

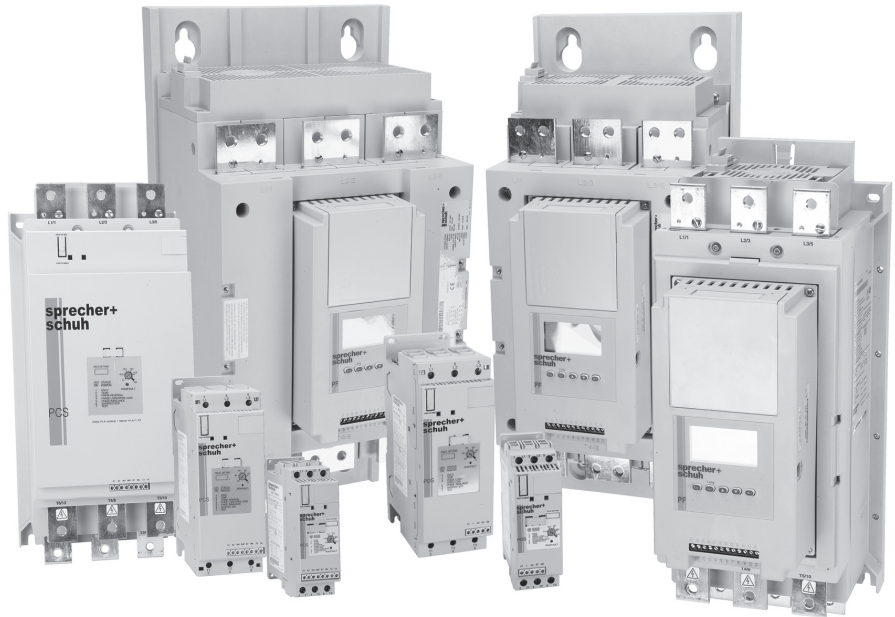
<i>General Description</i>	D2
<i>Custom Softstarter Panels</i>	D4
Series PCS Controllers	D6
<i>Selection Guide</i>	D8
<i>Accessories</i>	D19
<i>Replacement Parts</i>	D21
<i>Technical Information & Dimensions (Online)</i>	D22
Series PF Controllers	D31
<i>Selection Guide</i>	D38
<i>Accessories</i>	D49
<i>Replacement Parts</i>	D50
<i>Technical Information & Dimensions (Online)</i>	D51
Series PCEC Hydraulic Elevator Softstarters	D58
<i>Selection Guide</i>	D60
<i>Replacement Parts</i>	D61
<i>Technical Information & Dimensions (Online)</i>	D62



Next Generation Softstarter Intelligent Controllers

From economical to elaborate... the right softstarter for any application up to 1000HP @480V

D
Softstarters



Sprecher + Schuh offers a full line of softstarter controllers that utilize reliable solid state electronics to soft start three phase induction motors. Various options such as “soft-stopping” and braking are also available.

slow-speed with braking. The PF Intelligent controller also features a Pump Control option designed specifically to reduce “waterhammer” in centrifugal pumping applications. Virtually every controller in the line provides a choice of starting and stopping combinations that allow you to create a custom motor controller suited for any application.

The benefits of controlled starting

Solid state starting reduces the inrush currents and mechanical shock typical of conventional electromechanical motor starters, while providing silent and smooth acceleration without arcing, chattering or vibration. Wear on belts, chains, gearboxes and bearings is reduced, thus minimizing production losses and idle times.

Modular and Compact Design

As standard, the Sprecher + Schuh Softstarter includes a built-in electronic overload, integral bypass and motor starting capabilities for both star-delta and standard squirrel-cage induction motors, advanced protection and diagnostics in a compact, maintainable, modular, cost-effective package.

Common Applications

- Material Handling
- Overhead Cranes
- Rock Crushers
- Extruders
- Centrifugal Pumps
- Conveying Systems
- Lumber & Saw Mills
- Ventilators & Blowers
- Compressors
- Stirrers & Mixers
- Transport Systems
- Mills & Kneaders

Create the ideal start/stop profile for your application

Designed from fractional to 1000HP, Sprecher + Schuh softstarters can easily be configured to provide the desired starting and stopping characteristics. Starting modes range from basic Current Limit starting to “Soft Start with Selectable Kickstart,” and other advanced starting modes offered for the PF controller. Standard stopping modes are Soft-stop and coast-to-rest, other optional advanced stopping modes are available in the PF controller such as Smart Motor Brake, Accu-Stop and

No maintenance, easy installation

Because there are no moving parts, Softstarter Controllers require no regular maintenance to repair or replace worn out components. All units can be easily integrated into a new system or used to upgrade an existing electromechanical system (across-the-line, autotransformer, part-winding or wye-delta) using the same control circuitry.

100HP

400HP

700HP

1000HP

1400HP



Line Connected



Delta Connected

PCS Softstarter Controller

- Microprocessor controller designed for 3-phase motors up to 480A (3...85A DIN-rail mountable)
- Provides three different starting modes and selectable soft stop mode
- Includes built-in electronic overload and bypass contactor
- All models wye-delta compatible (6 lead up to 830A).



