание! Да се монтира само от експерт електротехник.
	cs	Varování: Nebezpečné napětí! Viz návod k obsluze. Před zahájením prací na tomto zařízení odpojte a uzamkněte napájení. Pozor! Toto zařízení smí instalovat pouze osoba s elektrotechnickou odborností.
	da	Advarsel: Farlig elektrisk spænding! Se installationsinstruktioner. Frakobl enheden, og afbryd strømforsyningen, før du arbejder med denne enhed. Giv agt! Installation må kun foretages af personer med elektroteknisk ekspertise.
	de	Warnung: Gefährliche Spannung! Siehe Installationsanleitung. Vor dem Arbeiten Gerät ausschalten und von der Spannungsversorgung trennen. Achtung! Installation nur durch elektrotechnische Fachkraft.
	el	Προειδοποίηση: Επικίνδυνη τάση! Ανατρέξτε στις οδηγίες λειτουργίας. Αποσυνδέστε και απομονώστε την παροχή ισχύος προτού ξεκινήσετε τις εργασίες σε αυτήν τη συσκευή. Προσοχή! Η εγκατάσταση πρέπει να γίνεται μόνο από αδειούχο ηλεκτρολόγο εγκαταστάτη.
	en	Warning: Hazardous voltage! Refer to installation instructions. Disconnect and lock out power before working on this device. Attention! Installation by person with electrotechnical expertise only.
	es	Advertencia: ¡Tensión peligrosa! Consulte las instrucciones de instalación. Antes de trabajar con este dispositivo, desconecte y bloquee la corriente. ¡Atención! La instalación debe ser realizada únicamente por un técnico electricista.
	et	Hoiatus: Elektrilöögi oht! Lisateave vaadake kasutusjuhendist. Enne selle seadmega töötamist ühendage lahti ja lukustage toide. Tähelepanu! Seadet tohib paigaldada ainult elekt tehnilise kogemusega isik.
	fi	Varoitus: Vaarallinen jännite! Katso asennusohje. atkaise virta ja estä virran kytkeytminen lukituksella ennen töiden aloittamista. Huomio! Asennuksen saa suorittaa vain henkilö, jolla on kokemusta sähkötekniikasta.
	fr	Avertissement: Tension dangereuse! Consultez les consignes d'installation. Débranchez et verrouillez l'alimentation électrique avant d'entreprendre des travaux sur cet appareil. Attention! L'installation doit être effectuée uniquement par une personne ayant une expertise en électrotechnique.
	hr	Upozorenje: Opasan napon! Pogledajte upute za ugradnju. Odspojite i isključite struju prije rada na ovom uređaju. Pažnja! Ugradnja je dopuštena samo osobama stručnim u području elektrotehnike.
	hu	Figyelmeztetés: Veszélyes feszültség! Lásd a használati utasítást. Válassza le és zárja ki az áramellátást, mielőtt a berendezésen dolgozni kezd. Figyelem! Az üzembe helyezést csak elektrotechnikai szakértelemmel rendelkező személy végezheti el.
	lv	Bridinājums: Bīstams spriegums! Skatiet darba norādījumus. Pirms sākat darbu ar šo ierīci, atvienojiet un blokējiet strāvas padevi. Uzmanību! Uzstādīšanu drīkst veikt tikai persona ar zināšanām par elektrotehniku.
	nl	Waarschuwing: Gevaarlijke spanning! Raadpleeg de installatie-instructies. Koppel dit apparaat los van de stroomvoorziening voordat u werkzaamheden uitvoert. Let op! Installatie mag alleen worden uitgevoerd door een monteur met elektrotechnische expertise.
	no	Advarsel: Farlig spenning! Se i bruksanvisningen. Koble fra og steng av strømmen før du arbeider på denne enheten. Forsiktig! Montering skal kun utføres av kvalifiserte personer med elektroteknisk kompetanse.
	pl	Ostrzeżenie: Niebezpieczne napięcie! Patrz: instrukcja instalacji. Przed rozpoczęciem wykonywania pracy z tym urządzeniem odłącz i zablokuj zasilanie. Uwaga! Montaż może wykonywać wyłącznie osoba posiadająca doświadczenie elektrotechniczne.
	pt	Aviso: Tensão perigosa! Consulte as instruções de instalação. Desconecte e desligue a energia elétrica antes de trabalhar nesse dispositivo. Atenção! A instalação deve ser feita apenas por uma pessoa com especialidade eletrotécnica.
	ro	Avertisment: Tensiune electrică periculoasă! Consultați instrucțiunile de utilizare. Deconectați și închideți sursa de energie înainte de a lucra cu acest dispozitiv. Atenție! Instalarea trebuie realizată doar de către o persoană cu expertiză electrotehnică.
	ru	Предупреждение: Опасное электрическое напряжение! Обратитесь к инструкциям по монтажу. Отключите электропитание и обеспечьте безопасность перед началом работ. Внимание! Монтаж должен выполняться только специалистом по электротехническим работам.
	sk	Výstraha: Nebezpečné napätie! Pozrite si návod na použitie. Pred začatím prác na tomto zariadení odpojte a zablokujte napájanie. Pozor! Inštaláciu smie vykonávať len osoba s odbornými znalosťami v oblasti elektrotechniky.
	sl	Opozorilo: Nevarna napetost! Glejte navodila za uporabo. Pred delom na tej napravi izklopite in zaklenite električno napajanje. Pozor! Namestitve sme izvesti samo elektrotehnični strokovnjak.
	sv	Varning: Livsfarlig spänning! Se i bruksanvisningen. Frånkoppla och blockera anläggning eller en anläggningsdel innan arbete utförs. Obs! Får endast installeras av behörig elektriker.
	tr	Uyarı: Tehlikeli gerilim! Montaj talimatlarına bakın. Bu cihaz üzerinde çalışmadan önce elektrikli kesin ve kilitleyin. Dikkat! Yalnızca elektroteknik uzmanlığa sahip kişiler tarafından kurulabilir.
	zh	警告：高压危险！请参见操作手册。操作本设备前请断开并锁定电源。注意！安装仅限专业电工人员。



