

## PRODUCT-DETAILS

# PSTX470-600-70

## PSTX470-600-70 Softstarter - 470 A - 208 ... 600 V AC



### General Information

|                         |                                                       |
|-------------------------|-------------------------------------------------------|
| Global Commercial Alias | PSTX470-600-70                                        |
| Extended Product Type   | PSTX470-600-70                                        |
| Product ID              | 1SFA898116R7000                                       |
| ABB Type Designation    | PSTX470-600-70                                        |
| EAN                     | 7320500508954                                         |
| Catalog Description     | PSTX470-600-70 Softstarter - 470 A - 208 ... 600 V AC |

### Long Description

The softstarter PSTX470-600-70 has a rated maximum operational current of 470 A with an operating voltage span from 208...600 V AC. The rated control voltage is between 100...250 V AC at 50/60 Hz. PSTX features a three-phase control soft start and stop through a voltage or a torque ramp. It has built-in bypass for easy installation and energy saving. A RUN, TOR and Event signal is available from relay outputs in NO (normally open state). The PSTX has functions such as current limit, kickstart, analog output, EOL, motor heating and pump cleaning. PSTX also features jog, braking, stand-still brake, diagnostics, sequence start and emergency/fire pump mode as standard. To interact with PSTX, it has a detachable full graphic display with IP66 and 4x outdoor rating. There are four ways to communicate with PSTX. It can be done by hardwire inputs Start/Stop/Reset of fault, and by three programmable digital inputs. Another popular option is the built-in Fieldbus communication Modbus RTU and incl optional ANYBUS modules with every major protocol such as for example Profinet, Profibus, Modbus TCP, Ethernet IP and others. Another way to communicate with PSTX is to use an external adaptor and a Fieldbus plug. PSTX is the complete alternative for any motor starting application. It's suitable for medium to large-sized three-phase motors with nominal currents from 30...1250 A inline connection or 52...2160 A inside delta connection. Typical applications are, for example, pumps, fans, compressors, and conveyors.

### Ordering

|                        |          |
|------------------------|----------|
| Minimum Order Quantity | 1 piece  |
| Customs Tariff Number  | 85371091 |

## Popular Downloads

|                                   |                 |
|-----------------------------------|-----------------|
| Data Sheet, Technical Information | 1SFC132012C0201 |
| Instructions and Manuals          | 1SFC132081M0201 |
| CAD Dimensional Drawing           | 2CDC001079B0201 |
| Wiring Diagram                    | N/A             |

## Dimensions

|                            |        |
|----------------------------|--------|
| Product Net Width          | 361 mm |
| Product Net Height         | 493 mm |
| Product Net Depth / Length | 282 mm |
| Product Net Weight         | 25 kg  |

## Technical

|                                                                  |                                                       |
|------------------------------------------------------------------|-------------------------------------------------------|
| Rated Operational Voltage                                        | 208 ... 600 V AC                                      |
| Rated Control Supply Voltage (U <sub>s</sub> )                   | 100 ... 250 V AC                                      |
| Rated Control Circuit Voltage (U <sub>c</sub> )                  | 24 V DC                                               |
| Rated Frequency (f)                                              | 50/60 Hz<br>Main Circuit 50 / 60 Hz                   |
| Rated Operational Power - In-Line Connection (P <sub>e</sub> )   | (230 V) 132 kW<br>(400 V) 250 kW<br>(500 V) 315 kW    |
| Rated Operational Current - In-Line Connection (I <sub>e</sub> ) | 470 A                                                 |
| Rated Operational Power - Inside Delta Connection                | at 230 V 250 kW<br>at 400 V 450 kW<br>at 500 V 600 kW |
| Rated Operational Current - Inside Delta Connection              | 814 A                                                 |
| Service Factor Percentage                                        | 100 %                                                 |
| Overload Protection                                              | Built-in electronic overload protection               |
| Integrated Electronic Overload                                   | Yes                                                   |
| Adjustable Rated Motor Current I <sub>e</sub>                    | 30 ... 100 %                                          |
| Starting Capacity at Maximum Rated Current I <sub>e</sub>        | 4xI <sub>e</sub> for 10s                              |
| Ramp Time                                                        | 1 ... 120 second [unit of time]                       |
| Initial Voltage During Start                                     | 10 ... 99 %                                           |
| Step Down Voltage Special Ramp                                   | 100 ... 10 %                                          |
| Switch for Inside Delta Connection                               | Yes                                                   |
| Run Signal Relay                                                 | Yes                                                   |
| By-pass Signal Relay                                             | Yes                                                   |

