VeriSafe™
2.0 AVT

PRE-RELEASE

Simplify absence of voltage testing

PANDUIT®

The Safe Way to Protect Employees and Equipment

The VeriSafe 2.0 Absence of Voltage Tester simplifies the voltage testing process. With the push of a button, workers can quickly determine voltage status and see an active indication when the absence of voltage is confirmed. This provides a new and innovative way to safely, reliably, and efficiently test for the absence of voltage without exposure to electrical hazards.
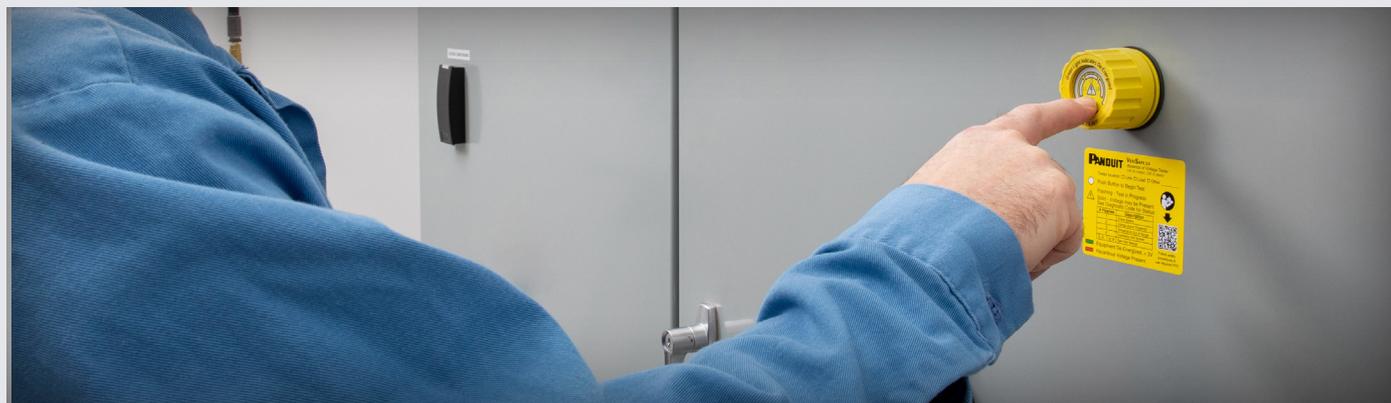
Voltage **PRESENCE** Indication		**ABSENCE** of Voltage Testing	
Red LEDs indicate hazardous voltage present	Lack of red LEDs does not guarantee voltage absence	Push to initiate test and see progress	Green indicates absence of voltage is confirmed

What's Included

1 **Indicator Module**
3.6V Battery powered option shown
Battery free option available

2 **System Cable**

3 **Isolation Module**

4 **Instruction Label**

Features and Benefits

Improved Safety and Risk Reduction
- No exposure to electrical hazards while testing
- Reduces human factors

Simplified Process for Easier Compliance
- Satisfies criteria in NFPA 70E 120.5(7) Exception 1 & CSA Z462 4.2.5 (g) Exception 2
- UL 1436 listing pending