Quick start guide
PSTX30...PSTX1250
Mechanical installation



For full instructions please follow the product manual which can be found on our web.

Mounting

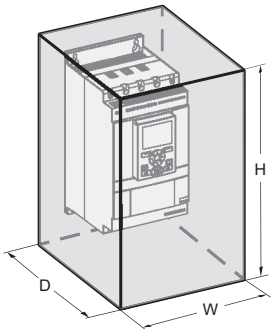
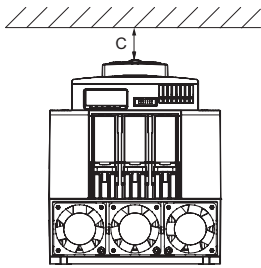
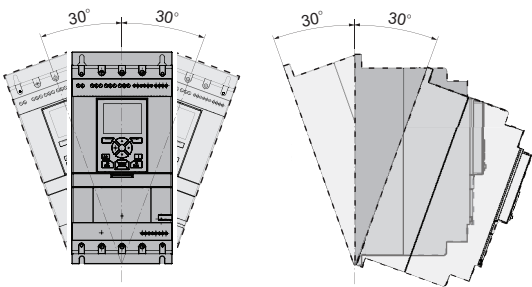
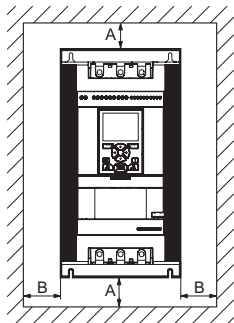
The Softstarters are available in different physical sizes which are designed to be mounted with M6 bolts, or bolts of equivalent dimension and strength. Verify the drilling plan on top of the box.

