



# Tier 460 Motor SPD

## Shunt Trip Controller

### 400 Series Surge Protective Device

*With Active Monitoring & Control*

P5 25kA Terminal Block Shunt Trip



#### Features:

##### Surge

- Thermally Protected MOV
- Surge Levels Available:  
25 kA/Mode, 50kA/ Phase
- ANSI/UL 1449 4th Edition, CSA
- Sine Wave Tracking: Type 2
- Surge Impulse Rated and Tested
- Blue/Red LED Indication

##### Monitoring & Control

- Monitor Under/Over Voltage, Phase Loss, Imbalance
- Green Power LED
- Blue Active System LED
- Active Load Disconnect & Reset
- User Selectable Controls:
- +/- 5, 7.5, 10, 15, 20, 25% Over/Under Voltage Trip Settings

### ***Why Install Surge Protection with Dedicated Motor Protection?***

Transient impulses can significantly impact your facility's power quality, easily disrupting or damaging your process or equipment. While it's important to protect against high-energy events with surge protection, a more frequent, yet often overlooked power quality concern is the damage caused by a phase loss, a temporary voltage sag, or a voltage swell condition. Disconnecting your sensitive loads during these longer duration PQ events, is the easiest way to safeguard important equipment.

*Innovative Solutions for Clean, Reliable Power*



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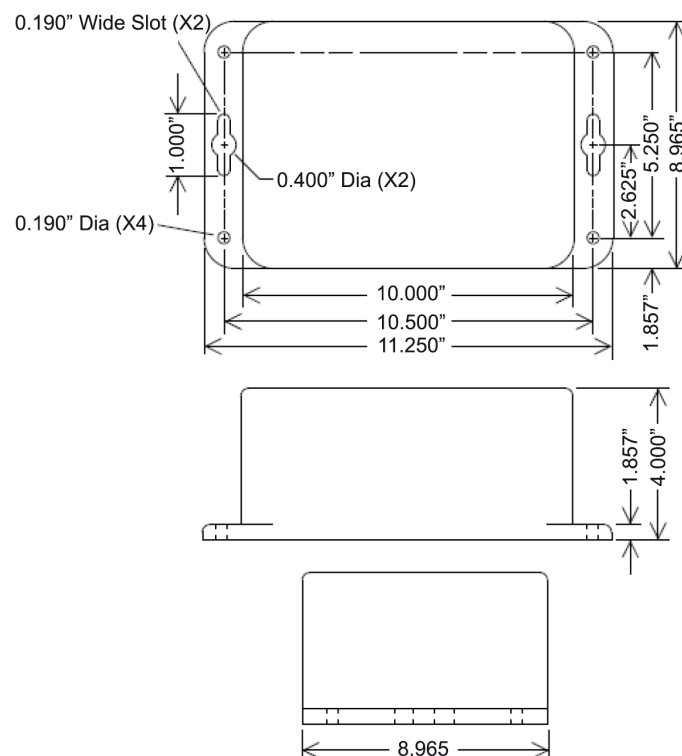
### Why Install a Tier 460 Shunt Trip Controller?

Shunt Trip Controller Devices will protect a motor, or an entire system, from power quality events. It runs an onboard surge protection device in parallel with an onboard shunt trip controller. The shunt trip controller will send a signal, at predetermined levels, to a shunt trip breaker located on a panel, or at the system or motor, and force it to disconnect the load. Please note, shunt trips require a manual reset after a disconnection event.

Available for 120V or 240V breakers.

#### General Technical Specifications

Connection Type	Parallel
Maximum Continuous Operating Voltage	120V, 150 VAC, 125%; 240V, 320 VAC; 277V, 320 VAC; 480V, 550 VAC; All Others 115%
Short Circuit Current Rating (SCCR)	200kAIC Surge; 22kAIC Contactor
Shunt Trip Breaker Voltage Levels	120V or 240V
Shunt Trip Separate Supply Voltage	24V, 120V, or 277V
Protection Modes	All Connected Modes: L-N, L-L, L-G, N-G
Operating Frequency Range	47 - 63 Hz
UL 1449 Location Type	Type 1 or Type 2
UL 1449 Nominal Discharge Current (In)	20 kA
Connection	Terminal Block
Status Indication	Blue/Red LEDs, Form C, Audible Alarm w/ disable switch, Green Power LED
Monitoring	Under Voltage/ Overvoltage + Blue Activation LED, Phase loss, Phase Imbalance
Enclosure	NEMA 4X Rated (Polycarbonate)
50 Ohm EMI/RFI Attenuation	60 /40dB Max
Response Time	<0.5 nanoseconds
Operating Temperature	-40°C to +75°C
Operating Humidity	0% to 95% non-condensing
25 kA/Mode Case Size	8.965" x 10.00" x 4.000", 6.4 lbs
25 kA/Mode Mount Footprint	8.965" x 11.25" x 4.000", 6.4 lbs
Selectable Over/Under Voltage Trigger Levels	+/- 5%, 7.5%, 10%, 15%, 20%, 25%
Warranty	SPD: 10 years



