Divelbiss CORPORATION

Setpoint - Tachometer

Application Description

This example shows how to use calculate RPM based on an input pulse from a Hall-effect Open Collector Speed Sensor connected to the High Speed Counter Input. This is based on the use of sensing speed on a 60 tooth gear to calculate RPM. RPM will be displayed on the 4-digit display.

Equipment Used

Solves-it	
Controller P/N:	SI-200
Programming Software:	Divelbiss EZ LADDER
Digital I/O	On-Board
Application Program Filename:	AN-108_SI.dld
Programming Cable:	SI-PGM
Connection Diagram:	Figure 1

Input / Output Description

There are NO real world inputs or outputs used in this example.

Program Variables

Update: Boolean. Type: Internal. Default value = 0. Description: Update RPM Flag.

PULSES: Integer. Type: Internal. Default value = 0. Description: # of pulses detected by the speed sensor.

RPM: Integer. Type: Internal. Default value = 0. Description: RPM detected at timer cycle completion

TMR1: Timer. Type: Default value = 1 second. Description: Time period for RPM calculations

TMR1Val: Timer. Type: Default value = 0 seconds. Description: Elapsed Timer variable.

Program Description

Rungs 1-2: Senses and outputs the High Speed Counter pulses counted since last timer cycle completion.

Rungs 3-4: 1 Second timer which causes a rising trigger to update the RPM variable when timer setpoint is reached.

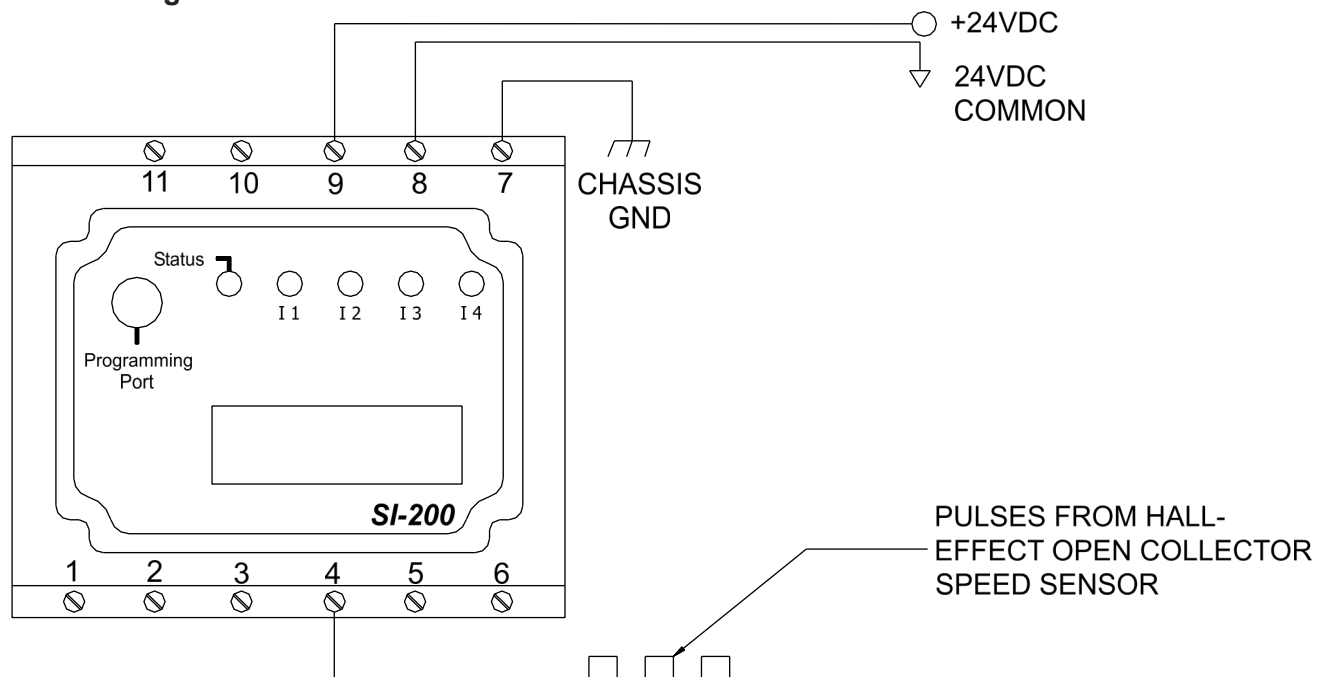Rungs 5-6 Displays RPM to 4-digit display.

Connection Diagram

FIGURE 1 - SOLVES-IT CONNECTIONS

Ladder Diagram

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