VeriSafe Insulation-Piercing Connection Kits

T-PMPI-322EN
Rev. 02 [10-2018]

Insulation-Piercing Connectors for
VeriSafe AVT Sensor Lead Tapping on Copper Conductors

INSTALLATION INSTRUCTIONS

Models: VS-CKP14-6, VS-CKP4-000

PANDUIT VSC Series Insulation-Piercing Connectors are intended for use in simplifying installation and connection of PANDUIT VeriSafe AVT Absence of Voltage Testers to phase (run) conductors, per electrical code requirements, within the rated environmental and operational limitations according to regulatory / safety standard certifications or listings.

TO REDUCE THE RISK OF INJURY, USER MUST READ INSTALLATION INSTRUCTIONS BEFORE ATTEMPTING TO INSTALL

NOTE: In the interest of higher quality and value, Panduit products are continually being improved and updated. Consequently, pictures may vary from the enclosed product.

NOTE: Updates to this Installation Instructions may be available. Check www.panduit.com for the latest version of this manual.

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Safety Information

This installation instructions contains information and warnings which must be followed to ensure safe termination and operation of the Insulation-piercing Connectors and an AVT Device.

- ***Always de-energize panel and verify absence of voltage in the panel before attempting to install connector. Do not install connector on an energized conductor.***
- ***Installer must also follow all safety, installation, commissioning and operating steps from the AVT Device Manual.***
- ***Connector is intended for one-time installation and use. Do not reuse nor re-install connector.***

Connection Kit Contents

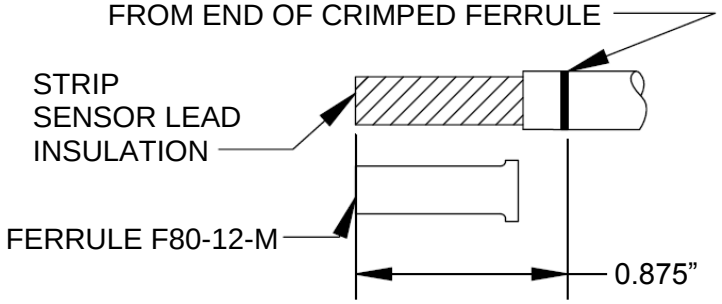
Connection Kits contain connectors and ferrules for installing an AVT Device, per below;

CONNECTION KIT CATALOG PART NUMBER	"RUN" Wire (CODE WIRE)		"TAP" Wire AWG (Terminated w/ Ferrule)	CONNECTOR		FERRULE	
	MIN. AWG [METRIC, mm2]	MAX. AWG [METRIC, mm2]		Catalog P/N	Quantity	Catalog P/N	Quantity
VS-CKP14-6	14 AWG [2.1, r]	6 AWG [13.3, r]	14 AWG STR Class K (Terminated w/ Ferrule)	VSC6	3	F80-12-M	12
VS-CKP4-000	4 AWG [21.2, r]	3/0 AWG STR [85, r]		VSC3/0	3	F80-12-M	12

Step-by-Step Installation Procedure

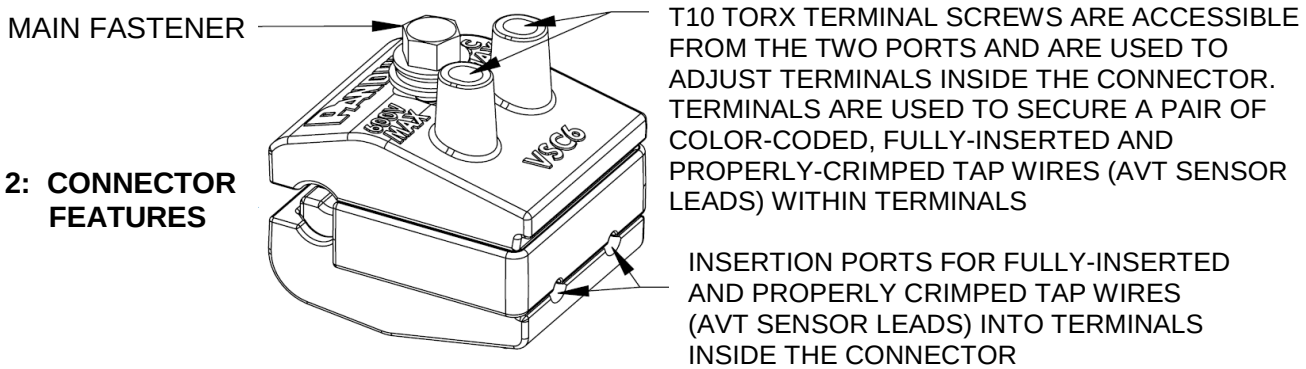
1. See FIGURE 1: Prepare (strip) AVT device sensor leads.
2. See FIGURE 1: Crimp ferrules F80-12-M onto sensor leads.
3. See FIGURE 1: Make locating mark on sensor leads.

