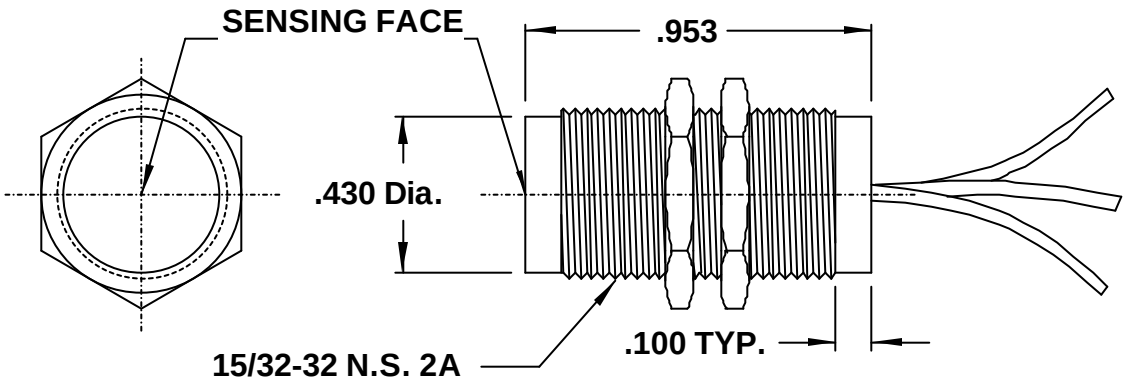
PHOENIX AMERICA INC.
4717 CLUBVIEW DRIVE
FORT WAYNE, IN 46804

P1100 and P1150

ZERO SPEED SENSOR, MAGNET ACTUATED



Sensor Description:

The P1000 Series sensor is a non-contact, solid state device that is magnetically actuated for a variety of speed applications. The P1100 Series sensor is produced to a tight magnetic tolerance around the zero Gauss level to provide a 50% duty cycle over the operating full frequency range. With the additional advantage of low hysteresis, this device is ideal for operation with high-density multi-pole magnet target wheels and large air gap applications, along with providing the position repeatability needs for motor commutation applications. It is capable of reading speeds from zero to 100 kHz.

Features:

- Digital Output Signal
- 4-24 VDC Operation Range
- Current Sinking Output
- 20ma Continuous Operation
- Reverse Polarity Protection
- 0 to100 kHz Operation
- Temperature Compensated
- Operation from –40°C to 125°C
- Rugged, thermoplastic housing

PART NUMBER	SENSOR DESCRIPTION
P1100	22 AWG leads, 36" long
P1150	PVC jacketed cable, 22 AWG, 36" long

(Contact the factory for other options)

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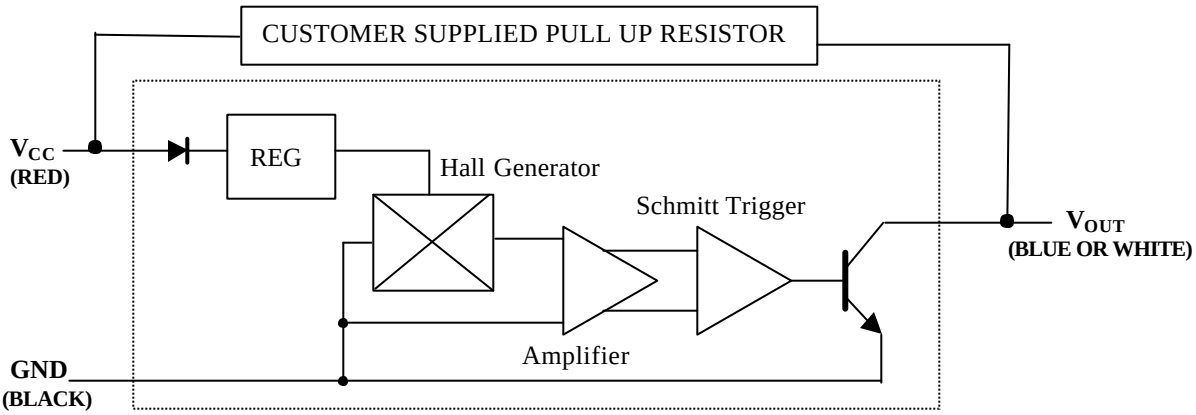
Functional Block Diagram



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.

Magnetic Characteristics: (V_{CC} = 4.5 to 24 VDC @ 25°C)

Characteristics	Symbol	Limits			
		Min.	Typ.	Max.	Units
Operating Point	B_{OP}	15	50	75	Gauss
Release Point	B_{RP}	-75	-50	-15	Gauss
Hysteresis	B_{HYS}	30	100	150	Gauss
Maximum Field Exposure	B_{MAX}	-800		800	Gauss
Active Element Depth	D_P			0.048	Inch

Electrical Characteristics: (T = -40 to 125 °C)

Characteristics	Symbol	Test Condition	Limits			
			Min.	Typ.	Max.	Units
Supply Voltage	V_{CC}	Operating	4.5		24	VDC
Supply Current	I_S	V_{CC} = 4.5V; Output Open		4.7	8.0	mA
Output Current	I_{OUT}	V_{CC} = 4.5V; Output Open			20	mA
Output Saturation Voltage	$V_{OUT(SAT)}$	B > B_{OP}; I_{OUT} = 20ma		150	400	mV
Output Leakage Current	I_{OFF}	B < B_{RP}; V_{OUT} = 24V		4.7	8.0	uA
Rise/Fall Time	t_r / t_f	R_L = 1.2k; C_L <33pF			1	us