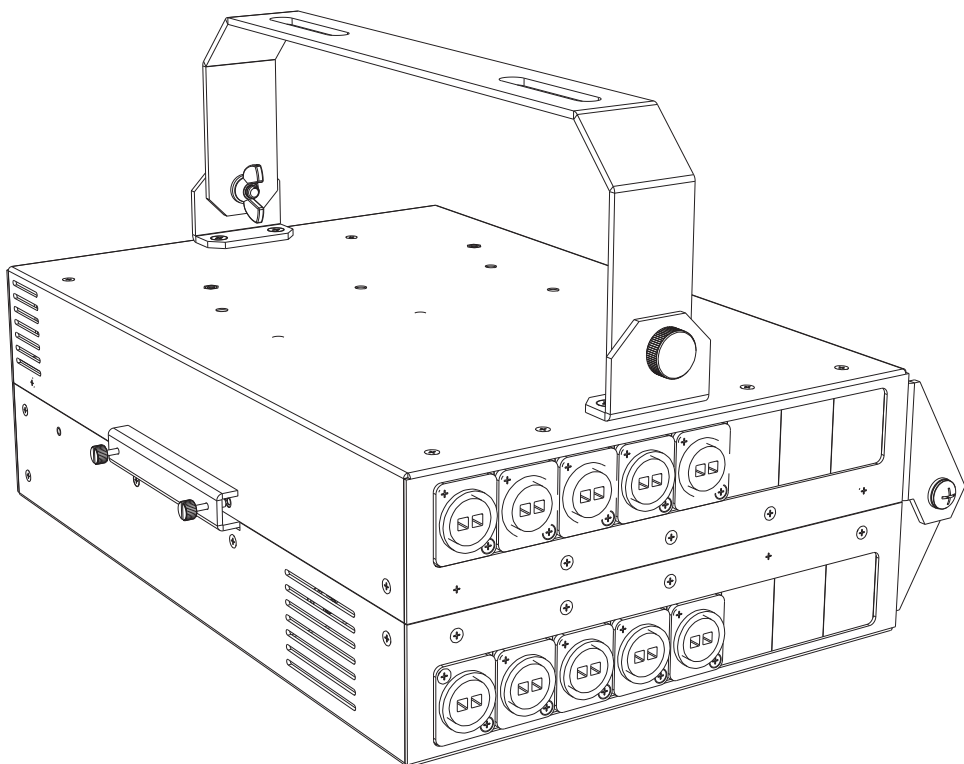




fiberplex
TECHNOLOGIES, LLC

USER MANUAL

**6 Position Truss Mount Enclosure for TD Series
Modules with 16 Channel Modular Front Panel
TTM**

Warning for Your Protection

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any of the ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

The apparatus shall not be exposed to dripping or splashing. No objects filled with liquids, such as vases or drink cups, shall be placed on the apparatus.

“WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.”

General Installation Instructions

Please consider these general instructions in addition to any product-specific instructions in the “Installation” chapter of this manual.

Unpacking

Check the equipment for any transport damage. If the unit is mechanically damaged, if liquids have been spilled or if objects have fallen into the unit, it must not be connected to the AC power outlet, or it must be immediately disconnected by unplugging the power cable. Repair must only be performed by trained personnel in accordance with the applicable regulations.

Installation Site

Install the unit in a place where the following conditions are met:

- The temperature and the relative humidity of the operating environment must be within the specified limits during operation of the unit. Values specified are applicable to the air inlets of the unit.
- Condensation may not be present during operation. If the unit is installed in a location subject to large variations of ambient temperature (e.g. in an OB-van), appropriate precautions must be taken.
- Unobstructed air flow is essential for proper operation. Ventilation openings of the unit are a functional part of the design and must not be obstructed in any way during operation (e.g. - by objects placed upon them, placement of the unit on a soft surface, or improper installation of the unit within a rack or piece of furniture).
- The unit must not be unduly exposed to external heat sources (direct sunlight, spot lights).

Ambient Temperature

Units and systems by FiberPlex are generally designed for an ambient temperature range (i.e. temperature of the incoming air) of +5...+40 °C. When rack mounting the units, the following facts must be considered:

- The permissible ambient temperature range for operation of the semiconductor components is 0 °C to +70 °C (commercial temperature range for operation).
- The air flow through the installation must allow exhaust air to remain cooler than 70 °C at all times.
- Average temperature increase of the cooling air shall be about 20 °C, allowing for an additional maximum 10 °C increase at the hottest components.