The **460 P5 25kA Terminal Block Shunt Trip** is our smallest motor surge protection unit, and houses any voltage and phase configuration of our P2 SPDs. When size is a factor, and you don't need a higher surge capacity, this is the ideal selection for a surge and motor protection package.

Available for 120V or 240V breakers.

Shunt Trip Supply Voltage: 24V, 120V, or 277V

Connection: Terminal Block

Surge Capacity: 25kA/Mode, 50kA/Phase



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### P5 25kA Terminal Block Shunt Trip

**Table A: Voltage & Source Configuration**

Model Code	Voltage	Source Configuration
000(N/S/Y/D)	N/A	N=Single, S=Split, Y= 3 Phs Wye, D=3 Phs Delta
120S	120/240	Split Phase, 3W+G (L1, L2, N G)
120N	120	Single Phase , 2W+G (L1, N, G)
120Y	120/208	Three Phase Wye, 4W+G (L1, L2, L3, N, G)
208N	208	Single Phase, 2W+G (L1, L2, G)
240N	240	Single Phase, 2W+G (L1, L2, G)
240D	240	Three Phase Delta, 3W+G (L1, L2, L3, G)
277Y	277/480	Three Phase Wye, 4W+G (L1, L2, L3, N, G)
480D	480	Three Phase Delta, 4W+G (L1, L2, L3, N, G)

*For Contactor Only Select 000 and one letter for your contactor phase*

**Table C: Enclosure Size**

Model Code	Dimensions	Capacity	Enclosure Material	Contactor Current or Shunt Trip Supply Volt
2	13.50" x 13.00" x 6.375"	25kA	Steel	30 or 60 Amp
5	8.695" x 11.25" x 4.000"	25kA	Polycarbonate	30 Amp; or 24V or 120V or 277V supply voltage
3	16.00" x 16.00" x 8.00"	50kA-150kA	Steel	30 or 60 Amp; or 24V or 120V or 277V supply voltage
5	8.695" x 11.25" x 4.000"	None	Polycarbonate	30 Amp Contactor only

**Table B: Surge Current Capacity**

Model Code	Surge Capacity /Mode	Surge Capacity / Phase
000	N/A	N/A
025	25 kA	50kA
050	50 kA	100 kA
075	75 kA	150 kA
100	100 kA	200 kA
125	125 kA	250 kA
150	150 kA	300 kA

**Table D: Contactor Current or Shunt Trip Supply Voltage**

Model Code	Contactor Current	Supply Voltage
3	30 Amp	120 Volt
6	60 Amp	120 Volt
9	90 Amp	120 Volt
A	None	24 Volt
B	None	120 Volt
C	None	277 Volt
S	Custom	Custom

**Tier460 Motor Protection Series, 460 Family Ordering Information:**

**Example Model Number: T46120Y025ALP52SB**

Positions: 1-3	Positions: 4-7	Positions: 8-10	Position: 11	Position: 12	Position: 13	Position: 14	Position: 15	Position: 16	Position: 17
Product Family	Voltage/ Phase Configuration	Surge Capacity	Surge Protected Modes	Connection Type	Enclosure Type	Enclosure Size	UL Type	Options	Contactor Current or Shunt Trip Supply Voltage
T46 = 460 Family	See Table A	See Table B	A = All connected modes N=No Surge	W = Wire Lead L = Terminal Block D = Disconnect R = Line Cord Receptacle	P=NEMA 4X; Polycarbonate M=NEMA 4; Steel	See Table C	1=UL Type 1 2=UL Type 2 N=No Surge	S = Standard /No Options C = Surge Center	See Table D