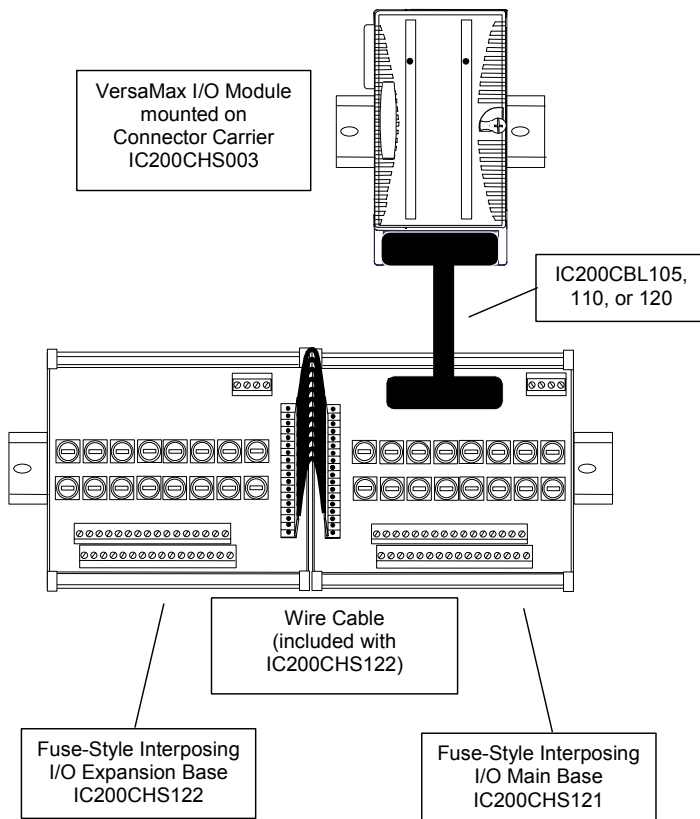# Fuse-style Interposing I/O Terminals

Description

The Fuse-Style Interposing I/O Terminals (IC200CHS121 and IC200CHS122) interface a Connector-Style I/O Carrier to field wiring and provide an integrated fuse solution for field devices connected to VersaMax I/O modules.

Preinstallation Check

Carefully inspect all shipping containers for damage. If any equipment is damaged, notify the delivery service immediately. Save the damaged shipping container for inspection by the delivery service. After unpacking the equipment, record all serial numbers. Save the shipping containers and packing material in case it is necessary to transport or ship any part of the system.

Main and Expansion Base

Two different versions of the Fuse-Style Interposing I/O Terminals are available, the main and expansion bases. The Main Base, IC200CHS121, provides terminals that correspond to the "A" terminals on a VersaMax I/O module. If the I/O module also has "B" terminals, an Expansion Base (IC200CHS122), is also needed.

Main Base – IC200CHS121

This interposing base has a connector (J1) for attaching a cable from the Connector-Style I/O Carrier and 36 box-style terminals for field I/O wiring and power connections.
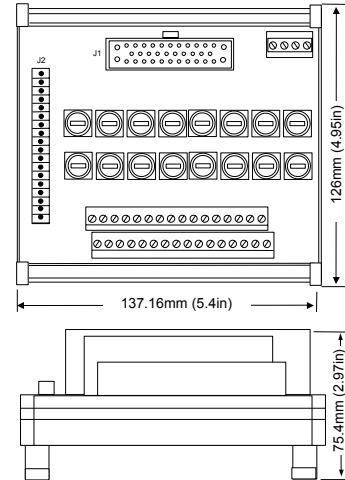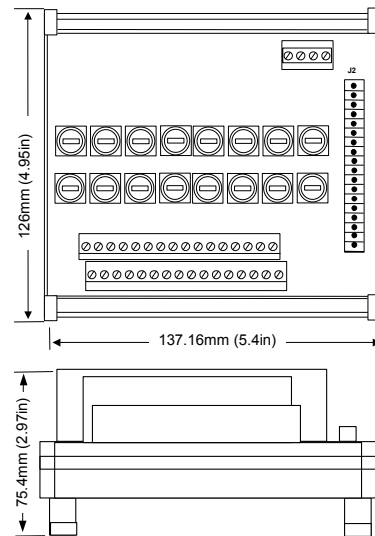

This base provides connection for the terminals on the "A" side of the VersaMax connector (A1-A18). Two groups of common terminals (W1-W8 and X1-X8) can be used for connecting two-wire devices without additional auxiliary terminal blocks.