If the cooling function of the installation must be monitored (e.g. for fan failure or illumination with spot lamps), the exhaust air temperature must be measured directly above the modules at several places within the enclosure.

Grounding and Power Supply

Grounding of units with mains supply (class I equipment) is performed via the protective earth (PE) conductor integrated in three pin Phoenix™ connector. Units with battery operation (< 60 V, class III equipment) must be earthed separately. Grounding the unit is one of the measures for protection against electrical shock hazard (dangerous body currents). Hazardous voltage may not only be caused by defective power supply insulation, but may also be introduced by the connected audio or control cables.

This equipment may require the use of a different line cord, attachment plug, or both, depending on the available power source at installation. If the attachment plug needs to be changed, refer servicing to qualified personnel.

Warranty, Service and Terms and Conditions of Sale

For information about Warranty or Service information, please see our published 'Terms and Conditions of Sale'. This document is available on fiberplex.com, or can be obtained by requesting it from clients@fiberplex.com or calling 301.604.0100.

Disposal

Disposal of Packing Materials

The packing materials have been selected with environmental and disposal issues in mind. All packing material can be recycled. Recycling packing saves raw materials and reduces the volume of waste. If you need to dispose of the transport packing materials, recycling is encouraged.

Disposal of Used Equipment

Used equipment contains valuable raw materials as well as substances that must be disposed of professionally. Please dispose of used equipment via an authorized specialist dealer or via the public waste disposal system, ensuring any material that can be recycled has been. Please take care that your used equipment cannot be abused. After having disconnected your used equipment from the mains supply, make sure that the mains connector and the mains cable are made useless.

Disclaimer

The information in this document has been carefully checked and is believed to be accurate at the time of publication. However, no liability is assumed by FiberPlex for inaccuracies, errors, or omissions, nor for loss or damage resulting either directly or indirectly from use of the information contained herein.

Introduction

Complementing the flexibility of the FiberPlex 'TD Series' of fiber optic modules, the TTM provides connection, mounting, power, and cable management for up to 6 front facing TD modules in a compact and rugged Truss Mountable aluminum enclosure. Each of the 16 channels of the modular TTM front panel can accommodate any Neutrik™ D Series connector, LC and ST barrel connectors, DB9 connectors, etc. The unused positions are simply filled by inserting blank panels. Additionally, the TTM has 4 additional modular channels on the rear of the unit for greater flexibility. The rear connectors allow for cable attachment in opposing directions without worrying about bending the fiber-optic cables, while also helping to keep the cabling neat and organized. The integrated key-hole mounting holes on the bottom of the TD units lock securely on mating studs while a rear retention bar holds them securely in place. A 6 position power wiring harness and included power adapter provide power and a positive earth ground to the modules via 3 position Phoenix™ locking power connectors. Managing all that cabling and fiber can be tedious; the TTM allows a simple solution to put maximum capacity and flexibility into a single truss mounted unit.

Key Features

- Provides mounting and power for up to 6 single wide TD Series modules, or up to 2 double wide and 2 single wide modules
- Perfect for connecting to truss mounted equipment
- Accommodates up to 16 connector positions
- Plates available for standard Neutrik™ D Series connectors, LC and ST barrels, DE-9, etc
- Reconfigure in minutes
- Securely seats modules with positive retention bar
- Integrated AC power supply and wiring harness included
- Convenient cable tray for clean installation

Getting Started

Initial Inspection

Immediately upon receipt, inspect the shipping container for damage. The container should be retained until the shipment has been checked for completeness and the equipment has been checked mechanically and electrically. If the shipment is incomplete, if there is mechanical damage, or if the unit fails to operate notify FiberPlex and make the shipping materials available for the carrier's inspection.

Chassis Mounting

The TTM can be opened by unscrewing the two thumbscrews along the latch, and swinging the chassis open about the hinges. To prevent pinching injury, keep fingers away from the open edges when closing the chassis. Mount the chassis to any standard truss section using two truss clamps, also known as Cheeseborough clamps, (not included) of the appropriate size. The TTM mounting bracket is designed to accommodate truss clamps with M10 mounting bolts. These clamps shall be affixed to the swivel bracket of the chassis, with the M10 mounting bolt through each slot. The rotational alignment can then be adjusted by loosening the two wing nuts where the bracket joins the chassis, moving the TTM to the desired position, and then tightening the wing nuts and the truss clamps to hold it in place. The chassis should be located in an environment where an ambient temperature between 0° and 50° C can be maintained, with all vents unobstructed.