FIGURE 1: PREPARATION OF FERRULES ONTO SENSOR LEADS



4. See FIGURE 2: Review connector features.
5. See FIGURE 2: Loosen factory-tightened MAIN FASTENER at least 6 full turns before proceeding to the next step.

FIGURE 2: CONNECTOR FEATURES



Step-by-Step Installation Procedure (continued from page 2 of 4)

6. See FIGURE 3 and FIGURE 4: Inspect location of factory-tightened TERMINAL in each TAP WIRE port in connector.
   - Connector was shipped with each TERMINAL SCREW and TERMINAL in a factory-tightened state.
   - In a factory-tightened state, the TERMINAL blocks access to and restricts insertion of TAP WIRE.
   - Installer must loosen TERMINAL SCREW and push down on SCREW to ensure TERMINAL position permits insertion of TAP WIRE.
   - REMOVE TAP TORQUE reminder label before proceeding to STEP 7.

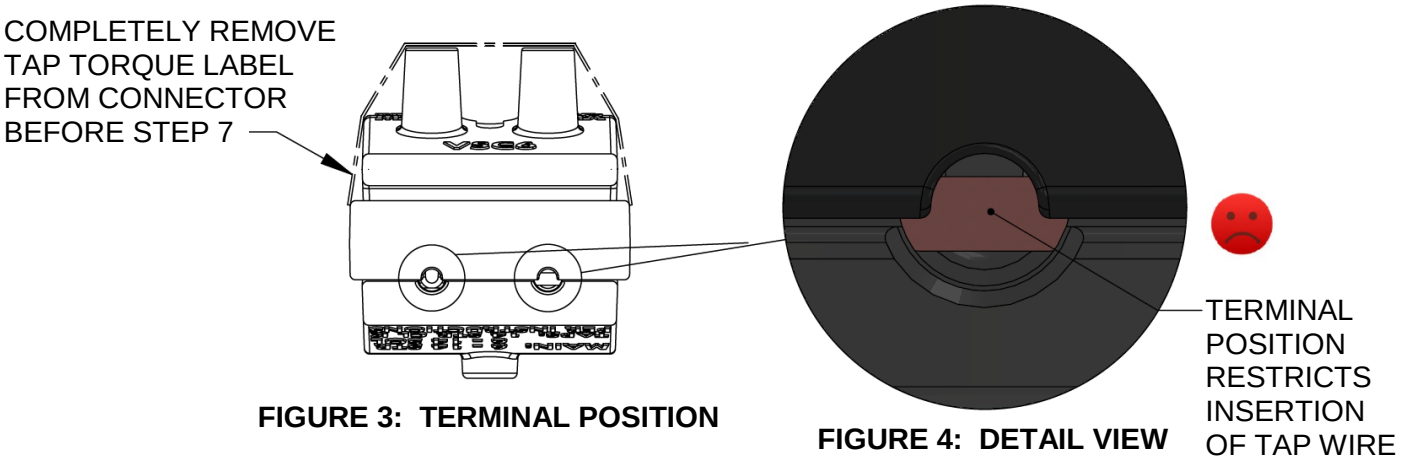


FIGURE 3: TERMINAL POSITION

FIGURE 4: DETAIL VIEW

7. See FIGURE 5: Loosen TERMINAL SCREW two turns and push down on SCREW to move TERMINAL.
   - Verify position of TERMINAL and repeat loosening two turns and repeat push down on the SCREW.
   - Repeat until TERMINAL is in the position shown in FIGURE 6. DO NOT completely loosen screw.
8. See FIGURE 6: Verify that TERMINAL is positioned at the bottom of port for TAP WIRE insertion.
   - TERMINAL must be positioned at bottom of port, permitting full-insertion of TAP WIRE.

