

Surgeologic™

Surge Protective Devices (SPDs)

Residential

Catalog
6671CT9701R08/12
2012



CONTENTS

Whole House Surge Protective Devices (SPDs)	3
SDSB1175C / SDSB1175CB Whole House SPDs	4
SDSB1175R / SDSB1175RB Whole House SPDs	6
Whole House Surge Protective Device Accessories	8
SDSA1175 Type 1 Surge Protective Devices	9
Home Electronics Protective Devices (HEPD)	10
Plug-on Surge Protective Devices	11
Dimensions	12
Wiring Diagrams	15



by Schneider Electric

Contents

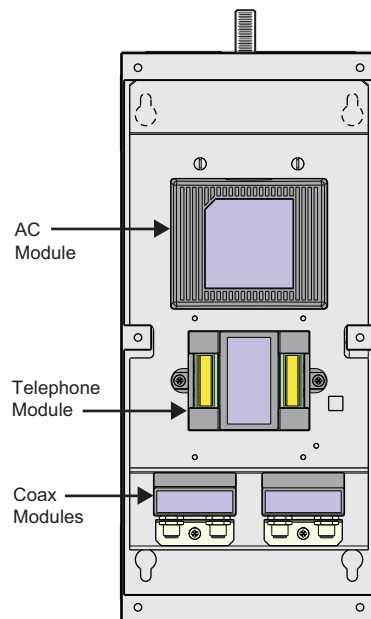
Whole House Surge Protective Devices (SPDs)	3
SDSB1175C / SDSB1175CB Whole House Surge Protective Device	4
Features	4
System Performance	4
Specifications	5
SDSB1175R / SDSB1175RB Whole House Surge Protective Device	6
Features	6
System Performance	6
Specifications	7
Whole House Surge Protective Device Accessories	8
Coaxial Modules	8
Telephone Modules	8
AC Modules	8
SDSA1175 Type 1 Surge Protective Devices	9
Features	9
Specifications	9
Accessories	9
Home Electronics Protective Devices (HEPDs)	10
Features	10
Specifications	10
Accessories	10
Plug-On Surge Protective Devices	11
Features	11
Applications	11
Specifications	11
Dimensions	12
SDSB1175C / SDSB1175CB Whole House Surge Protective Devices	12
SDSB1175R / SDSB1175RB Whole House Surge Protective Devices	12
SDSA1175 Surge Protective Device	13
HEPD Surge Protective Device	13
QOSAMK Mounting Bracket	13
TVSXRFMK Flush Mount Bracket	14
HOM2175SB Homeline Surge Protective Device	14
QO2175SB QO Surge Protective Device	14
Wiring	15
SDSB1175C / SDSB1175CB or SDSB1175R / SDSB1175RB Whole House SPDs	15
Network Interface Device	15
SDSA1175 SPDs	15
HEPD SPDs	16

Whole House Surge Protective Devices (SPDs)

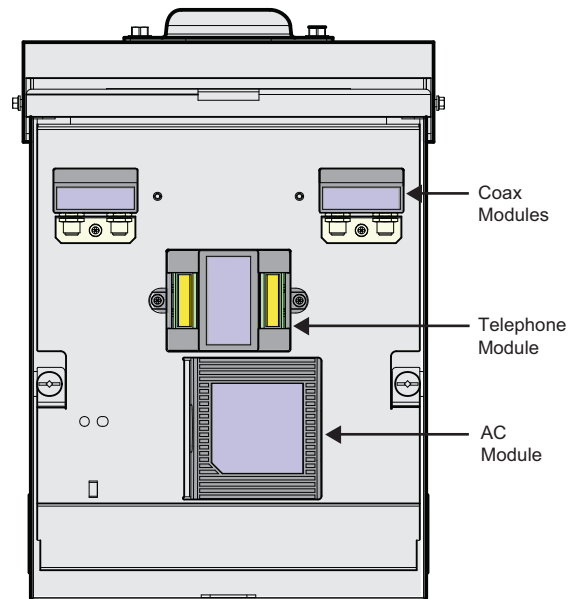
Whole House devices are designed to deliver surge suppression that addresses the entire home. AC modules are connected to the circuit breaker load center and provide suppression for all equipment connected to the power system. Whole House systems incorporate AC modules as well as modules for other metallic lines coming into the home including telephone/DSL and coaxial video/data.

