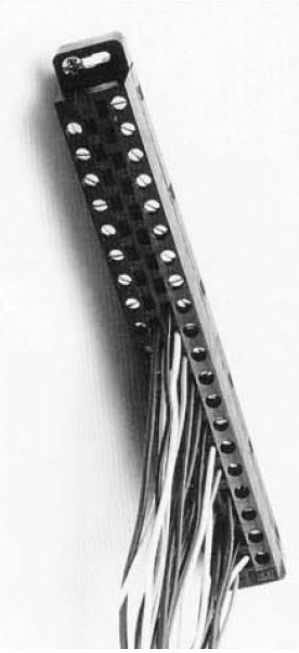
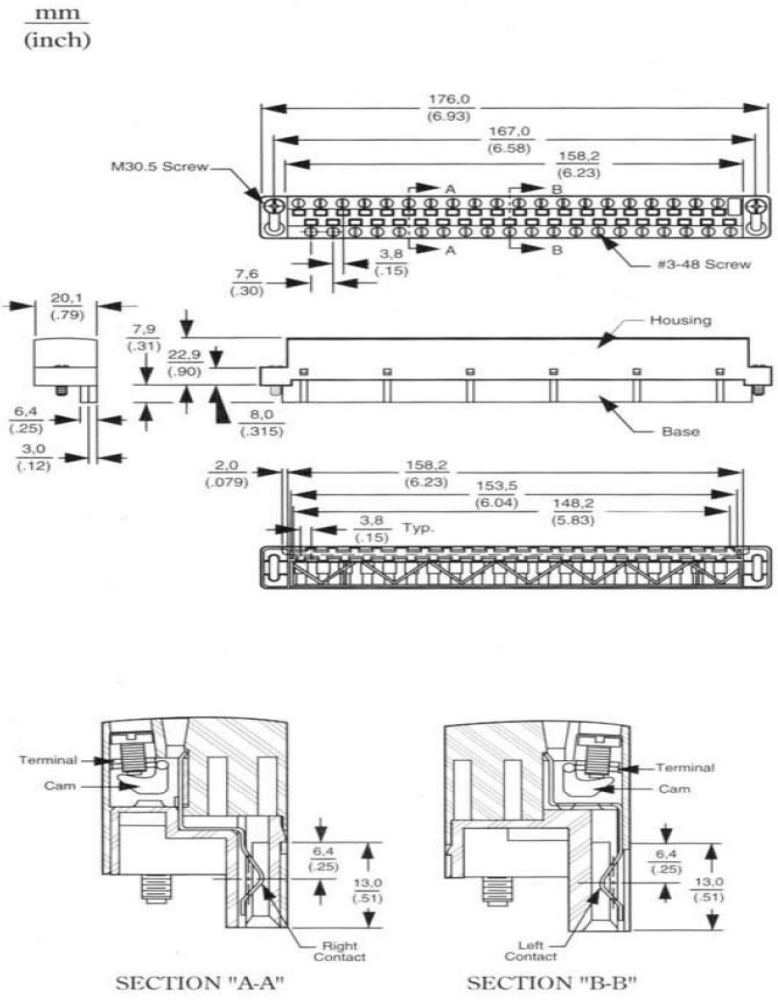
2500-40F / 2559-FPC
I/O Connectors

Classic

2500 Series® Process Control System
Product Bulletin





Description

Most 2500-Series I/O modules employ a specially-designed 40-position screw-terminal connector for terminating the field I/O wiring. This connector allows termination of multiple wires with access to both the wire and the screw clamp from the front of the module.

Features

- 2500-40F Replaces Siemens® 2587705-8011
- Front access to screws and wires
- 14-22 AWG
- 15A, 300V rating
- Special 2559-FPC 40-position connector includes cold junction compensation for the 2556-A and the 2559-TC Thermocouple input module

Important Note: Do not tighten screws beyond 4.55 in-lb (0.508 N-m) torque rating, as damage can occur.

