



SURGE **Protection**

NOTICE

The power will be off for
Approximately 30 minutes during
Installation of surge arrester

Anita Clever, Energy Services Specialist
(509) 773-7622
800-548-8357

KPUD Meter Based Surge Arrester Program

From computers to microwaves and high-tech entertainment centers, the average home has a huge investment in electronic equipment. AC (alternating current) surges are not caused by lightning only. Utility work, adverse weather conditions, or even something as simple as electric motor activity within a building (air conditioners, elevators, copiers, printers and refrigerators, for instance) can cause power fluctuations. Surge protectors extend the lifetime of sensitive electronic equipment by protecting it against harmful power surges and overvoltage problems. Meter based surge arresters add the advantage of buffering electronic equipment from everyday fluctuations. This is critical, as "invisible" power disturbances have a cumulative effect, and can lead to premature failure of all or part of an unprotected electronic system.

Klickitat PUD recommends that to protect these sensitive electronics, the best offense is a two-step defense:

External Surge Protection – Meter based surge arresters help stop external power problems before they can enter the home. Transient voltage can enter a home through the main power, telephone and television service entrances. In addition, transient voltage can also enter a home through: electric fences, electronic dog fences, electric driveway gates and intercoms, closed circuit video systems, air conditioners, any antennas mounted on a home, pool pumps/filters, outdoor speakers, etc. Any electronic equipment that is wired to a home's main electrical panel is a potential avenue for transient voltage to enter or exit.

Internal Surge Protection – While the meter based surge arrester is an extremely effective tool to protect a home from transient voltage, Klickitat PUD highly recommends using "point of use" surge protectors inside a home to further protect electrical equipment from the damaging effects of transient voltage. As mentioned above, transient voltage can enter a home a multitude of ways, so if by chance the transient voltage enters from a point other than the main service entrance, using point of use surge protectors will give you peace of mind that you are protecting your electrical equipment to the best of your ability. When looking for this type of product we recommend the UL1449 standard. Call for more details.

KPUD Meter based Surge Arresters:

- Can be installed on a residence with a 200 amp metered service or smaller.
- A monthly fee of \$4.50 will be added to your utility bill once installed.
- Power will be off to the home for approximately 30 minutes for the installation.
- Lead-time of approximately two weeks from time of request
- Surge arresters cannot be installed if your house is not grounded or you have either a CT meter or a 400 amp service.
- A list of covered appliances, electronics computer & office equipment, tool and other items is attached.
- Warranty: up to \$5,000 per item, but not to exceed an aggregate of \$50,000 per failure. Warranty information is attached for your review. Exclusions apply.

Customer Responsibility - Once the arrester is installed, remember to periodically check the two red indicator lights on the surge arrester to make sure they stay lit. If one or both of these lights are not lit, this means the device is either not working properly or it took a hit and protected your home. If the lights are not lit, contact our Energy Services Department at (509) 773-7622, to have the device inspected and replaced.

Warranty Claim – If you experience a loss due to apparent arrester failure, please contact our Energy Services Department at (509) 773-7622 to make the report to start the claim review process. We will send a service man to replace the arrester and test the existing arrester. Claim forms will be supplied if necessary.



Watt Hour Meter Base Surge Arrester

TES 240 MSA
Residential/Light Industrial



DESCRIPTION

Introducing the TES 240 MSA Surge Arrester, installed at wattmeter, locations for residential and light industrial applications. The TES 240 MSA Surge Arrester is specifically designed for long lifetimes even with strong lightning activity and temporary line overvoltage conditions. A tough Surge Arrester for tough line conditions.

APPLICATIONS

120 VAC-240 VAC Surge Arrester for residential and light industrial usage. Installed at wattmeter, safely clamps and dissipates lightning induced AC line high voltage current impulses going to a residence, apartment or light industrial building. Also protects against AC line temporary overvoltage conditions.