United States and Canadian UL® Listed as a Type 2 SPD to UL 1449 3rd Edition. The AC surge suppression module is UL and Canadian UL Listed as a Type 1 SPD. Both Type 1 and Type 2 SPDs comply with requirements of CSA 233.1-87, and CSA C22.2 No. 8-M1986 as appropriate. Telephone and coaxial video modules are UL® Recognized to UL 497A 3rd Edition and UL 497B 4th Edition, respectively.

- 120/240 Vac, 80 kA/phase AC surge suppression
- LED status indicators for AC surge suppression
- Telephone surge suppression module supports four lines with tool-less Insulation Displacement Connectors (IDC)
- Coaxial surge suppression module supports one line of video/data



SDSB1175C NEMA 1
Shown without cover and with 2nd optional coax module (SDSA2V)



SDSB1175R NEMA 3R
Shown without cover and with 2nd optional coax module (SDSA2V)

Surge Protective Devices (SPDs)

Whole House Surge Protective Devices (SPDs)



SDSB1175C / SDSB1175CB Whole House Surge Protective Device

Square D™ Whole House Surge Protective Devices (SPDs) provide suppression of electrical surges to AC power as well as telephone and television cables (optional with SDSB1175CB). Installed next to the circuit breaker panel, the device is hard-wired to the electrical panel. The telephone module (SDSA4P) accommodates four telephone lines (eight with two telephone modules). The coaxial module (SDSA2V) accommodates one coaxial television line (two lines with two modules).

Features

- Design allows for field replacement of components.
- Multi-path surge suppression capability covers all electrical entrance points to the home.
- 80,000 A surge current capacity for a longer service life and suppression of high-energy surges.
- LED status indicator allows for visual indication of the SPD status.
- Hardwire connection method provides direct connection means to the electrical panel.
- Coordinated fuse technology allows disconnection methods for thermal and high-current events.

System Performance

Electrical

- Surge suppression capability up to 80,000 A per phase
- Discrete thermal disconnect surge suppression
- cULus Listed to UL 1449 3rd Edition, Type 2 SPD
- Modes of surge suppression: Line 1-to-Neutral, Line 2-to-Neutral, Line 1-to-Ground, Line 2-to-Ground, Line 1-to-Line 2, Neutral-to-Ground.

Telephone (where applicable)

- Surge suppression for up to four telephone lines (up to eight lines with optional second Telco unit Cat. No. SDSA4P)
- Suitable for digital telephone lines and high-speed internet services
- Self-resetting fusing elements
- Three-mode SiBod™ for fast common mode and differential mode suppression
- All mode surge suppression: Tip-to-ground, ring-to-ground, and tip-to-ring
- Insulation-Displacement Connector (IDC): no special tool required

Television (where applicable)

- Surge suppression for one coaxial (antenna, cable or satellite) line (two lines with optional second SDSA2V module)
- Suitable for use on all state-of-the-art television and hybrid fiber/coaxial systems
- 140–200 Vdc Gas Discharge Tube (GDT) surge suppression

Surge Protective Devices (SPDs)

Whole House Surge Protective Devices (SPDs)

Specifications

SDSB1175C Specifications	
Performance—AC Protection	
Surge Current Rating per Phase	80 kA
Short Circuit Current Rating	25 kA
Modes of Protection	6
Fusing	Individually fused MOVs
Thermal Fusing	Yes
Overcurrent Fusing	Yes
Operating Frequency	50/60 Hz
Mechanical Description	
Enclosure	Carbon Steel
NEMA Rating	NEMA 1
Connection Method	#12 AWG, Stranded
Weight	10.5 lbs
Mounting Method	Four screws, #10
Circuit Type	Parallel
Operating Altitude	Sea Level to 12,000 ft. (3,658 m)
Storage Temperature	-40°F to +149°F (-40°C to +65°C)
Operating Temperature	-40°F to +149°F (-40°C to +65°C)
Diagnostics	
Green status LEDs	
Listings and Performance	
• cULus Listed to UL 1449 3rd Edition Type 2 SPD • CSA C22.2 No. 8-M1986, C233.1-87 • UL Recognized to UL 497A 3rd Edition • UL 497B 4th Edition • CSA C22.2 No. 226-92	

Catalog Numbers		
Description	Included Models	Cat. No.
Whole House NEMA 1 Basic	AC	SDSB1175CB
Whole House NEMA 1	AC, Telephone, Coax (1)	SDSB1175C

Surge Protective Devices (SPDs)

Whole House Surge Protective Devices (SPDs)



SDSB1175R / SDSB1175RB Whole House Surge Protective Device

Square D™ Whole House Surge Protective Devices (SPDs) provide suppression of electrical surges to AC power as well as telephone and television cables (optional with SDSB1175RB). Installed next to the circuit breaker power panel, the device is hard-wired to the electrical panel. The telephone module (SDSA4P) accommodates four telephone lines (eight with two telephone modules). The coaxial module (SDSA2V) accommodates one coaxial television line (two lines with two modules).

