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BoltShield™ Surge Protective Devices

QSPD series for load centers

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Surge Protective Devices (SPDs) provide the best protection from both externally and internally generated surges when located as close to the building distribution system as possible. For cost and space reasons many buildings only include one SPD located at the main incoming load center and do not cascade SPDs throughout the building as recommended by IEEE. The new Siemens QSPD series of SPDs are economical and easy to install in most panels throughout a building so that whole facility protection can be obtained. See the Siemens Boltshield web page and brochures for more information.

Features

- UL 1449 SPD Type 1*
- Monolithic distribution grade MOV
- Thermally protected MOV
- 65kA surge current protection per phase
- 20kA I-nominal ratings
- 200kA SCCR
- 10 year standard warranty
- Audible Alarm

Product specifications

| General specifications | |
|--------------------------------------|----------------|
| Maximum surge current rating range | 65kA per phase |
| UL Type designation | SPD Type 1* |
| UL 1449 I-nominal rating | 20kA |
| UL 1449 short circuit current rating | 200kA |
| Repetitive impulse | 5,000 hits |
| Response time | <1 ns |

| Physical specifications | | |
|---------------------------|----------------------|----------------------------------|
| Humidity range | 0-95% non-condensing | |
| Operating frequency | 0-415Hz | |
| Operating temperature | -25°C to +60°C | |
| Dimensions in inches (mm) | 2 pole | 3 (77.9) x 2 (50.4) x 2.6 (65.3) |
| | 3 pole | 3 (77.9) x 3 (75.2) x 2.6 (65.3) |
| Weight | 2 pole | 0.64 lbs (237 g) |
| | 3 pole | 0.71 lbs (335 g) |
| Neutral/ground connection | | #14 AWG (pre-wired) |

| Diagnostic monitoring specifications | Design specifications |
|--|---|
| Green/red visual mechanical flag failure indicators | Monolithic distribution grade MOV |
| Flashing dual color led (green/red) status indicator | Integrated optimized thermal protection |
| Audible alarm w/ silence switch/button | Fits in footprint of Siemens QP breaker |
| *Type 1 SPDs suitable for use in Type 2 applications | Modes of protection (L-N or L-G, L-L) |

UL 1449 performance data and ordering information

| System voltage | L-N (L-G) | L-L | I _n | SCCR | MCOV | Catalog numbers | Siemens breaker form factor |
|--------------------|-----------|------|----------------|-------|------|-----------------|-----------------------------|
| 120/240V, 1Ø, 3W** | 600V | 1000 | 20kA | 200kA | 150V | QSPD2A065P* | 2-P, QP |
| 240/120V, 3Ø, 4W | 600V/900V | 1200 | 20kA | 200kA | 150V | QSPD3B065 | 3-P, QP |
| 208Y/120V, 3Ø, 4W | 600V | 1000 | 20kA | 200kA | 150V | QSPD3C065 | 3-P, QP |
| 240V, 3Ø, 3W | 900V | 1500 | 20kA | 200kA | 280V | QSPD3D065 | 3-P, QP |

*QSPD2A065P comes in retail style blister pack packaging.

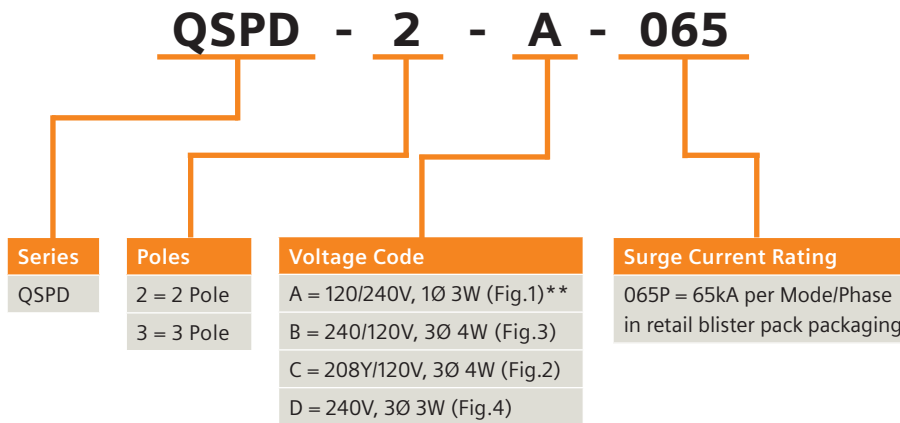
**Can also be used on 208Y/120V, 1Ø, 3W System.