Power Requirements

Any combination of 6 FiberPlex TD Series Modules can be mounted in a TTM. Each TD module can draw as much as 6 Watts, and the ventilation fan can draw up to 1.5 Watts, for a total maximum power consumption of 37.5 Watts. Power is supplied to the individual modules through a pre-wired Power Harness that connects the on board power supply to the modules using 3 pin Phoenix™ connectors. Power is supplied to the TTM as AC mains power (100 to 240 V, universal) through a Neutrik PowerCON TRUE1 connector on the rear of the enclosure.

Mounting Options

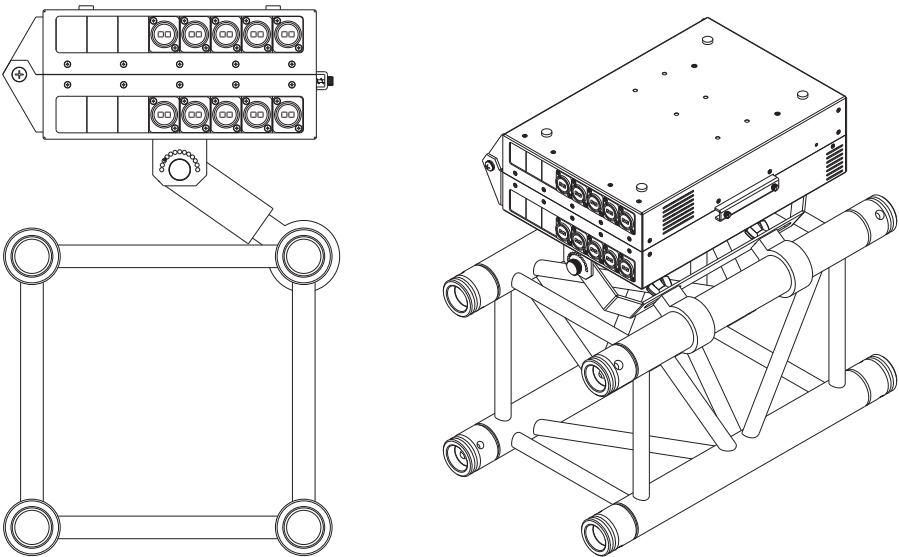


Figure 1 Truss Mount using Cheeseborough Clamps (not included)

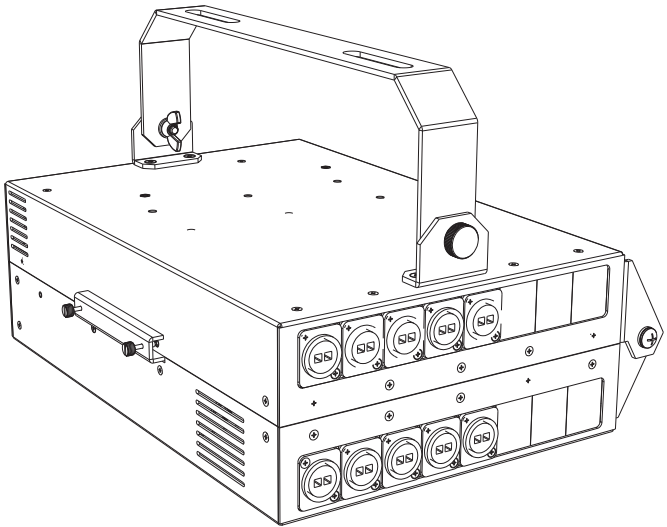


Figure 2 Portable "Drop Box"