Individual fuses (0.5A) exist between each terminal A1-A16 and its corresponding pin on the VersaMax cable connector. This base also provides an expansion connector (J2) to attach to the Interposing Fuse Expansion Base (IC200CHS122).

Expansion Base – IC200CHS122

This interposing base has a connector (J2) for attaching to the expansion connector of the Main Base (IC200CHS121) and provides 36 box-style terminals for field I/O wiring and power connections.

The Expansion Base provides connection for terminals on the "B" side of the VersaMax connector (B1-B18). In addition, it has two groups of common terminals (Y1-Y8 and Z1-Z8) for connecting two-wire devices without additional auxiliary terminal blocks. Individual fuses (0.5A) exist between each terminal B1-B16 and its corresponding pin on the VersaMax cable connector. The Expansion base includes the cable required to connect to the main base.

Field Wiring _____

In general, connection of field wiring to the Interposing Fuse bases follows the standard wiring diagram published for each module. Terminals A1-A18 and B1-B18 on the Interposing Fuse terminal bases are connected in the same fashion as all other bases. The built-in auxiliary terminals (W1-W8, X1-X8, Y1-Y8, Z1-Z8) are positioned directly below the A & B terminals to provide for simple two-wire connection of field devices.
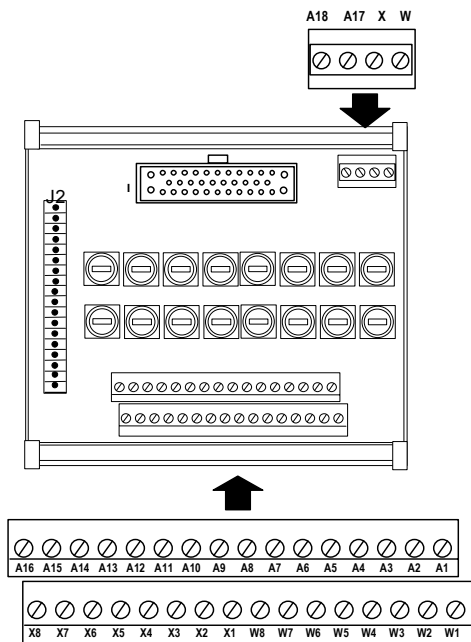
Each group of auxiliary terminals has a dedicated terminal to jumper the group to the appropriate VersaMax terminal (The "W" terminal is the connection point for W1-W8, etc.). The installation of these jumpers depends on the grouping present on the I/O module.

Terminal Wiring _____

Each terminal accommodates:

- one solid (0.2 to 4.0mm^2 cross section) or stranded (0.2 to 2.5mm^2 cross section), AWG #12 to AWG #24.

When inserting two wires in the same position, the wires must be the same size and type (solid or stranded), as specified below:

- Rigid or flexible wires: 0.2 to 1.5mm^2 cross section.
- Stranded wires with ferrules, no plastic sleeve: 0.25 to 0.75mm^2 cross section

Stranded wires with twin ferrule, with plastic sleeve:
  upper level (A/B terminals): 0.5 to 1.5mm^2 cross section
  lower level (W/X/Y/Z terminals): 0.5 mm^2 cross section.

Recommended torque for the terminal screws is 0.5 to 0.6 Nm.