|                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fault Signal Relay                                | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Overload Signal Relay                             | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Signal Indication Ready to Start/Standby ON (LED) | Green                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Signal Indication Running R (LED)                 | Green                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Signal Indication Protection (LED)                | Yellow                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Signal Indication Fault (LED)                     | Red                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Communication                                     | Modbus-RTU; Modbus-TCP; Ethernet-IP; EtherCAT; DeviceNet; CANopen; Profibus; Profinet; BACnet-IP; BACnet-MSTP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Degree of Protection                              | IP00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Terminal Type                                     | Main Circuit: Bars                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Connecting Capacity Main Circuit                  | Hole Diameter 8.5 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Connecting Capacity Control Circuit               | Rigid 1 x 2.5 mm <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Connecting Capacity Supply Circuit                | Rigid 1 x 2.5 mm <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Tightening Torque                                 | Main Circuit 35 N·m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Product Main Type                                 | PSTX470                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Function                                          | Auto phase sequence detection<br>Automatic restart<br>Current limit<br>Current limit ramp<br>Dual current limit<br>Dynamic brake<br>Electricity metering<br>Electronic overload Time-to-cool<br>Emergency mode<br>Event log<br>Full voltage start<br>Jog with slow speed, forward and reverse<br>Keypad password<br>Kick start<br>Limp mode with two-phase motor control if one set of thyristors is shorted<br>Motor heating<br>Pre-start function<br>Pump cleaning<br>Real time clock<br>Sequence start<br>Soft start with torque control<br>Soft start with voltage ramp<br>Soft stop with torque control<br>Soft stop with voltage ramp<br>Stand still brake<br>Start reverse (external contactors)<br>Thyristor runtime measurement<br>Torque limit<br>Voltage sags detection |
| Protection Function                               | Bypass open protection; Current imbalance protection; Current underload protection; Dual overload (separate overload for start and run); Earth fault protection / ground fault protection; Electronic overload protection, EOL; Extension IO failure protection; Fieldbus failure protection; HMI failure protection; Locked rotor protection; Max number of starts/hour; Over voltage protection; Phase reversal protection; Power factor underload protection; PT-100 connection; PTC connection; Too long current limit protection; Too long start time protection; Under voltage protection; User defined protection; Voltage imbalance protection                                                                                                                             |
| Warning Details                                   | Current imbalance warning; Current underload warning; Electronic overload Time-to-trip; EOL warning; Faulty fan warning; Locked rotor warning; Motor runtime limit warning; Over voltage warning; Phase loss warning (for standby); Power factor underload warning; Short circuit warning (for Limp mode); THD(U) - Total Harmonic Distortion warning; Thyristor overload warning (SCR); Under voltage warning; Voltage imbalance warning                                                                                                                                                                                                                                                                                                                                          |

## Technical UL/CSA

Maximum Operating

Main Circuit 600 V

## Voltage UL/CSA

Tightening Torque  
UL/CSA

Main Circuit 309.8

## Environmental

Ambient Air Temperature

Operation -25 ... +60 °C  
Storage -40 ... +70 °C

Degree of Protection

IP00

RoHS Status

Following EU Directive 2002/95/EC August 18, 2005 and amendment

## Certificates and Declarations

CQC Certificate

CN: CQC2015010304806588 / SE: CQC2015010304797766

Declaration of Conformity  
- CCC

CN: 2020980304001094 / SE: 2020980304001859

Declaration of Conformity  
- CE

2CMT005209

## Container Information

Package Level 1 Width

470 mm

Package Level 1 Depth /  
Length

381 mm

Package Level 1 Height

650 mm

Package Level 1 Gross  
Weight

29 kg

Package Level 1 EAN

7320500508954

Package Level 1 Units

box 1 piece

## Classifications

Object Classification Code

Q

ETIM 7

EC000640 - Soft starter

ETIM 8

EC000640 - Soft starter

ETIM 9

EC000640 - Soft starter

eClass

V11.0 : 27370907

UNSPSC

39121521

IDEA Granular Category  
Code (IGCC)