Features

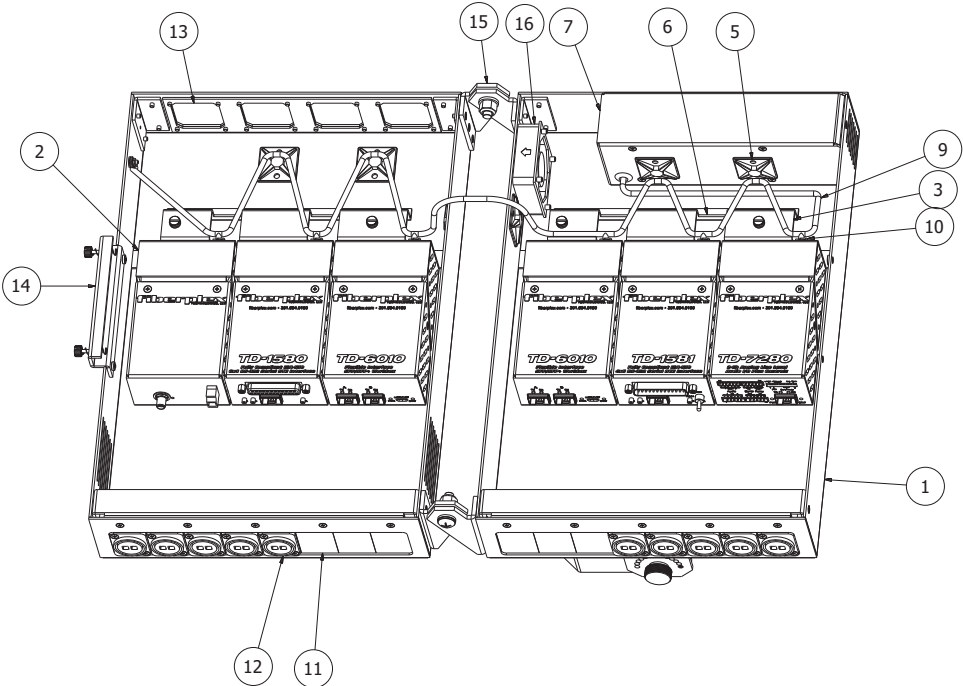


Figure 3: TTM Open

- 1 **TTM Enclosure** – The hinged trays of the TTM are made from rugged aluminum and neatly fold closed, giving it a low profile while mounted to a truss. The unit has 6 pairs of studs pressed into the base to mate with the keyholes on TD-Series modules.
- 2 **FiberPlex TD-Series Modules (Not Included)** – The TTM can accommodate up to 6 TD-Series modules or two double-wide modules and two additional single-wide modules.
- 3 **Retention Bar &** 4 **Retention Screws** – Once the TD-Series modules are securely seated on the pressed studs, the retention bar slides in behind them to secure the modules tightly in place. Two retention screws are then tightened to hold the bar.
- 5 **Cable Tie Down** – Six tie-wrap bases are affixed within the enclosure to allow for clean management of cabling to the TD-Series modules. Tie-wraps can be used to secure cable bundles against the rear and inside hinge face to prevent pinching of the cable when closing the assembly.
- 6 **Back Shell Relief** – The bar provides clearance notches for the Phoenix™ back shells installed on the wiring harness or individual power connections. These relief cuts also ease insertion of the power connections while the retention bar is in place.
- 7 **Power Supply Box** – The AC-DC converter, a ground pin, and the AC wiring are completely contained within the power supply box to prevent electrocution. This high-efficiency power unit can supply enough power to run all six TD modules at full load and provides over-current, over-voltage, and short circuit protection.