Wiring for Modules with One Group per Row

This wiring format generally applies when the associated VersaMax module provides for connection of I/O in 16-point groups. An example of such a module is the VersaMax 24VDC 16pt Output Module, IC200MDL740:
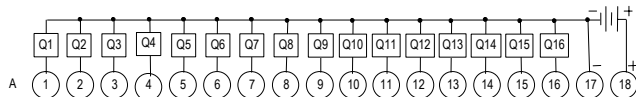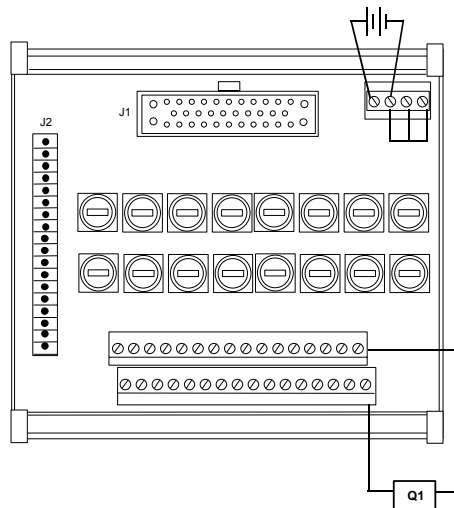

When connecting an Interposing Fuse base in this format, follow these guidelines:

- Connect field devices to A1-A16 (or B1-B16 where appropriate)
- Connect the return wires of field devices to the corresponding common connections – A1 to W1, A2 to W2, A9 to X1, A10 to X2, etc.
- Connect jumpers between the A17, W, and X terminals (or B17, Y, and Z)
- Connect the power supply between A17 and A18 (or B17 and B18)

Example: Wiring for Output Module IC200MDL740

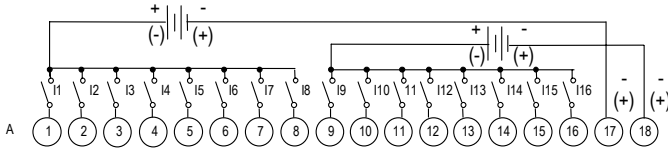Example field wiring for IC200CHS121 when used with VersaMax modules with 1 group per terminal row

Wiring for Modules with Two Groups per Row

This wiring format generally applies when the associated VersaMax module provides for connection of I/O in 8-point groups. An example of such a module is the VersaMax 24VDC 16pt Input Module, IC200MDL640:


When connecting the Interposing Disconnect bases in this format, follow these guidelines:

- Connect field devices to A1-A16 (or B1-B16 where appropriate)
- Connect return wires of field devices to the corresponding common connections – A1 to W1, A2 to W2, A9 to X1, A10 to X2, etc.
- Connect power supply between A17 and W (or B17 and Y).
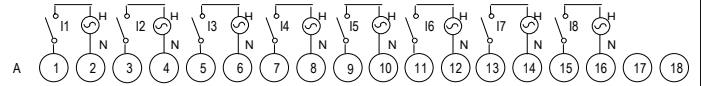- Connect power supply between A18 and X (or B18 and Z).

Example Wiring Diagram for Module IC200MDL640

Example field wiring for IC200CHS121 when used with VersaMax modules with 2 groups per terminal row
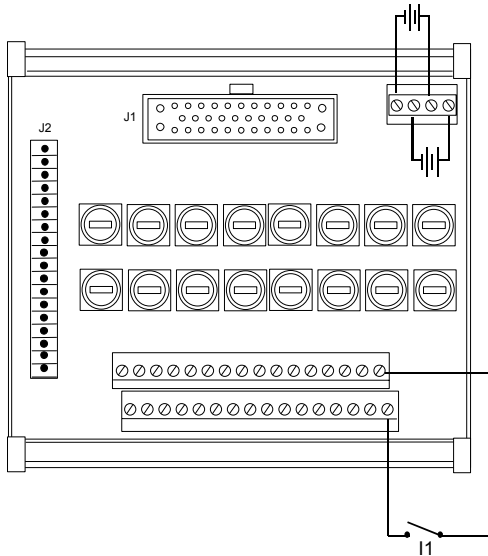
Wiring for Modules with Connections that are Not Grouped

This wiring format generally applies when the associated VersaMax module provides for connection of isolated I/O devices, but may also be used when a non-isolated module provides dedicated terminals for each common connection. An example of an isolated module is the VersaMax 120VAC 8pt Isolated Input Module, IC200MDL143:

When connecting the Interposing Disconnect bases in this format, additional jumpers are usually not needed. Field wiring is connected to terminals A1-A16 (or B1-B16 where appropriate). The auxiliary terminals are not generally connected.