Reliable Results
- Fail-safe design with active indications
- Safety functions pending SIL 3 (IEC 61508-1)
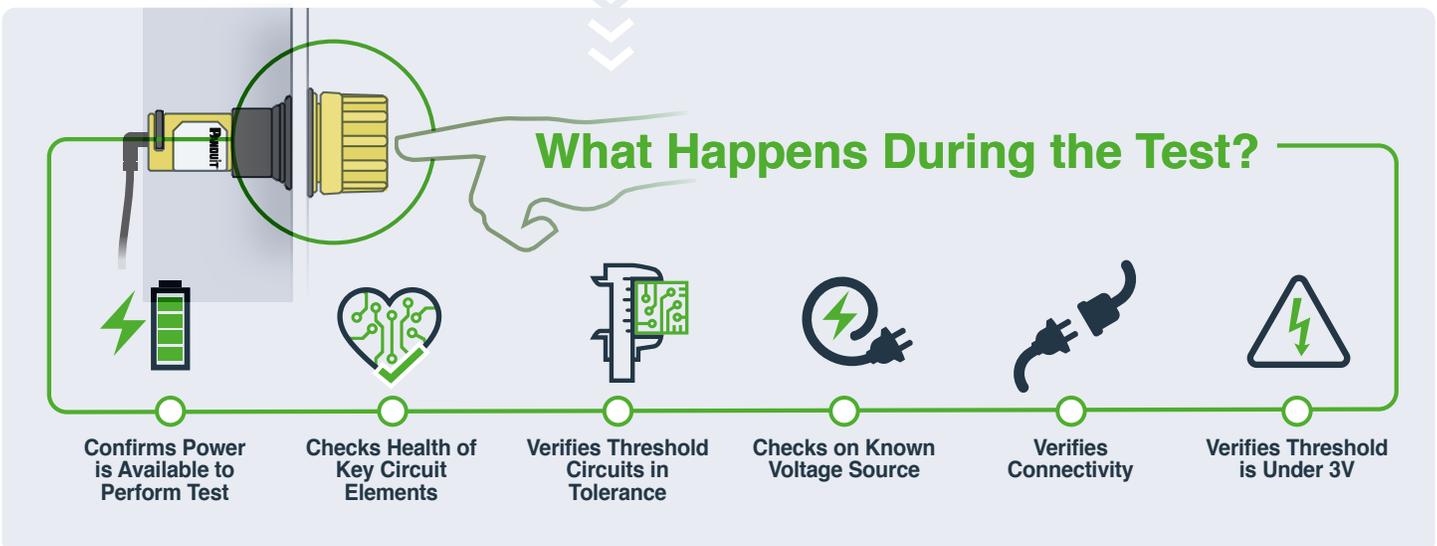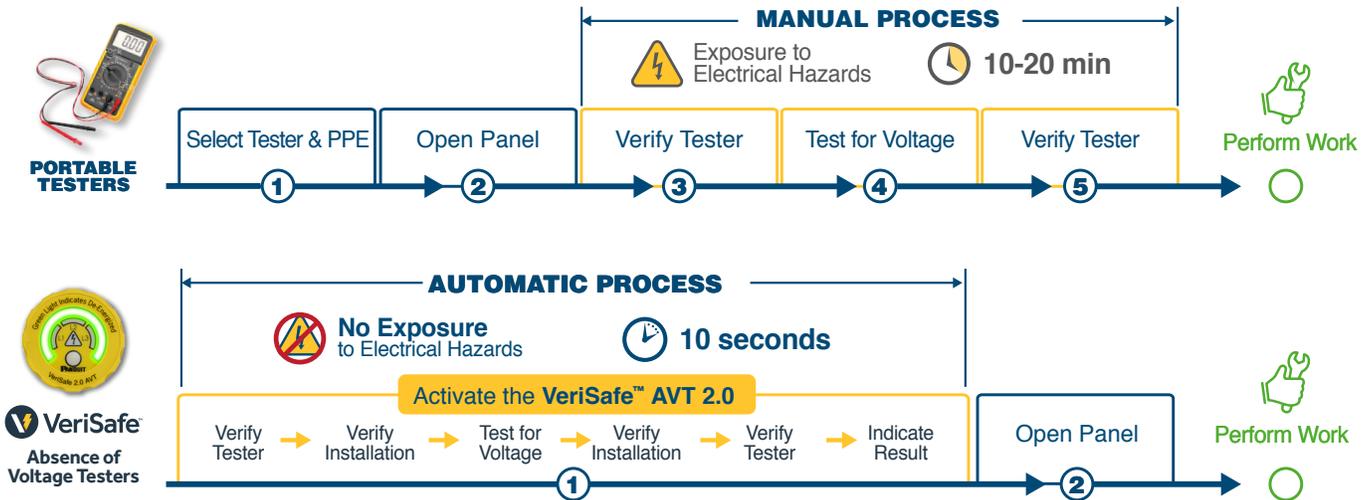- Redundant channels