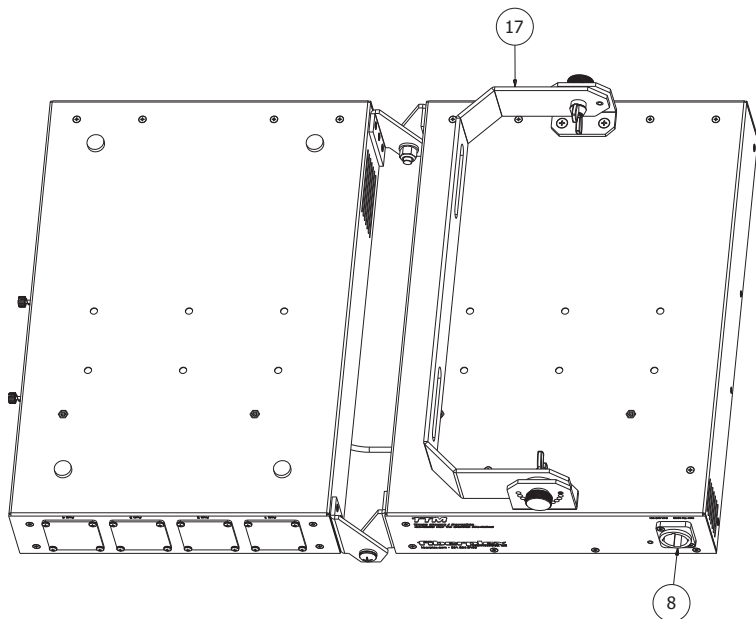
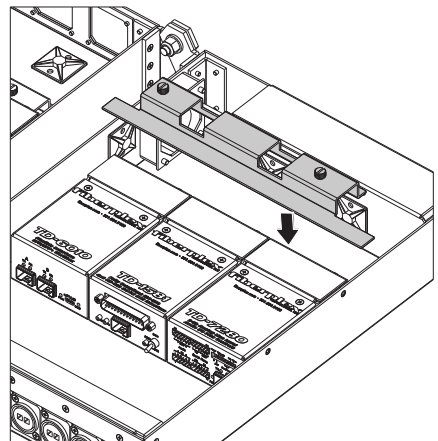
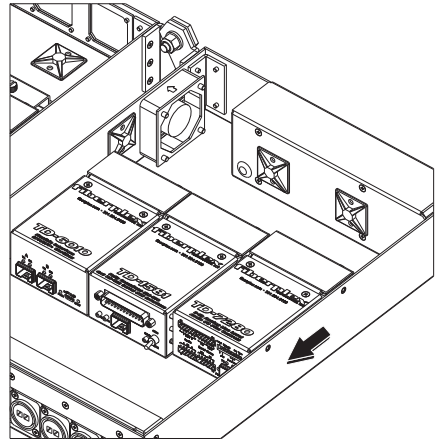
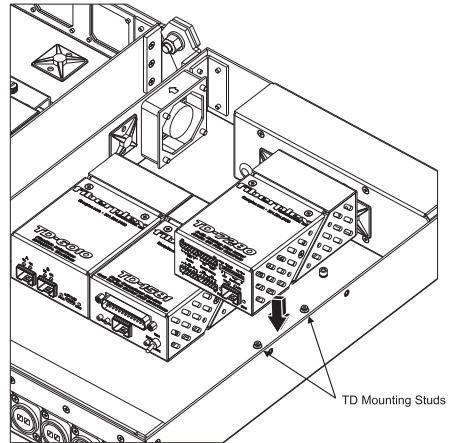


Figure 4 TTM Open, Bottom

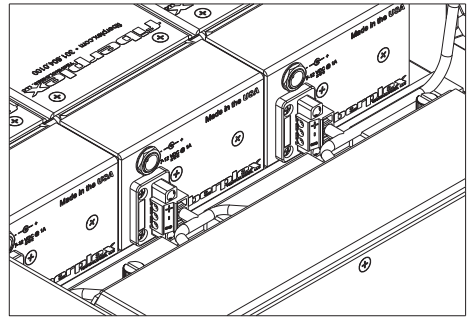
- 8 PowerCON TRUE1 Connector** – AC power entry for the unit. This connector mates with a standard PowerCON AC plug to receive input power with a flexible voltage range of 100 to 240 VAC.
- 9 Power Harness with (6 each)** **10 Phoenix™ Power Connectors** – The TTM comes standard with a 6-position wiring harness. This harness receives its power from the integrated power supply.
- 11 Connector Position Blanking Plates** – These plates fill unused connector space in the front of the unit.
- 12 I/O Connector Positions** – Input and Output connectors to the TD-Units are provisioned here.
- 13 Rear Connector Plates** – The unit can be equipped with up to 4 I/O connectors in the rear, allowing for easy bidirectional connection. Please note that these plates are differently sized and not interchangeable with the front I/O connector plates.
- 14 Enclosure Latch** – The unit is securely closed screwing the two captive screws in the latch bracket into holes on the opposite enclosure half.
- 15 Hinge** – The reinforced aluminum hinges allow the unit to smoothly swing open for easy service and reconfiguration, and swing closed for a compact profile during use.
- 16 Ventilation Fan** – The unit comes equipped with a quiet running 50 mm fan to remove any excess heated air inside the enclosure.
- 17 Swivel bracket** – Attached to the enclosure is a swivelable mounting bracket. Truss clamps are mounted in the two slots. The swivel position of the bracket can be adjusted by loosening the thumbscrews, then squeezing the two sides together to free the positioning pins. While squeezing, rotate the bracket into the desired position, then let go and tighten the thumbscrews. Optionally, wing nuts can be screwed onto the thumbscrews and jammed against the mounting bracket threads to provide vibration resistance.