Line Connected





Delta Connected

PF Softstarter Controller

- Microprocessor controller designed for 3-phase motors or Wye-Delta (6-lead) motors (up to 1,250A; 1,600A Y-D).
- Provides four basic starting modes including soft start, current limit starting and softstart with selectable kickstart and other advanced starting modes.
- Includes electronic overload, integral bypass and advanced protection and diagnostics
- Numerous starting and stopping options available including unique Pump Control option for reducing "waterhammer" in pumping systems, and selectable auxiliary contacts.

Reduced Voltage Solid State Starters

	 PCS Controller 200...600V 1...480 A	 PF Controller 200...600V 1...1250 A
S = Standard Features 0 = Optional Features		
Features		
Soft Start	S	S
Kickstart	S	S
Current Limit	S	S
Dual Ramp Start	~	S
Full Voltage	~	S
Soft Stop	S	S
Pump Control	~	0
Preset Slow Speed	~	S
Linear Speed	~	S
Smart Motor Braking	~	0
Accu-Stop	~	0
Slow Speed with Braking	~	0
Motor Protection	S	S
Metering	~	S
Keypad Programming/LCD Display	~	S
Inside Delta Connection	S	S
Product Selection	Page D6	Page D31

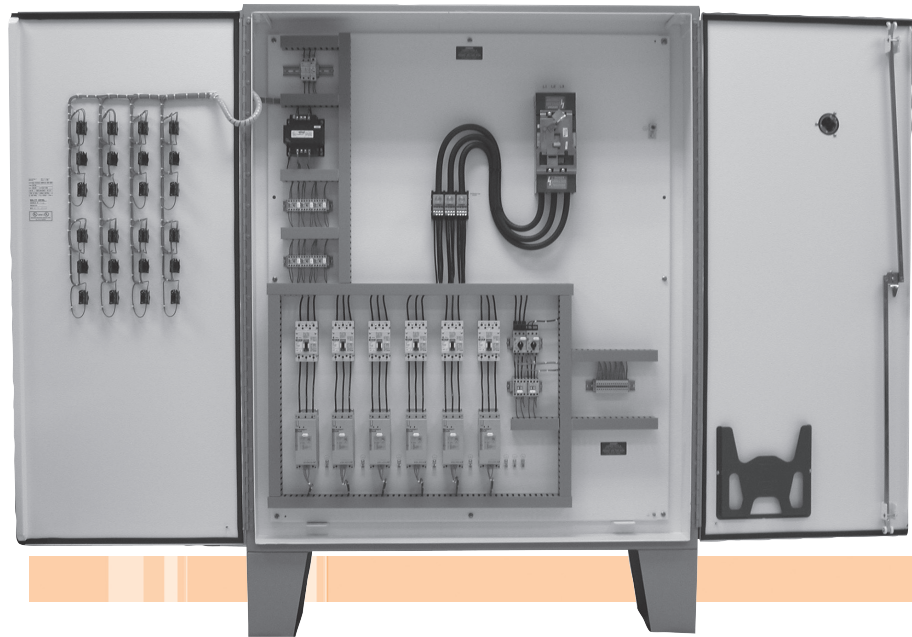
D
Softstarters

Custom Softstarter Panels

Serving Many Industries

D
Custom Softstarters

For your
Custom application
contact
customquotes@sprecherschuh.com



PCS Softstarter Custom Multi-Motor Panel 60HP@480V AC

Sprecher+Schuh offers a broad range of Softstarter products for starting or stopping AC induction motors from ½ Hp to 1000 Hp. The entire range incorporates superior features, such as;

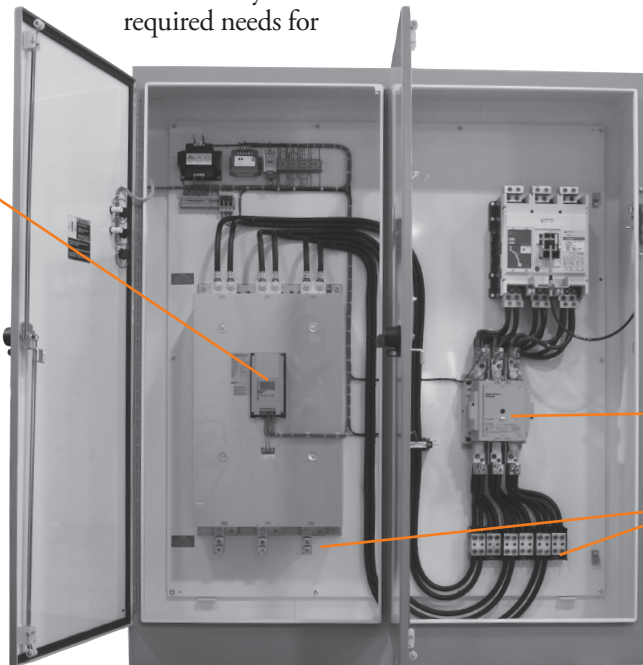
- Three Phase Control
- Built-in electronic overload and integral run bypass for both star-delta and standard squirrel-cage induction motors
- Advanced protection and diagnostics in a compact, maintainable, modular, cost-effective package

many applications. Here is a listing of industries the Sprecher+Schuh Custom Softstarter panels have played a successful role in.

