

PRODUCT DESCRIPTION

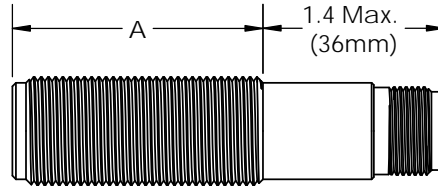
SPECTEC's Proximity/Zero Speed position sensors are designed to switch in the presence of a low magnetic field. Bi-polar (north and south polar activation) is standard. Uni-polar and Omni-polar activation is also available for higher pulse resolution. Various output options are available and provided to suit all interface requirements. A robust universal sink/source NPN/PNP low impedance rail-to-rail output with 60V automotive load dump and short circuit/reverse voltage protection is also available. The sensor is reverse polarity protected.

For intrinsically safe versions refer to bulletins: IS160 & IS161.

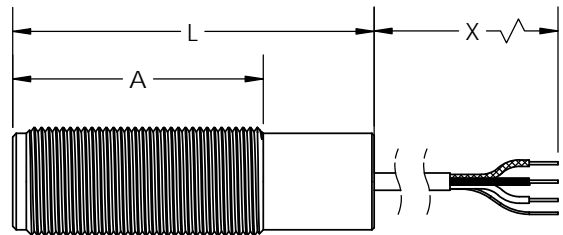
SPECIFICATIONS

Orientation:	Single: No orientation required. Dual: For directional applications, the alignment mark must be in line with the rotation of the target. For synchronous output, the alignment mark should be at a right angle to the rotation of the target.
Vs, Supply Voltage:	4.0 to 30 Vdc @ ≤ 18 mA 10-36 Vdc for Universal sink/source output Reverse Polarity Protected
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)
Air Gap:	$\leq .160"$ Typically $\leq 1"$ using extra strong 5K Gauss mags
Rise/Fall Time:	0.10 μ s to 2 μ s *Dependent on configuration
Temperature Range:	2TE: -40° to 221°F (-40° to 105°C) *May be reduce based on configuration 3TE: -40° to 302°F (-40° to 150°C) *May be reduce based on configuration
Construction:	300 Series S.S. Housing & Face Solid Encapsulation
Connectors & Pin Assignments:	See Page 2 All have Gold Plated Contacts
Lead Wire & Assignments:	See Page 2 for Wire & Cable Options 2TE: PVC 22-24 AWG (105°C) 3TE: TFE 22 AWG (150°C) Red: Supply (+) Black: Common (-) White: Signal A Green: Signal B (dual sensor only) Bare: Shield
CE-Compliance:	EN55011, EN50082-2

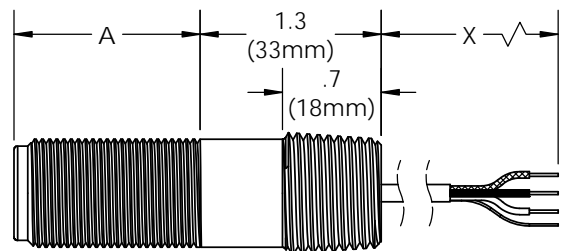
0162	3/4-16 UNF
0162B	3/4-20 UNEF
0162M	M18x1.5
0162M1	M18x1.0



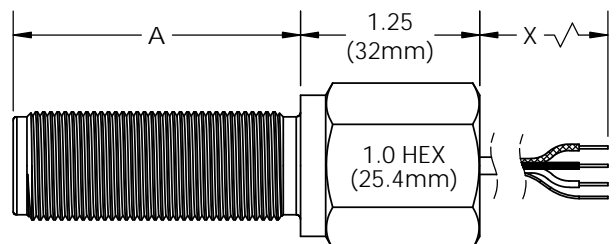
0163	3/4-16 UNF
0163B	3/4-20 UNEF
0163M	M18x1.5
0163M1	M18x1.0



0163X	3/4-16 UNF w/ 1/2-14 NPT Male
0163XB	3/4-20 UNEF w/ 1/2-14 NPT Male



0163Y	3/4-16 UNF w/ 1/2-14 NPT Female
0163YB	3/4-20 UNEF w/ 1/2-14 NPT Female

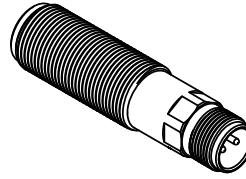


OPTIONS

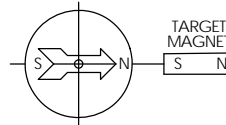
Custom configurations, special materials of construction, thread sizes, special output circuits (including short circuit protection), temperature probe (NTC10, RTD100, or others). Please contact sales.

