



# Advanced Elevator Controller Designed for wye-delta apps Microprocessor Controlled

## PCEC Hydraulic Elevator Softstarter

**Increases motor life & reduces downtime**

**Eliminates routine maintenance**

**Replaces traditional Wye-Delta installations**

**Easy installation and setup**

Sprecher + Schuh's PCEC Softstarters are designed to simplify installation, set-up, and typical operation of motors that drive hydraulic elevators and escalators. This solid state starter solution is designed to operate 3 phase induction motors and can be connected to a 6 or 12 lead Wye-Delta or standard 3 or 9 lead motors. Through the use of LINE or INSIDE-THE-DELTA control, the solid state solution can provide ultimate control of the motor.

### Microprocessor Controller

- Precise starting current limit adjustments
- Smooth, stepless ramp to full speed
- Built-in electronic overload; select from class 10, 15, 20 or OFF manual or automatic trip
- Built-in SCR bypass contactors on all three phases minimize heat, allowing compact size and longer SCR life

### Wired inside the delta

- Fits new and existing 6-wire installations
- Can be rewired and set for LINE connected 3-wire motors

### Current-limiting

- Reduced high current surges & voltage drops
- Reduced mechanical stress
- Less maintenance equals less downtime

### Flexible design

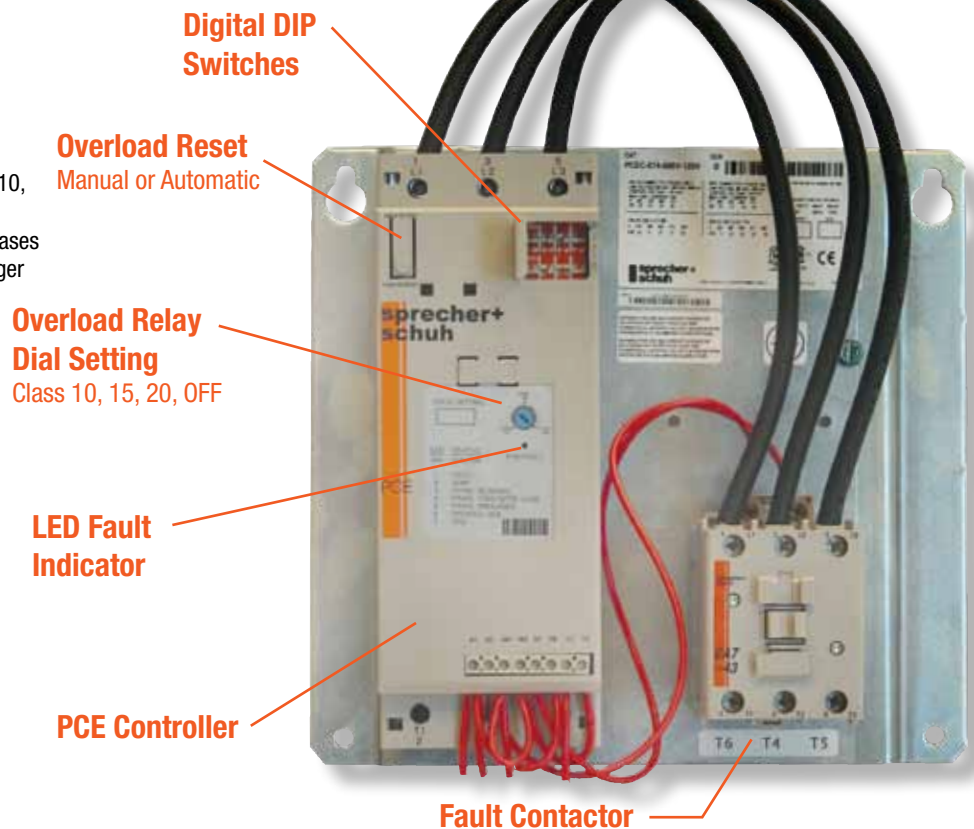
- Matches many wye-delta panels for easy replacement
- 2-wire control interface
- "Up to speed" contact for easy integration
- Optional side mounted auxiliary contacts
- Field-replaceable components

### LED fault diagnostic display

- Indicates operating status and fault conditions

### Standard fault contactor

- Isolates motor windings during fault condition



Starting/Stopping Modes	Fault Diagnostics
• Current Limit	• Overload Condition
• Soft Start	• Over Temperature - SCR
• Soft Stop	• Phase Reversal
• Coast-to-Rest	• Phase Loss/Open Load
• 0.75 second Delayed Stop	• Phase Imbalance
• Delta or Line Compatible	• Shorted SCR



# PCEC Hydraulic Elevator Softstarter

## PCEC Base Controller Operation

The base controller is a standard product that uses advanced motor control and simple diagnostics. The controller consists of a main micro processor, current sensing, built in adjustable overload, solid state power modules, and electromechanical bypass contacts. Simple dip switch configuration provides for a variety of control modes. The default configuration uses built in current sensing to limit current to the motor during starting. The controller then changes to the run mode by transitioning to internal bypass contactors and changing the state of the aux contact. The internal bypass contactor provides decreased heating during run and removes the SCR's from the circuit.