Installing TD Modules

1. Orient the TD Series module with the rear (power side) facing the rear of the TTM
2. Align the large opening of the keyhole on the bottom to the TD module with the pressed studs on the Mounting Tray
3. Lower the TD module over the studs until the module is flat on the tray and slide to the front of the Mounting Tray until the module stops
4. Repeat steps 1-3 until all desired modules are installed.
5. Lower the Retention Bar flat on the tray so that it is on the rear (power) side of the TD modules and straddles the threaded standoffs
6. Push the Retention Bar forward until it is secure against the TD modules, there should only be a tiny shift as it tightens against the unit. Tighten the Retention Screws. Repeat steps 5 and 6 for the three modules on the other half of the enclosure.

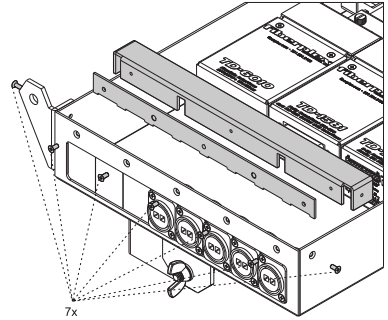


7. Connect the Phoenix™ power connector from the Power Harness at into its mating connector on the TD module in each position.
8. Install loaded TTM onto truss with appropriate Cheeseborough clamps.



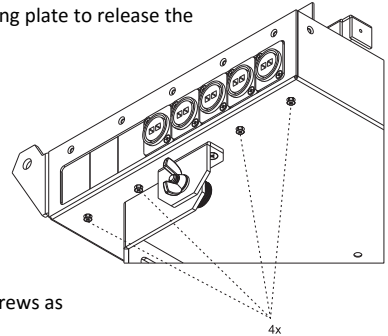
Reconfiguring Front Connectors

1. Unscrew and remove the upper positioning and holding brackets by removing the 7 retaining screws. Note that the screw that protrudes through the hinge bracket is slightly longer than the others.



2. Slightly loosen the 4 screws holding the bottom mounting plate to release the modular connector plates.

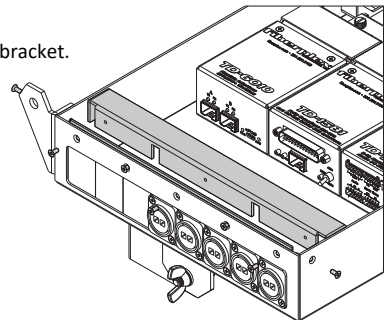
3. Replace and rearrange connector plates as needed, taking care to orient the chamfered edges towards the front of the enclosure.