Standards compliance and certifications

UL 1449 4th Edition, cUL, UL 96A compliant, ANSI/IEEE C62.41.1-2002, C62.41.2-2002, C62.45-2002, NEC Article 285

ISO 9001:2014 quality management system, ISO 17025:2007 laboratory certification (UL DAP Program) , 100% quality tested prior to shipping

Catalog number logic



National Electric Code (NEC)
The 2020 NEC has added a new requirement for SPDs (Article 230.67) that requires all services supplying dwelling units be provided with a surge-protective device. This means every new home or apartment must have a Type 1 or 2 surge protective device installed integral or adjacent to the service equipment or installed immediately downstream at each next level distribution equipment. This new requirement also applies when service equipment is replaced. The Siemens BoltShield family of QSPD products allows this to be done easily and at a reasonable cost.

**Can also be used on 208Y/120V, 1Ø, 3W System

Benefits of installing multiple QSPDs

Adding multiple QSPDs in a single load center can increase the modes of protection and the surge capacity. See the Boltshield brochure for more details and review the example chart below:

| Number of QSPDs | Connection | Modes of protection | Surge current capacity per mode | Surge current capacity per phase |
|-----------------|------------------------|---------------------|---------------------------------|----------------------------------|
| 1 | Neutral | 3 | 65kA | 65kA |
| 2 | Neutral + Ground | 6 | 65kA | 130kA |
| 2 | Neutral | 3 | 130kA | 130kA |
| 3 | Neutral(2) + Ground(1) | 6 | 130kA(L-N) + 65kA (L-G) | 195kA |
| 3 | Ground | 3 | 195kA | 195kA |
| 4 | Neutral(2) + Ground(2) | 6 | 130kA | 260kA |