- Food Processing
- Irrigation
- Lumber and Wood Products
- Mining and Metals
- OEM Specialty Machine
- Petrochemical
- Pulp and Paper
- Textile
- Transportation and Machine Tool
- Water/Wastewater Treatment and Municipalities
- Cement/Rock crushers/Chippers

Whether you need a solid state controller for a single motor, special ramping or stopping maneuvers or a complex multi-motor solution, our range of Softstarter controllers meet your required needs for

PFS Softstarter
• Built-in Overload
• Built-in Bypass



Contact your Sprecher+Schuh motor control and protection representative for consultation regarding custom quotations or help explaining which of the four families of Softstarter best meets your application needs.

Isolation Contactor

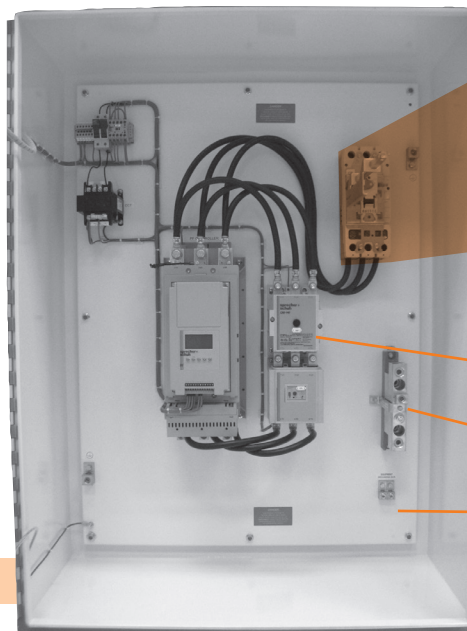
Motor Connection Terminals for Wye-Delta 6-Lead Motor

PFS Softstarter
1000HP@480V AC for
Wye-Delta 6-Lead Motor

D4



PFS Softstarter UL508A Service Entrance
Custom Panel 150HP@480V AC



External HP Rated Bypass
Contactor and Overload

Neutral Terminal

Ground Terminals

Pumping and Braking Applications

Custom panels using the PCS and PFS Softstarters are an excellent choice for typical motor starting and soft stopping profiles.

For customers seeking a control panel solution to reduce water-hammering or rapid fluid surges, our PFB Pump Control Softstarter is the market leader in this technology. The PFB Softstarter algorithm is specially designed to reduce fluid surges in pumping systems. It provides closed loop acceleration and deceleration control of centrifugal pump motors without the need for feedback devices. When it comes to irrigation, pumping stations or any fluid applications, the PFB Pump Control is the leading choice.

Need to provide a motor control panel to align a tumbler for loading or unloading product? Need to reduce the stopping time of a Bandsaw by more than half of other mechanical braking systems? The PFD Smart Motor Braking is the ideal solution. The PFD Braking option provides motor braking for applications which require the motor to stop quickly. It is a microprocessor based braking system, which applies braking current to a motor. The strength of the braking current is adjustable from 0...400% of full load current.

UL508A and Service Entrance Labeled

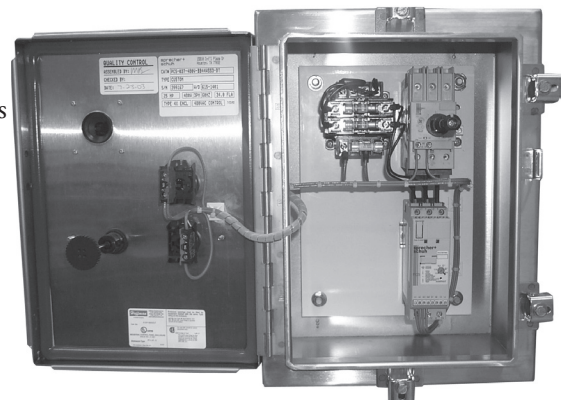
Upon request, custom Softstarter panels can be designed and labeled to meet UL508A requirements and /or Service Entrance requirements. Under UL508A, this ensures that all components in the panel are in compliance with UL and that wire bending spaces and wire sizes are properly selected for the given panel solution. The requirements for Service Entrance is to add special labeling near the main disconnecting handle and include a neutral bar and grounding lugs near the branch circuit protection device. The Sprecher+Schuh team is ready to meet your safety approval specifications.



PFS Softstarter Custom MCCB Combo
400HP@480V AC

Need Other Types of Enclosure Ratings?

The PCS/PF Softstarters can be enclosed in a variety of enclosures away from our standard listing in this section. Whether it's an outdoor rated Type-12 with a drip shield, corrosive resistant Type-4X Non-Metallic or an ATEX Approved enclosure, our Sprecher+Schuh team has vast custom control experience in meeting your enclosure environmental specifications.



PCS Softstarter KTA7 Combo
25HP@480V Stainless Steel