

Table 3-1. Ovation Module Choices (Cont'd)

Module Type	Channel	Electronic Module	Personality Module
Compact Seq. of Events contact input w/48V auxiliary	16	1C31233G04	Cavity Insert ²
Serial Link Controller RS232	1	1C31166G01	1C31169G01
Serial Link Controller RS485 4 wire	1	1C31166G01	1C31169G02
Servo Driver with Readback (1 KHz LVT Output, 19VPP)	6	1C31199G02	1C31201G02
Servo Driver with Readback (3 KHz LVT Output, 19VPP)	6	1C31199G03	1C31201G02
Servo Driver with Readback (16V DC LVDT Output)	6	1C31199G01	1C31201G01
Speed Detector Interface	8	1C31189G01	1C31192G01
Valve Positioner (17 Volt LVDT: 24.8 mA)	8	1C31194G01 or 1C31194G02	1C31197G01
Valve Positioner (23.75 Volt LVDT: 16.8 mA)	8	1C31194G01 or 1C31194G02	1C31197G02
Valve Positioner (23.75Volt LVDT: 8.3 mA)	8	1C31194G01 or 1C31194G02	1C31197G03
Valve Positioner (23.75Volt LVDT: 36 mA)	8	1C31194G01 or 1C31194G02	1C31197G04
¹ A ninth channel is provided when using the Analog Input module with temperature sensor. This ninth point is needed for the CJ Compensation field of the Point Builder Instrumentation Tab when defining the eight other thermocouple points for the AI module (refer to Section 4 for additional information). ² Cavity insert (1C31238H01) that fits into the Personality module position providing a wiring schematic label for the module. Typically, there is no actual Personality module required for this module type. ³Raise and Lower Runback inputs can be disabled and used as user-defined input points. Configuration instructions are included in Kit 1C31174G20.			

Section 24. Speed Detector Module

24-1. Description

The Speed Detector Module determines the speed of a piece of equipment by measuring the frequency of the output signal from a tachometer. The tachometer output can be sinusoidal or a pulse train. The Speed Detector provides a 16-bit output at an update rate of 5 milliseconds for over-speed detection, and a 32-bit output at a variable update rate for speed regulation.

The Speed Detector Module is NOT applicable for CE Mark Certified Systems.

24-2. Module Groups

24-2.1. Electronics Module

There is one Electronics module group for the Speed Detector Module:

- 1C31189G01

24-2.2. Personality Module

There is one Personality module group for the Speed Detector Module:

- 1C31192G01

Table 24-1. Speed Detector Subsystem ¹

Range	Channels	Electronic Module	Personality Module
16 bit speed (Low Res) 200 Hz min - 51200 Hz max	8	1C31189G01	1C31192G01
32 bit speed (High Res) 0.72 Hz min - 65535 Hz max	8	1C31189G01	1C31192G01
When using the Point Builder to define points for a Speed Detector module, only the following point types are valid for each channel:			
<u>I/O</u>	<u>Name</u>	<u>Type</u>	<u>Terminal Block Connection</u>
<u>Channel</u>			
1	High Resolution (speed value)	Input (can select I/O 1 or 3)	In
3	Low Resolution (speed value)	Input (can select I/O 1 or 3)	In
5	Open Wire	Input	Not applicable
11	Latched Overspeed	Input	Not applicable
12	Overspeed	Input	Not applicable
13	Trip Relay Status	Output	Not applicable
1	Trip Relay	Input	Relay
2	Reset Calculations	Input	Not applicable
¹ This module will interface to ONE speed sensor to determine the rotation speed of a field device.			

Abbreviation	Definition
NC	Normally closed terminal of relay's contact.
NO	Normally open terminal of relay's contact.
SHD	Shield of input signal's cable (see Figure 24-2 for field connection.)

All field signals leaving/entering the cabinet should be in shielded cables. The frequency input signal from the signal source must be in twisted-pair shielded cables. The shield must be grounded (see [Figure 24-2](#)).

Note

Do **not** use unmarked terminal block locations.

