

# TPS3 06

## Surge Protection Device (SPD)

for Service Entrance Applications – FC1, FC2

Switchboards, Type WL Low Voltage Switchgear, Motor Control Centres and Busway Systems

### Features:

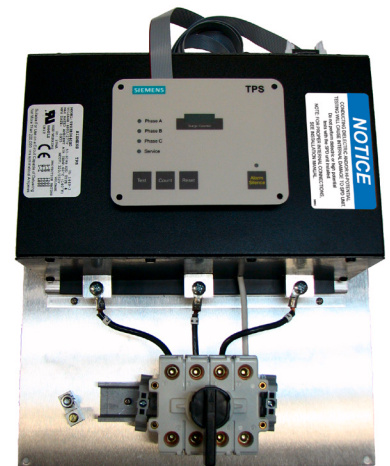
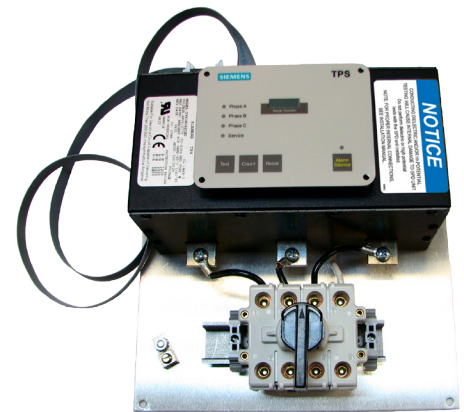
- Mounts internal to:
  - FC1, FC2 switchboards
  - Type WL low voltage switchgear
  - TIASTAR motor control centres - standard 12" bucket
- UL 1449 3rd Edition – 2009, cUL
- Type 4 SPD intended for use in Type 1 applications (Type 2 cUL)
- UL Type 1 tested with all internal OCP and safety coordination features included
- Large block, individually fused, thermally protected, 50 kA MOVs
- 20 kA  $I_n$  (most models)
- 200 kA 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: 300 kA per phase
    - Increased redundancy use: 400 kA per phase
    - Maximum redundancy use: 500 kA per phase

### ■ SPD Specifications

- Surge Current Rating Per Phase

| Per Phase | L-N    | L-G    | N-G    |
|-----------|--------|--------|--------|
| 100 kA    | 50 kA  | 50 kA  | 50 kA  |
| 150 kA    | 100 kA | 50 kA  | 50 kA  |
| 200 kA    | 100 kA | 100 kA | 100 kA |
| 250 kA    | 150 kA | 100 kA | 100 kA |
| 300 kA    | 150 kA | 150 kA | 150 kA |
| 400 kA    | 200 kA | 200 kA | 200 kA |
| 500 kA    | 250 kA | 250 kA | 250 kA |

- 100% monitoring (Every MOV is monitored, incl. N-G)
- EMI/RFI filtering: Active tracking up to -50 db from 10 kHz to 100 MHz
- Repetitive impulse: 5,000 hits
- Less than 1/2 nanosecond response time
- Relative humidity range: 1-95% non-condensing
- Operating frequency: 47-63 Hz
- 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, 50 kA MOVs
  - Rotary disconnect switch
  - 10 year warranty

- SPD Monitoring
  - LED indicators
  - Ribbon Length
    - 60" Standard
    - 30" MCC
  - Audible alarm with silence switch and test button
  - Dry contacts

- Available Options
  - Surge counter

- Available Accessories
  - RMSIE = Remote monitor
  - WHXWDP120 = 10' Display cable extension
- Key Bid Specifications
  - UL 1449 3rd Edition - 2009, cUL
  - 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 - 20 kA
  - Short Circuit Current Rating - 200 kA
  - Surge Current Rating
 

|           |   |        |   |        |
|-----------|---|--------|---|--------|
| Per Phase | = | L-N    | + | L-G    |
| 300 kA    |   | 150 kA |   | 150 kA |

