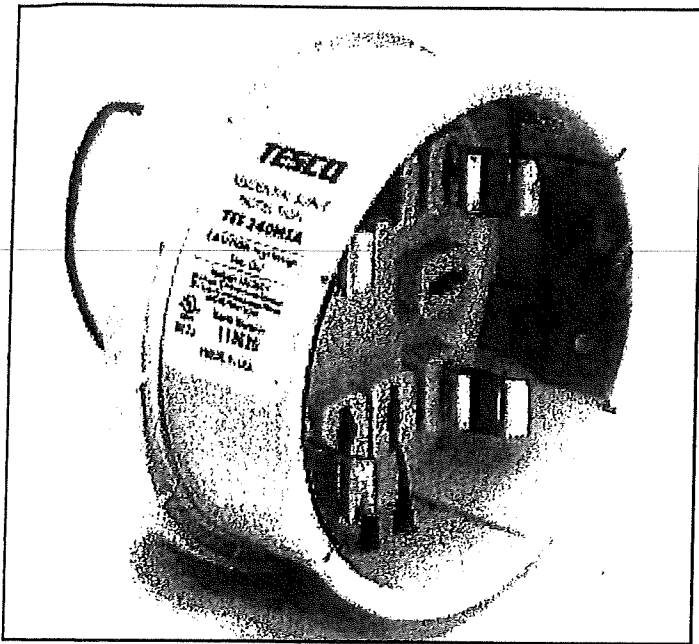




Watt Hour Meter Base Surge Arrester

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.

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 wires
- Competitive pricing

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. Prevents damage to computers, faxes, copiers, VCRs, TVs, stereos or other AC line powered electronic/ electrical equipment.

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

2019 TESCO LIMITED PRODUCT WARRANTY FOR SURGE PROTECTION CUSTOMERS

2051 N. Main Street, Suite 219
Coeur d'Alene, ID 83814

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

- | | |
|--------------|--|
| 1. \$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.) |
| 2. \$25,000: | TES 4PCT, TES 2PCT, TES 15NW, TES 20NW, TES 8CRJ45 |
| 3. \$10,000: | TES 8C/8P, TES 20C |
| 4. \$2,500: | TES 4PC, TES 4PT, TES 4P |
| 5. \$250: | TES 1PT, TES 1PC, TES 1P, TES 3P, TES 3C |

- 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.



2019 List of Covered Items

Anything **not** listed here is not covered under the warranty

Electronics

Cameras & Camcorders

Camcorders
Digital Cameras
Point & Shoot Cameras
SLR Cameras

Home Audio

CD Players
CD Recorders
Radios

Portable Electronics

Boom Boxes
MP3 Players
Personal CD Players
Personal Mini-Disc Players
Personal Radios & Cassettes

DVD, VCR & Other Video

Combination TV/VCR/DVD
DVD Players
Digital Video Recorders
Dual Deck VCR-DVD
Satellite Systems

Office & Communication

Answering Machines
Corded Phones
Cordless Phones
Handheld Organizers

Televisions

Combination TV/VCR/DVD
Plasma & LCD TV's
Regular Televisions

Accessories

Chargers
Drives & Storage Devices
Headphones
Microphones

Computers

Desktop Computers
Digital Cameras
Digital Printers
Drives
Fax Machines
Scanners

Office & Communication

Answering Machines
Corded Phones
Cordless Phones
Handheld Organizers – PDA's

Garage Door Openers

Garage Door Openers

WARRANTY DOES NOT COVER HOME THEATER SYSTEMS

WARRANTY DOES NOT COVER ELECTRIC VEHICLES, ELECTRIC VEHICLE CHARGERS, or ELECTRIC VEHICLE CHARGING STATIONS

WARRANTY DOES NOT COVER ELECTRIC DRONES or ELECTRIC DRONE CHARGERS

WARRANTY DOES NOT COVER SOLAR PANELS OR SOLAR PANEL INVERTERS

Anything **not** listed here is not covered under the warranty

White Goods / Appliances

Trash Compactors

Trash Compactors

Cooking

Cooktops
Drop-In Ranges
Freestanding Ranges
Range Hoods
Slide-in Ranges
Wall Ovens

Dishwashers

Built-In Dishwashers
Portable Dishwashers

Fans

Floor Fans
Stand Fans
Table Fans
Window Fans

Personal Appliances

Beauty & Grooming
Fountains
Heating Pads
Paraffin Spa
Massagers
Ironing Products

Power Tools

Angle Grinders
Buffers & Polishers
Circular Saws, Corded
Circular Saws, Cordless
Cordless Combo Kits
Drills, Corded

Floor Care

Canister Vacuums
Hand-Held Vacuums
Upright Vacuums

Freezer

Chest Freezers
Upright Freezers

Heaters

Portable Electric Heaters

Dehumidifiers

Console Humidifiers
Table Top Humidifiers

Laundry Care

Dryers
Washers
Energy Efficient

White Goods

Cutlery

Knife Sharpeners

Wet-Dry Vacs

Hand Held Vacuums
Wet-Dry Vacuums

Tools

Electrical Shop

Battery Charges
Battery Boosters
Electric Lanterns
Flashlights

Compressors & Air Tools

Carpentry Air Tools
Carpentry Compressors
Compact Compressors
Compact Inflators

Microwaves

Built-in Microwaves
Countertop Microwaves
Micro-Hood Combinations

Refrigeration

Bottom Freezer Refrigerators
Compact Refrigerators
Freezerless Refrigerators
Ice Makers
Side-by-Side Refrigerators
Top Freezer Refrigerators

Room Air Conditioners

Room Air Conditioners

Water Heaters

Electric Water Heaters
LP Gas Water Heaters
Natural Gas Water Heaters
*(WARRANTY DOES NOT COVER
TANKLESS OR ON DEMAND
WATER HEATERS)*

Small Kitchen Appliances

Blenders & Food Processors
Bread Makers
Can Openers
Food Slicers
Juicers
Coffee, Tea & Espresso Makers

Bench Power Tools

Band Saws
Bench Grinders
Miter, Radial Arm Saws
Blowers
Dadoes