Specifications

- Housing: Glass filled polyester UL recognized flammability classification 94V-0, black, 130°C max operating temperature
- Contacts: Copper alloy, selective gold over nickel
- Screws: #3-48 steel, zinc plating with clear chromate coating
- Wire cage: Steel, zinc plating with clear chromate coating
- Cam: Steel alloy, zinc plating with clear chromate coating
- Ratings: 15A, 300V, (limited space ratings)
- Wire range: 14-22 AWG (0.32 - 2 mm^2) (solid or stranded)
- Tightening torque: 3.5 to 4.5 in-lb (0.395 N-m to 0.508 N-m)

Control Technology Inc.
5734 Middlebrook Pike, Knoxville, TN 37921-5962
Phone: +1.865.584.0440 Fax: +1.865.584.5720
www.controltechnology.com

ROCK SOLID PERFORMANCE. TIMELESS COMPATIBILITY.

2500-40F / 2559-FPC I/O Connectors

IO Selection Guide

These modules require the 2500-40F. The 2500-40F is ordered separately for each module.

Module Model Number	Module Model Number	Module Model Number
• 2501 • 2502 • 2530 • 2531 • 2532 • 2534 • 2541 • 2550-A • 2554-A • 2555-A	• 2558 • 2559-RTD • 2560-A • 2562 • 2580 • 2581 • 2582 • 2588-8 • 2589-A • 2589-B	• 2590-A • 2590-EF • 2591-A • 2591-EF • 2596 • 2596-8 • 2597 • 2598 • 2598-8 • 2599

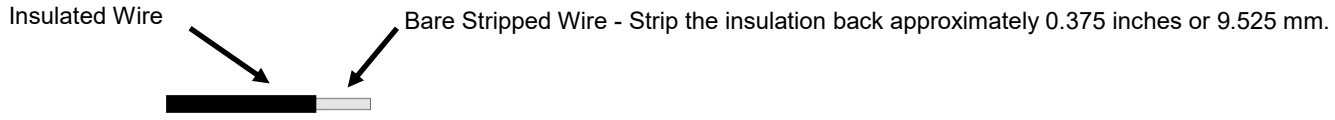
These modules require the 2559-FPC which provides CJC connections for Thermocouple modules. The 2559-FPC is ordered separately for each module.

Module Model Number 2556-A. Module Model Number 2559-TC

Refer to the Installation and Operation Guide for each module's wiring connections and label.

Wire Stripping Dimensions

The stripping dimensions are the same for all wire gauges.



- Once the wire is stripped it is ready to insert into the front of the connector. With the wire inserted tighten the front connector screw down using a torqueing screw driver. Tighten the screw to 4.5 in-lb or 0.508 N-m. Do not over tighten.