Ordering Information

Catalogue #



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) ②
- E = 277/480V, 3Ø, 4W (Fig 2)
- F = 480V, 3Ø, 3W (Fig 4) ②
- G = 600V, 3Ø, 3W (Fig 4) ①
- 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 = 100 kA per phase
- 15 = 150 kA per phase
- 20 = 200 kA per phase
- 25 = 250 kA per phase
- 30 = 300 kA per phase
- 40 = 400 kA per phase
- 50 = 500 kA per phase

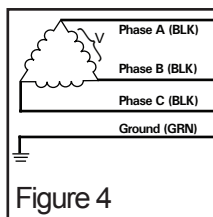
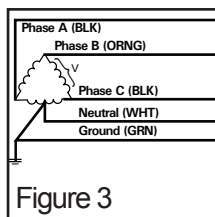
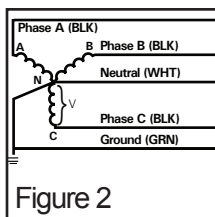
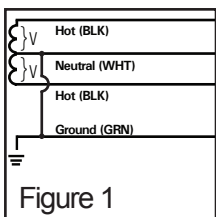
Options

- B = Busway application ①
- M = MCC application ①
- X = Surge counter

- Example: TPS3C0640X0 = SPD for a 208/120V switchboard with a surge current capacity of 400 kA per phase and a surge counter option
- When an option is not selected, include a zero (0) in the field

UL 1449 3rd Edition - 2009 Test Data Summary  
Voltage Protection Rating (VPR - 6kV, 3kA) ③

| Voltage Code | Service Voltage          | L-N        | L-G        | N-G  | L-L         | Type   | I <sub>n</sub> | SCCR   | MCOV      |
|--------------|--------------------------|------------|------------|------|-------------|--------|----------------|--------|-----------|
| A            | 120/240V, 1Ø, 3W (Fig 1) | 700        | 700        | 700  | 1200        | Type 4 | 20 kA          | 100 kA | 150       |
| B            | 120/240V, 3Ø, 4W (Fig 3) | 700 / 1200 | 700 / 1200 | 700  | 1800 / 1800 | Type 4 | 20 kA          | 200 kA | 150 / 275 |
| C            | 120/208V, 3Ø, 4W (Fig 2) | 700        | 700        | 700  | 1200        | Type 4 | 20 kA          | 200 kA | 150       |
| D            | 240V, 3Ø, 3W (Fig 4)     |            | 1200       |      | 1200        | Type 4 | 20 kA          | 200 kA | 320       |
| E            | 277/480V, 3Ø, 4W (Fig 2) | 1200       | 1200       | 1200 | 2000        | Type 4 | 20 kA          | 200 kA | 320       |
| F ④          | 480V, 3Ø, 3W (Fig 4)     |            | 1800       |      | 1800        | Type 4 | 20 kA          | 200 kA | 550       |
| G            | 600V, 3Ø, 3W (Fig 4)     |            | 2500       |      | 2500        | Type 4 | 10 kA          | 200 kA | 690       |
| K            | 380/220V, 3Ø, 4W (Fig 2) | 1200       | 1200       | 1200 | 2000        | Type 4 | 20 kA          | 200 kA | 320       |
| L ④          | 600/347V, 3Ø, 4W (Fig 2) | 1500       | 1500       | 1500 | 2500        | Type 4 | 20 kA          | 200 kA | 420       |
| S            | 400/230V, 3Ø, 4W (Fig 2) | 1200       | 1200       | 1200 | 2000        | Type 4 | 20 kA          | 200 kA | 320       |



Notes:

- ① G voltage code only available in 200 & 250 kA
- ② Not available in 500 kA
- ③ VPR may increase when disconnect switch is added  
VPR may decrease for products 400 & 500 kA per phase
- ④ I<sub>n</sub> rating for 100 - 300 kA per phase is 10 kA

Siemens Canada Limited  
1577 North Service Road East  
Oakville, ON L6H 0H6

SPD Hotline: 888.333.3545  
info@purgethesurge.com

©2013 Siemens Canada Limited, Inc.  
All Rights Reserved. Siemens is a registered trademark of Siemens AG. Product names mentioned may be trademarks or registered trademarks of their respective companies. Specifications are subject to change without notice.

www.siemens.ca/surge  
www.siemens.ca