Features

- Design allows for field replacement of components.
- Multi-path surge suppression capability covers all electrical entrance points to the home.
- 80,000 A surge current capacity for a longer service life and suppression of high-energy surges.
- LED status indicator allows for visual indication of the SPD status
- Hardwire connection method provides direct connection means to the electrical panel.
- Coordinated fuse technology allows disconnection methods for thermal and high-current events.

System Performance

Electrical

- Surge suppression capability up to 80,000 A per phase
- Discrete thermal disconnect surge suppression
- cULus Listed to UL 1449 3rd Edition, Type 2 SPD
- Modes of surge suppression: Line 1-to-Neutral, Line 2-to-Neutral, Line 1-to-Ground, Line 2-to-Ground, Line 1-to-Line 2, Neutral-to-Ground.

Telephone (where applicable)

- Surge suppression for up to four telephone lines (up to eight lines with optional second Telco unit Cat. No. SDSA4P)
- Suitable for digital telephone lines and high-speed internet services
- Self-resetting fusing elements
- Three-mode SiBod™ for fast common mode and differential mode suppression
- All mode surge suppression: Tip-to-ground, ring-to-ground, and tip-to-ring
- Insulation-Displacement Connector (IDC): no special tool required

Television (where applicable)

- Surge suppression for one coaxial (antenna, cable or satellite) line (two lines with optional second SDSA2V module)
- Suitable for use on all state-of-the-art television and hybrid fiber/coaxial systems
- 140–200 Vdc Gas Discharge Tube (GDT) surge suppression

Surge Protective Devices (SPDs)

Whole House Surge Protective Devices (SPDs)

Specifications

SDSB1175R Specifications	
Performance—AC Protection	
Surge Current Rating per Phase	80 kA
Short Circuit Current Rating	25 kA
Modes of Protection	6
Fusing	Individually fused MOVs
Thermal Fusing	Yes
Overcurrent Fusing	Yes
Operating Frequency	50/60 Hz
Mechanical Description	
Enclosure	Carbon Steel
NEMA Rating	NEMA 3R
Connection Method	#12 AWG, Stranded
Weight	15.3 lbs
Mounting Method	Four screws, #10
Circuit Type	Parallel
Operating Altitude	Sea Level to 12,000 ft. (3,658 m)
Storage Temperature	-40°F to +149°F (-40°C to +65°C)
Operating Temperature	-40°F to +149°F (-40°C to +65°C)
Diagnostics	
Green status LEDs	
Listings and Performance	
• cULus Listed to UL 1449 3rd Edition Type 2 SPD • CSA C22.2 No. 8-M1986, C233.1-87 • UL Recognized to UL 497A 3rd Edition • UL 497B 4th Edition • CSA C22.2 No. 226-92	

Catalog Numbers		
Description	Included Models	Cat. No.
Whole House NEMA 3R Basic	AC	SDSB1175RB
Whole House NEMA 3R	AC, Telephone, Coax (1)	SDSB1175R

Surge Protective Devices (SPDs)
Whole House Surge Protective Devices (SPDs)



SDSA2V Coaxial SPD Module



SDSA4P Telephone SPD Module



HEPD80RK SPD Module

Whole House Surge Protective Device Accessories

Accessories for expanding systems or for replacing existing modules. Up to three coaxial SPD modules, or two telephone suppressor modules can be installed in a Whole House SPD.

Coaxial Modules

- SDSA2V provides suppression of externally generated surges. Uses dual F-type coaxial connectors compatible with video, audio, and high-speed cable internet lines.
- Clamping Voltage: 140–200 Vdc
- Frequency Range: DC to 3 GHz
- US and Canadian UL Recognized to UL 497B 4th Edition.

Description	Cat. No.
Coaxial video surge suppressor	SDSA2V

Telephone Modules

- SDSA4P provides suppression of externally generated surges.
- Each accommodates up to four lines, using tool-less IDC terminations for quick connection.
- Compatible with telephone and high-speed DSL or dial-up internet lines.
- Clamping voltage: 330 Vdc
- US and Canadian UL Recognized to UL 497A 3rd Edition.

