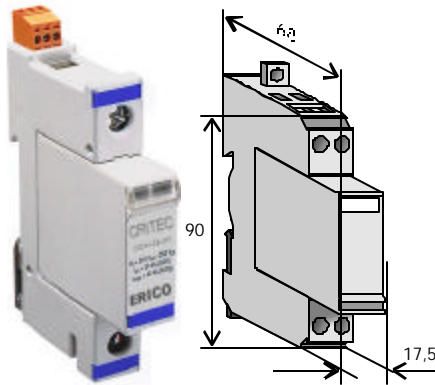


## INSTALLATION INSTRUCTIONS



**PRODUCT SERIES**  
**UTB - xx**

### 1. PREPARATION

**DANGER:** Possible electrical shock or burn hazard. Qualified personnel should only install this product. Failure to lockout electrical power during installation or maintenance can result in fatal electrocution or severe burns. Before making any connections to this electrical panel please ensure that power has been removed from all associated wiring, electrical panels, and other electrical equipment.

- CAUTION NOTES :**
1. The installation of this Universal Transient Barrier (UTB) should follow observe nationally recognized codes of authorities having jurisdiction to ensure correct and safe operation.
  2. Check to ensure that the maximum continuous operating voltage  $U_c$  of the UTB selected is higher than that expected on the circuit being protected.
  3. It is important to ensure that the maximum line current rating  $I_L$  of the UTB is not exceeded.
  4. Check that the maximum operating frequency of the circuit does not exceed that of the UTB.
  5. The ground (earth) terminal must be connected to a low impedance earth (<10 ohms) for correct operation.
  6. Do not perform a "Flash Test" or use a Megger to test circuits that are protected with these UTB units. This may damage the UTB(s) and affect the insulation readings being performed.
  7. Do not attempt to open or tamper with the UTB unit in any way as this may compromise performance and will void warranty.

### 2. INTRODUCTION

The CRITEC Universal Transient Barrier (UTB) has been designed to protect equipment from the damaging effects of surges on low voltage data, control and signaling lines. Damage can also occur when surges entering the equipment

via the mains power cabling. ERICO recommends the installation of additional surge protection on these mains circuits. The CRITEC DSD series compliments the UTB series for such applications.

UTB units are available in a number of different operating voltages to suit the specific application intended. The TA and SA models are intended to protect equipment connected to telephone subscriber lines.

### 3. ELECTRICAL CONNECTION

Please follow the sequence indicated:

1. First, ensure that power is removed from the area and the circuits to be connected.
2. Connect line side wiring to the UTB screw terminals marked LINE (a, b). The "line side" of the UTB is the "exposed side" where the surge is expected to originate.
3. Connect equipment side wiring to the UTB screw terminals marked EQUIP (a', b'). The "equipment side" of the UTB is the protected side and wires to the equipment being protected.
4. The UTB should be installed as close to the equipment being protected as possible. Where protecting long cable runs (< 30 meters), a UTB unit should be installed at either end of the cable.
5. Connect the UTB's ground screw terminal to a low impedance ground using as direct a path as possible. This "ground" should also be referenced to the equipment being protected. When the UTB is installed on a DIN rail, grounding of the unit can be achieved by connecting the rail to ground.

### 4. MOUNTING

UTBs are designed to clip to 35mm (top hat) DIN rails (standard EN50022) set in the horizontal position with the UTB securing clips towards the bottom of the rail and the label text facing the correct way up.

**INSTALLATION INSTRUCTIONS**

**5. MAINTENANCE**

Failure of a UTB is usually indicated by interruption of data or a fault on the signal (control) line. The UTB has been designed for simple plug-in modular replacement, without the need to disturb circuit wiring.

Before removing a UTB module from service, ensure that the power has been removed and if possible “locked out”. Qualified personnel should only undertake replacement of UTB modules. Replacement plug-in modules are available.

**NOTE:** *It is very important to ensure that the new module is of the same type and voltage as that being replaced.*

Table 1. UTB operating specifications

Operation:							
Model	UTB-5	UTB-15	UTB-30	UTB-60	UTB-110	UTB-SA	UTB-TA
Nominal System Voltage Un	5V - 3V~	15V - 10V~	30V - 21V~	60V - 42V~	154V - 120V~	Analog telephone circuits	
Max. Continuous Operating Voltage Uc	7V - 5V~	18V - 12V~	33V - 23V~	64V - 45V~	200V - 150V~	-	
Max. Line Current I <sub>L</sub>	1.5A					160mA	
Frequency @ 3dB / 120°	<500kHz	<1MHz	<2MHz	<4MHz	<2MHz	<15MHz	
Connections	6mm <sup>2</sup> (#18AWG to #10AWG). Grounding via terminal or DIN rail connection						