

## Setpoint - Tachometer

### NOTICE

This application note is provided for use as a general example and a guide. Divelbiss assumes no responsibility, liability or warranty regarding this application, its use, functionality or reliability to meet application needs. User assumes all responsibility to ensure all safety precautions are taken when using this application note. This application must not be used alone in applications which would be hazardous to personnel in the event of a failure. Precautions must be taken by the user to provide mechanical and/or electrical safeguards external to this application and controllers shown.

### 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

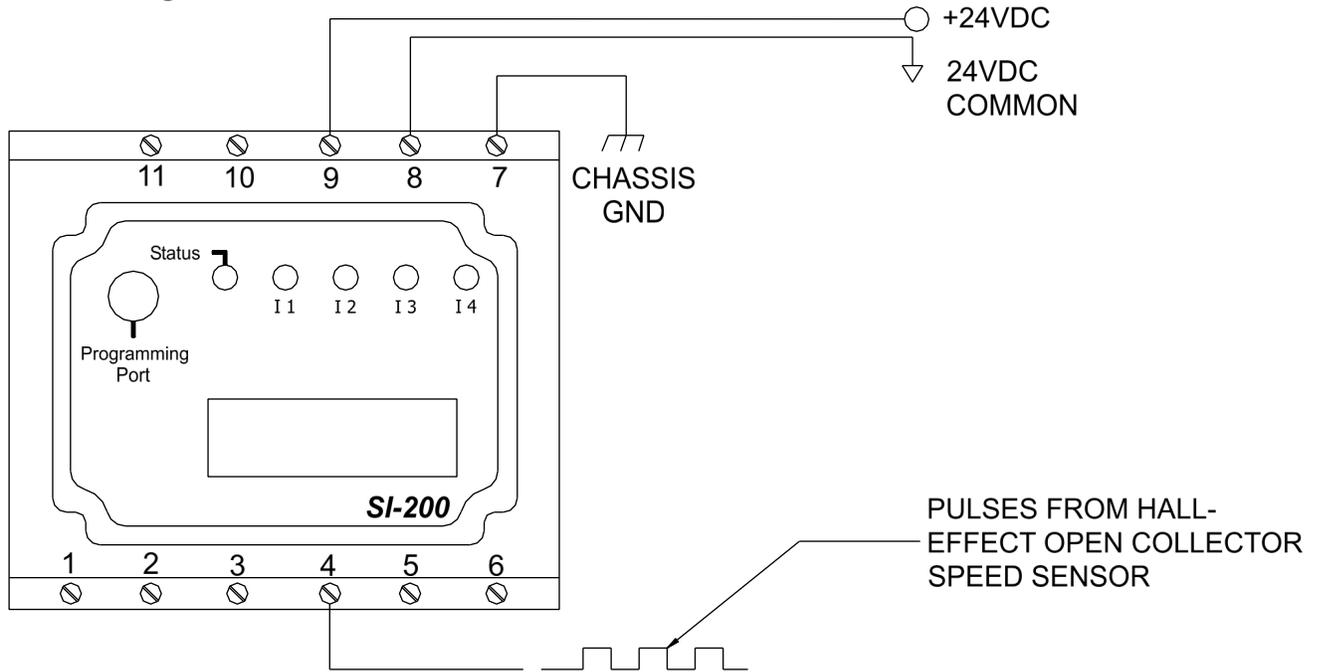


FIGURE 1 - SOLVES-IT CONNECTIONS

## Ladder Diagram