Description	Cat. No.
4-Line telephone surge suppressor with tool-less IDC terminations	SDSA4P

AC Modules

- US and Canadian UL Listed as Type 1 SPD to UL 1449 3rd Edition.
- Complies with requirements of CSA 233.1-87, and CSA C22.2 No. 8-M1986 as appropriate.

Description	Cat. No.
Whole House AC Module (HEPD80) replacement kit	HEPD80RK

SDSA1175 Type 1 Surge Protective Devices



SDSA1175

SDSA1175 SPDs are designed and listed for indoor or outdoor installation and surge suppression for single-phase three-wire 120/240 Vac or two-wire 120 Vac 60 Hz electrical services. This product is ideal for residential applications for single phase power systems. SDSAs work together with surge protection plug strips to provide surge suppression for sensitive electronics. Two SDSA1175 surge protection devices can be installed to provide suppression for 208Y/120 Vac three-phase four-wire services.

Features

- High-energy suppression circuitry that can be located at any point in the electrical system. As a Type 1 rated device, they have the flexibility to be used with or without an Overcurrent Protection Device (OCPD).
- Surge suppression for equipment from severe transient activity.
- Each Metal Oxide Varistor (MOV) is individually fused
- NEMA Type 4X rating suitable for installing indoors, outdoors, or in other harsh environments.
- US and Canadian UL Listed as Type 1 SPD to UL 1449 3rd Edition.
- Complies with requirements of CSA 233.1-87, and CSA C22.2 No. 8-M1986 as appropriate.
- LED indicates operational status
- Short circuit current rating: 25 kA
- Convenient back-nipple mounting

Specifications

SDSA1175 Specifications

Performance

Surge Current Rating per Phase	36 kA
Short Circuit Current Rating	25 kA
Modes of Protection	3
Fusing	Individually fused MOVs
Thermal Fusing	Yes
Overcurrent Fusing	Yes
Operating Frequency	50/60 Hz

Mechanical Description

Enclosure	Non-metallic
NEMA Rating	Type 4X
Connection Method	#14 AWG, Solid
Weight	0.64 lbs (0.29 kg)
Mounting Method	Close-nippled, back-mounted
Operating Altitude	Sea Level to 12,000 ft. (3,658 m)
Storage Temperature	-40°F to +149°F (-40°C to +65°C)
Operating Temperature	-40°F to +149°F (-40°C to +65°C)

Diagnostics

Green status LED

Listings and Performance

- cULus Listed to UL 1449 3rd Edition Type 1 SPD
- CSA C22.2 No. 8-M1986, C233.1-87



QOSAMK
Mounting Bracket

Accessories

QOSAMK Mounting Bracket

Home Electronics Protective Devices (HEPDs)



HEPD80

Square D™ brand Home Electronics Protective Devices (HEPDs) are compact and affordable surge suppressors designed for residential load centers. HEPDs work together with surge protection plug strips to provide surge suppression for sensitive electronics. HEPDs reduce surges that might otherwise overwhelm plug strips and damage connected household equipment.

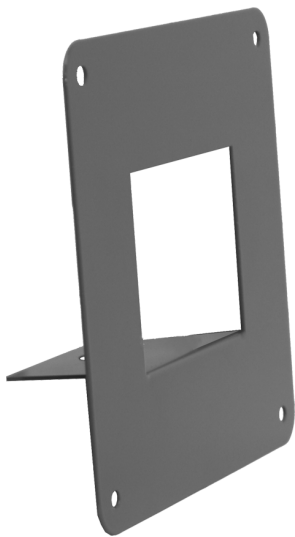
HEPDs also provide surge suppression for important items such as washers, dryers, refrigerators, stoves, and lighting that plug strips don't protect.

Features

- High-energy suppression circuitry helps protect household equipment
- Each Metal Oxide Varistor (MOV) is individually fused
- NEMA Type 4X enclosure rating suitable for installing indoors, outdoors, or in other harsh environments.
- US and Canadian UL Listed as Type 1 SPD to UL 1449 3rd Edition.
- Complies with requirements of CSA C233.1-87, and CSA C22.2 No. 8-M1986 as appropriate.
- LED indicates operational status
- Short circuit current rating: 25 kA
- Convenient side-nipple mounting