FEATURES

- 40,000 Amp peak capability, each 120 VAC leg
- 210 VAC, continuous 5 minutes, temporary overvoltage clamping capability.
- Lowest, reliable voltage clamping level
- Safety fusing, both 120 VAC legs, patented
- LED "unit good" indicators, both 120 VAC legs
- Fire proof and explosion proof polycarbonate glass-fiber reinforced enclosure with matching mounting connector
- Sealed unit except for mounting connector wiring opening
- For less inductance, #10 AWG tinned copper wire
- Competitive pricing

ELECTRICAL-ENVIRONMENTAL SPECIFICATIONS

Maximum Peak Surge Current
(each 120 VAC leg) 40 KA plus

Maximum Clamping Voltage Level
@40 KA (each 120 VAC leg) 840 VDC

Start Clamping Voltage Level
@1 ma (each 120 VAC leg) 240 VDC

Accelerated Life Test
13 KV, 1.2/50 μ sec. open circuit, 5.5 KA, 8/20 μ sec. short circuit, 100 surge cycles, 6 secs. apart. No failure or arcing allowed. Surge Arresters still in excellent condition at end of tests. No arcing.

Temporary Overvoltage
Continuous, 5 minutes, maximum line voltage without thermal runaway. Must be 185 VAC or greater. 210 VAC

End of Life Failure Mode
While in overvoltage induced thermal runaway, apply 7 KA at 120 VAC. Surge arrester must fail safe without faulting the AC line. No arcing allowed. Surge arrester fails safe—surge element punctures, safety fuse opens, LED turns off, no fire, slight puff of smoke out connector wiring opening. AC line not faulted. No arcing.

Enclosure Flammability
(550° C or greater) 960° C, UL 94 V1

Ultra-Violet Resistance
Good UV stability in tropical conditions

Thermal Withstand 80° C

Salt-Fog Corrosion Resistance Very good

Enclosure Dimensions 2.75" deep X 7" diameter

Recommended "Hole Size" for Mounting Connector Form 2S or 12S ring or ringless style

List of Covered Items

Anything not listed here in not covered under the warranty

Appliances

Floor Care: Canister, Hand-held & Upright Vacuums

Microwaves: Built-ins, Countertop, Micro-Hood

Dishwashers: Built-in & Portable

Cooking: Cooktops, Drop-in Ranges, Freestanding Ranges, Range Hoods, Slide-in Ranges, Wall ovens.

Refrigeration: Refrigerators: Bottom Freezer, Compact, Freezer less, Side-by-Side, Top Freezer

Freezers: Chest & Upright, Icemakers

Dehumidifiers: Console & Table Top

Fans: Floor, Stand, Table & Window

Laundry Care: Conventional Dryers, Conventional Washers, Energy Efficient Washers

Water Heaters: Electric, LP Gas, Natural Gas. **Warranty DOES NOT cover Tank less/On Demand**

Heating & Cooling: Portable Electric Heaters & Room Air Conditioners.

Warranty does not cover HVAC or Furnace systems.

Other: Compactors

Electronics

Cameras & Camcorders: Camcorders, Digital Cameras, Point & Shoot Cameras, Security Cameras

Home Audio: CD Players, CD Recorders, Radios

Portable Electronics: Boom Boxes, Handheld Organizers-PDA's, MP3 Players, Personal CD Players, Personal Minidisc Players, Personal Radios & Cassettes

DVD, VCR & Other Video: Combination TV/VCR/DVD, DVD Players, Digital Video Recorders, Dual Deck VCR-DVD, Satellite Systems

Office & Communications: Answering Machines, Corded and Cordless Phones, Two Way Radios

TV's: Combination TV/VCR/DVD, Plasma & LCD, Regular TV

Computers: Computer Books, Desktop, Digital Printers, Drives

Other: Chargers, Drives & Storage Devices, Headphones, Microphones

Warranty does not cover HOME THEATER SYSTEMS

Housewares

Small Kitchen Appliances: Blenders & Food processors, Bread Makers, Can Opener, Food Slicers, Juices, Coffee, espresso & Tea Makers

Grills: Countertop, Indoor & Rotisserie

Personal Appliances: Beauty & Grooming, Fountains, Heating Pads, Massagers, Paraffin Spa

Other: Irons & Knife Sharpeners

Tools

Compressors & Air Tools: Carpentry Air Tools, Carpentry Compressor, Compact Compressors, Compact Inflators

Bench Power Tools: Band Saws, Bench Grinders, Miter, Radial Arm Saws, Blowers, Dadoes

Portable Power Tools: Angle Grinders, Buffers & Polishers, Circular Saws, Cordless Combo Kits, Corded Drills

Electrical Tools & Accessories: Battery Chargers, Battery Boosters, Electric Tools & Accessories, Electric Lanterns, Flashlights, Cordless Tools

Other: Garage Door Openers, Wet-Dry Vacuums

**TESCO LIMITED PRODUCT WARRANTY
FOR POWER FILTER/SURGE PROTECTION CUSTOMERS**

TESCO HEREIN PROVIDES A LIMITED PRODUCT WARRANTY ONLY. THIS IS NOT AN INSURANCE POLICY.