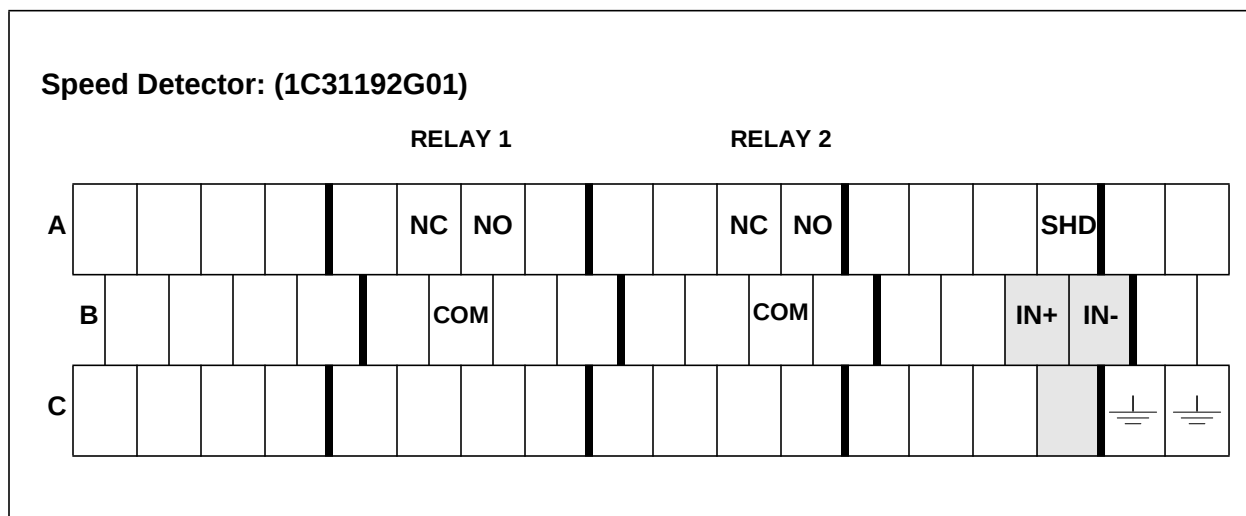


Figure 24-1. Terminal Block Connections for the Speed Detector Personality Module

24-5. Speed Detector Field Connection Wiring Diagrams

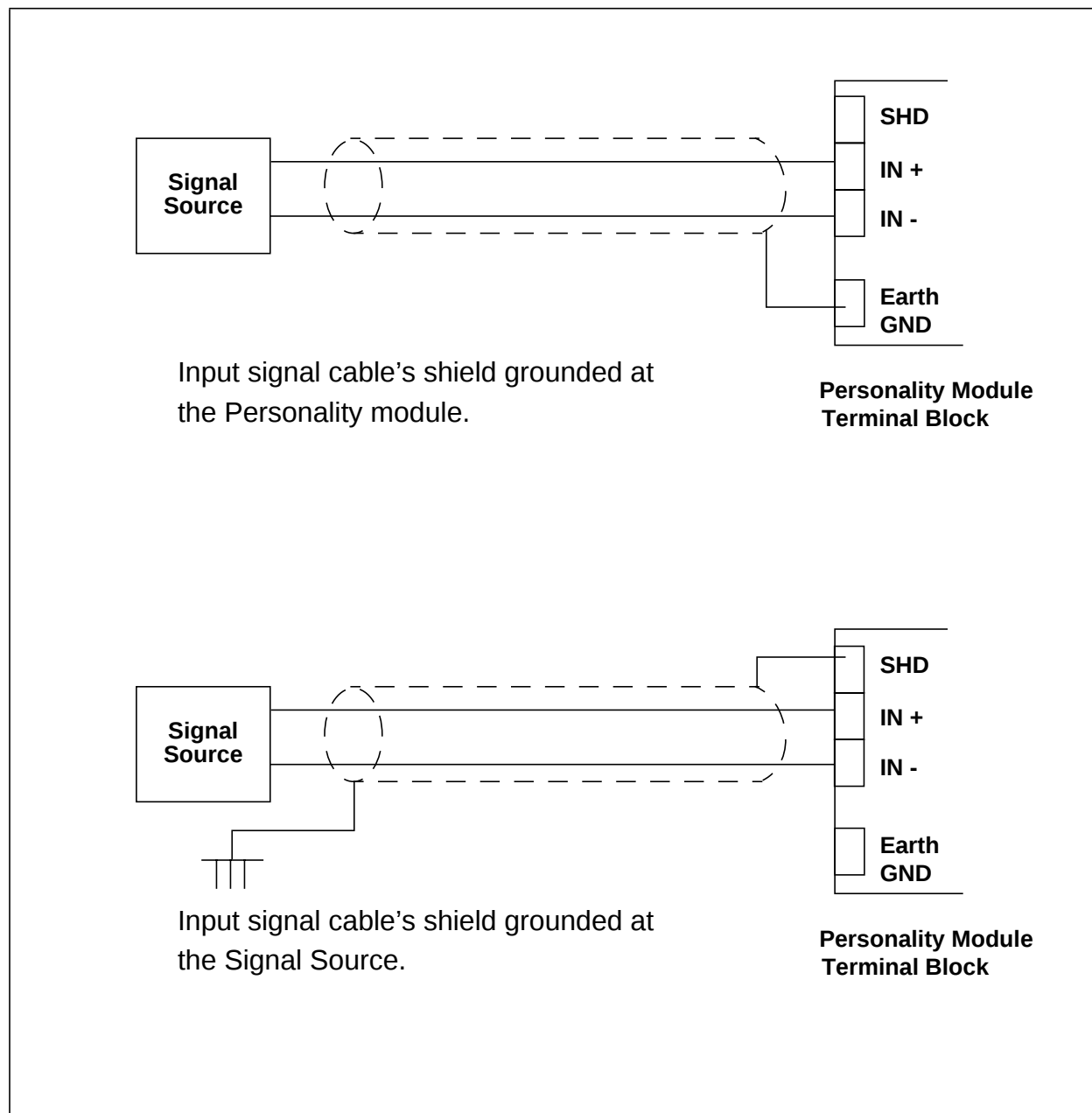


Figure 24-2. Field Connections for the Speed Detector Personality Module