ORDER INFORMATION

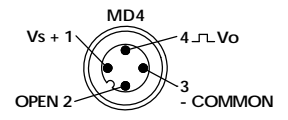
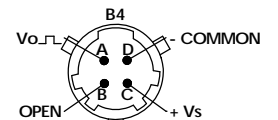
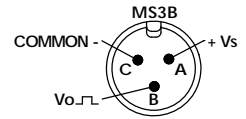
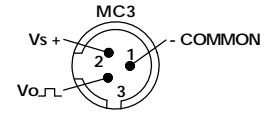
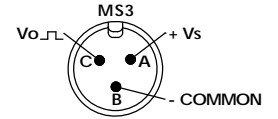
STYLE:	OPTIONS:	THREADS/DIA.:
0162	- [] [] [] [] []	3/4-16 UNF
0162B	- [] [] [] [] []	3/4-20 UNEF
0162M	- [] [] [] [] []	M18 x 1.5
0162M1	- [] [] [] [] []	M18 x 1.0
Thread Length(A):		1 - 0.9" (25mm) 4 - 2.5" (64mm) 2 - 1.5" (38mm) 5 - 3.5" (89mm) 3 - 2.0" (51mm) 6 - 5.0" (127mm)
Temperature Range:		1 - 2TE: -40° to +221°F (-40° to +105°C) 6 - 3TE: -40° to +302°F (-40° to +150°C)
Vo, Signal Out:		1 - 0 - Vs, NPN w/ 3.1 k Ohm pull-up [Normally High] 2 - 0 - Vs, NPN, OC (Open Collector) [Normally High] 3 - 0 - Vs, PNP OC [Normally Low] 4 - 0 - Vs, NPN with LED [Normally High] 5 - 0 - 5V, NPN [TTL] [Normally High] 6 - 0 - Vs, Universal Sink/Source (85°C Max.) 7 - 0 - 5V, Universal Sink/Source (85°C Max.)
Sensor Type:		1 - Hs, Uni-Polar (South Pole Activated) 2 - H, Bi-Polar 4 - Ho, Omni-Polar Type 6 - HHs, Dual Uni-Polar (South Pole Activated) 7 - Hcs, Uni-Polar High Speed Type (South Pole Activated) 8 - Hc, Bi-Polar Latch High Speed Type 9 - Hco, Omni-Polar High Speed Type
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 MS3113-H8A4P BAYONET (See Bulletin 3001) 6 - MD4: 4 Pin MICRO DIN (See Bulletin 3005)



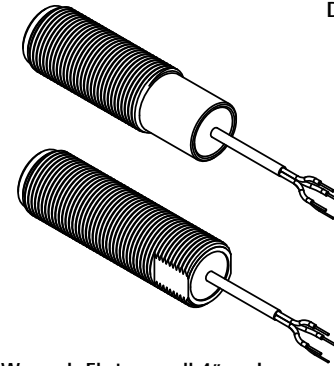
Shown with 5/8" Hex Wrench Flats option per note #1.



SINGLE SENSOR (HF) PINOUT

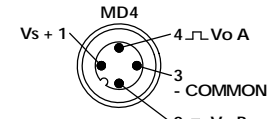
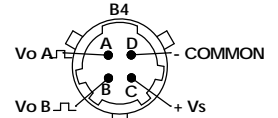


STYLE:	OPTIONS:	THREADS/DIA.:
0163	- [] [] [] [] []	3/4-16 UNF
0163B	- [] [] [] [] []	3/4-20 UNEF
0163M	- [] [] [] [] []	M18 x 1.5
0163M1	- [] [] [] [] []	M18 x 1.0
Thread (A) & Housing (L) Length:		A L 1 - 0.9" (23mm) 1.75" (44mm) 2 - 2.0" (51mm) Fully Threaded 3 - 2.0" (51mm) 2.5" (64mm) 4 - 2.5" (64mm) 3.0" (76mm) 5 - 3.5" (89mm) 4.0" (102mm) 6 - 4.0" (102mm) Fully Threaded 7 - 6.0" (152mm) Fully Threaded 8 - 8.0" (203mm) Fully Threaded
	SAME AS ABOVE	



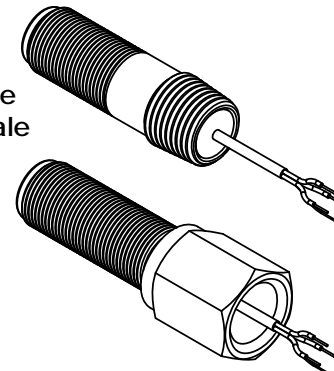
5/8" Wrench Flats on all 4" and longer fully threaded sensors

DUAL SENSOR (HHF) PINOUT



Lead Wire(X):	2 - 2' (.6m) Single Leads	Note: Cable Shielding is not connected to sensor, and is intended to be connected the instrument
	7 - 3' (1m) Shielded Cable	
	9 - 10' (3m) Shielded Cable	

STYLE:	OPTIONS:	THREADS/DIA.:
0163X	- [] [] [] [] []	3/4-16 UNF with 1/2-14 NPT Male
0163XB	- [] [] [] [] []	3/4-20 UNEF with 1/2-14 NPT Male
0163Y	- [] [] [] [] []	3/4-16 UNF with 1/2-14 NPT Female
0163YB	- [] [] [] [] []	3/4-20 UNEF with 1/2-14 NPT Female
Thread Length(A):		0163X 0163Y 0 - 0.9" (23mm) --- 1 - 1.3" (33mm) 1.5" (38mm) 2 - --- 2.0" (51mm) 3 - --- 2.8" (71mm) 4 - --- 4.0" (102mm) 6 - --- 6.0" (152mm) 8 - --- 8.0" (203mm)
	SAME AS ABOVE	



Notes:

- Optional 5/8" hex Wrench flats are designated by adding an "H" after the 4 digit base number i.e.: 0162HB-XXXXX
- 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.