

## Installation Instructions for the RDS-DIN1 Series Single Channel Interface Module ISSUE 3 PK 80103

**⚠ WARNING**

**PERSONAL INJURY**

- **DO NOT USE** in applications where product failure could result in personal injury or death.
- **DO NOT USE** in fail-safe applications.
- Improper installation of this device can cause personal injury. **STRICTLY FOLLOW** the instructions below.

**Failure to comply with these instructions could result in death or serious injury.**

### GENERAL INFORMATION

The RDS-DIN1 Series Single Channel Interface Module is designed to be used with the 926FS30 Railwheel Proximity Sensor in stand alone applications.

The Interface Module converts the 2-wire DC Normally Closed (NC) output of the Railwheel Proximity Sensor into a Normally Open (NO), open collector output to interface with other equipment.

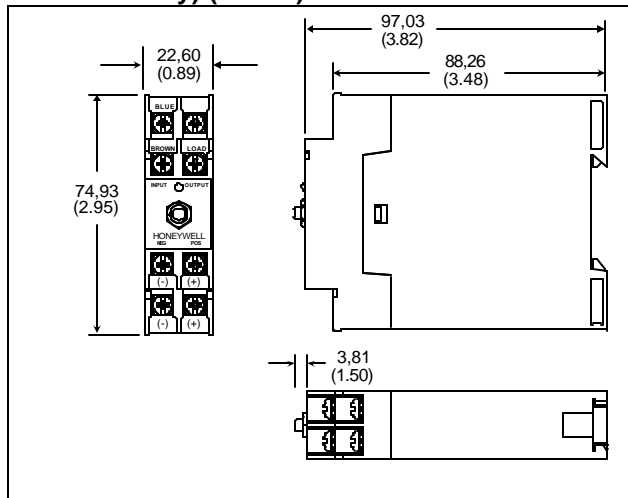
The Interface Module is available with either a NPN (current sinking) or a PNP (current sourcing) output. A 10 ms nominal time delay on the output signal is also available.

### INSTALLATION INSTRUCTIONS

#### Step 1 - Mount Interface Module (see Figure 1):

- Place flanges located on the back of the Interface Module housing over the top flange of the 35 mm DIN rail. Snap securely in place.

**FIGURE 1: MOUNTING DIMENSIONS (for reference only) (mm/in)**



#### Step 2 - Wire Interface Module (See Figure 2):

### NOTICE

The 926FS30 Railwheel Proximity Sensor is polarity neutral. Each sensor input connection accepts either a blue or a brown leadwire.

The Interface Module provides two supply connections to facilitate installation of multiple Interface Modules (daisy chaining) from a common power supply.

Separate terminal connections are supplied for load pull-up (NPN) or pull-down (PNP). Use of these terminals is optional.

- Connect one Railwheel Proximity Sensor to the input connections.
- Connect an 18 Vdc to 30 Vdc supply to the negative (-) and the positive (+) supply connections using up to 12 AWG wire.
- Connect a load to the output connection.

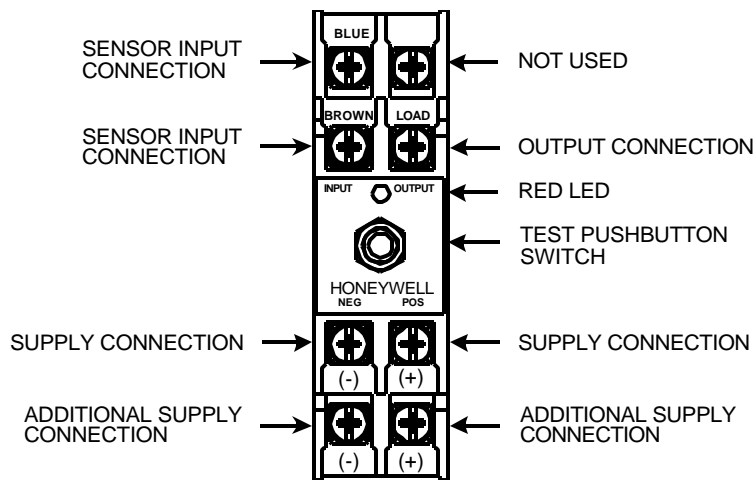
#### Step 3 - Test Interface Module (see Table 1):

- Apply 18 Vdc to 30 Vdc supply voltage. If the input connection has a Railwheel Proximity Sensor attached, and no target is present, the LED is OFF.
- Apply a target to the Railwheel Proximity Sensor. The LED will turn ON and the output state will change.
- Actuate the test pushbutton switch to simulate Railwheel Proximity Sensor actuation. The LED will turn ON and the output state will change.