Increased Productivity
- Results within 10 seconds of button push
- Troubleshoot abnormal power conditions
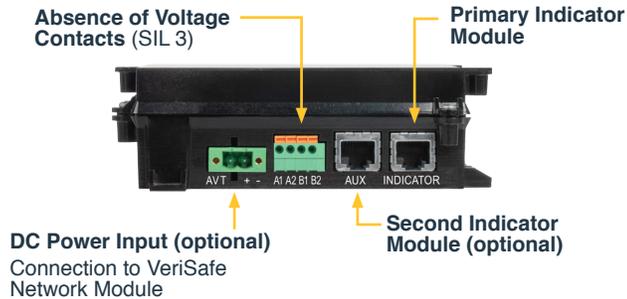- Utilize network module for remote monitoring

Flexible Applications
- 2.0 AVT technology is designed for even more applications
- Suitable for indoor, outdoor use

Comparison of Test Methods

PORTABLE TESTERS

MANUAL PROCESS

⚠ Exposure to Electrical Hazards   🕐 **10-20 min**

Select Tester & PPE	Open Panel	Verify Tester	Test for Voltage	Verify Tester	Perform Work
1	2	3	4	5	○

VeriSafe
Absence of Voltage Testers

AUTOMATIC PROCESS

🚫 **No Exposure** to Electrical Hazards   🕐 **10 seconds**

Activate the VeriSafe™ AVT 2.0

Verify Tester → Verify Installation → Test for Voltage → Verify Installation → Verify Tester → Indicate Result   **(1)**

Open Panel **(2)**   Perform Work ○

What Happens During the Test?

Confirms Power is Available to Perform Test	Checks Health of Key Circuit Elements	Verifies Threshold Circuits in Tolerance	Checks on Known Voltage Source	Verifies Connectivity	Verifies Threshold is Under 3V

More than an Absence of Voltage Tester

2.0 Isolation Module

Absence of Voltage Contacts (SIL 3)

Primary Indicator Module

DC Power Input (optional)
Connection to VeriSafe Network Module

Second Indicator Module (optional)

AVT + − A1 A2 B1 B2 AUX INDICATOR

**Absence of Voltage Contacts**
Redundant solidstate signal outputs (SIL 3) for optional integration with control systems. The contacts are normally open and close only when the green Absence of Voltage Indicator is illuminated.