Specifications

HEPD Specifications	
Performance	
Surge Current Rating per Phase	80 kA
Short Circuit Current Rating	25 kA
Modes of Protection	6
Fusing	Individually fused MOVs
Thermal Fusing	Yes
Overcurrent Fusing	Yes
Operating Frequency	50/60 Hz
Mechanical Description	
Enclosure	Non-metallic
NEMA Rating	Type 4X
Connection Method	#12 AWG, Solid
Weight	1.8 lbs
Mounting Method	Close-nipped, side-mounted
Operating Altitude	Sea Level to 12,000 ft. (3,658 m)
Storage Temperature	-40°F to +149°F (-40°C to +65°C)
Operating Temperature	-40°F to +149°F (-40°C to +65°C)
Diagnostics	
Green status LEDs	
Listings and Performance	
• cULus Listed to UL 1449 3rd Edition Type 1 SPD • CSA C22.2 No. 8-M1986, C233.1-87	



TVSXRFMK
Mounting Bracket

Accessories

TVSXRFMK Flush Mount Bracket

Plug-On Surge Protective Devices

Square D™ brand QO™ and Homeline™ load center surge protective devices are easy to install plug-on units that install as quickly as a standard circuit breaker. The Surge Protective Devices (SPDs) use two pole spaces in a QO or Homeline load center or NQ panelboard.

These SPDs offer an effective method to bring surges down to manageable levels and can offer additional value in a cascaded SPD system.

Features

- Plug-on design requires two pole spaces
- LED indicates operational status
- 22.5 kA per phase
- cULus Listed per UL 1449 3rd Edition Type 2 SPD

Applications

- QO2175SB: For QO load centers, combination devices, and NQ panelboards
- HOM2175SB: For Homeline loadcenters and combination devices

Specifications



QO2175SB



HOM2175SB

QO and HOM SPD Specifications

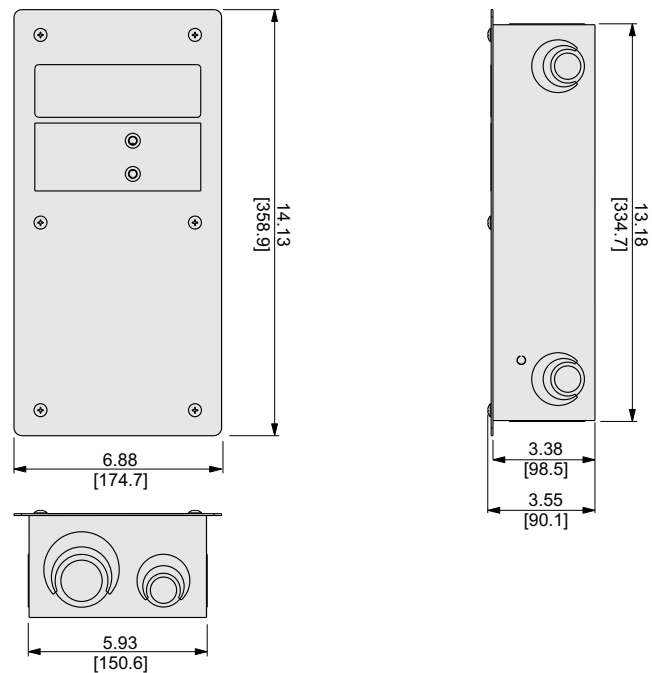
Performance	
Surge Current Rating per Phase	22.5 kA
Short Circuit Current Rating	22 kA
Modes of Protection	3
Fusing	Individually fused MOVs (Metal Oxide Varistor)
Thermal Fusing	Yes
Overcurrent Fusing	Yes
Operating Frequency	50/60 Hz
Mechanical Description	
Enclosure	Non-metallic
NEMA Rating	Type 1
Connection Method	Quick plug-on
Weight	0.54 lbs
Operating Altitude	Sea level to 12,000 ft. (3,658 m)
Storage Temperature	-4°F to +149°F (-20°C to +65°C)
Operating Temperature	-4°F to +149°F (-20°C to +65°C)
Diagnostics	
Green Status LED	
Listings and Performance	
• cULus Listed per UL 1449 3rd Edition Type 2 SPD • CSA C22.2 No. 8-M1986, C233.1-87	