Mechanical installation

- Follow the drilling instructions which can be found on the top part of the shipping box, or in the installation manual.
- Make sure to have enough space according to our table below.
- Install the product safely in place (may need two persons).
- Make sure to mount the product in correct orientation according to the picture below.

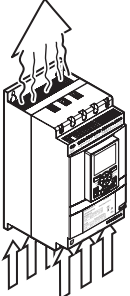
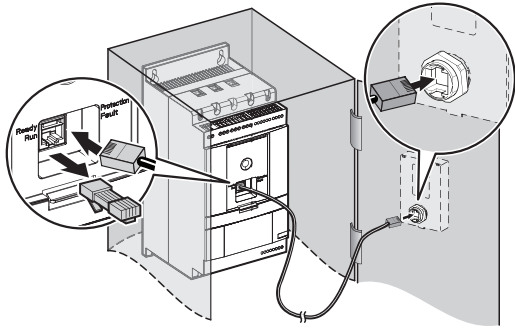
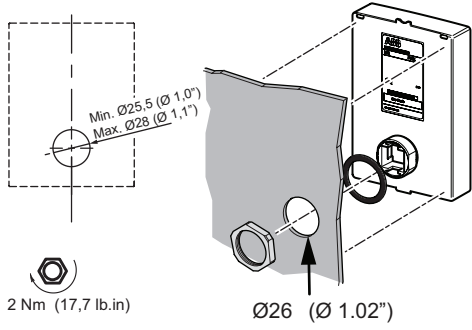
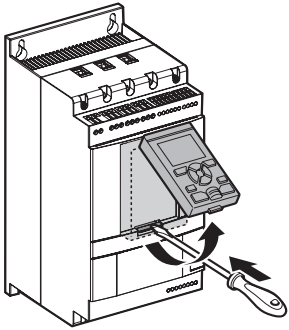
Check that the distance to wall and front, as well as the mounting angle fulfills the requirements.

Softstarter type	A (mm)	B (mm)	C (mm)	A (in)	B (in)	C (in)
PSTX30...105	100	10	20	3.94	0.39	0,787
PSTX142...170	100	10	20	3.94	0.39	0,787
PSTX210...370	100	10	20	3.94	0.39	0,787
PSTX470...570	150	15	20	5.905	0.590	0,787
PSTX720...840	150	15	20	5.905	0.590	0,787
PSTX1050...1250	150	15	20	5.905	0.590	0,787



In applications where the softstarter is installed in an enclosure, make sure that the enclosure size is not smaller than the minimum recommended. Select size from the applicable table for IEC or UL.

Softstarter type	IEC			UL			Min number of latches
	H (mm)	W (mm)	D (mm)	H (in)	W (in)	D (in)	
PSTX30...105	610	508	305	24	20	10	2
PSTX142...170	762	610	305	30	24	12	4
PSTX210...370	914	762	305	30	24	12	4
PSTX470...570	1219	914	405	48	36	16	8
PSTX720...840	1524	914	405	60	36	16	8
PSTX1050...1250	1524	914	405	60	36	16	8



Ensure a free flow of air through the product.

Risk of damage to property. Ensure that no liquids, dust or conductive parts enter the softstarter.

Using a too small enclosure and/or failure to follow the instructions in other ways, may result in overheating of the PSTX Softstarter and operational disturbances.



Product manuals / 产品使用手册 / كتيبات المنتج
solutions.abb.com/softstarter-manuals

ABB Electrification Sweden AB
SE-721 61 Västerås
Sweden

Product information:



Revision
A

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Document number
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Specifications subject
to change without notice.

For full instructions please follow the product manual which can be found on our web.