Network Module

Connection to VeriSafe AVT

+ − AVT + − 1A 1B | 2A 2B | 3A 3B ⚡ 10/100 PoE

DC Power Input

Voltage Presence Contacts
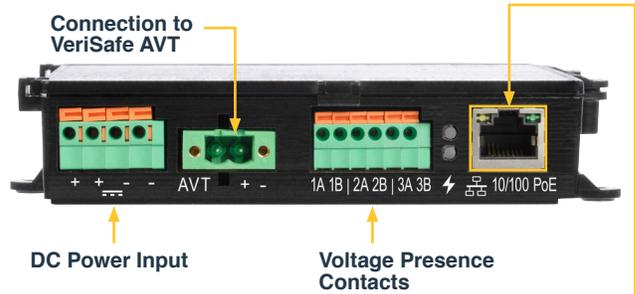
Voltage Presence Contacts
Solidstate signal outputs that are normally open and close when a red voltage presence indicator is not illuminated.
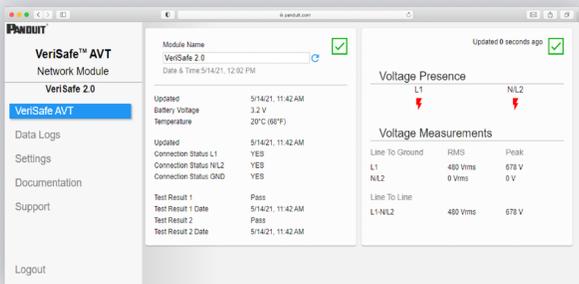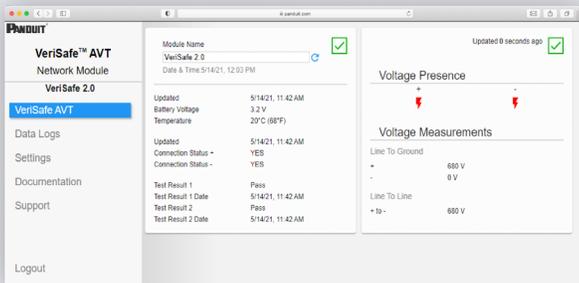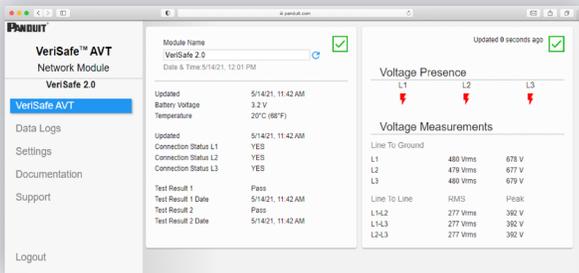
Network Connection
Real-Time Diagnostics and Performance Reporting

3A 3B ⚡ 10/100 PoE

- **Record Test Results**
  Time stamp, result, diagnostic codes, data logs

- **Troubleshoot Remotely**
  See voltage values in real time
  Set alerts for voltage drops and outages

- **View sensor lead status**

- **Monitor battery life status**

- **Analyze temperature trends**

- **Power the AVT**

- **EtherNet/IP and Modbus TCP Connection**
  Easy integration or utilize onboard web server

Refer to VS2-NET specification sheet for more technical information.

Ordering Information

Step 1 — Select Configuration

VS2-AVT - XY Z - ##

Choose your system — XY

3P — 3-Phase 2.0 System
10' (3.0 m) Black Sensor Leads

1P — DC/Single-Phase 2.0 System
10' (3.0 m) Black Sensor Leads

Choose your indicator — Z

F — Battery Free Indicator

B — Battery Powered Indicator (battery included)

Choose your cable —

02 — 2' (0.6m) System Cable

08 — 8' (2.4m) System Cable

16 — 16' (4.8m) System Cable

Step 2 — Select Upgrades (optional)

VS2-NET
Network Module for use with VS2-AVT models.

Additional Indicator Options

VS2-AVT-1IF
Battery Free Single-Phase Indicator

VS2-AVT-3IF
Battery Free 3-Phase Indicator

VS2-AVT-1IB
Battery Powered Single-Phase Indicator No Battery Included

VS2-AVT-3IB
Battery Powered 3-Phase Indicator No Battery Included

Replacement System Cable: For use with VeriSafe 2.0 Base and Base Plus Modules only

VS2-CABLE-02	VS2-CABLE-04	VS2-CABLE-08	VS2-CABLE-16	VS2-CABLE-20
2' Cable Length .6 m	4' Cable Length 1.2 m	8' Cable Length 2.4 m	16' Cable Length 4.8m	20' Cable Length 6.1 m

Step 3 — Select Connectors (optional)

VeriSafe Insulation Piercing Connection Kit
Kits includes 3 connectors and ferrules for installation of 1 AVT.

VS-CKP-14-6
Connection Kit
For Tapping 14 to 6 AWG conductors. Rated up to 600V

VS-CKP-4-000
Connection Kit
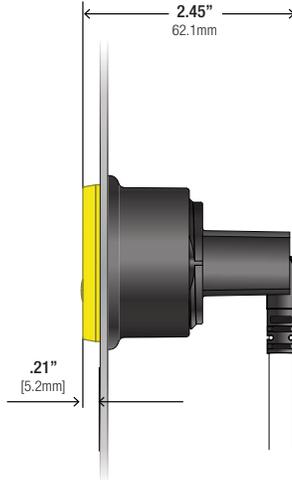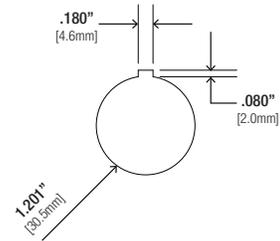For Tapping 4 to 3/0 AWG conductors. Rated up to 600V.

