

fiberplex
TECHNOLOGIES, LLC

USER MANUAL

**6 Position Powered Rack for TD Series Modules
TDR-01-AC**

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, 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.

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Introduction

Complementing the flexibility of the FiberPlex 'TD Series' of fiber optic modules, the TDR-01-AC provides mounting, power and cable management for up to 6 modules in a compact and rugged aluminum 1U rack. The integrated key-hole mounting holes on the bottom the TD units lock securely on mating studs while a rear retention bar holds them securely in place. A 6 position wiring harness and included power adapter provide, not just 9 VDC power, but a positive earth ground to the modules via 3 position Phoenix™ locking power connectors. Managing all that cabling and fiber can sometimes be quite a chore so an extended cabling tray with integrated tie down points are provided to help make your installation clean.

Key Features

- Provides mounting and power for up to 6 TD Series modules
- Securely seats modules with positive retention bar
- Power adapter and wiring harness included
- Convenient cable tray for clean installation
- Grounding stud for positive earth ground
- Reinforced rack ears

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

Mount the empty chassis using fasteners appropriate to your standard 19" rack enclosure. All four (4) mounting points MUST be utilized. Ensure that there exists adequate clearance for ventilation. The chassis should be located in an environment where an ambient temperature between 0° and 50° C can be maintained.

Power Requirements

Any combination of 6 FiberPlex TD Series Modules can be mounted in a TDR-01-AC. Each TD module can draw as much as 500 mA at 9VDC, so with the maximum 6 modules installed the maximum power requirement for a power adapter is 3A at 9V or 18 Watts. Power is supplied to the individual modules through a pre-wired Power Harness that connects to the modules using a 3 pin Phoenix™ connector. Two pins supply the 9 VDC and the third pin connects a positive earth ground to a ground lug on the rear of the TDR-01-AC. For best performance it is recommended to connect the ground lug to a known good earth ground. DC power is supplied to the Power Harness through the included power adapter connected to the rear circular connector.

Features

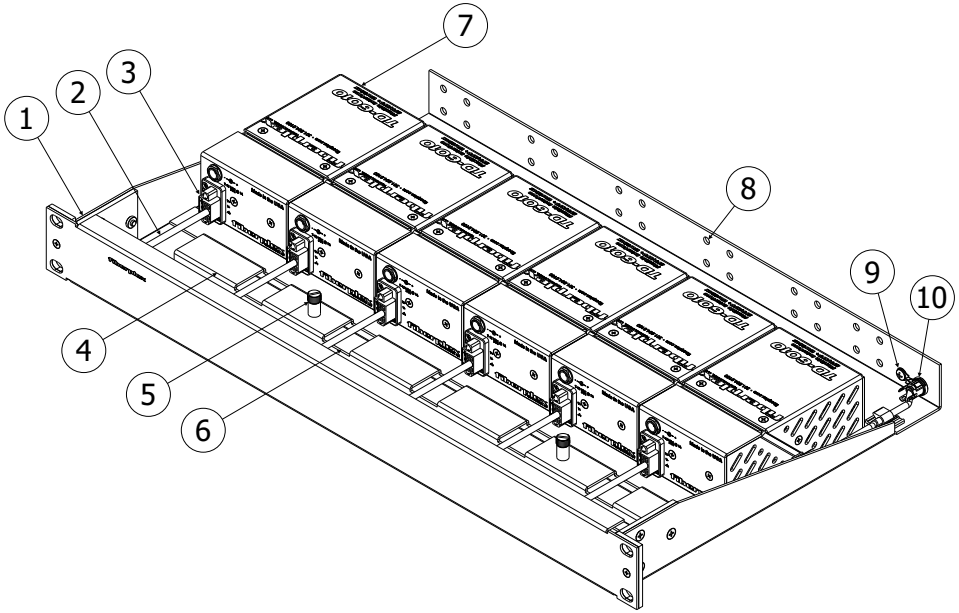
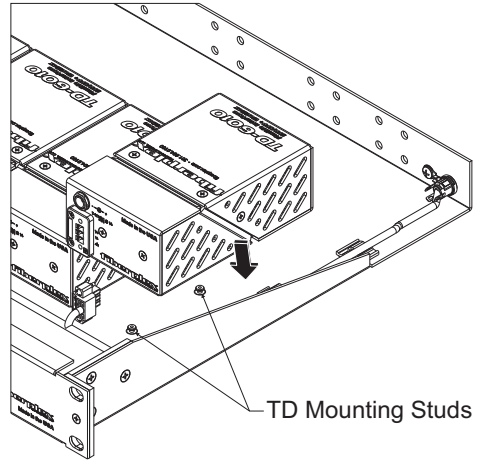