## PCEC Fault Contactor Operation

The fault contactor is controlled through the fault contact of the controller. When control power is applied to the controller, the fault contact closes and applies control power to the coil. The fault contact will open, removing power from the fault contactor and disabling the motor during any of the following events:

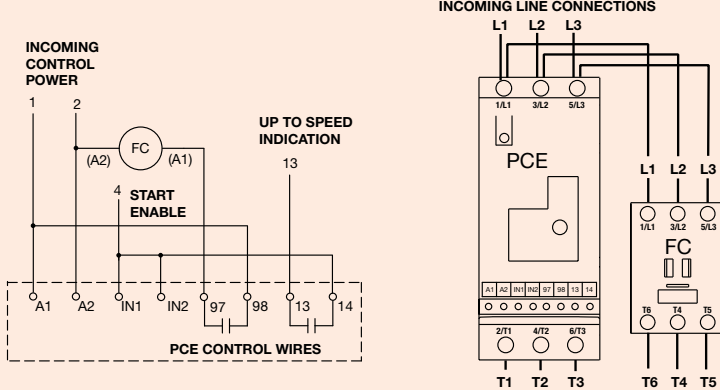
- ✓ Power is removed from the controller
- ✓ The motor has developed a problem including overloading due to mechanical or electrical reasons, ground faults, or motor short circuits.
- ✓ If the starter would detect an internal problem such as a shorted SCR or Overtemp condition

## PCEC Controller Panel

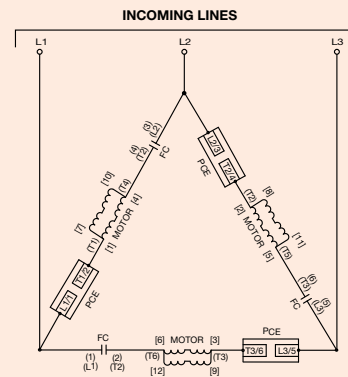
DELTA Connected - 6 Wire					Line Connected - 3 Wire					With 120V AC 50/60Hz Control Voltage
Maximum Horsepower					Maximum Horsepower					
200V	240V	480V	575V	Overload Range	200V	240V	480V	575V	Overload Range	Catalog Number
10	10	20	30	10.9...32.9	5	5	10	15	6.3...19	<b>PCEC-032-600V-120V</b>
15	15	30	40	17...51	7.5	10	20	25	10...30	<b>PCEC-051-600V-120V</b>
20	20	40	60	21.3...64	10	10	25	30	12.3...37	<b>PCEC-064-600V-120V</b>
20	25	50	60	24.7...74	10	15	30	40	14.3...43	<b>PCEC-074-600V-120V</b>
30	40	75	100	34.7...104	15	20	40	50	20...60	<b>PCEC-104-600V-120V</b>
40	50	100	150	49...147	25	30	60	75	28.3...85	<b>PCEC-147-600V-120V</b>
75	75	150	200	59...234	40	50	100	125	34...135	<b>PCEC-234-600V-120V</b>

Also available in 230V Control Voltage. The PCEC Hydraulic Elevator duty rating is 80 starts per hour at 50% duty cycle (160 calls per hour). Starts per hour are based on when the motor starts, the motor only runs on "up" calls.

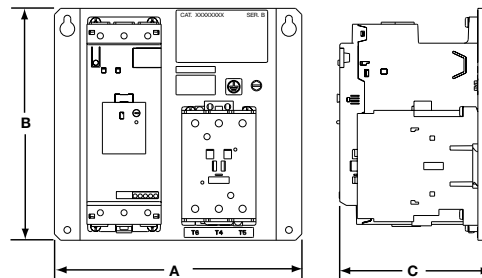
## PCEC Control & Power Circuit



## Delta Connected Line Diagram



Controller Size	Units	A (Width)	B (Height)	C (Depth)	Approx. Weight
32/51/64	mm	178	144	115.7	4 lbs (2 kg)
	in	7.01	5.67	4.56	
74/104/147	mm	240	225	147.9	14 lbs (6 kg)
	in	9.45	8.86	5.82	
234	mm	362	515	216.4	51 lbs (23 kg)
	in	14.25	20.28	8.52	



For detailed technical information concerning this product, please consult your Sprecher + Schuh representative for accompanying publications.

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