VS-CKP-1K4/0-500
Connection Kit
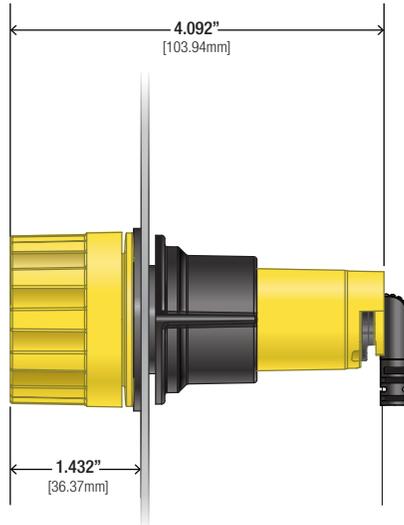For Tapping AWG 4/0 to 500 MCM conductors. Rated up to 1000V.

VeriSafe ™
2.0 AVT

Dimensions

Battery Free Indicator Module

2.45"
62.1mm

1.800"
[45.7mm]

.21"
[5.2mm]

Green Light Indicates De-Energized
L1 L2 L3
PANDUIT
VeriSafe 2.0 AVT

Panel Knockout

.180"
[4.6mm]

.080"
[2.0mm]

1.201"
[30.5mm]

Battery Powered Indicator Module

4.092"
[103.94mm]

Green Light Indicates De-Energized
L1 L2 L3
PANDUIT
VeriSafe 2.0 AVT

2.000"
[50.80mm]

1.432"
[36.37mm]

2.810"
[71.37mm]

Isolation Module
Install on DIN rail or with optional mounting tabs

3.637"
[92.38mm]

3.865"
[98.17mm]

5.332"
[135.43mm]

1.676"
[42.57mm]

4.317"
[109.65mm]
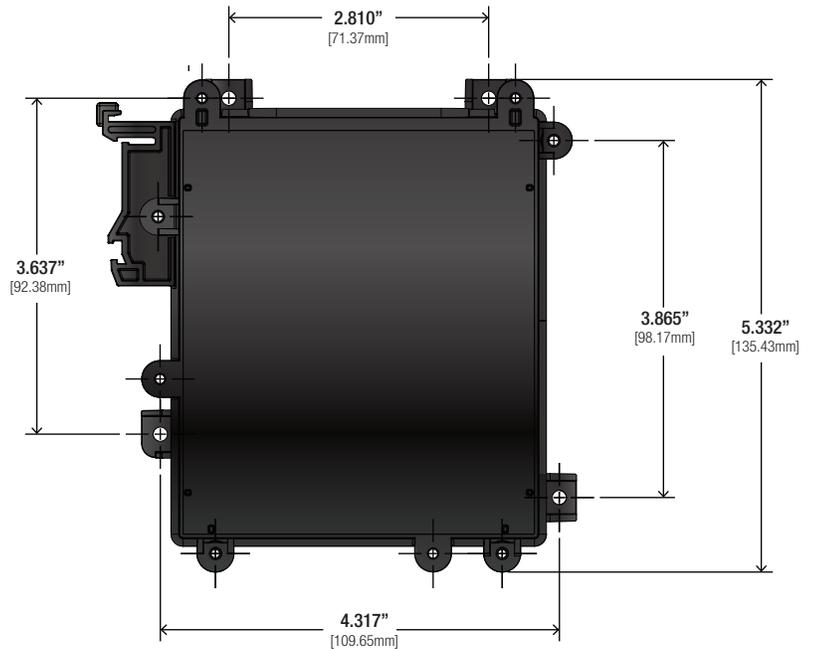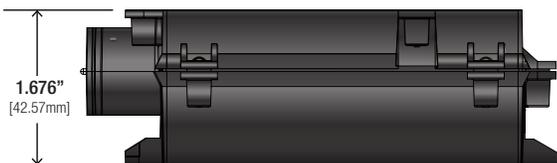
Dimensions in inches [millimeters]

