

Open PSTX - Product Overview

Description

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.

Typical Open PSTX Applications

Bow thruster
Centrifugal pump
Compressor
Conveyor belt (short)
Elevator

Open PSTX Standard Features

Three-phase controller
Operational voltage: 208...600 V AC
Wide rated control supply voltage: 100...250 V AC, 50/60 Hz
Rated operational current: 18...370 A
Voltage ramp and torque control for both start and stop
Current limit
Kick-start
Built-in bypass for energy saving and easy installation
Coated PCBA protecting from dust, moist and corrosive atmosphere
Illuminated display that uses symbols to become language neutral
Detachable Keypad rated IP66 (Type 1, 4X, 12)
Fieldbus communication with FieldBusPlug adapter and the FieldBusPlug
Analog output for display of motor current
Electronic overload protection
Underload protection
Locked rotor protection
Keyhole mounting

Open PSTX Specifications

General	Rated insulation voltage U_i	600 V
	Rated operational voltage U_e	440...480 V AC AC +10% / -15%, 50/60Hz ±5%
	Rated control supply voltage U_s	100...250 V AC +10% / -15%, 50/60Hz ±5%
	Rated control circuit voltage U_c	Internal or external 24 V DC
	Starting capacity at I_e	4 x I_e for 10 sec.
	Number of starts per hour	10 for PSTX30...PSTX370 6 for PSTX470 ... PSTX1250
	Overload capability	Overload class = 10
	Ambient temperature	During operation: -25...+60 °C, (- 13...+140 °F) During storage: -40...+70 °C, (-40...+158 °F)
	Maximum altitude	4000 m (13123 ft)
	Main circuit	Built-in bypass contactor: Yes Cooling system - fan cooled: Yes (thermostat controlled)
Environmental Protection	Main circuit	IP00
	Supply and Control Circuit	IP20
HMI for Settings	Display	LCD type, graphical
	Languages	Arabic, Chinese, Czech, Dutch, English, Finnish, French, German, Greek, Indonesian, Italian, Polish, Portuguese, Russian, Spanish, Swedish and Turkish
	Keypad	2 selection keys, 4 navigation keys, start key, stop key, info key and remote/local key
Signal relays	Number of programmable signal relays	3 (each relay can be programmed to None, Run, Top of ramp, Event group 0-6, Sequence 1-3 Run, Sequence 1-3 Top of ramp or Run reverse)
	K4	Default as Run signal
	K5	Default as Top of Ramp (Bypass) signal
	K6	Default as Event group 0 (Faults)
	Rated operational voltage, U_e	250 V AC/24 V DC
	Rated thermal current I_{th}	5A
	Rated operational current I_e at AC-15 ($U_e=250$ V)	1.5A
Analog Output	Output signal reference	0...10 V, 0...10 mA, 0...20 mA, 4...20 mA
	Type of output signal	Motor current (A), Main voltage (V), Active power (kW), Active power (HP), Reactive power (kVAR), Apparant power (kVArh), Active energy (kWh), Reactive energy (kVArh), cos phi, Motor temperature (%), Thyristor temperature (%), Motor voltage (%), Main frequency (Hz), PT100 temperature (centigrade), PTC resistance (Ohm)
Control Circuit	Number of inputs	2 (start, stop)
	Number of additional programmable inputs	3 (each input can be programmed to: None, Reset, Enable, Slow speed forward (Jog), Slow speed reverse (Jog), Motor heating, Stand still brake, Start reverse,

User defined protection, Emergency mode (active high), Emergency mode (active low), Fieldbus disable control, Start 1, Start 2, Start 3, Switch to remote control or Cancel brake)

Signaling indication LED	Ready	Green
	Run	Green
	Fault	Red
	Protection	Yellow
Fieldbus Connection	Built-in Modbus RTU	Yes
	Connection for Anybus	Yes
External Keypad	Detachable keypad	Yes
	Display	LCD type, graphical
	Ambient temperature	During operation: -25...+60 °C, (-13...+140 °F) During storage: -40...+70 °C, (-40...+158 °F)
	Degree of protection	IP66 (Type 1, 4X, 12)
Start and stop functions	Soft start with voltage ramp	Yes
	Soft stop with voltage ramp	Yes
	Soft start with torque control	Yes
	Soft stop with torque control	Yes
	Kick start	Yes
	Full voltage start	Yes
	Sequence start	Yes, 3 different sets of settings
	Current limit	Yes
	Dual current limit	Yes
	Current limit ramp	Yes
	Torque limit	Yes
	Pre-start function	Yes (Motor heating or Stand still brake)
	Jog with slow speed, forward and reverse	Yes (3 speed levels)
	Start reverse (external contactors)	Yes
Dynamic brake	Yes	