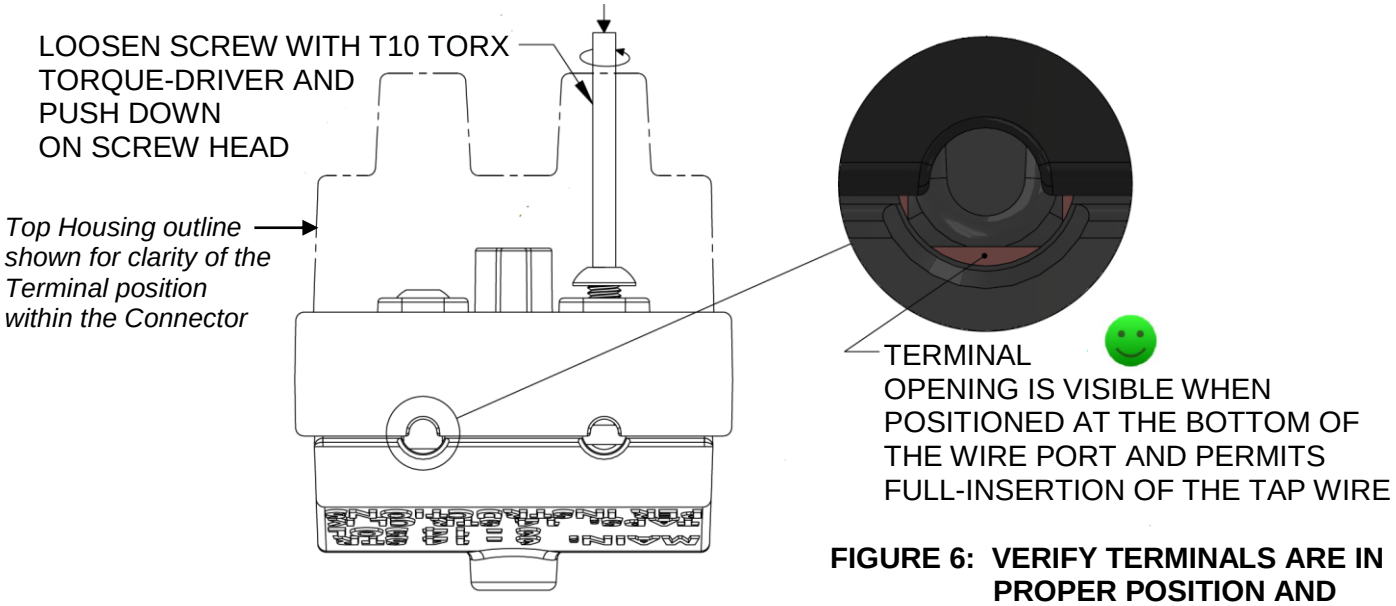


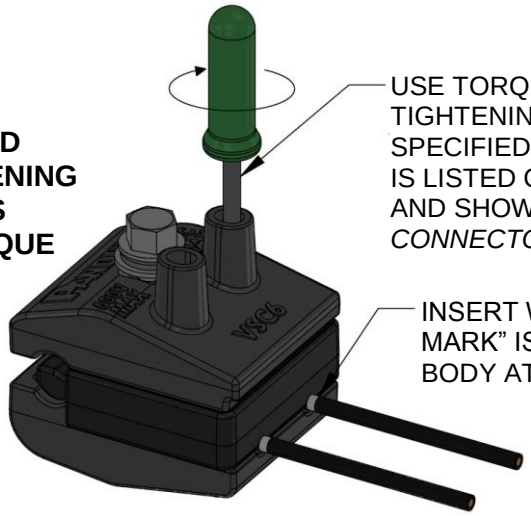
FIGURE 5: LOOSEN TERMINAL SCREWS AND PUSH TERMINAL INTO PROPER POSITION

FIGURE 6: VERIFY TERMINALS ARE IN PROPER POSITION AND THAT TAP WIRE CAN BE FULLY-INSERTED

Step-by-Step Installation Procedure (continued from page 3 of 4)