VeriSafe™ 2.0 AVT

Technical Specifications

Applications

Electrical System	For use in 1 and 3-phase AC systems, DC systems
Voltage Detection Range	Up to 1000V AC (50/60Hz), 1000V DC; Rated tolerance +10%
Absence of Voltage Threshold	3 V
Overvoltage Category	III (1000 V), IV (600 V)
Degree of Protection	Battery Indicator Module: For Flat Surface Mounting in a TYPE (UL, NEMA and CSA) 1, 12, 13, 4, 4X, IP66 or IP67 Enclosure Battery Free Indicator Module: For Flat Surface Mounting in a TYPE (UL, NEMA and CSA) 1, 12, 13, 4, 4X, IP66, IP67 or IP69K Enclosure Isolation Module: Open Type, IP20
Hazardous Locations	cULus: Class I, Division 2, Groups A, B, C, D T3 Class II, Division 2, Groups F and G T3 Class I Zone 2 AEx ic ec T3 Gc; Ex ic ec T3 Gc Zone 22 AEx tc IIIC T200°C Dc; Ex tc IIIC T200°C Dc ATEX: Ɛ II 3G Ex ic ec T3 Gc Ɛ II 3D Ex tc IIIC T200°C Dc IECEx: Ex ic ec T3 Gc Ex tc IIIC T200°C Dc

Environment

Operating Temperature	-25°C to 60°C (-13°F to +140°F)
Storage Temperature	-45°C to 85°C (-49°F to +185°F)
Humidity	5 to 90% non-condensing; Rated 80% at 40°C, decreasing linearly to 50% at 60°C
Pollution Degree	3
Altitude	Up to 5,000 meters (3.1 miles)

Power Requirements

Battery	3.6V Lithium Battery, 4-6 year life expectancy
DC Power	35mA max @ 12 VDC; 17mA max @ 24 VDC
PoE*	PoE (10/100), 15mA, IEEE 802.at (-af) Type 1 Class III PoE topology

*VS2-NET is required to use PoE.

Standards and Certifications

NOTE: All standards and certifications listed in this document are planned or pending final approval by appropriate listing agencies.

UL 1436	Standard for outlet circuit testers and similar indicating devices
UL 508 & CSA-C22.2 No. 14	Industrial control equipment
CAN/CSA-C22.2 No. 160	Voltage and Polarity Testers
CAN/CSA-C22.2 No. 107.1	Power Conversion Equipment
IEC / UL / CSA C22.2 NO. 61010-1	Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General Requirements
IEC / UL / CSA C22.2 NO. 61010-2-030	Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits
IEC 61508-1, -2, and -3 {SIL 3 Rating}	Safety of Electrical/Electronic/programmable Electronic safety-related security systems – Part 1 General Requirements Part 2 Requirements for Electrical / Electronic / Programmable safety related systems Part 3 Software Requirements