Catalog Numbers

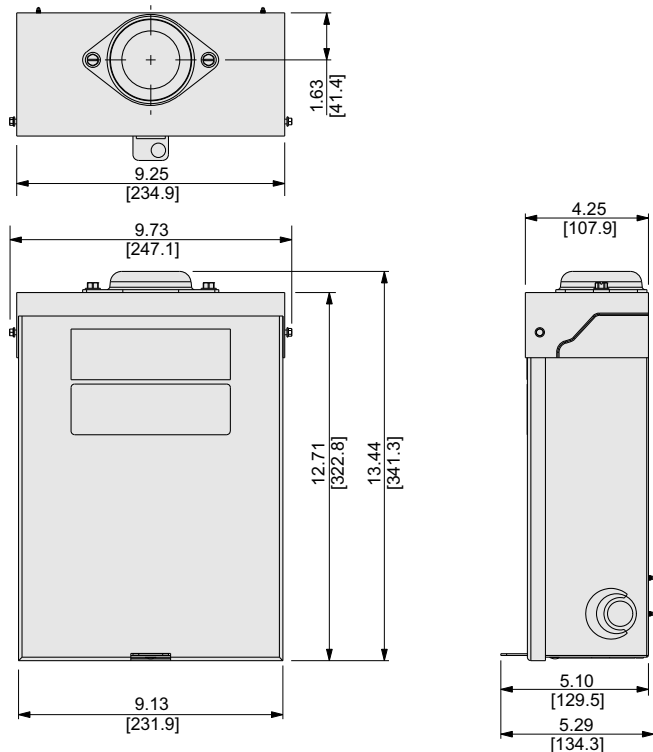
Description	Cat. No.
QO Load Center SPD, 120/240, 22.5 kA, 1-phase, 3-wire	QO2175SB
Homeline Load Center SPD, 120/240, 22.5 kA, 1-phase, 3-wire	HOM2175SB

Dimensions

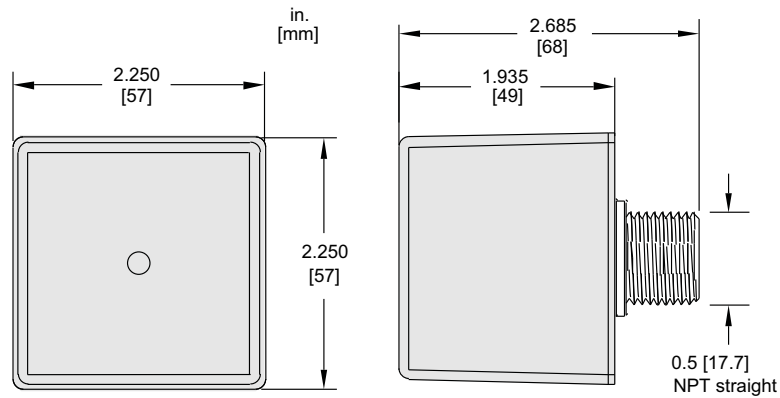
SDSB1175C / SDSB1175CB Whole House Surge Protective Devices



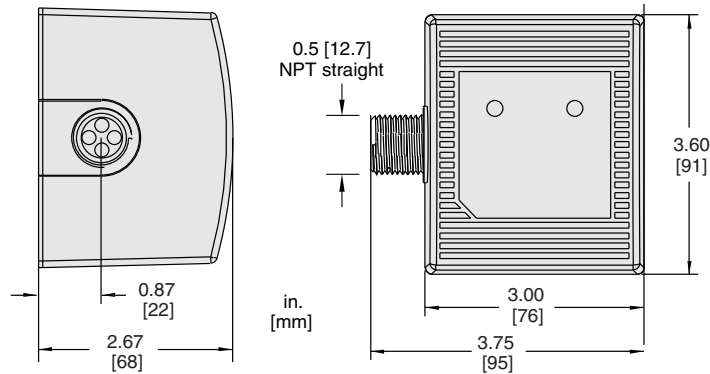
SDSB1175R / SDSB1175RB Whole House Surge Protective Devices