9. See FIGURE 7: Insert a crimped, color-coded pair of AVT sensor leads into TAP WIRE terminals.
10. See FIGURE 7: Verify fully-inserted AVT sensor leads by verifying that "location mark" (STEP 3) is flush with the connector body at wire insertion port.
11. See FIGURE 7: Use torque-driver (T10 Torx drive) to tighten terminal screws to specified Torque, as listed on Connector packaging (also shown below in Connector Rating Information).

FIGURE 7: FULLY-INSERT SENSOR LEADS AND SECURE BY TIGHTENING TERMINAL SCREWS TO SPECIFIED TORQUE



12. See FIGURE 8: Properly position connector onto phase conductor (RUN WIRE) and keep RUN WIRE centered with the circular recess during next step.
13. See FIGURE 8: Use torque-driver (SAE Hex) to tighten MAIN FASTENER, while keeping RUN WIRE centered with the circular recess of opening. Tighten until the specified TORQUE value is achieved and maintained for 5 seconds. Torque value is listed on Connector packaging (also shown below in Connector Rating Information).

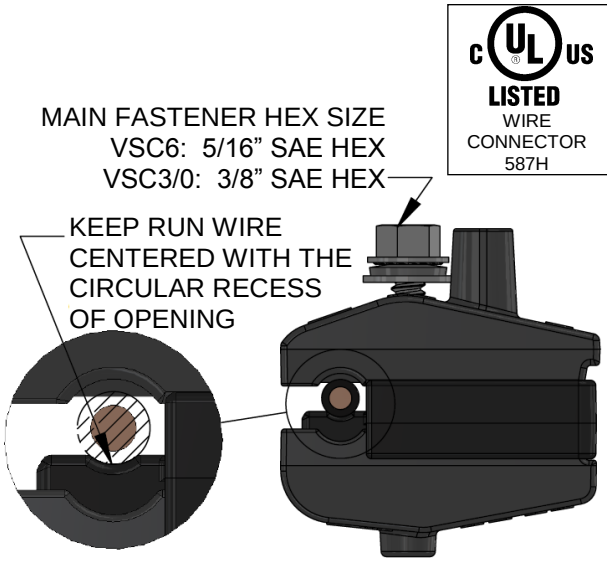


FIGURE 8: INSERT AND CENTER THE RUN WIRE, IN THE CENTER OF THE CIRCULAR RECESS. TIGHTEN HEX BOLT UNTIL THE SPECIFIED TORQUE IS ACHIEVED AND MAINTAINED FOR 5 SECONDS

CONNECTOR RATING INFORMATION			
PANDUIT CATALOG P/N		**VSC6**	**VSC3/0**
MAX. Operating Temperature (°C)		90°C	
MAX. Operating Voltage (Volts)		600V	
RUN WIRE	Torque-driver SAE Hex Size (Main Fastener)	5/16"	3/8"
	Installation Torque (Required)	40 in-lb [4.52 N·m]	80 in-lb [9.04 N·m]
	Minimum Rated Wire Size, AWG [Metric, mm2, rigid]	14 SOL 14 STR [2.1, r]	4 SOL 4 STR [21.2, r]
	Maximum Rated Wire Size, AWG [Metric, mm2, rigid]	6 SOL 6 STR [13.3, r]	3/0 STR [85, r]
TAP WIRE	Torque-driver Installation Bit Size	T10 Torx	
	Torque-driver Installation Tool*	Wiha P/N 28502 (*recommended)	
	Installation Torque (Required)	7 in-lb [0.79 N·m]	
	Minimum Rated Wire Size, AWG	14 STR Class K	
	Required Ferrule (Panduit P/N)	F80-12-M	
	Recommended Crimp Tool (Panduit P/N)	CT-1160	