

# Coaxial Line Surge Protection Device

The CLT Series provides Bidirectional Transient Voltage Surge Suppression for Coaxial Applications. Units provide protection against Transient Voltages that exceed nominal operating voltages. Devices can protect against surge current impulses up to 10kA/wire.

Models are available to protect CATV, SATV, CCTV, Digital Modems, Ethernet ThinNet (10 Base 2) and Arcnet. Consult factory for special applications.

The CLT Series installs in series with the coaxial lines and diverts harmful transient energies away from sensitive system components. Units operate over a wide range of temperatures and interface with standard coaxial protocols.



#### Dimensions







#### (Diagrams not drawn to scale)

Product Specifications				
Max. Surge Current	10kA per wire			
Interface	Bi-directional			
Response Time	Typically <1 picosecond			
Series Resistance	< 0.1 Ohm			
Nominal Data Rate	100 Mbps			
Enclosure	Polycarbonate UL94 V-0			
Max. Operating Temp	-40° to +85° C			
Warranty	15 Year Product Warranty			

Mechanical Specifications				
Mounting:	Series devices suitable for din rail or wall mounting			

ETL Listed to UL497A Standard. (Isolated Loop Protector)

Model Number	Application & Voltages	Connector	Case Style	Mounting (Standard)
CLT/	-XXX	-X	-X	-X
	Replace XXX with:	Replace X with:	Replace X with:	Replace X with:
Coaxial Line Treater	CTV = 36V Cable TV <b>TVC = 75V Cable TV</b> CCV = 10V Video <b>VCC = 75V Video</b> ENT = 18V 10 Base 2 ARC = 30V Arcnet <b>NTV = 75V Satellite</b>	1 = F Type 2 = BNC	M = Din Rail Case	0 = Din Rail Wall Mount
Note: Shields are protected unless otherwise noted.	NOTE: Bold items are Gas Tube (only).	Consult factory for gender options.		

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All product dimensions provided are  $\pm \ 0.125$ Email: sales@metertreater.com

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### **GENERAL**

1. This document provides detailed information on how to install and operate the CLT Series of Surge Protection Devices (SPD).

2. Incorrect installation may significantly impair the performance of the SPD. It is particularly important that all installation procedures and guidelines be followed exactly.

# 3. INSTALLATION OF THIS DEVICE SHOULD ONLY BE PERFORMED BY A QUALIFIED INSTALLER.

4. CHECK TO ENSURE THAT ALL CONNECTIONS ARE CORRECT AND SECURE BEFORE ENERGIZING.

5. KEEP THIS MANUAL IN A SAFE, DRY PLACE FOR FUTURE REFERENCE.

### DANGER HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

Thoroughly read and comprehend all instructions before commencing installation.

This equipment must be installed by qualified electrical personnel in accordance with all applicable codes which supersede these instructions.

Improper installation or misapplication of these devices may result in death or serious injury.

Failure to follow these instructions could result in damage to the electrical system(s) or related equipment.

Apply appropriate Personal Protective Equipment (PPE) and follow safe electrical work practices. See NFPA 70E

### <u>CAUTION</u> HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

Never install this unit if it has fallen, has been dropped or looks damaged in any way. Return device to factory for diagnostic testing.

### WARNING HAZARD OF EQUIPMENT DAMAGE

This device does NOT contain serviceable parts. Do NOT attempt to test this device, damage may occur. Any alterations, tampering or misuse or unauthorized repairs of this product will void its original factory warranty.

Never install on an ungrounded system.

### WARRANTY INFORMATION

Meter-Treater, Inc. (MTI) warrants all CLT Series models to be free from defects, and will at our option repair or replace the product should it fail within fifteen (15) years from the first date of shipment. This warranty is limited to defects in workmanship or materials, and does not cover customer damage, abuse or unauthorized modification. If this product fails or does not perform as specified, your sole recourse shall be repair or replacement as described above. Under no condition shall MTI be liable for any damages incurred by the use of this product. Damages include, but are not limited to, the following: lost profits, lost savings and incidental or consequential damages arising from the use of or inability to use this product. MTI specifically disclaims all other warranties, expressed or implied, and the installation or use of this product shall be deemed an acceptance of these terms by the user.

### WARRANTY RETURNS

All warranty and non-warranty repairs must be returned freight prepaid and insured to MTI. All returns must have a Return Authorization (RA) number on the outside of the shipping container. This number may be obtained from MTI Warranty Department (800) 342-6890. Products returned without an RA number will not be accepted.

IF UNIT(S) ARE RECEIVED DAMAGED, NOTIFY THE SHIPPING COMPANY IMMEDIATELY. RETAIN ALL SHIPPING CONTAINERS AND PACKING MATERIALS FOR INSPECTION.

Please Note: There are no user serviceable parts inside.



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# CLT Series Surge Protection Device

# USER MANUAL AND INSTALLATION GUIDE





### COAXIAL LINE PROTECTOR

### COMMERCIAL INSTALLATIONS

## **SCHEMATIC**



## **DIMENSIONS**







# **INSTALLATION**

The CLT Series of products are easy to install. The following instructions clearly explain each step:

**NOTE:** Follow the installation instructions exactly; if the surge protector is improperly installed, the current limiting feature could be rendered inoperable.

CLT interface Single-Circuit DIN Models:

1. Mount the CLT surge protector in the desired location. For best performance the surge protector should be as close as practical to the equipment to be protected. The CLT DIN model may be mounted on standard DIN rail or the mounting tabs located near the terminals may be extended for direct placement using #6 fasteners placed 3-7/8 inches (98.4mm) apart.

**NOTE:** The CLT Surge protector is connected in series. The Line side connected internally to the load side directly across from it. (see diagram)

- 2. Connect the Load (protected) Side of the CLT surge protector to the communication equipment to be protected.
- 3. Connect the Line (unprotected) Side of the CLT surge protector to the incoming communication cable.
- 4. Connect a ground wire from the CLT Surge protector to the nearest available chassis ground. There are two grounding options for the CLT surge protector. Only one ground connection is required. Connect the ground wire at either the Line or Load side.
  - A. Hard ground: The CLT surge protector has a direct connection to the ground and is best used when the protected equipment is grounded at the same general location as the CLT surge protector.
  - B. Floating ground: The CLT surge protector is used at a remote site where a camera (or other equipment) does not reference ground or has its own ground. The floating ground is used to prevent ground current loop that can cause problems with the signal.

# **CAUTION - IMPORTANT SAFETY INSTRUCTIONS**

- 1. Never install communication wiring during a lightning storm.
- 2. This product is for INDOOR USE ONLY OR FOR USE INSIDE AN ENCLOSURE APPROVED FOR OUTDOOR USE.
  - 3. Read and understand all instructions prior to installation and operation.

## **WARNING**

Should your equipment or building be subject to a direct lightning strike, this product will not provide complete protection.

**NOTE:** If applicable, the protected device/equipment should also have power protection because it is still vulnerable to transients on the power lines. Omitting power protection poses a continued threat of failure at the communication interface.

## GROUNDING

The unit's ground wire must be as short as possible with a minimum amount of bends. This will increase the effectiveness of the surge protector. Ground wire sizes between 20AWG and 14AWG are recommended. Larger size ground wires are more effective. Ground wire length in excess of 12 inches (30.5cm) is not recommended.

Typically the unit is hard grounded at the communication equipment and connected to the floating ground at the remote site to prevent ground loop currents due to different ground potential references.

The surge protector must not be hard grounded to ground points that are independent of AC ground.

NOTE: For information as to how your equipment is grounded, consult the equipment's user manual.