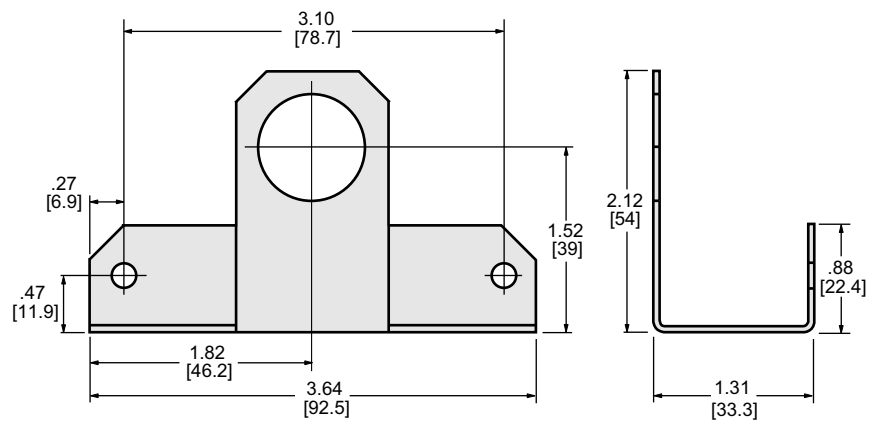
SDSA1175 Surge Protective Device



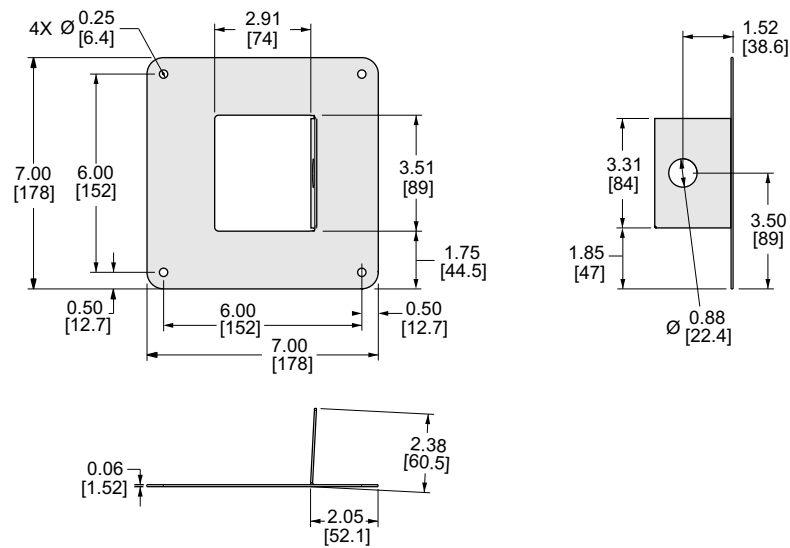
HEPD Surge Protective Device



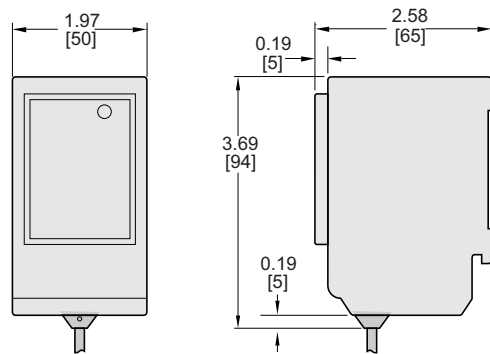
QOSAMK Mounting Bracket



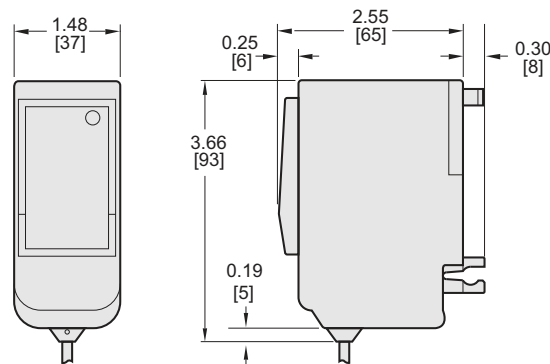
TVSXRFMK Flush Mount Bracket



HOM2175SB Homeline Surge Protective Device

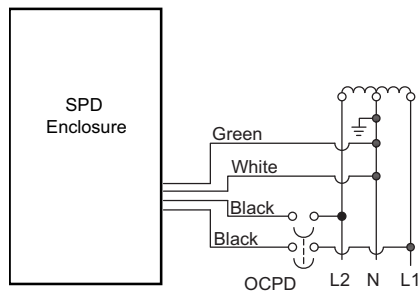


QO2175SB QO Surge Protective Device

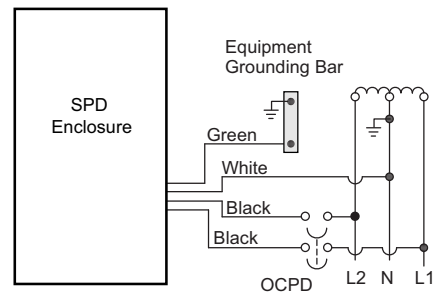


Wiring

SDSB1175C / SDSB1175CB or SDSB1175R / SDSB1175RB Whole House SPDs

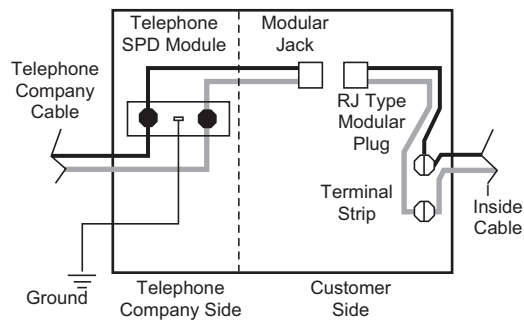


Service Entrance
without Grounding Bar
120/240 Vac Single-phase
3-Wire Service

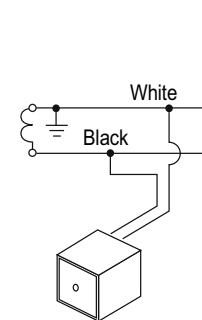


Sub-Panel or Service Entrance
with Grounding Bar
120/240 Vac Single-phase
3-Wire + Ground Service

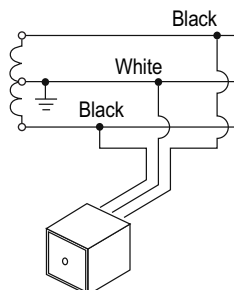
Network Interface Device



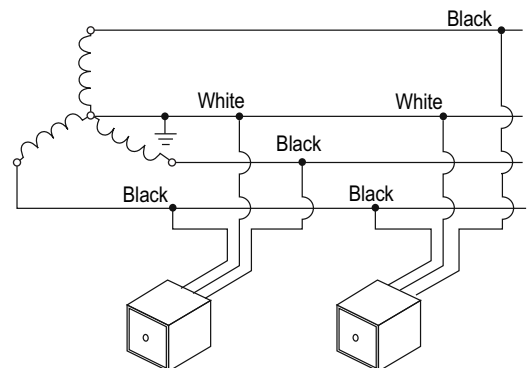
SDSA1175 SPDs



SDSA1175T
