

ABSENCE OF VOLTAGE TESTING



While many of our most popular Permanent Electrical Safety Devices (PESDs) are known for verifying presence of voltage, over the course of the years we have engineered innovative solutions for electrical safety programs to enhance absence of voltage testing as well. In 2019, two of the top ten most cited OSHA violations were related to the control of hazardous energy and the use of electrical work practices.

In the United States alone, we have an average of 150 fatalities per year due to “exposure to electricity” and more than 50,000 are injured for disregarding Lockout/Tagout (LOTO) protocols resulting in electrocution and arc flash.

When we look at these statistics, we find that the most critical incidents relate to exposure to electricity and complacency by employers. While providing the opportunity to safely indicate voltage presence with our voltage indicators, we wanted to further enhance safety and compliance by providing an additional layer of protection while performing an absence of voltage test that complies with NFPA 70E.

SAFE-TEST POINT™

Several years ago, we added new products to our lineup of GracePESDs® to combat the rising violations, injuries, and fatalities that occur within LOTO procedures. While the

margin of human error and complacency will no doubt always exist, incorporating a PESD such as our Safe-Test Point into your electrical safety program will take you beyond compliance when controlling hazardous energy. These devices reduce risk while simultaneously increase productivity for the LOTO task at hand.

Failure to perform proper mechanical or electrical LOTO can lead to electrocution, electrical shock, arc-flash, and other hazards. In addition to penalties and fines by OSHA, these hazards often result in lost time wages, compensation claims, permanent disability, and fatalities. In other words, these are obvious scenarios anybody would want to avoid and they're the exact preventable situations that went into the considerations and design of our Safe-Test Point™.

The high impedance protection offered by the Safe-Test Point™ limits the maximum available fault current to 2.94mA at 600V and 2.35mA at 480V when any two test point jacks are shorted together. This level of safety provides qualified electrical workers a safer and more productive way to perform the live-dead-live test (three-point test) from outside the electrical cabinet using an adequately rated test instrument.



It contains four test point jacks that are hardwired directly to the point-of-work and allows measurement of AC/DC voltages by inserting the insulated meter probes into any two test point jacks to take a voltage measurement either phase to phase or phase to ground. The Safe-Test Point can be mounted directly on any enclosure with the option to test either the line side, load side, or both.

In addition to the 4-wire testing option, the Safe-Test Point™ is also available in an optional 5-wire configuration for use on wye power systems with a neutral terminal.



R-5MT

VOLTAGE TEST STATION

When we examined the benefits of combining a voltage indicator with our Safe-Test Point™, the concept of the Voltage Test Station (VTS) was conceived. Drawing inspiration from our GracePort® programming ports, we created an all-in-one station that's conveniently placed within our GracePort® environmentally rated protective housings. The UL Listed VTS allows workers a safer way to verify voltage presence with our R-3W voltage indicator and perform an Absence of Voltage Test from outside the electrical cabinet using an adequately rated instrument using the Safe-Test Point™.



P-S11S21-M2RX-V_{test}

The VTS test point jacks provide the ability to perform an absence of voltage test on AC/DC systems either phase-to-phase or phase-to-ground. Following facility safety procedures, simply insert the insulated meter probes with .080" tips into any two test point jacks to take a voltage reading with properly rated test equipment.

The VTS components (Safe-Test Point™ and R-3W voltage indicator) are independently connected to the same source providing a redundancy check for additional safety. The device must be installed by a qualified electrical worker and adhere to all regulatory requirements and manufacturer's instructions.

ELECTRICAL LOCKOUT/TAGOUT (LOTO)

Per NFPA 70E, Article 110.4 (A), only qualified persons shall perform the absence of voltage testing. The purpose of performing NFPA's Article 120.5, Step 7 is to verify that energy has been isolated. In the event that this test is being performed within a cabinet and the energy is in fact still present, this presents a hazardous situation that may result in an arc flash occurrence.

Our Safe-Test Point™ and VTS, with integrated high impedance test points, eliminates that level of exposure when performing an absence of voltage test where energy is in fact still present by limiting the maximum available fault current to 2.94mA at 600V and 2.35mA at 480V.

DEVICE CERTIFICATIONS

The Safe-Test Point™ & VTS PESDs are listed to the transient overvoltage category up to 8kV allowing the devices safe use in feeders and branch circuits inside distribution (CAT III), three phase utility connections, and outside (CAT IV). The VTS is UL recognized which enables OEMs (UL 508 Shops) to easily add to their existing UL File. The standard 4-wire Safe-Test Point is UL listed and the 5-wire Safe-Test Point is housed within a UL listed GracePort® housing.

Safe-Test Point™ (4-Wire)	Safe-Test Point™ (5-Wire)	Voltage Test Station
UL Type 12 & 13 File #: E311256; CE	Port: UL Type 4,4X,12 File #: E311256, E207344; CE	UL File (RU) #E207344 CE, RoHS

CONTACT US TODAY

For all of your mechanical and electrical LOTO and electrical safety program improvement needs, GracePESDs® has a solution for your specific application and we'd love to start working with you today. You can contact our sales team at Sales@GraceTechnologies.com and we'll help you select the right PESD for your application today.