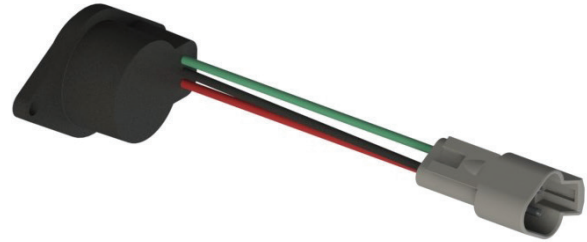


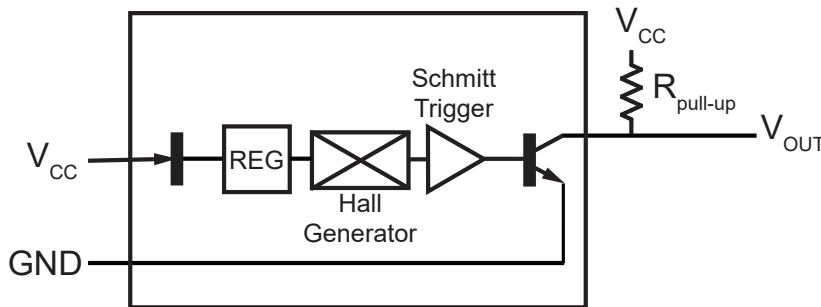
**Features and Benefits**

- Non-contact, solid state device
- Tight magnetic tolerance around zero Gauss level provides 50% duty cycle
- Reads speeds 0 to 100 kHz
- Digital output signal
- 4 to 24 VDC operation range
- Current sinking output
- 20 mA continuous operation
- Reverse polarity protection
- Temperature compensated
- Operates from -40°C to 125°C
- Rugged thermoplastic housing
- Nylon 6 Glass-filled material enclosure
- Thread 15/32 N.A. 2A



Sensor

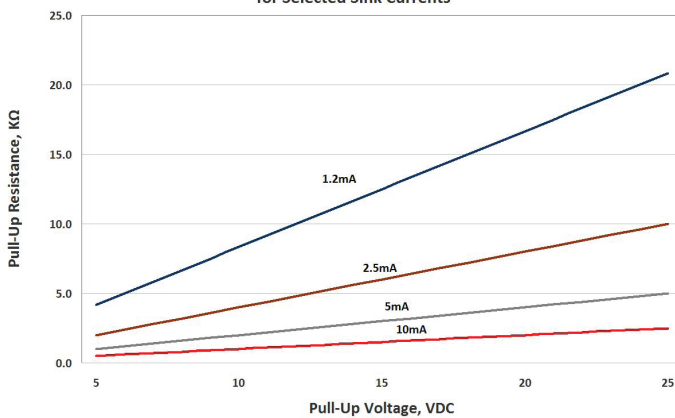
**Electrical Circuit**



Output channels require customer supplied pull-up resistors unless internal pull-up option is selected. See Table 1.1 for recommended resistor values.

Note: A pull-up resistor is required on the open collector output to establish a quiescent voltage level. The pull-up resistor also provides faster rise times and improves noise immunity. Contact the factory for application assistance.

**Pull-Up Resistance Chart for Selected Sink Currents**



**Table 1.1**

Recommended Pull-Up Resistor Values			
Current, I <sub>sink</sub>	Supply Voltage		
	5	12	24
1.2 mA	4.3K	10.0K	20.0K
2.5 mA	2.0K	4.7K	10.0K
5 mA	1.0K	2.4K	4.7K
10 mA	510Ω	1.2K	2.4K

I<sub>sink</sub> is application dependent. It is recommended to use the lowest possible sink current when selecting a pull-up resistor.