4740 &gt;&gt; Soft starter

## Accessories

| Identifier      | Description                                                  | Type                                             | Quantity | Unit Of Measure |
|-----------------|--------------------------------------------------------------|--------------------------------------------------|----------|-----------------|
| 1SDA013922R1    | KIT FC CuAl 2x240mm2 T6 630-S6 630 6pcs                      | KIT FC CuAl<br>2x240mm2 T6<br>630-S6 630<br>6pcs | 1        | piece           |
| 1SDA013956R1    | KIT FC CuAl 3x185mm2 T6 800-S6 800 6pcs                      | KIT FC CuAl<br>3x185mm2 T6<br>800-S6 800<br>6pcs | 1        | piece           |
| 1SDA054988R1    | KIT FC CuAl 1x185mm2 T4 3pcs                                 | KIT FC CuAl<br>1x185mm2 T4<br>3pcs               | 1        | piece           |
| 1SDA055020R1    | KIT FC CuAl 1x240mm2 T5 400 3pcs                             | KIT FC CuAl<br>1x240mm2 T5<br>400 3pcs           | 1        | piece           |
| 1SDA023380R1    | KIT FC CuAl 2x240mm2 T6 630-S6 630 3pcs                      | KIT FC CuAl<br>2x240mm2 T6<br>630-S6 630<br>3pcs | 1        | piece           |
| 1SFN074810R1000 | LX205 Terminal Extension                                     | LX205                                            | 1        | piece           |
| 1SFN075410R1000 | LX370 Terminal Extension                                     | LX370                                            | 1        | piece           |
| 1SFN075710R1000 | LX460 Terminal Extension                                     | LX460                                            | 1        | piece           |
| 1SFN074307R1000 | LW110 Terminal Enlargement                                   | LW110                                            | 1        | piece           |
| 1SFN074807R1000 | LW205 Terminal Enlargement                                   | LW205                                            | 1        | piece           |
| 1SFN075407R1000 | LW370 Terminal Extension                                     | LW370                                            | 1        | piece           |
| 1SFN075707R1000 | LW460 Terminal Enlargement                                   | LW460                                            | 1        | piece           |
| 1SFN076107R1000 | LW750 Terminal Enlargement                                   | LW750                                            | 1        | piece           |
| 1SFN124801R1000 | LT205-30C Terminal Shroud                                    | LT205-30C                                        | 1        | piece           |
| 1SFN124803R1000 | LT205-30L Terminal Shroud                                    | LT205-30L                                        | 1        | piece           |
| 1SFN125401R1000 | LT370-30C Terminal Shroud                                    | LT370-30C                                        | 1        | piece           |
| 1SFN125403R1000 | LT370-30L Terminal Shroud                                    | LT370-30L                                        | 1        | piece           |
| 1SFN125406R1000 | LT370-30D Terminal Shroud                                    | LT370-30D                                        | 1        | piece           |
| 1SFN125701R1000 | LT460-AC Terminal shroud                                     | LT460-AC                                         | 1        | piece           |
| 1SFN125703R1000 | LT460-AL Terminal shroud                                     | LT460-AL                                         | 1        | piece           |
| 1SFN126101R1000 | LT750-AC Terminal shroud                                     | LT750-AC                                         | 1        | piece           |
| 1SFN126103R1000 | LT750-AL Terminal shroud                                     | LT750-AL                                         | 1        | piece           |
| 1SFA899314R1001 | PSCA-1 USB cable                                             | PSCA-1                                           | 1        | piece           |
| 1SFA899300R1001 | AB-PROFIBUS-1 Communication Module                           | AB-PROFIBUS<br>-1                                | 1        | piece           |
| 1SFA899300R1002 | AB-DEVICENET-1 Communication Module                          | AB-<br>DEVICENET-1                               | 1        | piece           |
| 1SFA899300R1003 | AB-MODBUS-RTU-1 Communication Module                         | AB-MODBUS-<br>RTU-1                              | 1        | piece           |
| 1SFA899300R1006 | AB-ETHERNET-IP-2 Communication Module                        | AB-<br>ETHERNET-IP<br>-2                         | 1        | piece           |
| 1SFA899300R1008 | AB-MODBUS-TCP-2 Communication Module                         | AB-MODBUS-<br>TCP-2                              | 1        | piece           |
| 1SFA899300R1010 | AB-PROFINET-IO-2 Communication Module                        | AB-PROFINET<br>-IO-2                             | 1        | piece           |
| 1SFA899300R1011 | AB-BACNET-MSTP-1 Communication Module                        | AB-BACNET-<br>MSTP-1                             | 1        | piece           |
| 1SFA899300R1012 | AB-ETHERCAT-IP-2 Communication Module                        | AB-<br>ETHERCAT-IP<br>-2                         | 1        | piece           |
| 1SAJ611000R0101 | DX111-FBP.0 IO-Module for UMC100 DI 24 VDC, supply 24VDC     | DX111-FBP.0                                      | 1        | piece           |
| 1SAJ622000R0101 | DX122-FBP.0 IO-Module for UMC100 DI 110/230VAC, supply 24VDC | DX122-FBP.0                                      | 1        | piece           |
| 1SFA896312R1002 | PS-FBPA Fieldbus plug kit                                    | PS-FBPA                                          | 1        | piece           |

---

## Categories

---

Drives → Softstarters → Softstarters → PSTX Softstarters → PSTX470

Low Voltage Products and Systems → Control Products → Softstarters → Softstarters → PSTX Softstarters → PSTX470

