SPECTEC
THUNDERBIRD INTERNATIONAL CORPORATION
P.O. Box 360, Emigrant, MT 59027 USA
(406) 333-4967 FAX: (406) 333-4259
www.spectecsensors.com

CE

0155
DIGISPEC PROXIMITY SPEED H SENSOR
SINGLE OUTPUT, MAGNET ACTUATED
1/4, 5/16, M6, M8

PRODUCT DESCRIPTION

SPECTEC's Proximity/Zero Speed sensors are designed to switch in the presence of a magnetic of a low magnetic field. Omni-polar (north and south activation) is standard. Uni-polar (single pole activation) and Bi-polar latching (alternating pole activation) are also available. Various output options are available and provided to suit all interface requirements.

The standard output is NPN Supply Tracking 0-Vs, provided from a 3k Ohm internal pull-up resistor to a collector, which can sink 25 mA. The output is normally high with no target present. Other output signal options are available; please see Page 2 for details.

SPECIFICATIONS

Vs, Supply Voltage 4.0 to 30 VDC at ≤ 18 mA
No Reverse Polarity Protection

Vo, Signal Out: Output signal is typically 'Normally High', except for PNP output which is 'Normally Low'

Operating Freq.: Standard: 0 to ~20 kHz
(for precision position applications)
High Speed: 0 to ~100 kHz
(for high speed only, not precision)

Air Gap: ≤ .160" Typically
≤ 1" using extra strong 5K Gauss mags

Rise/Fall Time: 0.10 µs to 2 µs
*Dependent of configuration

Temperature Range: 2TE: -40° to 221°F (-40° to 105°C)
*May be reduced based on configuration
3TE: -40° to 300°F (-40° to 150°C)
*May be reduced based on configuration

Transmit Distance: 1500' (~500m) max.

Construction: 300 Series Stainless Steel Housing
Solid Encapsulation
Epoxy sealed sensing tip

Connectors & Pin Assignments: See Page 2
All have gold plated contacts

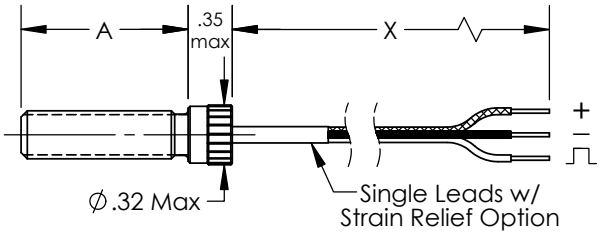
Lead Wire Assignments: 2TE: PVC 26-28 AWG (105°C)
3TE: TFE 26-28 AWG (150°C)
Red: Supply (+)
Black: Common (-)
White/Green: Signal Out
Bare: Cable Shielding

CE-Compliance: **EN55011, EN50082-2**

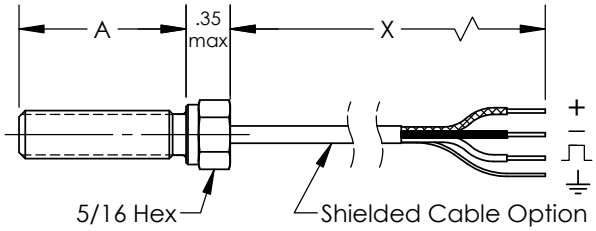
OPTIONS

Custom configurations, thread sizes (including metric), special materials of construction, special output circuits (including short circuit protection), temperature probes (NTC10, RTD100, or others) are also available positioned near the face of the sensor.

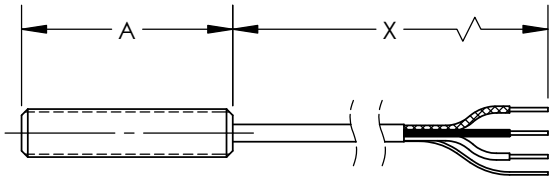
0155K 1/4-40 UNS
0155KB 1/4-28 UNF
0155KM M6 x 0.75



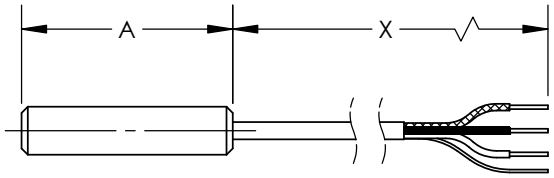
0155H 1/4-40 UNS
0155HB 1/4-28 UNF
0155HB M6 x 0.75



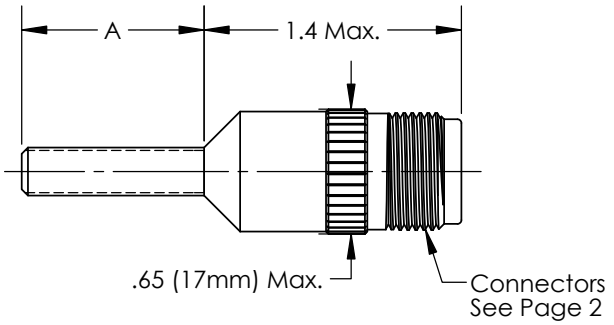
0155A 1/4-40 UNS
0155AB 1/4-28 UNF
0155AM M6 x 0.75
0155AM8 M8x 1.0



0155S Ø1/4" (6.4 mm)
0155S8 Ø5/16" (8.0 mm)