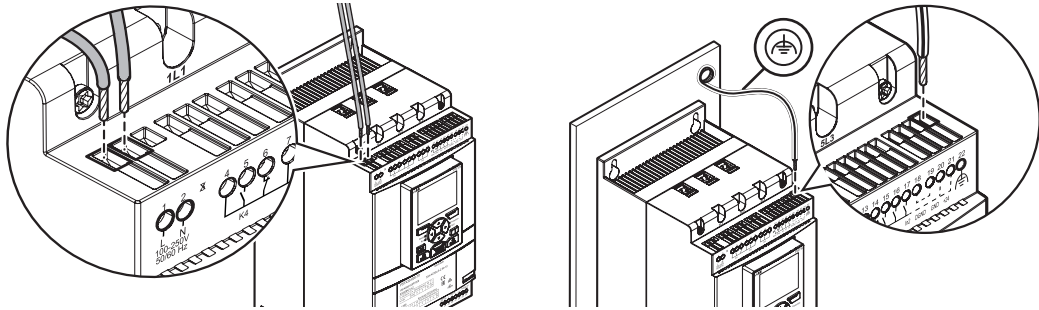
Electrical installation

1. Connect the control supply voltage on terminals 1 and 2.
2. Connect terminal 22 to the functional earth.
3. Connect the start/stop circuit and other I/Os.
4. Connect the mains on L1/L2/L3 and the motor to T1/T2/T3.

Hazardous voltage. Will cause death or serious injury. Turn off and lock out all power supplying this device before starting work on this equipment.

To prevent an unintended direct start it's important to first power on the control supply voltage. This will energize the bypass relays before mains are powered on to ensure the relays are in open state.

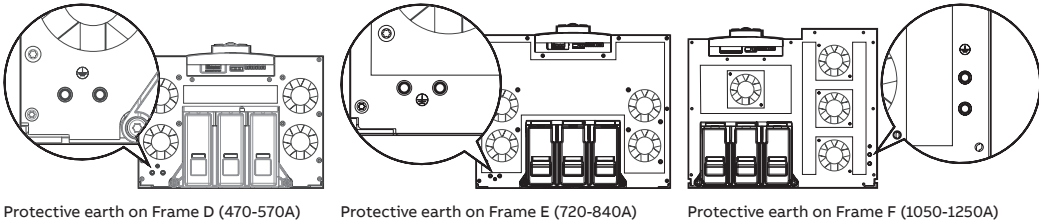
When using a softstarter in a network with high harmonic disturbances, there is a risk to damage the softstarter. An example could be installations where VSDs (variable speed drives) are connected to the same transformer as the softstarter. The harmonics are only harmful to the softstarter when it is not running a motor. To avoid problem with harmonics, a line contactor can be used to switch off the line voltage when the softstarter is not running a motor.



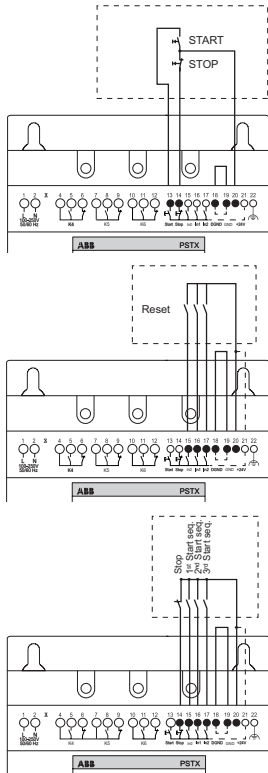
Protective Earth

Protective Earth is available on PSTX Softstarters with metallic casing that has a current of 470 A or more. It is located close to the fans. Intended to be used according to regulations.

This is only connected to the metallic casing and has no electrical or capacitive connections to anything inside.