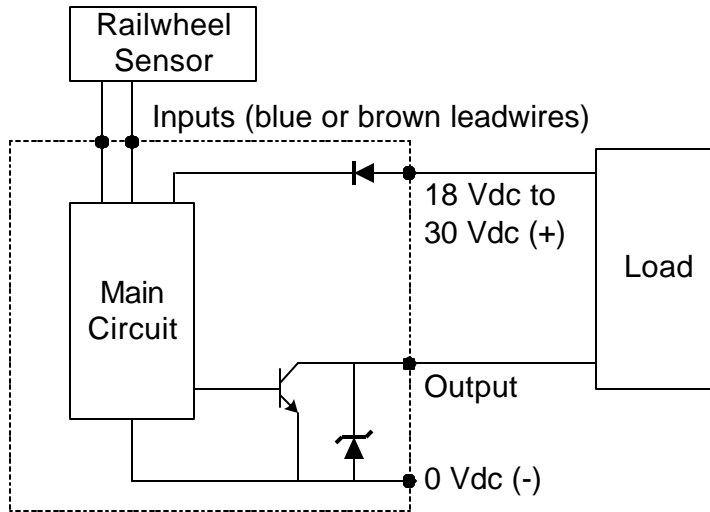
**TABLE 1: LED STATUS**

Condition (Supply Voltage Applied)	LED Status
Railwheel Proximity Sensor attached to Interface Module - no target present	OFF
Railwheel Proximity Sensor attached to Interface Module - target present	ON
Test pushbutton switch actuated	ON
No Railwheel Proximity Sensor attached to Interface Module	OFF

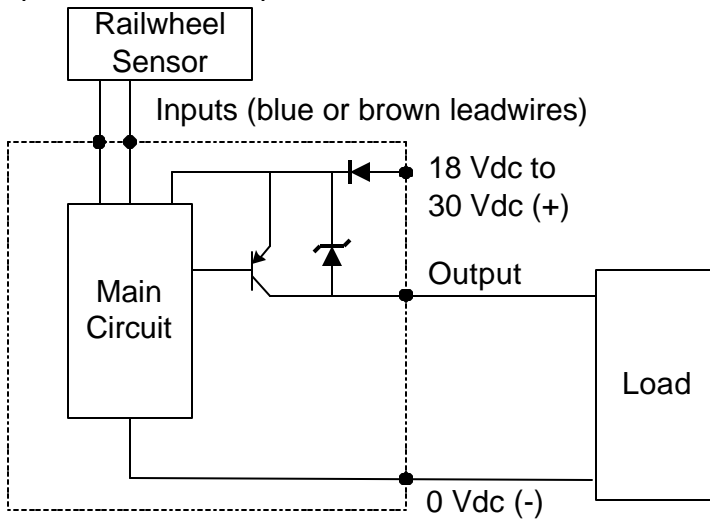
FIGURE 2: CONNECTION DIAGRAM



CIRCUIT DIAGRAM - NPN (CURRENT SINKING)



CIRCUIT DIAGRAM - PNP (CURRENT SOURCING)



**SPECIFICATIONS**

Parameter	Condition
<b>Electrical</b>	
Supply Voltage	18 Vdc to 30 Vdc
Output Type	Open collector, normally open, NPN or PNP
Saturation Voltage	6.5 V max. @ 20 mA
Output Load Current Per Channel	20 mA max.
Leakage Current	50 $\mu$ A max.
Power-up Delay Time	50 ms max.
Radiated Immunity Amplitude Modulation	EN 61000-4-3, 10 V/m ENV 50140, 80 MHz - 1000 MHz
Pulse Modulation	ENV 50140, 900 MHz $\pm$ 5 MHz
Fast Transient Burst	EN 61000-4-4, 1 KV
Conducted Disturbance	EN 61000-4-6, 10 KV
Impulse Withstand Voltage	IEC 255-5, 1000 V
Response Time Delay, Typical	100 $\mu$ s or 10 ms (depending on catalog listing)
<b>Environmental</b>	
Operating Temperature Range	-40 °C to +70 °C (-40 °F to +158 °F)
Shock	6G, 11 ms half sine
Vibration	3G/0.060 in amplitude, 10 to 500 Hz
Sealing	NEMA 1
Humidity	95% RH non-condensation
Housing Material	ABS (plastic)
Protection	Reverse polarity and short circuit

**INTERFACE MODULE IDENTIFICATION**

Catalog Listing	Output Description
RDS-DIN1-NA-D1	NPN (Current Sinking), Normally Open, 100 $\mu$ s Nominal Time Delay
RDS-DIN1-NA-D2	NPN (Current Sinking), Normally Open, 10 ms Nominal Time Delay
RDS-DIN1-PA-D1	PNP (Current Sourcing), Normally Open, 100 $\mu$ s Nominal Time Delay
RDS-DIN1-PA-D2	PNP (Current Sourcing), Normally Open, 10 ms Nominal Time Delay

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