

# TPS3 05

## Surge Protection Device (SPD) for P4 & P5 Panelboards and Distribution Switchboards

### Features:

- Mounts internal to:
  - P4 & P5 panelboards and distribution switchboards
- UL 1449 3rd Edition – 2009, cUL
- UL 1283
- Type 1 SPD (Type 2 cUL)
- Large block, individually fused, thermally protected, 50kA MOV's
- 20kA  $I_{nT}$  (most models)
- 200kA SCCR (most models)
- All UL-required OCP & safety coordination included
- UL96A Lightning Protection Master Label compliant (@20kA  $I_{nT}$ )
  
- Panelboard Features
  - Copper or aluminum bus
  - MB or MLO
  
- Switchboard Features
  - Copper or aluminum bus
  - 200% rated neutral bus for harmonic-rich applications
  - CSA, UL 891, UL 67 and NEMA PB-2
  
- Applications
  - Provides main service or downstream protection for sensitive computer and electronic loads
    - Standard redundancy use: 100kA per phase
    - Increased redundancy use: 200kA per phase
    - Maximum redundancy use: 300kA per phase
  
- SPD Specifications
  - Surge Current Rating Per Phase

Per Phase	L-N	L-G	N-G
100kA	50kA	50kA	50kA
150kA	100kA	50kA	50kA
200kA	100kA	100kA	100kA
250kA	150kA	100kA	100kA
300kA	150kA	150kA	150kA
  - 100% monitoring – every MOV is monitored, incl. N-G
  - EMI/RFI filtering: Active tracking up to -50db from 10kHz to 100MHz
  - Repetitive impulse: 5,000 hits
  - Less than 1/2 nanosecond response time
  - Relative humidity range: 1-95% non-condensing
  - Operating frequency: 47-63Hz
  - Operating temperature: -25°C (-15°F) to +60°C (140°F)



UL 1449 3rd Edition SPD

SIEMENS

- SPD Features
  - UL 1449 3rd Edition effective September 2009
  - Designed, manufactured & tested consistent with:
    - ANSI/IEEE C62.41.1-2002, C62.41.2-2002, and C62.45-2002
    - 1992/2000 NEMA LS-1
    - NEC Article 285
    - IEC 61643, CE
  - Large block, individually fused, thermally protected, 50kA MOV's
  - 10 year warranty

- SPD Monitoring
  - LED indicators
  - Audible alarm with silence switch and test button
  - Dry contacts
  - Internal rotary disconnect switch

- Available Options
  - Surge counter

- Key Bid Specifications
  - UL 1449 3rd Edition - 2009, cUL
  - UL 1283
  - Type 1 SPD ❶
  - Audible alarm with silence switch and test button
  - Dry contacts
  - EMI/RFI filtering
  - Protection modes on L-N, L-G, L-L, N-G
  - I<sub>n</sub> Rating - 20kA
  - Short Circuit Current Rating - 200kA
  - Surge Current Rating
    - Per Phase = L-N + L-G
    - 100kA      50kA      50kA

Ordering Information

Catalog #

TPS3    05         

Voltage Code

A = 120/240V, 1Ø, 3W (Fig 1)  
 B = 120/240V, 3Ø, 4W (Fig 3)  
 C = 120/208V, 3Ø, 4W (Fig 2)  
 D = 240V, 3Ø, 3W (Fig 4)  
 E = 277/480V, 3Ø, 4W (Fig 2)  
 F = 480V, 3Ø, 3W (Fig 4)  
 G = 600V, 3Ø, 3W (Fig 4) ❷  
 K = 380/220V, 3Ø, 4W (Fig 2)  
 L = 600/347V, 3Ø, 4W (Fig 2)  
 S = 400/230V, 3Ø, 4W (Fig 2)

Surge Current (kA)

10 = 100kA per phase  
 15 = 150kA per phase  
 20 = 200kA per phase  
 25 = 250kA per phase  
 30 = 300kA per phase

Options

X = Surge counter

- Example: TPS3C0530X = SPD for a 208/120V power panel with a surge current capacity of 300kA per phase and a surge counter option

- When an option is not selected, include a zero (0) in the field

Available Accessories: Ordered Separately

- RMSIE - Remote monitor

UL 1449 3rd Edition - 2009 Test Data Summary									
Voltage Protection Rating (VPR - 6kV, 3kA)									
Voltage Code	Service Voltage	L-N	L-G	N-G	L-L	Type	In	SCCR	MCOV
A	120/240V, 1Ø, 3W (Fig 1)	800	700	700	1200	Type 1	20kA	100kA	150
B	120/240V, 3Ø, 4W (Fig 3)	800 / 1500	700 / 1200	700	1800 / 1800	Type 1	20kA	200kA	150 / 320
C	120/208V, 3Ø, 4W (Fig 2)	800	700	700	1200	Type 1	20kA	200kA	150
D	240V, 3Ø, 3W (Fig 4)		1200		1500	Type 1	20kA	200kA	320
E	277/480V, 3Ø, 4W (Fig 2)	1500	1200	1200	2500	Type 1	20kA	200kA	320
F	480V, 3Ø, 3W (Fig 4)		1800		1800	Type 1	10kA	200kA	552
G	600V, 3Ø, 3W (Fig 4)		2500		2500	Type 1	10kA	200kA	690
K	380/220V, 3Ø, 4W (Fig 2)	1500	1200	1200	2500	Type 1	20kA	200kA	320
L	600/347V, 3Ø, 4W (Fig 2)	1500	1500	1500	2500	Type 1	10kA	200kA	420
S	400/230V, 3Ø, 4W (Fig 2)	1500	1200	1200	2500	Type 1	20kA	200kA	320

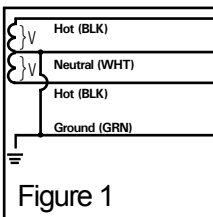


Figure 1

Split  
2 Hots, 1 Neu, 1 Gmd

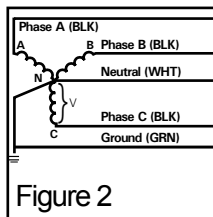


Figure 2

Wye  
3 Hots, 1 Neu, 1 Gmd

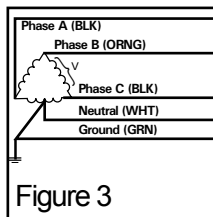


Figure 3

Hi-Leg Delta (B High)  
3 Hots, (B High),  
1 Neu, 1 Gmd

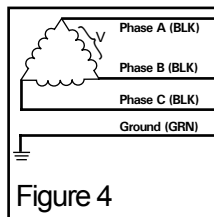


Figure 4

Delta & HRG Wye  
3 Hots, 1 Gmd

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Notes:

- ❶ Type 2 cUL
- ❷ Available 100kA & 150kA only