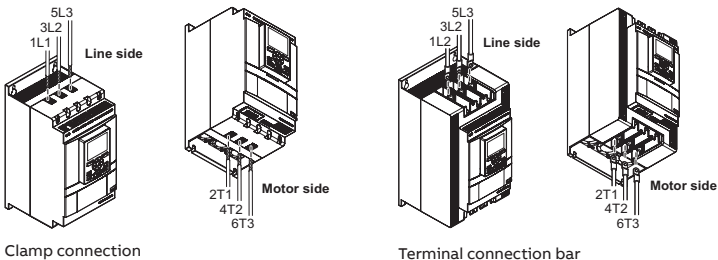
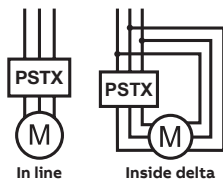


PSTX30...105 1L1 3L2 5L3 2T1 4T2 6T3	M8 8 Nm - 71 lb.in	Using built-in clamp AWG6...210 Cu 75 °C only Rigid: 10...56 mm² Flexible: 10...70 mm² Rigid/flexible: 2x6...2x35 mm²
PSTX142...170 1L1 3L2 5L3 2T1 4T2 6T3	11/6-16 UNF-2A 275 lb.in	Using cable clamp/lug ATK185: AWG4 to 300 kcmil Cu 75 °C only
PSTX210...370 1L1 3L2 5L3 2T1 4T2 6T3	3/4-16 UNF-2A 375 lb.in	Using cable clamp/lug ATK300: AWG4 to 400 kcmil ATK3002: AWG4 to 500 kcmil or 2xAWG4 to 2x500 kcmil Cu 75 °C only
PSTX470...570 1L1 3L2 5L3 2T1 4T2 6T3	5/8-18 UNF-2A 275 lb.in 3/4-16 UNF-2A 375 lb.in	Using cable clamp/lug ATK580/2: 2xAWG210 to 2x500 kcmil ATK750/3: 3xAWG210 to 3x500 kcmil CU 75 °C only
PSTX720...840 1L1 3L2 5L3 2T1 4T2 6T3	5/8-18 UNF-2A 275 lb.in 3/4-16 UNF-2A 375 lb.in	Using cable clamp/lug ATK580/2: 2xAWG210 to 2x500 kcmil ATK750/3: 3xAWG210 to 3x500 kcmil CU 75 °C only
PSTX1050...1250 1L1 3L2 5L3 2T1 4T2 6T3	M12 45 Nm - 398 lb.in	Using bars 1x 40 mm (1.57 in) + 2x 50 mm (1.96 in) 6 mm (0.23 in)
M3.5 0.5 Nm 4.3 lb.in	3.5 x 0.6 mm (0.138 x 0.024 in)	AWG 12...24 0.2...2.5 mm² 2x0.2...1.5 mm² 0.2...2.5 mm² 2x0.2...1.5 mm²

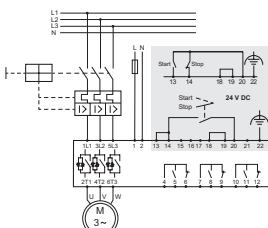


Softstarters PSTX30...PSTX1250 can be connected In Line, and Inside Delta. Use wire connection for PSTX30...105 and Terminal connection for PSTX142...1250.

- Connect the line side to terminals 1L1, 3L2, 5L3.
- Connect the motor to terminals 2T1, 4T2, 6T3 on the motor side.



Circuit diagram
PSTX30...PSTX1250
(Fuse and contactor version)



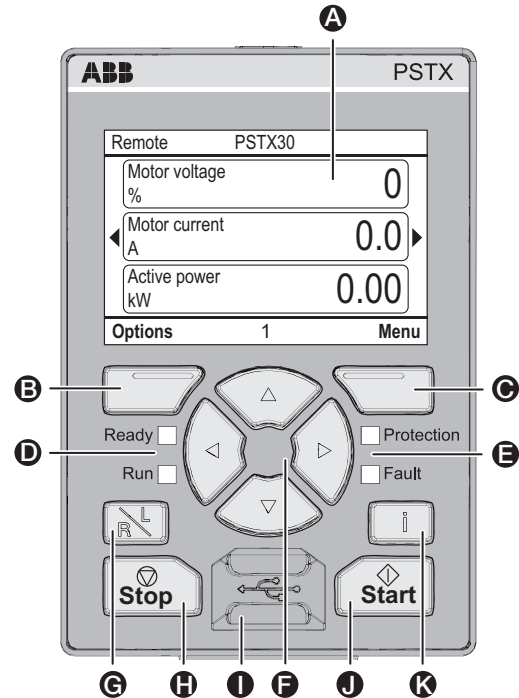
Circuit diagram
PSTX30...PSTX1250
(MCCB version)

For full instructions please follow the product manual which can be found on our web.