Figure 1 TDR-01-AC

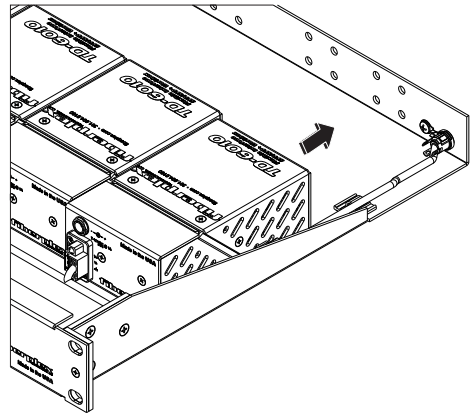
- ① **TDR-01 Mounting Tray** – The base tray of the TDR-01-AC is made from rugged anodized aluminum and features reinforced rack ears. This 1U tray has 6 pairs of studs pressed into the base to mate with the key holes on TD series modules.
- ② **Power Harness with (6) ea** ③ **Phoenix™ Power Connectors** – The TDR-01-AC comes standard with a 6 position wiring harness. This harness gets its power from a standard power adapter (included) via a circular connector. ⑩
- ④ **Retention Bar** ⑤ **Retention Screws** & ⑥ **Back Shell Relief** – 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. The unique design of the bar provides clearance notches for Back Shell Relief in the event that Phoenix™ back shells are desired to be installed on the wiring harness or individual power connections. These relief cuts also make inserting the power connections easier while the Retention Bar is in place.
- ⑦ **FiberPlex TD Series modules** – Shown here for clarification, however they are not included. The TRD-01-AC can accommodate up to 6 TD Series modules.
- ⑧ **Cable Tie Down** – Six sets of 2x2 hole patterns are along the raised rear panel of the Mounting Tray. These are provided to allow for clean management of cabling to the TD Series modules. Tie wraps can be used to secure cable bundles against the rear panel. The 2x2 pattern aligns with the hole patterns on standard Cable Tie Mounts. The left rear corner of the Mounting Tray features a cut out to allow cable egress.
- ⑨ **Earth Ground Lug** – Both for general safety reasons as well as improved functionality of some signals, a positive Earth Ground is often desirable. The TDR-01-AC provides a Ground Lug on the rear panel that connects to the third pin of each of the 6 Phoenix™ connectors in the Power Harness tying all TD modules in the rack to Earth Ground.
- ⑩ **Circular DC Power Connection** – DC power entry for the unit. This is a standard DC connection for use with the included DC wall power supply and provides power to the Power Harness.

Installing TD Modules

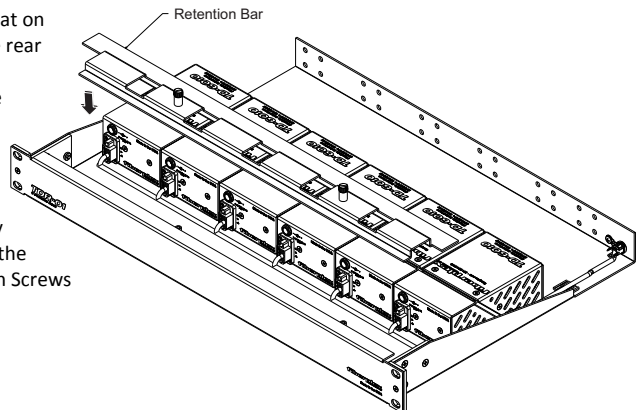
1. Orient the TD Series module with the rear (power side) facing the front panel of the TDR-01-AC
2. Align the large opening of the keyhole on the bottom to the TD module with the pressed studs on the Mounting Tray



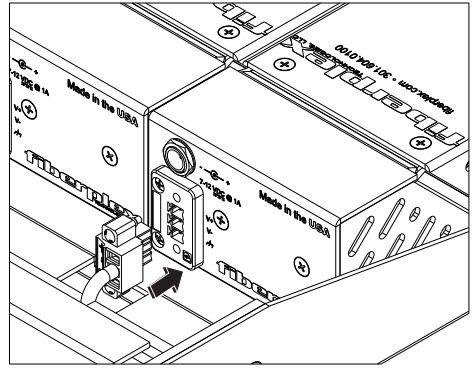
3. Lower the TD module over the studs until the module is flat on the tray and slide to the rear of the Mounting Tray until the module stops
4. Repeat steps 1-3 until all desired modules are installed.