Ordering Information

Part Number	Part Description
VeriSafe 2.0 AVT Absence of Voltage Tester	
VS2-AVT-3PB-02	Includes three-phase battery powered indicator module, 2ft (0.6m) system cable, and 10ft (3.0m) sensor leads
VS2-AVT-3PB-08	Includes three-phase battery powered indicator module, 8ft (2.4m) system cable, and 10ft (3.0m) sensor leads
VS2-AVT-3PB-16	Includes three-phase battery powered indicator module, 16ft (4.8m) system cable, and 10ft (3.0m) sensor leads
VS2-AVT-3PF-02	Includes three-phase battery free indicator module, 2ft (0.6m) system cable, and 10ft (3.0m) sensor leads
VS2-AVT-3PF-08	Includes three-phase battery free indicator module, 8ft (2.4m) system cable, and 10ft (3.0m) sensor leads
VS2-AVT-3PF-16	Includes three-phase battery free indicator module, 16ft (4.8m) system cable, and 10ft (3.0m) sensor leads
VS2-AVT-1PB-02	Includes single-phase/DC battery powered indicator module, 2ft (0.6m) system cable, and 10ft (3.0m) sensor leads
VS2-AVT-1PB-08	Includes single-phase/DC battery powered indicator module, 8ft (2.4m) system cable, and 10ft (3.0m) sensor leads
VS2-AVT-1PB-16	Includes single-phase/DC battery powered indicator module, 16ft (4.8m) system cable, and 10ft (3.0m) sensor leads
VS2-AVT-1PF-02	Includes single-phase/DC battery free indicator module, 2ft (0.6m) system cable, and 10ft (3.0m) sensor leads
VS2-AVT-1PF-08	Includes single-phase/DC battery free indicator module, 8ft (2.4m) system cable, and 10ft (3.0m) sensor leads
VS2-AVT-1PF-16	Includes single-phase/DC battery free indicator module, 16ft (4.8m) system cable, and 10ft (3.0m) sensor leads
Accessories	
VS2-NET	Network Module accessory, for use with VS2-AVT models.
VS2-AVT-3IF	Battery Free Indicator Module, three-phase faceplate, indicator module only (system cable sold separately)
VS2-AVT-1IF	Battery Free Indicator Module, single-phase/DC faceplate, indicator module only (system cable sold separately)
VS2-AVT-3IB	Battery Powered Indicator Module, three-phase faceplate, indicator module only (battery and system cable sold separately)
VS2-AVT-1IB	Battery Powered Indicator Module, single-phase/DC faceplate, indicator module only (battery and system cable sold separately)
VS2-AVT-3P-ISO	Three-Phase Isolation Module replacement
VS2-AVT-1P-ISO	Single-Phase/DC Isolation Module replacement
VS2-CABLE-02	Replacement Cable, 2ft (0.6m), for use with VeriSafe 2.0 AVTs only.
VS2-CABLE-04	Replacement Cable, 4ft (1.2m), for use with VeriSafe 2.0 AVTs only.
VS2-CABLE-08	Replacement Cable, 8ft (2.4m), for use with VeriSafe 2.0 AVTs only.
VS2-CABLE-16	Replacement Cable, 16ft (4.8m), for use with VeriSafe 2.0 AVTs only.
VS2-CABLE-20	Replacement Cable, 20ft (6.0m), for use with VeriSafe 2.0 AVTs only.
VS2-CABLE-30	Replacement Cable, 30ft (9.1m), for use with VeriSafe 2.0 AVTs only.
VS-AVT-BATTERY	Replacement Battery, VeriSafe AVT, 3.6V
VS2-AVT-RL	Replacement Labels. Includes one faceplate and instruction label replacement for each offered language.
Insulation Piercing Connector Kits	
VS-CKP14-6	Insulation Piercing Connection Kit for Tapping 14 to 6 AWG conductors. Rated for 600V installations. Kit includes 3 connectors for installation of 1 AVT
VS-CKP4-000	Insulation Piercing Connection Kit for Tapping 4 to 3/0 AWG conductors. Rated for 600V installations. Kit includes 3 connectors for installation of 1 AVT.
VS-CKP1K4/0-500	Insulation Piercing Connection Kit for Tapping AWG 4/0 to 500MCM copper conductors. Rated for 1KV installations. Kit includes 3 connectors for installation of 1 AVT.

For a copy of Panduit product warranties, log on to www.panduit.com/warranty

For more information
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Contact Customer Service by email: cs@panduit.com
or by phone: 800.777.3300