PRODUCT-DETAILS

# PSTX45-690-70

# PSTX45-690-70 Softstarter - 45 A - 208 ... 690 V AC

## General Information

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|---|---|
| Global Commercial Alias | PSTX45-690-70 |
| Extended Product Type | PSTX45-690-70 |
| Product ID | 1SFA898205R7000 |
| ABB Type Designation | PSTX45-690-70 |
| EAN | 7320500501412 |
| Catalog Description | PSTX45-690-70 Softstarter - 45 A - 208 ... 690 V AC |
| Long Description | The softstarter PSTX45-690-70 has a rated maximum operational current of 45 A with an operating voltage span from 208...690 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 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

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

## Popular Downloads

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

## Dimensions

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| Product Net Width | 150 mm |
| Product Net Height | 314 mm |
| Product Net Depth / Length | 198 mm |
| Product Net Weight | 4.6 kg |

## Technical

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| Rated Operational Voltage | 208 ... 690 V AC |
| Rated Control Supply Voltage ($U_s$) | 100 ... 250 V AC |
| Rated Control Circuit Voltage ($U_c$) | 24 V DC |
| Rated Frequency (f) | 50/60 Hz<br>Main Circuit 50 / 60 Hz |
| Rated Operational Power - In-Line Connection (Pe) | (230 V) 12.5 kW<br>(400 V) 22 kW<br>(500 V) 25 kW<br>(690 V) 37 kW |
| Rated Operational Current - In-Line Connection (Ie) | 45 A |
| Rated Operational Power - Inside Delta Connection | at 230 V 25 kW<br>at 400 V 37 kW<br>at 500 V 45 kW<br>at 690 V 59 kW |
| Rated Operational Current - Inside Delta Connection | 76 A |
| Service Factor Percentage | 100 % |
| Overload Protection | Built-in electronic overload protection |
| Integrated Electronic Overload | Yes |
| Adjustable Rated Motor Current Ie | 30 ... 100 % |
| Starting Capacity at | 4xIe for 10s |

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| Maximum Rated Current Ie | |
| Ramp Time | 1 ... 120 second [unit of time] |
| Initial Voltage During Start | 10 ... 99 % |
| Step Down Voltage Special Ramp | 100 ... 10 % |
| Current Limit Function | 1.5 ... 7.5 xIe |
| Switch for Inside Delta Connection | Yes |
| Run Signal Relay | Yes |
| By-pass Signal Relay | Yes |
| Fault Signal Relay | Yes |
| Overload Signal Relay | Yes |
| Analog Outputs | 0…10 V, 0…20 mA, 4…20 mA |
| 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 | Cable Clamp |
| Connecting Capacity Main Circuit | Hole Diameter 8.5 mm |
| Connecting Capacity Control Circuit | Rigid 1 x 2.5 mm² |
| Connecting Capacity Supply Circuit | Rigid 1 x 2.5 mm² |
| Tightening Torque | Main Circuit 8 N·m |
| Product Main Type | PSTX45 |
| 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 |

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| | 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

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|---|---|
| Maximum Operating Voltage UL/CSA | Main Circuit 690 V |
| Tightening Torque UL/CSA | Main Circuit 70.8 |

## Environmental

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|---|---|
| Ambient Air Temperature | Operation -25 ... +60 °C<br>Storage -40 ... +70 °C |
| Degree of Protection | IP00 |
| RoHS Information | 2CMT005210 |
| RoHS Status | Following EU Directive 2002/95/EC August 18, 2005 and amendment |

## Certificates and Declarations

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|---|---|
| CQC Certificate | CN: CQC2014010304744405 / SE: CQC2014010304724380 |
| Declaration of Conformity - CCC | CN: 2020980304001091 / SE: 2020980304001489 |
| Declaration of Conformity - CE | 2CMT005209 |

## Container Information

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|---|---|
| Package Level 1 Width | 200 mm |
| Package Level 1 Depth / Length | 282 mm |
| Package Level 1 Height | 388 mm |
| Package Level 1 Gross Weight | 5.6 kg |
| Package Level 1 EAN | 7320500501412 |
| Package Level 1 Units | box 1 piece |

## Classifications

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|---|---|
| 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 >> Soft starter |

## Categories

Drives → Softstarters → Softstarters → PSTX Softstarters → PSTX45

Low Voltage Products and Systems → Control Products → Softstarters → Softstarters → PSTX Softstarters → PSTX45