

PRODUCT DESCRIPTION

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

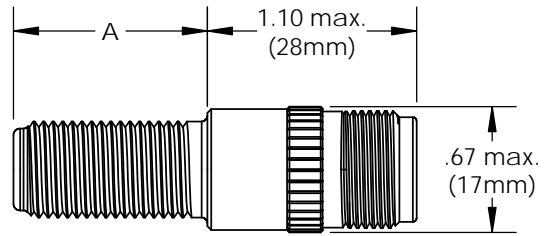
The standard output is NPN Supply Tracking 0-Vs, provided from a 3k Ohm internal pull-up resistor to a collector, which can sink 25 mA. The output is normally high with no target present. Other output signal options are available; please see Page 2 for details.

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

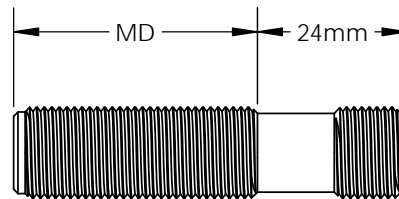
SPECIFICATIONS

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 at ≤ 18 mA 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 ≤ 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 reduced based on configuration 3TE: -40° to 302°F (-40° to 150°C) *May be reduced based on configuration
Construction:	300 Series S.S. Housing & Face Solid Epoxy Encapsulation
Connectors & Pin Assignments:	See Page 2 All have Gold Plated Contacts
Lead Wires & Assignments:	See Page 2 for Configurations 2TE: PVC 22-24 AWG (105°C) 3TE: TFE 22 AWG (150°C) Red: Supply (+) Black: Common (-) White/Green: Signal Bare: Cable Shielding
CE-Compliance:	EN55011, EN50082-2

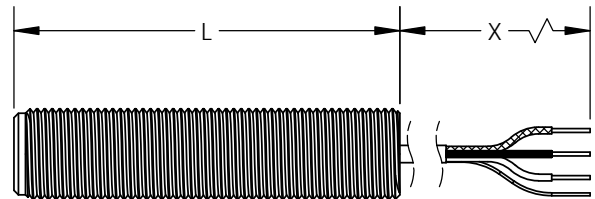
0158 1/2-20 UNF
0158MK M12x1



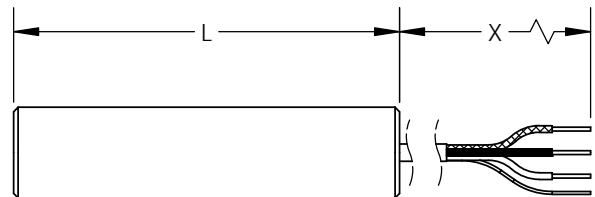
0158MD M12x1 w/ MD4 Connector Only



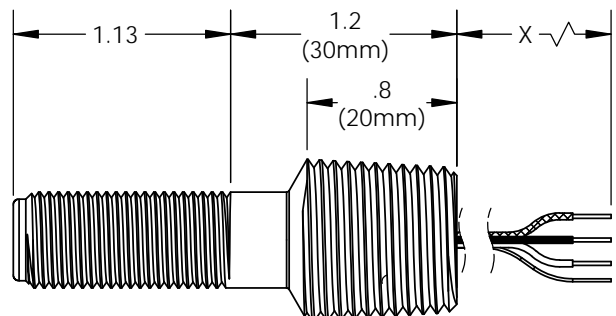
0158A 1/2-20 UNF
0158B 1/2-32 UN
0158M M12x1



0158S $\varnothing 1/2$ " (12.7mm) Smooth Shell



0158X 1/2-20 UNF w/ 1/2-14 NPT

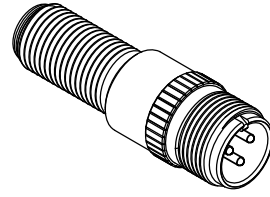


OPTIONS

Custom configurations, special materials of construction, temperature probes (NTC10, RTD100, or others) are also available positioned near the face or the sensor.

