

# **Model 5101 Power Entry Module**

## **User Guide**

Issue 1, January 2017

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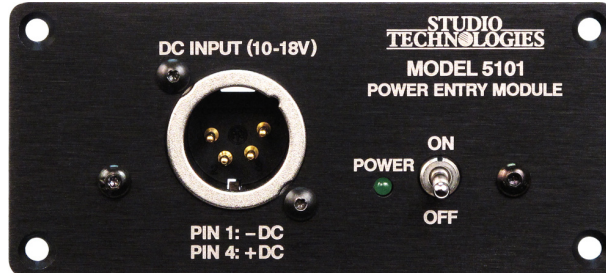
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# Revision History

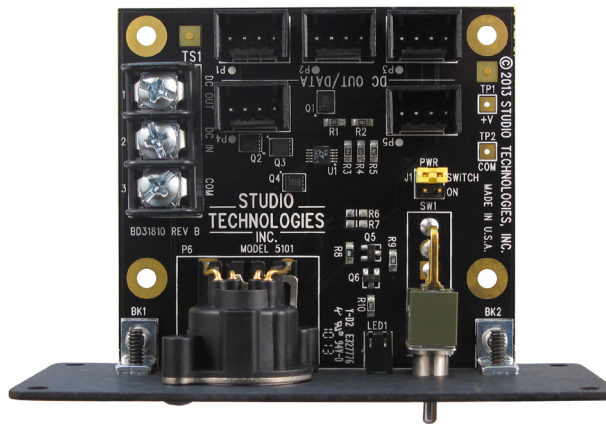
## **Issue 1, January 2017:**

1. Initial release.

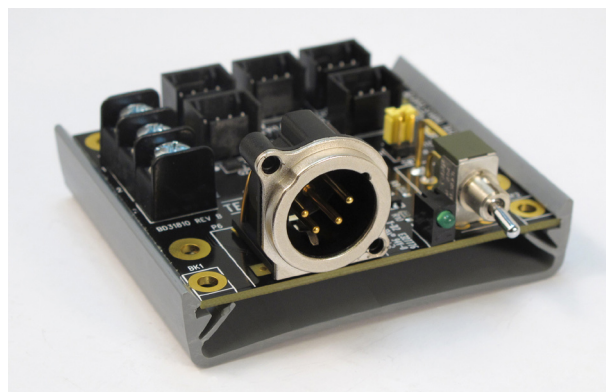
# Product Photos



Model 5101 Power Entry Module Front Panel Mounting Version, Front View (Order Code: M5101-01)



Model 5101 Power Entry Module Front Panel Mounting Version, Top View (Order Code: M5101-01)



Model 5101 Power Entry Module SNAPTRACK® Mounting Version, Top View (Order Code: M5101-02)

## Appendix A—Interconnection Details

The required mating receptacles are from the TE Connectivity (formerly AMP) MTA-100 series of IDC (insulation displacement) connectors. This series was selected because of its low cost and wide range of offerings. Separate connectors are offered for compatibility with various gauges of insulated wire, including 22 and 24 AWG (American Wire Gauge). The connector color indicates its AWG-compatibility. Unfortunately, with flexibility can come some confusion. The MTA-100 offers a number of different connectors that will work with the Model 5101's DC Output/Data headers. Before obtaining receptacles it's important to determine two things: wire gauge and wiring arrangement.

### DC Output/Data

- For 22 AWG wire this receptacle (red in color) is recommended:
  - TE Connectivity (AMP) 3-644540-4
  - Digi-Key part number A31122-ND*
  - Mouser part number 571-3-644540-4*

### Tools for Connecting Wires to the Mating Receptacles

For applications where just a few Model 5100-Series modules are going to be installed a manual IDC termination tool may be appropriate. While requiring a steady hand to achieve reliable wire connections to the mating receptacles, the price, at less than US\$40, is fairly reasonable:

- “T Handle” termination hand tool:
  - TE Connectivity (AMP) 59803-1
  - Digi-Key part number A9982-ND*
  - Mouser part number 571-598031*

## Appendix A—Interconnection Details, continued

### Tools for Connecting Wires to the Mating Receptacles, continued

For applications where a larger number of Model 5100-Series modules are going to be installed it's worth considering a semi-automatic termination tool. The recommended tool consists of a handle assembly and crimp die for MTA-100 receptacles. The total price for both, approximately US\$300 as of this writing, is steep but the performance that this tool assembly provides is excellent. We feel that the time savings and reliability of the connections warrants the price when many terminations are going to be made:

- Handle Tool, Pistol Grip:
  - TE Connectivity (AMP) 58074-1
  - Digi-Key part number A2031-ND*
  - Mouser part number 571-580741*
- Crimp Head Die Assembly for MTA-100 Receptacles:
  - TE Connectivity (AMP) 58246-1
  - Digi-Key part number A1998-ND*
  - Mouser part number 571-58246-1*

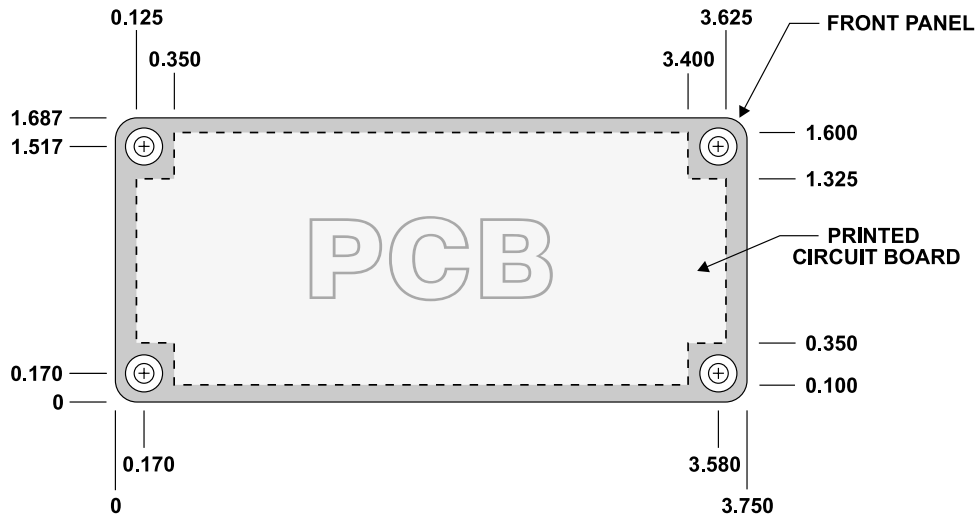
### Headers on the Printed Circuit Board

The actual part number of the header connectors that are soldered into the Model 5101's printed circuit board are provided in this section. *But do not order these part numbers with the intent of interconnecting signals with the Model 5101!* We are providing these details only so that interested technical personnel can have the full background on the Model 5132's interconnect system. The appropriate mating receptacle is detailed in a previous section of this Appendix.

- DC Output/Data:
  - TE Connectivity (AMP) 2-644486-4 (**DO NOT ORDER THIS NUMBER!**)

## Appendix B—Model 5101 Front Panel and Printed Circuit Board (PCB) Dimensions

STUDIO TECHNOLOGIES, INC.  
MODEL 5100-SERIES SINGLE-WIDTH FRONT PANEL  
AND PRINTED CIRCUIT BOARD DIMENSIONS  
(DIMENSIONS SHOWN IN INCHES)  
(AS OF JANUARY 2017, APPLIES TO  
MODELS 5101, 5110, 5121, 5124, 5132, 5134, 5150, 5152, 5154, 5180, AND 5190)



**NOTES:**

- 1) OPENING MUST BE MADE IN CUSTOM-MOUNTING ARRANGEMENT SO THAT PCB IS ALLOWED TO FREELY PASS THROUGH.
- 2) FRONT-PANEL MOUNTING LOCATIONS DIMENSIONED FOR #4 COUNTERSUNK SCREWS (4 PLACES). UNDERCUT FLAT-HEAD MACHINE SCREWS RECOMMENDED.
- 3) RECOMMENDED MOUNTING-HOLE LOCATIONS SHOULD BE DRILLED AND TAPPED FOR 4-40 SCREW THREADS (4 PLACES).

**WARNING:**  
THIS DRAWING SHOWS THE DIMENSIONS OF THE PRINTED CIRCUIT BOARD.  
PANEL OPENING MUST BE MADE LARGER TO ALLOW PCB TO PASS THROUGH!  
CONTACT FACTORY IF YOU HAVE QUESTIONS.



