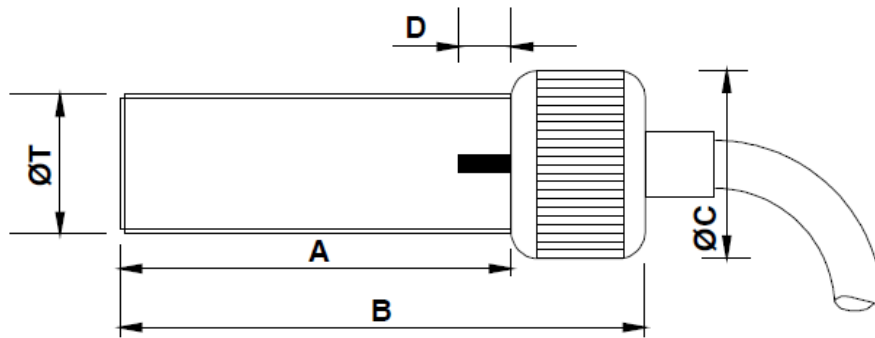


Zero Velocity
 Gear Tooth Sensor
 Internal Bias Magnet
 For Detection of Ferrous Targets

HES1645NSV

Hall Effect Sensor



Mechanical specification

dimensions in mm unless otherwise stated

<i>Dimension</i>		<i>Part Number</i>
A	45	
B	62 nominal	
ØC	Ø22 medium straight knurled cap	
D	6mm alignment groove on thread	
ØT	5/8" x 18 tpi UNF-2A (body thread)	HES1645NSV-I
or	M16 x 1.5 6g	HES1645NSV-M
Main body material	Stainless Steel	
End face	Stainless steel solid sealed end (suitable for permanent liquid immersion)	
Locknut	1 off supplied as standard	

Electrical specification

Supply Voltage (V_S)	5V DC — 30V DC
Protection	Reverse polarity, overvoltage and momentary transient surge, short circuit (output to ground, output to supply)
Supply Current (output low)	17mA max
Supply Current (output high)	5mA min
High Output Voltage (O/C)	$V_S - 0.1V$ typical, $V_S - 0.2V$ min
Low Output Voltage (O/C)	0.2V typical, 0.65V max
High Output Voltage ($I_{out} = 10 / 20mA$)	$V_S - 0.6V$ min / $V_S - 1.0V$ min
Low Output Voltage ($I_{out} = 10 / 20mA$)	0.8V max / 1.0V max
Output Current Limit (Sink or Source)	80mA max
Operating Temperature Range	0°C to 70°C
Operating Frequency Range	0 – 8000Hz
Operating Air Gap (AG)	0 – 3.0mm
Output Polarity	The groove must be aligned with the direction of rotation of the tooth as it passes the face of the sensor. The polarity may be reversed by rotating the sensor through 180°.
Termination	3-core (7/0.2) screened PVC cable (OD 4.2mm), length 2m as standard, with other lengths (nm) given by "En" in part code, e.g HES1645NSVE5 for 5m of cable.
Connections	Red = V_S Blue = 0V Green = Output

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Reliability, Guaranteed



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