



# Series 24 BET (66-Term)

#### **MECHANICAL SPECIFICATIONS FOR SERIES 24 BET**





100-Pair



25 & 50-Pair

#### Standard Warranty

Tii Technologies warrants Products to be in good working order under normal use and main - tenance for one year. If any Product is not in good working order during the one year period of this Warranty, Tii Technologies at its election, shall repair, replace or refund the purchase price of the product. Any action with respect to this Warranty must be brought within one year from the date of receipt of the product by the end user.

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### SOLUTIONS FOR VOICE AND DATA NETWORK PROTECTION





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#### Installation Instructions

#### Use and Location Selection

The Series 24 BET are intended for indoor use only and should be located:

- 1. Inside a building or other suitable shelter.
- 2. Mount on a suitable vertical surface that is firm and screw holding power is adequate.
- 3. Where easily accessible and where maintenance will not block a passageway.
- 4. Where there is no risk of severe moisture.
- With adequate clearance from electric light fixtures, equipment, and power circuits and where there is no risk of damage by moving machinery, hoists, and doors etc.
- 6. With provisions for adequate space around the unit for cables and/or splices.
- 7. Near a suitable earth ground.

#### **Protector Modules**

Series 24 BET with an "M" in the model number will accept male, also known as five-pin style protector modules. Protector modules must be listed for primary protection per UL497 in order to maintain the UL listing of the BET. The effectiveness of the protection depends heavily upon the performance specifications of module chosen. Tii Technologies carries a complete line of protector modules to suit a va riety of applications. See the Tii Technologies web site (www.tiitech.com) or call our customer service department (888) 844-4720 for assistance in choosing the best Protector Module for your application.

#### Note:

The BET and Protector Modules shall be installed and connected to earth ground in accordance with the instructions contained herein and the applicable requirements of the National Electric Code, ANSI/NFPA-70, Article 800, Section C and any applicable State Regional, and Local Codes.

#### Caution:

**Risk of Electrical Shock** –The BET is not to be used without associated Protector Modules.

# Installation





- 1. Align unit in desired location on a vertical mounting surface.
- 2. Affix unit securely with four #10 x  $\frac{3}{4}$ " wood screws (supplied) or other hardware suit able for use on the mounting surface.
- 3. Connect a #6 AWG ground wire from the ground termination point on the BET to a suitable earth ground. (See recommended grounding section below).
- 4. If the unit is being installed in a cascade configuration with other BET, connect a #6 AWG ground wire from the ground termination point on the unit to a ground point on an adjacent BET.
- 5. For optimum protector performance, all bends in the routing of the #6 ground wire should be of a minimum 8-inch bend radius.
- 6. Within the splice chamber of all Series 24 BET is a ground wire connected internally to the ground termination point. When installing BET on OSP cable runs between buildings, this ground wire should be attached to the shielding of AT ONE END of the outside plant cable using a (user supplied) "B-Bond" clamp. For proper installation of the B-Bond clamp, consult the instructions from the B-Bond clamp manufacturer.
- 7. To install the incoming OSP cable on a single stand-alone BET follow the instructions below.
  - a) Remove the small metal knockout at the end of the splice chamber that you wish the cable to enter (top or bottom.)
  - b) Install one half of the included strain relief bushing to the fixed side of the splice chamber knock out such that the bushing protrudes outward from the BET.
  - c) Take the OSP cable and pass it through the bushing with enough cable to make punch-downs on the entire block with the individual cable pairs.
  - d) Strip the shielding from the cable, ground the shielding as needed, and punch down the cable pairs on the block.
  - e) Note: all connections made to the BET 66 and 110-termination blocks must be of #22 AWG or #24 AWG. Series 24 BET are equipped with #26 AWG fuse wires on the unprotected (OSP) side of the BET. These #26 fuse wires are known as the "fusible link," and will protect the equipment user by fusing open in the event of a sustained over-current condition.
  - f) When punchdowns are complete, using UL listed electrical tape, build up the diameter of the OSP cable at the level of the half bushing such that the cable fits snuggly into the half bushing.
  - g) Place the second half of the bushing over the cable, and secure it with one of the provided cable ties.
  - h) Close the splice chamber door, and lock with padlock if desired.
- 8. Vertically Stacking the Series 24 BET:
  - a) The procedure for vertically stacking is generally limited to 100-pair BET,b) MS<sup>2</sup>, 710, and RJ21input side BET can be stacked 5 high.

- c) 66 input BETs can be stacked 4 high.
- d) 110 input BETs can be stacked 2 high.
- e) Mount the first BET at the highest position on the wall in which you wish to stack the BET.
- f) Use the appropriate 2-ended bushing (included) to locate the next lowest BET. Keep the half bushings installed to the fixed side of one BET as you mount the next BET.
- g) After all BETs have been secured to the wall, pass the cables into and through the BETs.
- h) Remember to ground ONE SIDE of each OSP cable you are running to the BETs using the ground wire in the splice chamber and a b-bond clamp, as described in Step 6.
- i) One all of the cables have been run and the pairs you wish to terminate have been punched down, build up each section of OSP cable at the level of each half bushing such that the cable fits snuggly into the half bushing.
- j) Place the second half of each bushing over the cable, and secure it with one of the provided cable ties.
- k) Close each splice chamber door, and lock with padlock if desired.
- I) Connect a #6 AWG ground wire from the ground termination point on the unit to a ground point on an adjacent BET.
- m) Connect the final BET from its ground termination point to a suitable earth ground. (See recommended grounding section below).
- 9. Series 24 BET can also be arranged in a Matrix configuration on a wall with each BET fed by a 100-pair Cable and all of the 100 pair cables run the around the outside of the BETs. See Figure 4. Follow instructions for individual BET installation, Steps 1 thru 7.
- 10. One knockout filler plug is included with every 25 and 50-pair Series 24 BET. One large and one small knockout filler plug is included with every 100-pair. These filler plugs can be used if you accidentally remove the wrong knockout, or if you wish to change the location from which you feed the BET with the incoming OSP cable(s).

## **Recommended Grounding**

Utilize the best grounding available. Connecting to a poor ground will reduce the effectiveness of the protection device. Never use excess wire that will result in looping, gathering, or winding of the ground wire. Use the shortest ground wire that is practical. If you are uncertain of proper grounding for BET consult a licensed electrician.