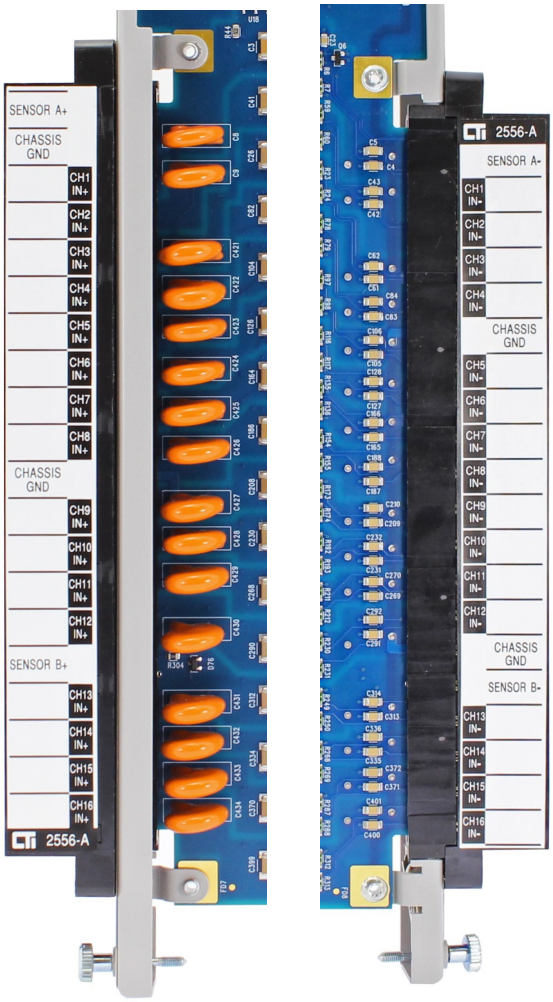
2559-FPC I/O Connectors for the 2556-A

The correct label for using a 2559-FPC with a 2556-A

There are different wiring labels for the 2556-A and the 2559-TC. The appropriate label must be applied to the 2559-FPC depending on which module the connector is being installed with . Labels are included with the module packaging. Below is the correct label for the 2556-A

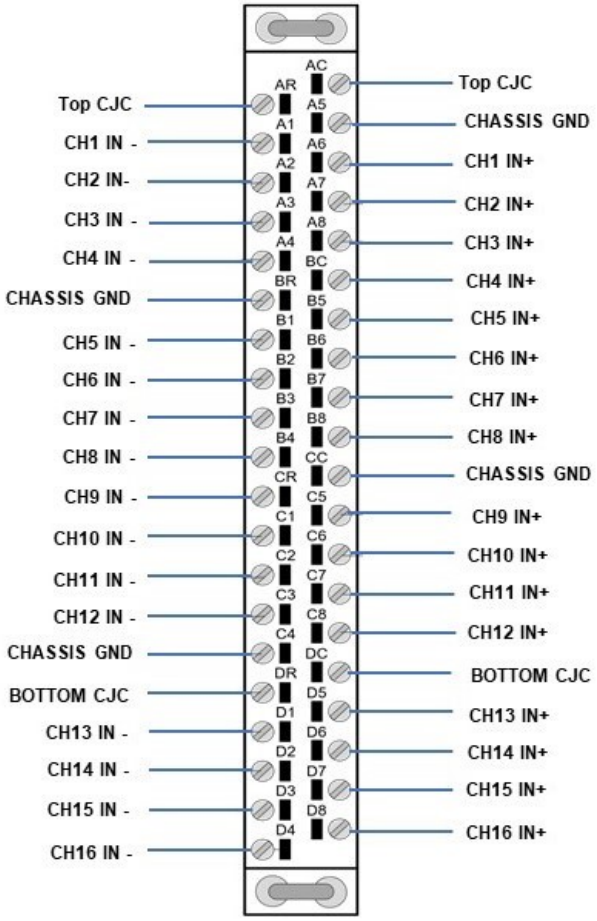
2556-A Wiring Label

Below is the label for the 2556-A. The label is included with the 2556-A when shipped. There are 2 labels one is for the component side and the other is for the solder side. Please refer to the Installation and Operation Guide for additional details.



2556-A Wiring Diagram

Below is the wiring diagram for the 2556-A.. The labeling should match the diagram.



7 December 2022

ROCK SOLID PERFORMANCE. TIMELESS COMPATIBILITY.