4. Replace and the upper positioning bracket using two screws as shown.

5. Tighten down the screws which hold the lower holding bracket.

6. Replace the upper holding bracket and tighten all screws.



Specifications

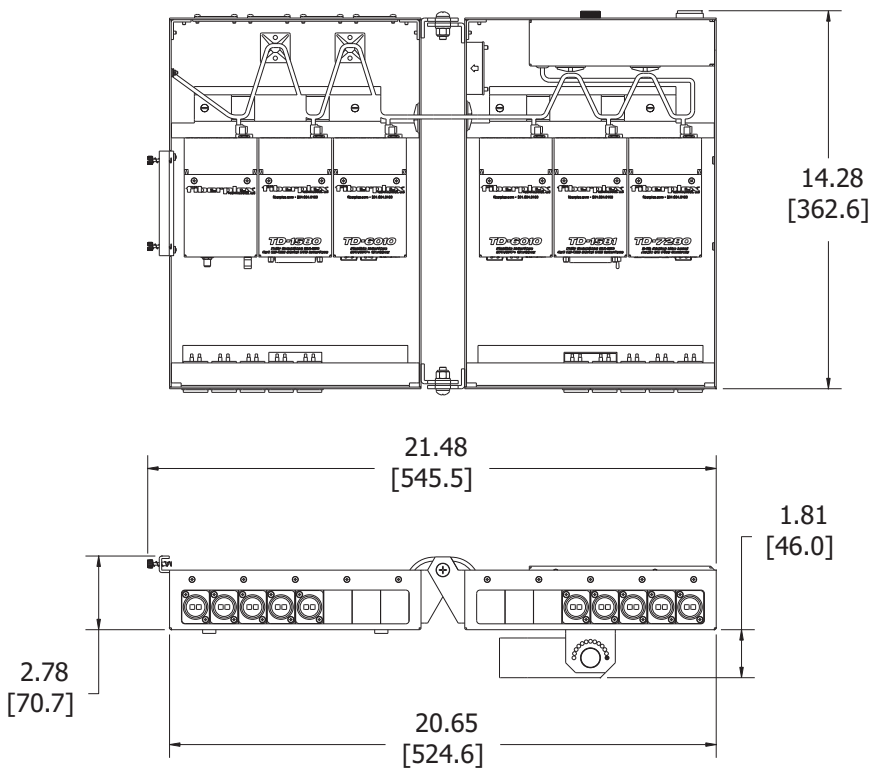


Figure 5 TTM Dimensions, Case Open

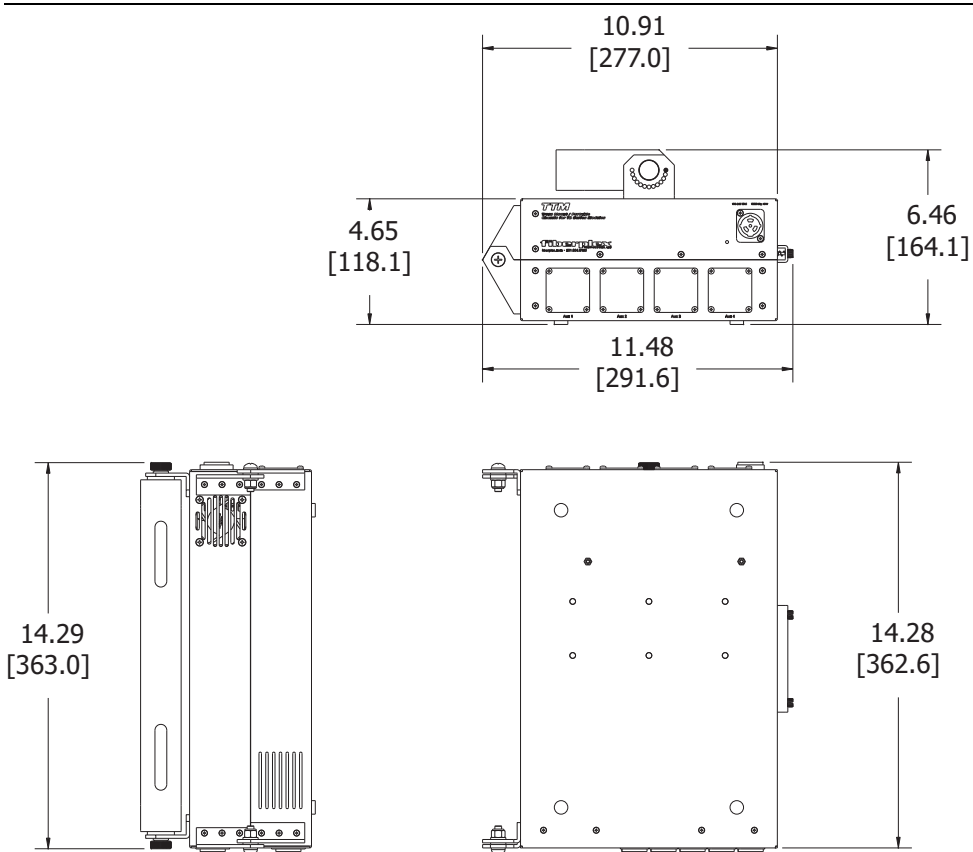


Figure 6 TTM Dimensions, Case Closed

PHYSICAL SPECIFICATIONS					
		Length	Width	Height	Weight
Case Dimensions (Unloaded)		14.3 in (363 mm)	11.4 in (290 mm)	4.5 in (114 mm)	6.5 lb (2.9 kg)
ELECTRICAL SPECIFICATIONS					
		Min	Typ	Max	Units
Power Requirement	Voltage Range	100	110	240	VAC
	Power Line Frequency	50	-	60	Hz
	Power Consumption	-	18	40	W
Power Connector	PowerCON TRUE1 connector on rear				