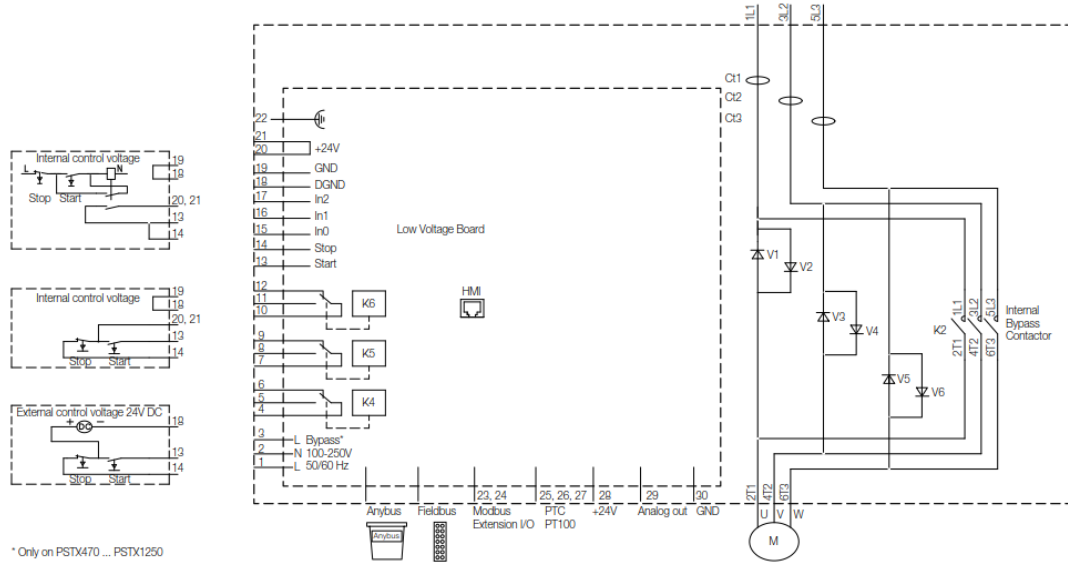
Open PSTX - Circuit Diagrams

PSTX30...PSTX1250
IEC circuit diagram



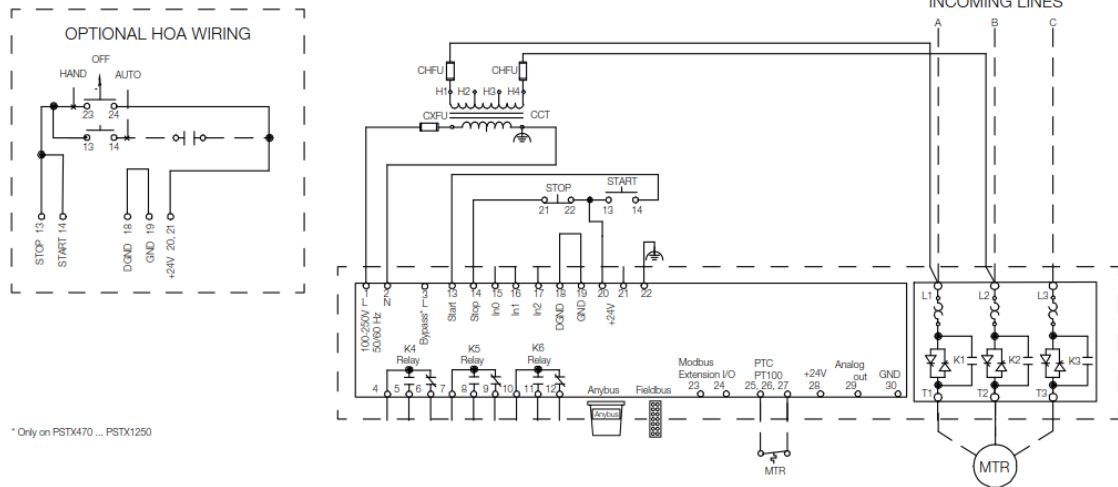
CAUTION

Terminal 22 is a function earth, it is not a protective earth. It should be connected to the mounting plate.