1. Limited Warranty and Warranty Period. TESCO warrants that each TESCO Surge Protector, when installed according to TESCO installation instructions/specifications and used for the purposes intended by TESCO, will be free from defect in its materials and workmanship. This Limited Warranty will be in effect for ten (10) years from the original factory ship date of the surge protector or the first date the surge protector is first installed for any residential customer within one year from original factory ship date and the customer is also the person responsible for payment of the service. The First Installation Date of each System should be documented, but if not available it will be determined by TESCO in its reasonable discretion.

2. Covered Warranty Claims. If a surge passes through a TESCO Surge Protector and fails (by failure indicator), TESCO will repair damage to or replace, in TESCO's sole and reasonable discretion, the following (except as stated in Paragraph 3 and 4 below):

- The Surge Protector,

Ten Year Product Replacement

TESCO will, at its option, repair or replace any Power Filter/Surge Protection Device that is damaged by an electrical surge (including those caused by lightning).

- Electronic office equipment and electro-mechanical appliances that are connected to the surge protector,

Ten Year Connected Equipment

\$50,000: TES 240MSA, TES 240R, TES 42SE, TES 46SE-1 (Up to \$5,000 per item, but not to exceed an aggregate \$50,000 per failure.)

- Electronic office equipment such as computers, fax machines, modems, copiers, printers, scanners, etc., that are used in a home or office are covered under this warranty.

3. Warranty Claim Exclusions: TESCO is not responsible for any damage to the Surge Protector or any downline, in-home electronic equipment or mechanical appliances, if in TESCO's sole and reasonable discretion, the damage has been caused by any of the following:

- Power surges subverting the Protector and entering the building to which the Protector is affixed by other means of transmission; Installation of the Surge Protector contrary to TESCO installation instructions
- Misuse or abuse of the Protector; Alteration of the Protector or to the electrical, telephone, or cable system to which it is installed
- Sustained over-voltages passing through the Protector (a "sustained over voltage" is any transmission greater than nominal voltage, including but not limited to that occurring when a high-voltage line comes in contact with a low voltage line or neutral, a telephone line, and CATV line).
- Damage caused by a damaged or lost system "neutral"; downed power lines by any means.
- Damage caused by direct or near hit lightning strikes to the protected property that bypass the surge protection device; brownouts, under-voltage, blinks, abnormal voltage regulation, power outage and "acts of God"/ natural disasters, i.e., earthquakes, tornados, straight-line winds (i.e.-Derechos), hurricanes, and tropical storms; except lightning in the limited circumstances described.
- Any event for which a "state of emergency" is announced by any governmental authority concerning the Customer's geographic region or jurisdiction.

4. Excluded Warranty Claim Items. This Limited Warranty does not cover any damage to or from any of the following:

- Real property and fixtures.
- Equipment or appliances in or associated with detached buildings or garages, water or sewer systems, irrigation systems, swimming pool equipment and spas including hot tubs/Jacuzzi's.
- Personal property, which in TESCO's reasonable discretion does not constitute ordinary in-home electronic equipment or mechanical appliances.
- In-home electronic equipment or mechanical appliances which in TESCO's reasonable discretion deems to be used primarily for commercial purposes or extraordinary home office/business purposes.
- Medical, health-care, and life-support equipment.
- Products, materials, data, or information used or stored on or in in-home electronic equipment or mechanical appliances.
- Detached buildings, garages, rental property and/or vacation property

5. Remedy for Breach of Limited Warranty. Customer's sole and exclusive remedy for this Limited Warranty will be to require TESCO to repair or replace the Protector, and if applicable to repair damage to downline, in-home electronic equipment and mechanical appliances, or replace with like kind, quality, and features. However, TESCO SHALL HAVE NO LIABILITY PURSUANT TO THIS LIMITED WARRANTY AND NO OBLIGATION TO REPAIR OR REPLACE ANY SYSTEM OR ANY EQUIPMENT OR APPLIANCE UNLESS ALL OF THE FOLLOWING CONDITIONS ARE SATISFIED:

- Upon installation of the System, Customer receives a complete copy of this warranty from the Utility.
- Not more than fourteen (14) days after Customer's discovery or suspicion of a failed/damaged surge protector Customer delivers to Utility or TESCO at the above address (by US mail, parcel service, phone call to the utility customer service or facsimile transmission) notice of such failure and any alleged damage covered by this Limited Warranty.
- The Surge Protector was not altered and was at all times handled, installed, maintained, and used by Customer and/or Utility in accordance with this Limited Warranty, all written instructions, specifications, and warnings furnished by TESCO.
- The customer may be required to deliver to Utility or TESCO a true, accurate, and reasonable written estimate by a qualified professional of the value and cost of repair (and description of the damage) for any downline, in-home electronic equipment or mechanical appliances allegedly damaged at the same time the TESCO surge protector failed. TESCO will determine in its reasonable discretion that there has been a failure of a TESCO Surge Protector resulting in a valid warranty claim. In the event that TESCO is liable for a warranty claim, the decision between whether to repair or to replace the Surge Protector and any covered downline, in-home electronic equipment and mechanical appliances shall be made by TESCO in its sole discretion.

6. Fraudulent Warranty Claims and Waiver of Right to Future Warranty Claims. CUSTOMER UNDERSTANDS AND AGREES THAT IF CUSTOMER SUBMITS A FRAUDULENT WARRANTY CLAIM ON THIS LIMITED WARRANTY, CUSTOMER HEREBY WAIVES ITS RIGHT TO ALL FURTHER WARRANTY CLAIMS (FRAUDULENT AND NON-FRAUDULENT) OR REMEDIES FOR THE BREACH OF THIS LIMITED WARRANTY OR ANY OTHER IMPLIED WARRANTIES WHICH OTHERWISE MAY EXIST.

WARRANTY DISCLAIMERS

1. TESCO DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ANY OTHER WARRANTIES THAT EXTEND BEYOND THOSE DESCRIBED HERE.
2. NO AGENT OR REPRESENTATIVE OF TESCO, NOR OF ANY RETAILER, LESSOR, OR INSTALLER OF THE SYSTEM, HAS ANY EXPRESS OR IMPLIED AUTHORITY TO MAKE ANY REPRESENTATION, PROMISE, GUARANTEE, OR WARRANTY NOT STATED HERE.
3. THIS LIMITED WARRANTY SETS FORTH ALL OBLIGATIONS OF TESCO IN THE EVENT DEFECTS APPEAR IN THE SYSTEM AND A SURGE PASSES THROUGH A FAILED SURGE PROTECTOR OR SURGE ARRESTER. THE REMEDIES STATED HERE ARE THE SOLE AND EXCLUSIVE REMEDIES FOR ANY DAMAGE, LOSS, OR WARRANTY CLAIM UNLESS A HOME OWNERS INSURANCE POLICY CLAIM IS FILED IN LIEU OF THE TESCO WARRANTY.
4. TESCO SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES OR ANY ECONOMIC LOSS.
5. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU. THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE.

Request Entered Arrester Installed Grounding Problem CT Meter 400 Amp

SURGE ARRESTER REQUEST

Date Customer Called: _____

Call Taken By: _____

Customer's Name _____

Phone Number: _____

Physical Address: _____

Mailing Address: _____

City/State/Zip: _____

Account No.: _____ Meter No. _____

Location No.: _____ Meter Multiple _____

Date Installed: _____ Inventory # _____

Service Order No. _____

Date to Billing: _____

DISCUSSED WITH CUSTOMER

Lightning/Surge passing through meter (direct hits)

Monitor lights on arrester (Periodically check that both RED lights are on)
If one or more lights are off we will come replace the arrester

Two stage protection (Point of Use)

Grounding

400 amp/CT meter (Not available right now) Get name and number for next year

Power will be off for 30 minutes

Lead time depends. Generally 2 weeks

Arrester attached to meter base

\$4.50 per month

Customer received packet

Comments: _____