Basic settings

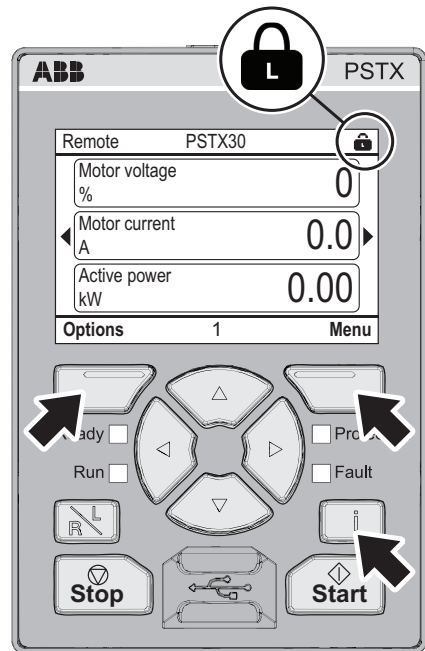
1. Set I_e to motor rated current (its the most important setting).
2. Basic parameters.
 - a. Initial voltage (increase if the motor is stalling or have a harsh start, default is 30%).
 - b. Start ramp time (adjust the voltage ramp if needed, default is 10 sec).
 - c. Current limit (possible to set specifically, default is 4 x I_e).
 - d. Set stop parameters if needed (mostly used for pumps, default is coast to stop).
3. For other settings please read the full product manual.

- A** Display for information.
- B** Left selection soft key. The function is showed to the left in the display above the key.
- C** Right selection soft key. The function is showed to the right in the display above the key.
- D** Left LED indicators. Ready (green) and Run (green).
- E** Right LED indicators. Protection (yellow) and Fault (red).
- F** Navigation keys. To navigate in the menu and change the parameter values. Highlighted black board on numbers or text shown in the display indicates that the menu/value can be changed or scrolled.
- G** Remote/local-key. Switch between local control from the HMI and remote control from hardwire input or fieldbus.
- H** Stop-key. Stop-switch for the softstarter. To stop the motor according to the set parameters. (Only active in local control mode).
- I** Mini USB port. For communication with external devices, eg. a PC.
- J** Start-key. Start-switch for the softstarter. To start the motor and operate it according to the set parameters. (Only active in local control mode).
- K** Information-key. For context-sensitive information about the softstarter status and settings.



Lock/ Unlock keypad

Push and hold the Options-key, Menu-key and i-key simultaneously for two seconds in order to lock/ unlock the keypad. The lock prevents only accidental use of keys. The display will show the home view and the only keys that can be used are the left and right keys in order to step through the home view.



Assistants menu

For an initial configuration of the softstarter it is recommended to use the Assistants. An Assistant is a step-by-step wizard which guides the user through a group of tasks to set-up and configure the softstarter.

Menu Assistants

Push , Menu, to enter the menu. Use  or  to highlight Assistants and push , Select.

Assistants menu	
Basic set-up	Application set-up
1. Language	1. Application set-up
2. Date and time	2. Keep/Change values
3. Motor data **	3. Tune settings
4. System configuration	4. Set-up complete
5. Set-up complete	

Use , , and , to navigate through the steps and change the values.



** All PSTX softstarters must be configured to the rated current of the motor.

If the PSTX is connected In Line, set the parameter "01.01 Motor rated current I_e" to the value found on the rating plate of the motor.

If the PSTX is connected Inside Delta, set the parameter "01.01 Motor rated current I_e" to (1 / √3) = 58 % of the rated motor current.