Wiring configurations

Split

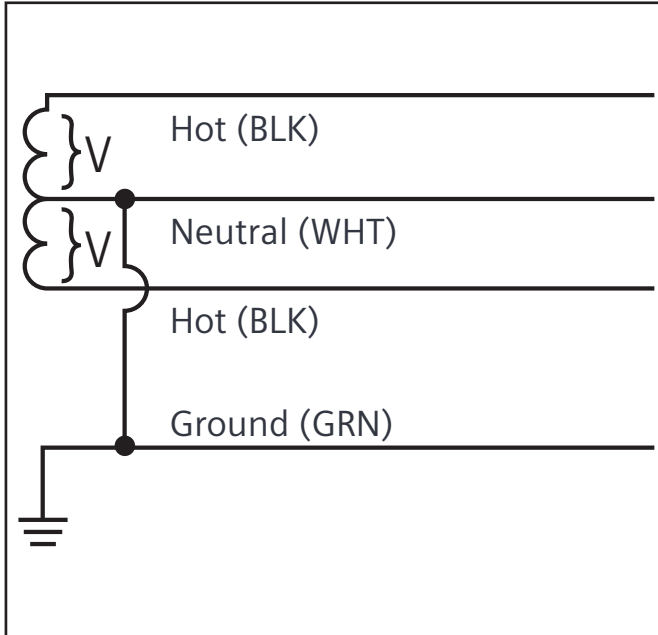


Figure 1
2 Hots, 1 Neu, 1 Grnd

WYE

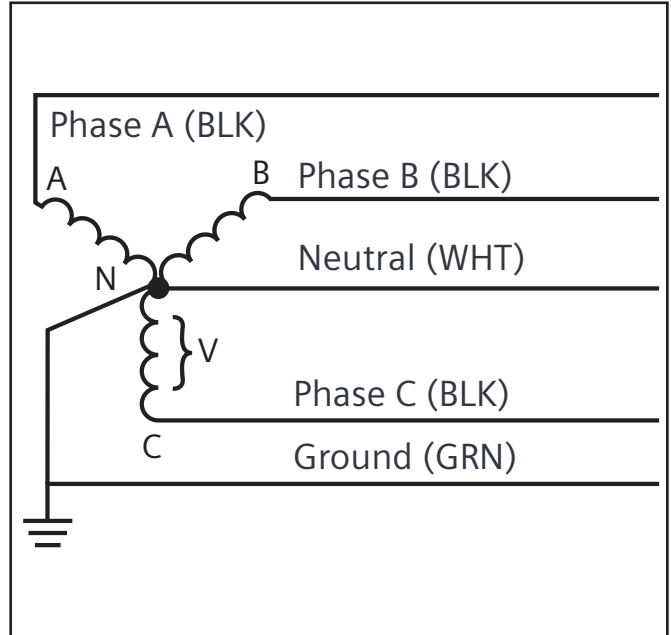


Figure 2
3 Hots, 1 Neu, 1 Grnd

Hi-Leg Delta (B High)

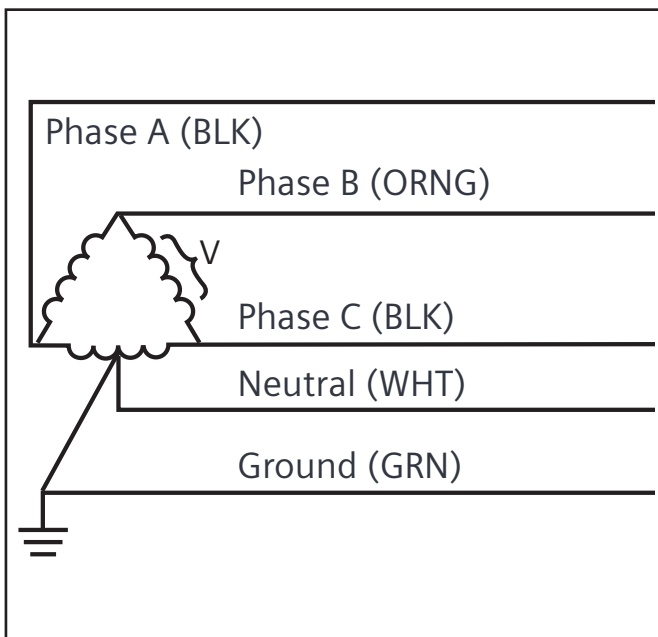


Figure 3
3 Hots (B High), 1 Neu, 1 Grnd

Delta & HRG WYE

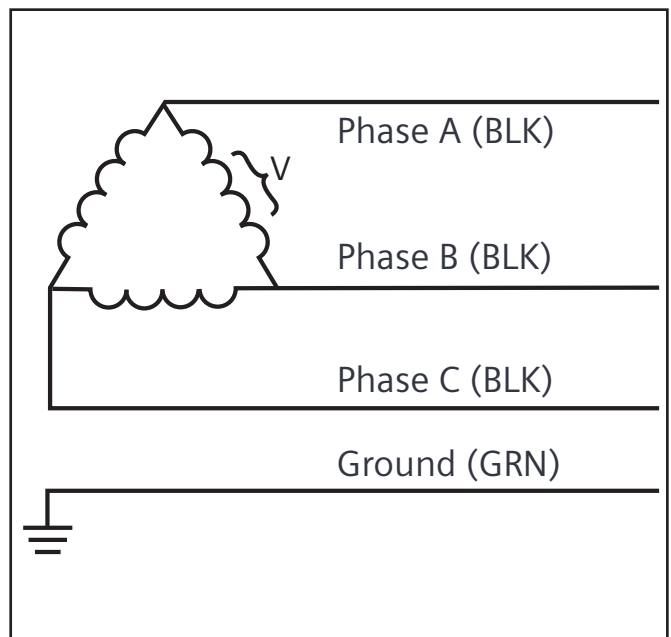
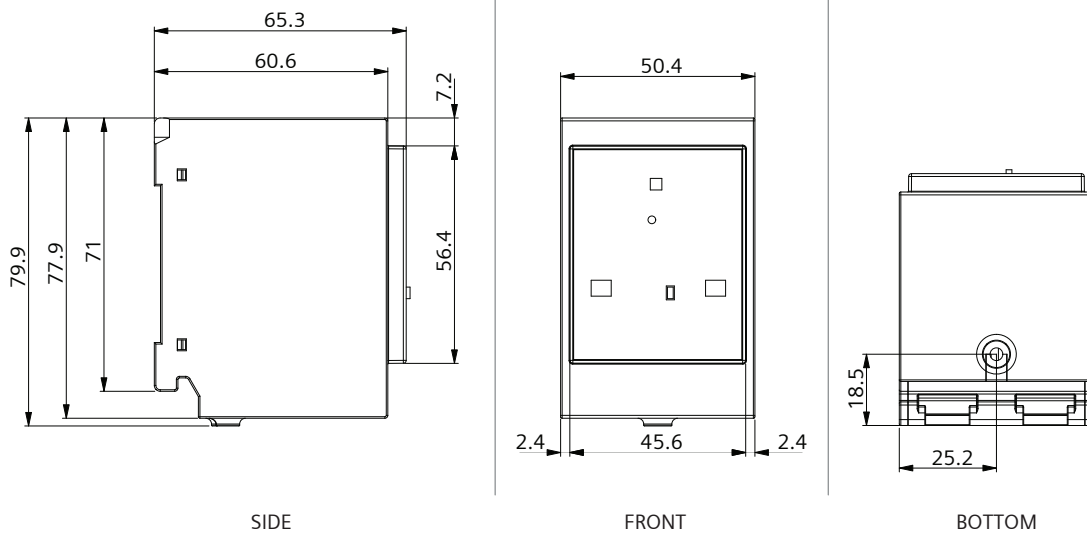


