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All UL® Listed Surge Protection Devices (SPD's), commonly known as surge suppressors, must comply with the new Underwriters Laboratories Standard UL 1449 3rd Edition. Formerly, all UL Listed surge suppressors complied with UL 1449 2nd Edition. The redesign of the residential SPD line has changed the recommended installation practice of these products.What products does this impact?The CHSPT1 series is dual rated for a Type 1 (installation ahead of a main disconnect) and Type 2 (installation after a main disconnect) application. A dedicated circuit breaker is not required for the installation of a Type 1 product, but is recommended in a Type 2 application for ease of installation. A Type 1 product may also be installed using lay-in lugs. The CHSPT2 series is rated for a Type 2 (installation after a main disconnect) application and must be installed using a dedicated circuit breaker. The circuit breaker provides a means to connect the to the loadcenter bus and short circuit current protection. The SPD still must be installed using a dedicated unused or new circuit breaker in an available space closest to the location where the SPD is to be installed.Can a 14 AWG wire be installed using a 50 ampere circuit breaker Yes. The connecting wires do not carry load current. Instead, they carry only short-duration currents that are associated with a transient event. What if my inspector questions my installation method?Reference NEC® article 110.3 (B) which states that "listed or labeled equipment shall be installed and used in accordance with any instructions included in the listing or labeling" as well as the instruction bulletin for the SPD. If an inspector continues to have a perceived issue, any dedicated 15 or 50 ampere circuit breaker may be used. The SPD will still perform its intended function but it is not guaranteed that the SPD will perform to its published ratings. How else can I maximize the performance of the SPD?In addition to installing the recommended circuit breaker for the SPD, installation wiring should be kept as short as possible (less than 12 inches is recommended) and have one twist per inch to reduce the impedance of the wire.Eaton Type 1 & 2 Surge ProductsUL1449 3rd Edition Surge Products - Recommended Installation Practices for CHSPT1 and CHSPT2 ProductsThe following are the recommended types of circuit breakers for the new UL 1449 3rd Edition CHSPT1 and CHSPT2 products to achieve their published ratings.Note: Formerly, all 120/240V UL 1449 2nd Edition SPD's were recommended to be installed using a dedicated unused or new 2-pole 15 ampere circuit breaker in an available space closest to the location where the SPD was to be installed.Eaton CorporationElectrical Group1000 Cherrington ParkwayMoon Township, PA 15108 United States877-ETN-CARE (877-386-2273)Eaton.com© 2012 Eaton CorporationAll Rights ReservedPrinted in USAOctober 2012UL is a registered trademark of Underwriters Laboratories. The National Electrical Code is a registered trademark of the National Fire Protection Association.All other trademarks are property of their respective owners Catalog Number Recommended Dedicated Circuit Breaker TypeType 1 Surge ProtectionCHSPT1ULTRA 2-pole 50 ampere circuit breakerCHSPT1MAX 2-pole 50 ampere circuit breakerCHSPT1MICRO 2-pole 50 ampere circuit breakerCHSPT1-208Y 3-pole 50 ampere circuit breakerType 2 Surge ProtectionCHSPT2ULTRA 2-pole 50 ampere circuit breakerCHSPT2MAX 2-pole 15 ampere circuit breakerCHSPT2MICRO 2-pole 15 ampere circuit breakerInstruction BulletinIB00414001Y Effective January 2015 Thank you for purchasing an Eaton Protective(CHSP) device. This product forms part of the CHSP modular surge protection system, consisting of: The CHSPT2SURGE or CHSPT2ULTRAAC module, designed to protect residential electrical loads from voltage transients and surge disturbances on your AC power line and intended for both indoor and outdoor usage. The CHSPCABLE module designed to protect coaxial cables • providing service for televisions, satellite TV and other coaxial connected equipment from electrical transients and surge disturbances intended for indoor use only. Outdoor installations require separate purchase of the CHSPD (accessory: CHSP3RTLCABLE). The Eaton system is designed for maximum installation flexibility in newly constructed or existing homes. For example, in new construction, when coaxial cables are run directly to the