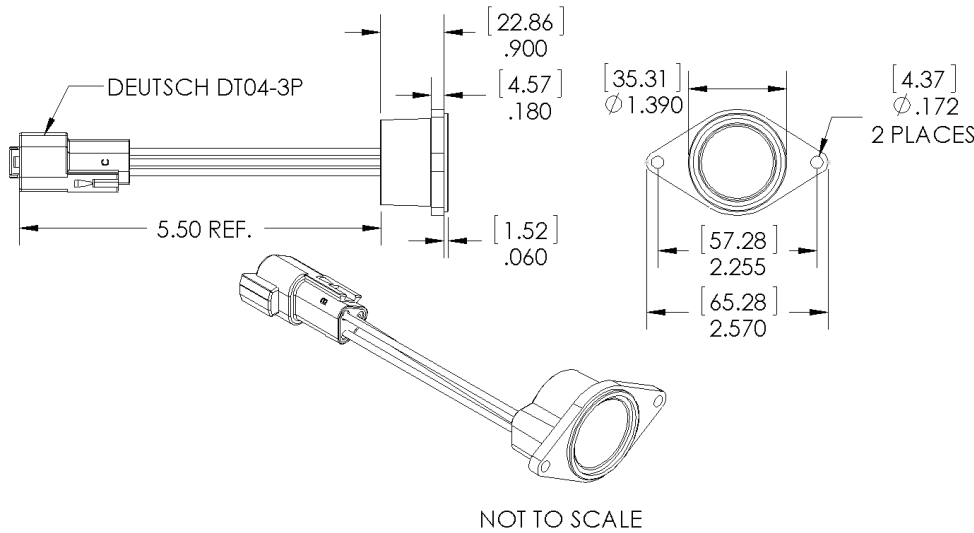
Theoretical Pull-Up Resistor Calculation:  $R_{pullup} = \frac{V_{supply}}{I_{sink}}$

Resistance values based on closest standard 5% resistor values

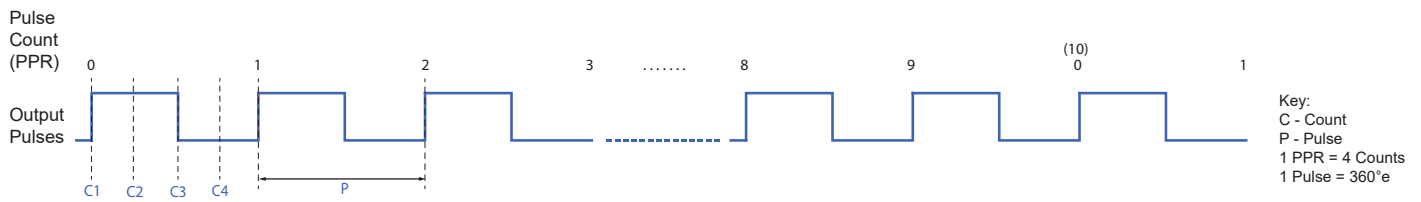
Absolute Maximum I<sub>sink</sub> = 20mA

4.7 K pull-up is available as a standard option. If an alternative pull-up value is preferred, contact sales@phoenixamerica.com.

**Physical Outline**



**Output Waveforms**



**Absolute Maximum Ratings**

**Table 2.1**

Characteristic	Symbol	Rating	Units
Forward Supply Voltage	$V_{CC}$	30	V
Reverse Supply Voltage	$V_{RCC}$	-30	V
Output Off Voltage	$V_{OUT}$	30	V
Reverse Output Voltage	$V_{ROUT}$	-0.5	V
Output Current Sink	$I_{OUTSINK}$	25	mA
Operating Temperature	$T_A$	-40 - 125	°C
Storage Temperature	$T_S$	-40 - 150	°C

**Electrical Characteristics**

**Table 2.2**

Characteristic	Symbol	Test Conditions	Min.	Typ. <sup>1</sup>	Max.	Unit <sup>2</sup>
Forward Supply Voltage	$V_{CC}$	Operating, $T_J < 165\text{ °C}$	3.8	-	24	V
Power-On Time	$t_{PO}$	$V_{CC} > 3.8V$	-	-	4	µs
Supply Current	$I_{CC(ON)}$	$B > B_{OP}$ , $V_{CC} = 12V$	-	3.8	7.5	mA
	$I_{CC(OFF)}$	$B < B_{RP}$ , $V_{CC} = 12V$	-	3.5	7.5	mA
Reverse Battery Current	$I_{RCC}$	$V_{RCC} = -30V$	-	-	-10	mA

**Part Number Description**