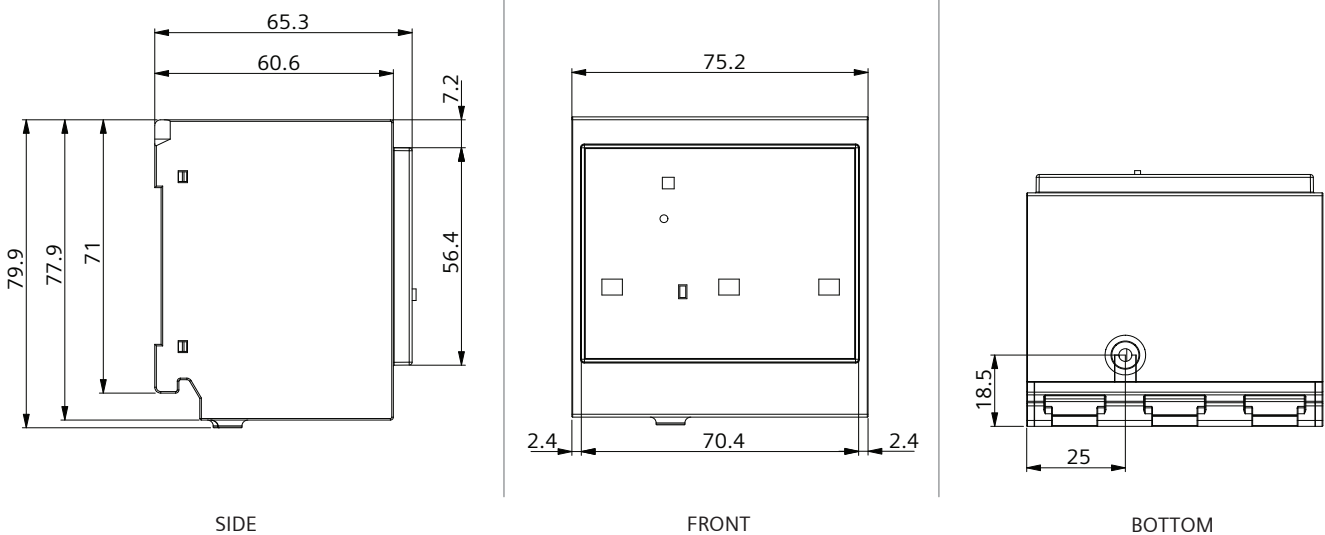
Figure 4
3 Hots, 1 Grnd

Product diagrams (in millimeters)

2-pole: QSPD2A065



3-pole: QSPD3x065



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