Example Wiring Diagram for Module IC200MDL143

Example field wiring for IC200CHS121 when used with VersaMax modules without grouped points.
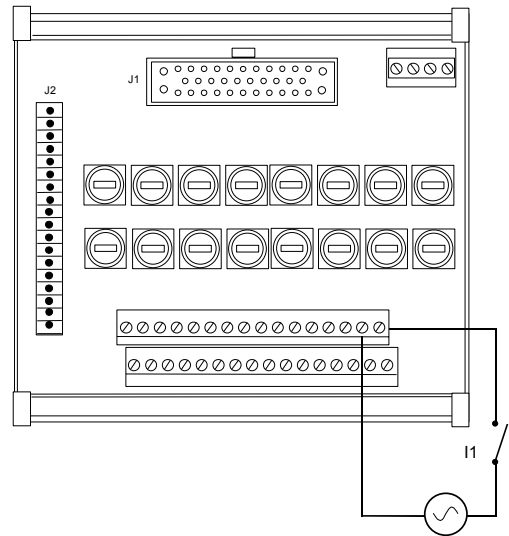
Fuse-style Interposing I/O Terminals

Base Selection_____

The following table provides a guideline for selecting the appropriate bases and wiring formats for each VersaMax I/O Module. Modules that are incompatible with these Interposing Fuse Bases are indicated by shaded entries in the table.

	1 Group per Row	2 Groups per Row	Not Grouped	CHS121	CHS122	Notes
Discrete Inputs						
IC200MDL140		X*		X		
IC200MDL141		X*		X		
IC200MDL143			X	X		
IC200MDL144						Module not compatible with VersaMax Connector Base
IC200MDL240		X*		X	X	
IC200MDL241		X*		X	X	
IC200MDL243			X	X	X	
IC200MDL244						Module not compatible with Connector Base
IC200MDL631			X	X		
IC200MDL632			X	X	X	
IC200MDL635		X		X		
IC200MDL636		X		X	X	
IC200MDL640		X		X		
IC200MDL643		X		X		
IC200MDL644		X		X	X	
IC200MDL650		X		X	X	
Discrete Outputs						
IC200MDL329			X	X		
IC200MDL330			X	X	X	
IC200MDL331						No direct connectivity to B row
IC200MDL730						
IC200MDL740	X			X		
IC200MDL741	X			X		
IC200MDL742	X			X	X	
IC200MDL743	X			X		
IC200MDL744	X			X	X	
IC200MDL750	X			X	X	
IC200MDL930			X	X		
IC200MDL940			X	X	X	
Discrete Mixed						
IC200MDD840						Non-symmetric distribution of inputs & outputs
IC200MDD842	X	X		X	X	1 Group/Row for Outputs, 2 Groups/Row for Inputs
IC200MDD843						Non-symmetric distribution of inputs & outputs
IC200MDD844	X	X		X	X	1 Group/Row for Outputs, 2 Groups/Row for Inputs
IC200MDD845		X	X	X	X	
IC200MDD846		X*	X	X	X	
IC200MDD847		X*	X	X	X	Not Grouped for Outputs, 1 Group/Row for Inputs
IC200MDD848		X*	X	X	X	
IC200MDD849			X	X	X	
IC200MDD850						Module not compatible with Connector Base
IC200MDD851	X	X		X	X	1 Group/Row for Outputs, 2 Groups/Row for Inputs
High Speed Counter						
IC200MDD841						Non-symmetric distribution of inputs & outputs

* This module uses a slight variation of the one-group per row format - return groups W & X should be jumpered to terminal A17.