* Only on PSTX470 ... PSTX1250

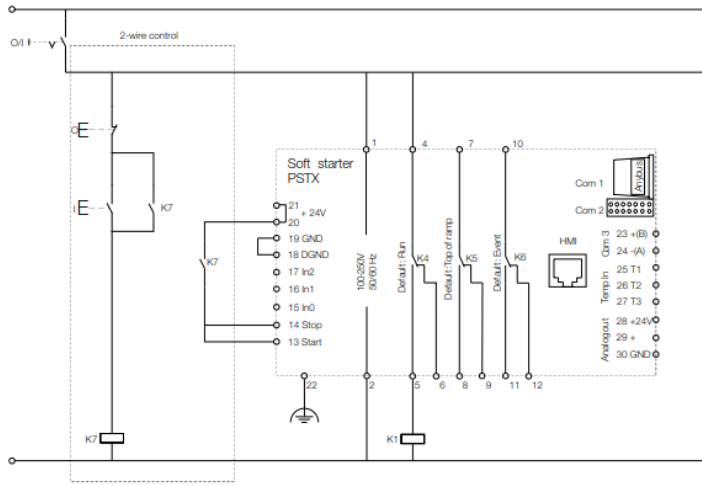
UL circuit diagram



* Only on PSTX470 ... PSTX1250

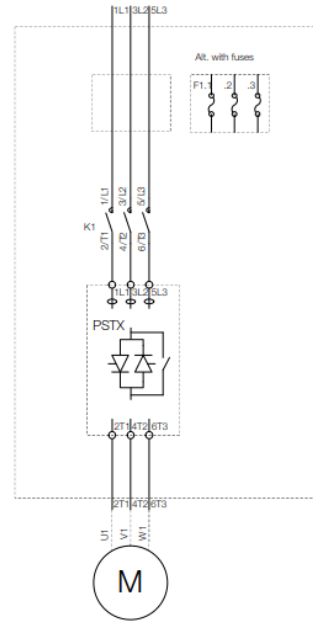
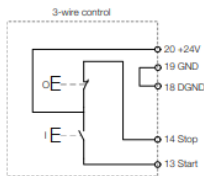
PSTX30...PSTX1250

In-line connected with line contactor and fuses

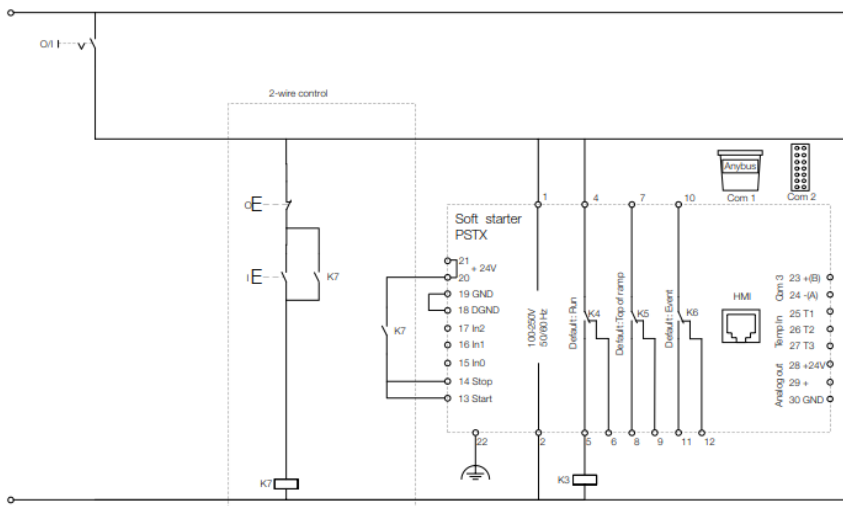


Coil consumption for main contactors.
 Pull-in max 15A
 Holding max 1.5A

If the pull-in or holding values are higher, the main contactors must be controlled via an auxiliary contactor.



Inside-delta connected with contactor and fuses



Coil consumption for Inside Delta contactor.
 Pull-in max 15A
 Holding max 1.5A

If the pull-in or holding values are higher, the Inside Delta contactor must be controlled via an auxiliary contactor.