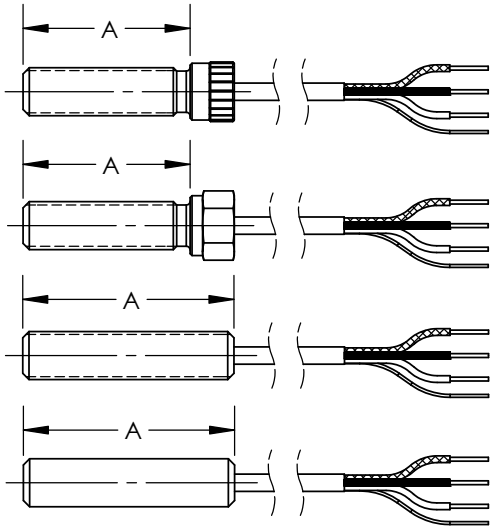


0155 1/4-40 UNS
0155B 1/4-28 UNF
0155M M6 x 0.75



ORDER INFORMATION

Style:	Options:	Threads/Dia.:
0155K -	□ □ □ □ □	1/4-40 UNS
0155KB -		1/4-28 UNF
0155KM -		M6x0.75
0155H -		1/4-40 UNS
0155HB -		1/4-28 UNF
0155HM -		M6x0.75
0155A -		1/4-40 UNS
0155AB -		1/4-28 UNF
0155AM -		M6x0.75
0155AM8 -		M8x1.0
0155S -		1/4" Smooth
0155S8 -	□ □ □ □ □	5/16" Smooth



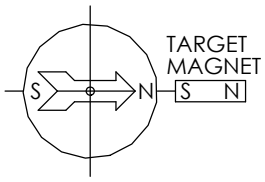
Above illustrations are shown with shielded cable.

Thread Length(A):
- **0** - 0.75" (19mm) **(K & H Style only)**
- **1** - 1.0" (25mm)
- **2** - 1.5" (38mm)
- **3** - 2.0" (50mm)
- **4** - 3.0" (75mm)

Temperature Range:
- **0** - 2TE: -40° to 221°F (-40° to 105°C)
- **5** - 3TE: -40° to 302°F (-40° to 150°C)

Vo, Signal Out:
- **1** - 0-Vs, NPN w/internal 3k Ohms pull-up [Normally High]
- **2** - 0-Vs, NPN OC (Open Collector) [Normally High]
- **3** - 0-Vs, PNP OC [Normally Low]
- **5** - 0-5V, NPN (TTL) [Normally High]

Sensor Type*:
- **1** - Hs, Unipolar (South Pole Activated)
- **2** - H, Bipolar Latch (South High : North Low, Alternating pole)
- **3** - Hn, Unipolar (North Pole Activated)
- **4** - Ho, Omni-polar (Activated by either South or North Pole)
- **7** - Hcs, Unipolar High Speed Type (South Pole Activated)
- **8** - Hc, Bipolar Latch High Speed Type

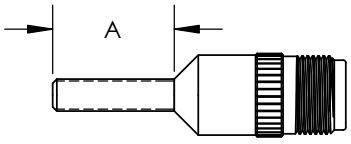


* A South pole activated sensor is triggered by the south pole of a magnet. Using your compass as a reference, the needle pointer will point to the south pole of the magnet.

Lead Wire(X):
- **2** - 2' (0.6m) Single Leads
- **7** - 3' (1.0m) Shielded Cable
- **9** - 10' (3.0m) Shielded Cable

(Shield is NOT connected to sensor shell, and is intended to be connected to instrument panel ground.)

0155 -	□ □ □ □ □	1/4-40 UNS
0155B -		1/4-28 UNF
0155M -		M6x0.75



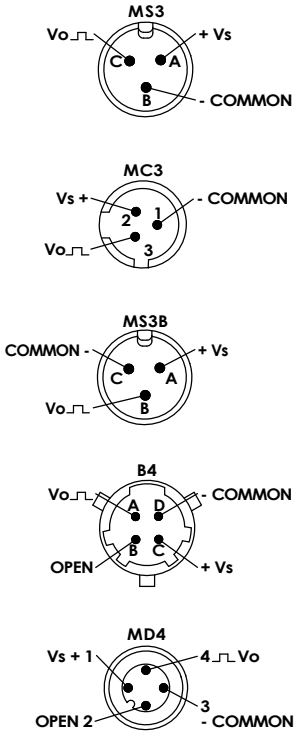
Thread Length(A):
- **1** - 1.0" (25mm)
- **2** - 1.5" (38mm)
- **3** - 2.0" (50mm)
- **4** - 3.0" (75mm)

SAME AS ABOVE

Connector:

1 - MS3:	3 Pin	MS3102-10SL-3P (see Bulletin 3000)
2 - MC3:	3 Pin	MICRO C (see Bulletin 3004)
3 - MS3B:	3 Pin	MS3102-10SL-3P (see Bulletin 3000)
4 - B4:	4 Pin	BAYONET MS3113-H8A4P (see Bulletin 3005)
6 - MD4:	4 Pin	MICRO DIN (see Bulletin 3005)

CONNECTOR PINOUTS



Note: A Normally Low output signal is available for the NPN output signal option (TTL, Supply Tracking and Open Collector) by adding '–NL' to the end of the part number.

Similarly, a Normally High output signal is available for the PNP output signal option by adding '–NH' to the end of the part number.