120 Vac Single-phase
2-Wire Service

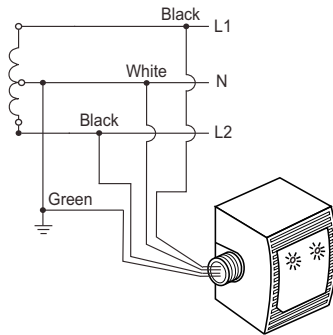


SDSA1175
120/240 Vac Single-phase
3-Wire Service

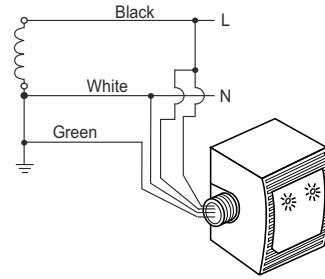


Two SDSA1175 3-wire units
on 208Y/120 Vac
Three-phase 4-Wire Service

HEPD SPDs

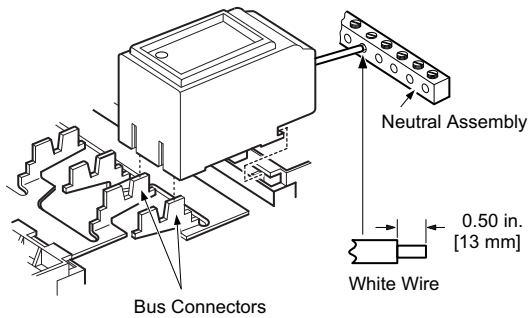


120/240 Vac Single-phase
3-Wire + Ground Service



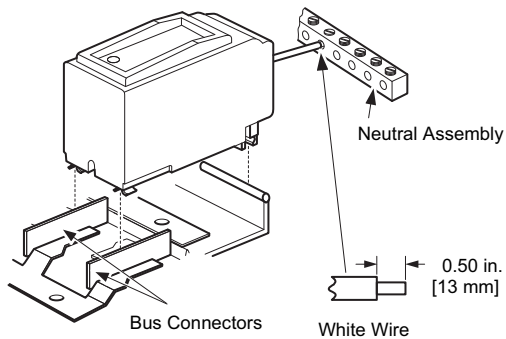
120 Vac Single-phase
2-Wire + Ground Service

HOM2175SB Homeline Surge Protective Device



NOTE: The SPD requires two adjacent mounting spaces and must be installed as close to neutral assembly and main circuit breaker or main lugs as possible. Keep wire lengths as short as possible with no sharp bends.

QO2175SB QO Surge Protective Device



NOTE: The SPD requires two adjacent mounting spaces and must be installed as close to neutral assembly and main circuit breaker or main lugs as possible. Keep wire lengths as short as possible with no sharp bends.