ORDER INFORMATION

STYLE:	OPTIONS:	THREADS/DIA.:
0158	- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1/2-20 UNF
0158MK	- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	M12 x 1.0
0158MD	- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	M12 x 1.0 (MD4 Connector Only)

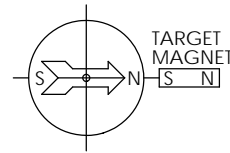


Thread Length (A,MD):	0158 & 158M	0158MD
	1 - 1.0" (25mm)	16mm
	2 - 2.0" (51mm)	28mm
	3 - 3.0" (76mm)	40mm
	4 - 4.0" (101mm)	79mm
	6 - 6.0" (152mm)	130mm

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/ 3.1k Ohm 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]

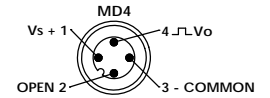
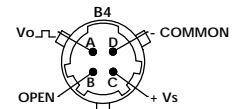
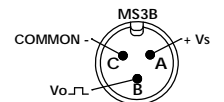
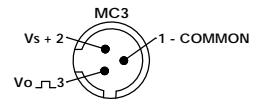
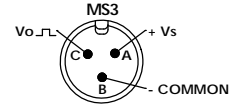
Sensor Type:	1 - Hs, Uni-Polar (South Pole Activated)
	2 - H, Bi-Polar
	4 - Ho, Omni-Polar Type
	6 - Hhs, Dual Uni-Polar (South Pole Activated)
	7 - Hcs, Uni-Polar High Speed Type (South Pole Activated)
	8 - Hc, Bi-Polar Latch High Speed Type
	9 - Hco, Omni-Polar High Speed Type



Note: A South Pole Activated Sensor is Triggered by the South Pole of a Magnet. Using a Compass as a reference, the needle will point to the south pole of the magnet

Connector:	1 - MS3: 3 Pin MS3106-10SL-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 3001)
	6 - MD4: 4 Pin Micro DIN (see Bulletin 3005)

Connector Pinouts

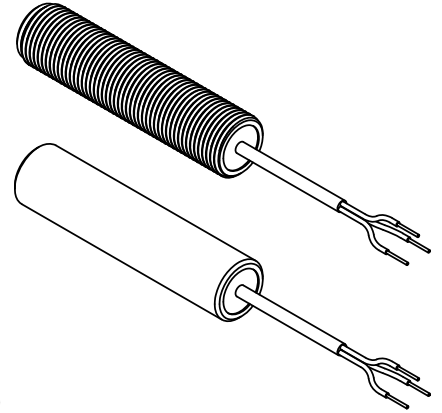


0158A	- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1/2-20 UNF
0158B	- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1/2-32 UN
0158M	- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	M12 x 1.0
0158S	- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Ø1/2" (12.7mm) Smooth Shell

Housing Length(L):	2 - 1.0" (25mm)
	3 - 1.25" (32mm)
	4 - 1.50" (38mm)
	5 - 2.00" (51mm) [1.80"(46mm) for 0158S ONLY]
	6 - 2.50" (64mm)
	7 - 4.00" (101mm)
	8 - 6.00" (152mm)

SAME AS ABOVE

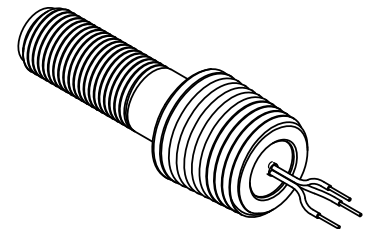
Lead Wire(X):	2 - 2' (.6m) Single Leads	Note: For Shielded Cable, shield is not connected to sensor shell, and is intended to be connected to the instrument panel ground.
	7 - 3' (1m) Shielded Cable	
	9 - 10' (3m) Shielded Cable	



0158X	- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1/2-20 UNF with 1/2-14 NPT Male Conduit
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Thread Length(A):	1 - 1.3" (33mm)
	2 - 2.50" (64mm)

SAME AS ABOVE



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.