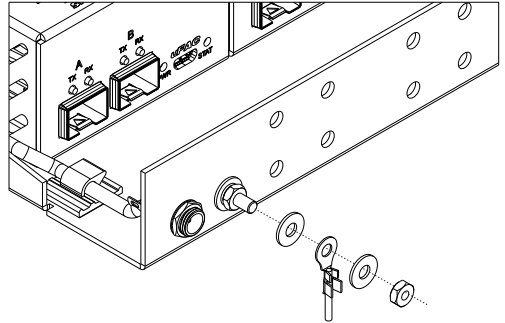
5. Lower the Retention Bar flat on the tray so that it is on the rear (power) side of the TD modules and straddles the threaded standoffs
6. Push the Retention Bar forward until it is secure against the TD modules, there should only be a tiny shift as it tightens against the unit. Tighten the Retention Screws



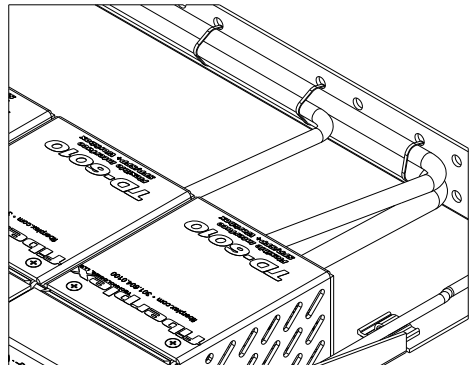
7. Connect the Phoenix™ power connector from the Power Harness at into its mating connector on the TD module in each position



8. Connect the Earth Ground Lug to an external earth ground source. Sandwich the external ground wire or lug between the two flat washers and tighten the screw to secure.



9. Dress signal cabling and fiber using tie wraps looped through the Cable Tie Down holes on the rear of the TDR-01-AC. Cables can be routed through the cable access notch at the rear left of the Mounting Tray.
10. Install loaded TDR-01-AC in to rack using 4 standard rack screws.



Specifications

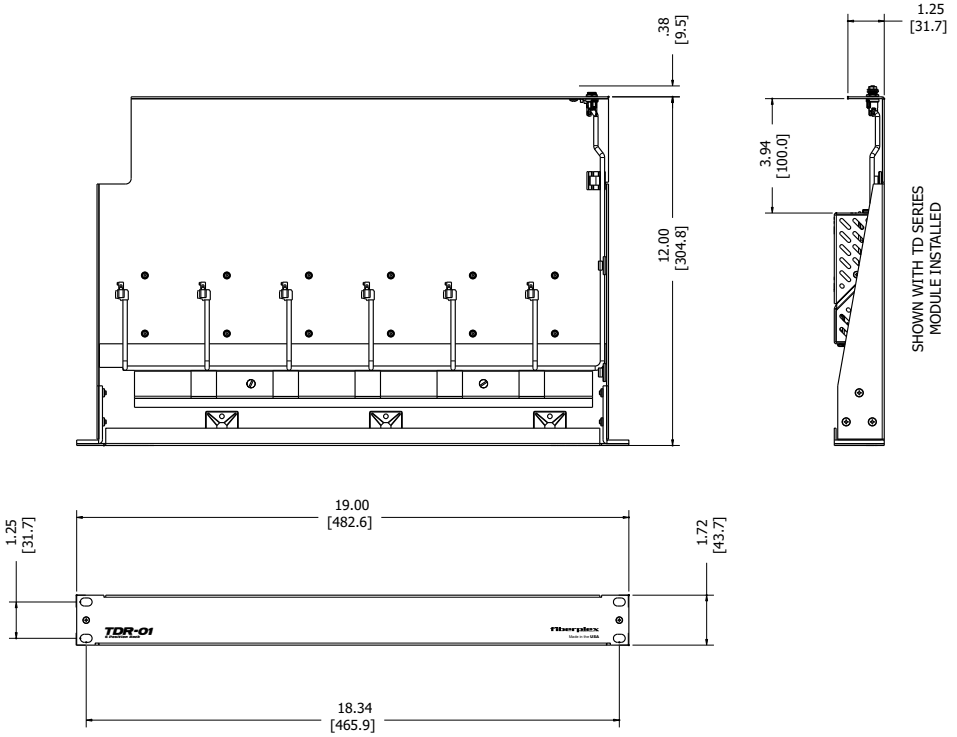


Figure 2 TDR-01-AC Dimensions

PHYSICAL SPECIFICATIONS					
		Length	Width	Height	Weight
Case Dimensions (1U)		13 in (330 mm)	19 in (482 mm)	1.25 in (31.7 mm)	2 lb (0.9 kg)
ELECTRICAL SPECIFICATIONS					
		Min	Typ	Max	Units
Power Requirement	Voltage Range		9	-	VAC
	Power Consumption	-	18	30	W
Power Connector	Standard 5.5 x 2.1 mm DC barrel, center positive				

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