

# TPS3 06

## Surge Protection Device (SPD)

for Service Entrance Applications – SB1, SB2, SB3, Type RCS Switchboards, Type WL Low Voltage Switchgear, Motor Control Centers and Busway Systems

### Features:

- Mounts internal to:
  - SB1, SB2, SB3 & Type RCS switchboards
  - Type WL low voltage switchgear
  - TIASTAR motor control centers - standard 12" bucket
  - STP series busplug on SX series busway
- UL 1449 3rd Edition Recognized – 2009
- UL 1283
- Type 4 SPD intended for use in Type 1 applications (Type 2, cUL)
- UL Type 1 tested with all internal OCP and safety coordination features included
- Large block, individually fused, thermally protected, 50kA MOV's
- 20kA  $I_n$  (most models)
- 200kA SCCR (most models)
- Rotary disconnect switch included
- All UL-required OCP & safety coordination included
- Applications
  - Provides main service entrance or downstream protection for sensitive computer and electronic loads
    - Standard redundancy use: 300kA per phase
    - Increased redundancy use: 400kA per phase
    - Maximum redundancy use: 500kA 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
400kA	200kA	200kA	200kA
500kA	250kA	250kA	250kA

- 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 ½ 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
  - Rotary disconnect switch

- Available Options
  - Surge counter

- Key Bid Specifications
  - UL 1449 3rd Edition Recognized - 2009
  - UL 1283
  - 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
    - 300kA      150kA   150kA

Ordering Information

Catalog #      TPS3  06

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) ❷  
 E = 277/480V, 3Ø, 4W (Fig 2)  
 F = 480V, 3Ø, 3W (Fig 4) ❷  
 G = 600V, 3Ø, 3W (Fig 4) ❸  
 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  
 40 = 400kA per phase  
 50 = 500kA per phase

Options

B = Busway application ❶  
 M = MCC application ❶  
 X = Surge counter

- Example: TPS3C0640X0 = SPD for a 208/120V switchboard with a surge current capacity of 400kA 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
- WHXWDP120 = 10' Display cable extension

UL 1449 3rd Edition - 2009 Test Data Summary									
Voltage Protection Rating (VPR - 6kV, 3kA) ❹									
Voltage Code	Service Voltage	L-N	L-G	N-G	L-L	Type	In	SCCR	MCOV
A	120/240V, 1Ø, 3W (Fig 1)	700	700	700	1200	Type 4	20kA	100kA	150
B	120/240V, 3Ø, 4W (Fig 3)	700 / 1200	700 / 1200	700	1800 / 1800	Type 4	20kA	200kA	150 / 275
C	120/208V, 3Ø, 4W (Fig 2)	700	700	700	1200	Type 4	20kA	200kA	150
D	240V, 3Ø, 3W (Fig 4)		1200		1200	Type 4	20kA	200kA	320
E	277/480V, 3Ø, 4W (Fig 2)	1200	1200	1200	2000	Type 4	20kA	200kA	320
F ❷	480V, 3Ø, 3W (Fig 4)		1800		1800	Type 4	20kA	200kA	550
G ❷	600V, 3Ø, 3W (Fig 4)		2500		2500	Type 4	20kA	200kA	690
K	380/220V, 3Ø, 4W (Fig 2)	1200	1200	1200	2000	Type 4	20kA	200kA	320
L ❷	600/347V, 3Ø, 4W (Fig 2)	1500	1500	1500	2500	Type 4	20kA	200kA	420
S	400/230V, 3Ø, 4W (Fig 2)	1200	1200	1200	2000	Type 4	20kA	200kA	320

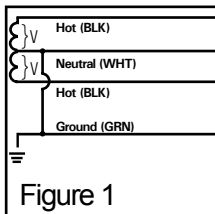


Figure 1  
Split  
2 Hots, 1 Neu, 1 Gmd

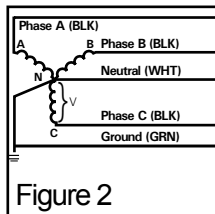


Figure 2  
Wye  
3 Hots, 1 Neu, 1 Gmd

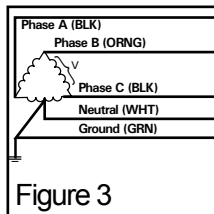


Figure 3  
Hi-Leg Delta (B High)  
3 Hots, (B High),  
1 Neu, 1 Gmd

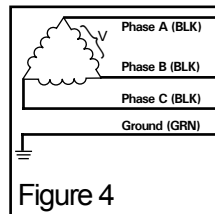


Figure 4  
Delta & HRGWye  
3 Hots, 1 Gmd

Notes:

- ❶ G voltage code only available in 200 & 250kA
- ❷ Not available in 500kA
- ❸ Available in 100kA, 150kA, 200kA & 250kA only
- ❹ VPR may increase when disconnect switch is added  
VPR may decrease for products 400 & 500kA per phase
- ❺ In rating for 100 - 300kA per phase is 10kA

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