

INSTALLATION INSTRUCTIONS FOR THE **SNDH-H SERIES** **SPEED SENSORS**

50071164

Issue D

GENERAL INFORMATION

The SNDH-H Series Hall-Effect Speed Sensors use a magnetically biased, Hall-effect integrated circuit to accurately sense movement of ferrous metal targets. The specially designed IC (integrated circuit) and a permanent magnet are sealed in rugged, probe-type packages. The flux density of the permanent magnet alters when approached by ferrous metal.

This is detected by the Hall ICs. If the sensor is positioned at the circumference of a revolving gear wheel, for example, it detects the teeth and tooth spaces, supplying a digital pulse output with frequency proportional to gear wheel speed. Optimum performance is dependent upon variables which must be considered in combination: target material, geometry and speed, sensor/target gap, and environmental temperature.

TABLE 1. SPECIFICATIONS

Characteristic	SNDH-H3L-G01	SNDH-H3C-G04
Supply voltage range	4 Vdc to 24 Vdc	6.5 Vdc to 24 Vdc
Output	digital current sinking (open collector)	
Supply current	6 mA max.	14 mA max.
Output current	30 mA ¹	20 mA sinking
Output leakage current	10 µA	
Reverse output voltage	—	-0.5 V
Rise time (10% to 90%)	400 ns	1 µs
Fall time (90% to 10%)	400 ns	0.6 µs
Target orientation	omnidirectional	alignment required
Zero speed	yes	
Operating frequency range	0 kHz to 15 kHz	0 kHz to 12 kHz
Operating temp. range	-40°C to 100°C	-40°C to 125°C
Dielectric	200 Vdc	—
Housing material	stainless steel	plastic
Sensing air gap	up to 2,5 mm [0.098 in]	
Target tooth width	2 mm	3 mm
Target slot width	2 mm	>2 mm
Tooth height	5 mm	>2 mm
Target width	≥3 mm	>2 mm
Sensor misposition to target	dependent on target geometry	
Probe length	40 mm	27,5 mm
Probe diameter	9,53 mm	18,6 mm
Connector	leaded ³	Delphi-Packard Metripak 150.2 Type 101

¹ Short circuit protected.

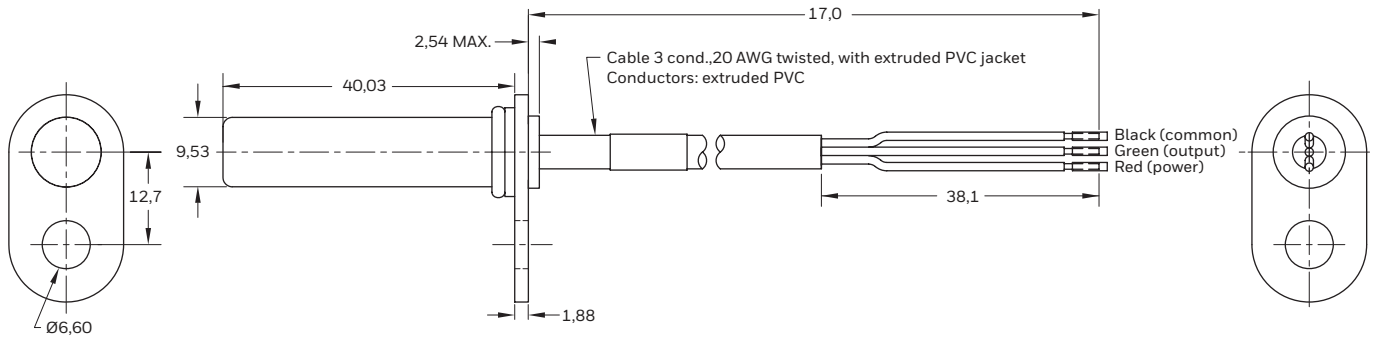
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FIGURE 1. MOUNTING DIMENSIONS (FOR REFERENCE ONLY: MM.)

SNDH-H3L-G01



SNDH-H3C-G04