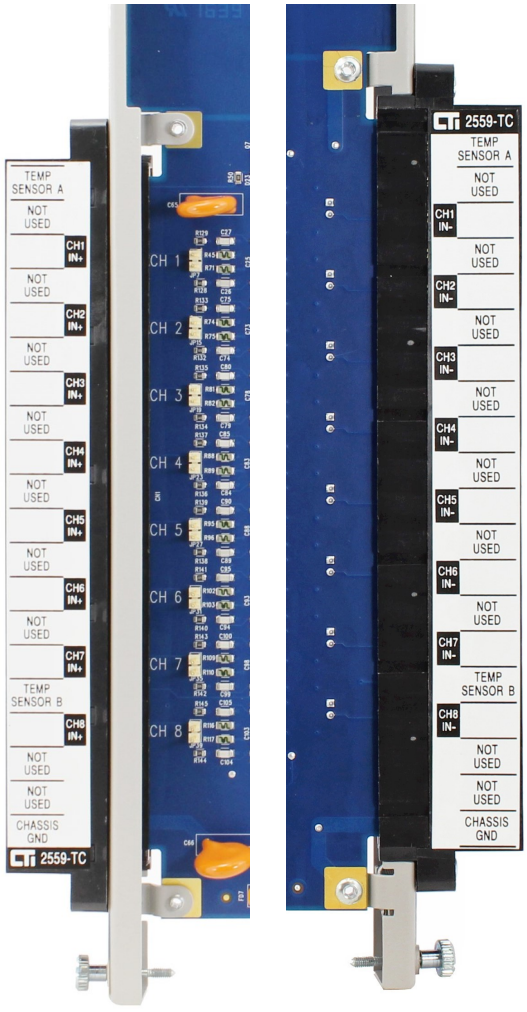
2559-FPC I/O Connectors for the 2559-TC

The correct label for using a 2559-FPC with 2559-TC

There are different wiring labels for the 2556-A and the 2559-TC. The appropriate label must be applied to the 2559-FPC depending on which module the connector is being installed with . Labels are included with the module packaging. Below is the correct label for the 2559-TC

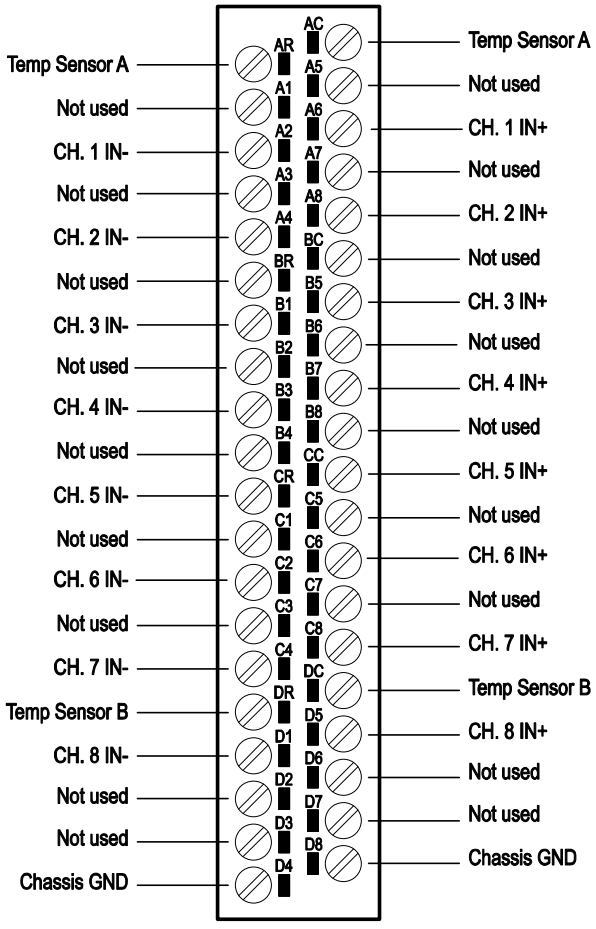
2559-TC Wiring Label

Below is the label for the 2556-A. The label is included with the 2556-A when shipped. There are 2 labels one is for the component side and the other is for the solder side. Please refer to the Installation and Operation Guide for additional details.



2559-TC Wiring Diagram

Below is the wiring diagram for the 2559-TC. The labeling should match the diagram.



7 December 2022

ROCK SOLID PERFORMANCE. TIMELESS COMPATIBILITY.

2500-40F / 2559-FPC I/O Connectors

Inserting a 2500-40F or a 2559-FPC on a 2500 Module

New connectors can sometimes be difficult to install the first few times they are plugged onto a module. If you encounter this difficulty, you can use the "rolling" technique shown in the pictures below to attach the connector gradually from top to bottom.

Step 1: Starting at the top insert the connector part of the way and start rolling the connector keeping the top inserted.

Step 2: Once the connector is inserted at the top roll the connector down while pushing the connector in to completely insert it on the board.

Step 3: Once you have rolled the connector all the way down and fully inserted onto the PCB you can finish the installation by screwing the Thumb Screws down. Do not over-tighten.