electrical panel, the CHSP module can be joined together using the quick-connect feature found on each protection module, for neatly configured surge protection systems (see Figures 8, 9 and 10). These instructions do not cover all details, variations or combinations of the equipment, its storage, delivery, installation, checkout, safe operation, or maintenance. If you require further information regarding a particular application or installation that is not covered in this manual, please contact Eaton's Technical Resource Center at 1-877-ETN-CARE, option 2, then option 1. Safety Precautions Alicensed/qualified electrician must complete all instructions described in this manual in accordance with the U.S. National Electrical Code, state and local codes, or other applicable country codes. All electrical codes supersede these instructions. WARNING! SHOCK HAZARDS Improper installation can cause death, injury and/or equipment damage. Follow all warning and cautions. Completely read and understand the information in this instruction manual before attempting to install or operate this equipment. Improper wiring could cause death, injury, and/or equipment damage. Only licensed/qualified electricians who are trained in the installation and service of electrical devices are to install and service this equipment. Use appropriate safety precautions and equipment for arc flash protection. During normal operation, hazardous voltages are present inside the SPD. When servicing the SPD, follow all safe work practices to avoid electrical shock. CAUTION Do not perform a high-pot test with the SPD connected to the electrical system. Failure to disconnect the SPD during a high-pot test will result in damage to the SPD. IMPORTANT Choose a mounting location for the CHSP that provides the shortest and straightest possible wiring (lead length) from the CHSP to the electrical system connections. Excessive lead length and sharp bends will degrade the performance. When using conduit, avoid using 90° elbows and keep the conduit run as short and straight as possible. 2 EATON CORPORATION www.eaton.com CompleteHomeSurge ® CompleteHomeSurge Protection The CHSPT2SURGE/CHSPT2ULTRA is designed to be connected to the top/bottom or sides of your electrical load center , see Figure 1, or alternatively it can be surface mounted or flush mounted to the wall adjacent to the load center . Definition: The thermal load center refers to the electrical panel (or breaker panel) in your home. To install this device you need: Four self-tapping screws - #8x3/4-inch (1.9cm) • (surface mount only – supplied with purchase). Slot or Phillips screwdriver. • Hammer, wire cutter and wire stripper • For finished wall applications, you should purchase the CHSP3RTLCABLE . The load center must be properly grounded and meet local, national, or NEC (or Canadian CEC) electrical code approved practices. • The CHSP can be used with any manufacturer's load center • (breaker panel). Circuit Breaker Installation 1.Turn off power to the load center. 2.Remove load center cover. 3.Verify power has been disconnected with a portable voltmeter. 4.Locate a dedicated unused, or standard new 2-pole circuit breaker in an available space closest to the location where the CHSP is to be installed. A dedicated 2-pole 15 ampere circuit breaker is recommended for use with CHSP devices, but use a 2-pole 50 ampere circuit breaker to achieve the full published rating of the CHSPT2ULTRA device. (The connecting wires do not carry supply current. Instead, they carry only short-duration currents that are associated with a transient event.) 5.Move circuit breaker handle to the OFF position. ndoor Installation 1 Table 1. Recommended Dedicated Circuit Breaker to Achieve Published Rating Catalog Number Pole CHSPT2SURGE 2-Pole CHSPT2ULTRA 2-Pole Panel Mount (Figures 1 and 2) 6.Remove 1/2-inch(1.25cm) knockout located closest to the 2-pole breaker installed in Step 4. 7.Remove locknut from the threaded nipple and feed the CHSP wire through the knockout. Secure the CHSP in its final position by attaching locknut and tighten firmly using hammer and screwdriver or suitable wrench. Continue with final installation Step 11. Surface Mount 8.Using the supplied four(4)self-tapping screws, mount the CHSP on a suitable surface through the four mounting holes. The wires should be protected using rigid or flexible electrical metal tubing. Continue with final installation Step 11. Rating 15 ampere 50 ampere