

SPECTEC

THUNDERBIRD INTERNATIONAL CORPORATION
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0099
 DIGISPEC MAGNETIC SPEED SENSOR
 3/4, M18

PRODUCT DESCRIPTION

SPECTEC's Digital RF pickup produces a digital frequency output directly proportional to speed. The internal amplifier provides for constant pulse shaping, signal amplitude, near zero speed performance and good sensitivity (air gap). Internal temperature probes are also available.

For CL 1, Div I & II hazardous location, intrinsically safe, and non-incendive versions; please refer to IS100 and IS101.

SPECIFICATIONS

Vs, Supply Voltage: 7 to 30 Vdc (Std.), or 3.8 to 30 Vdc
 @ ≤ 10 mA See Page 2
 Reverse Polarity Protected

Vo, Signal Out: 0 – 10V (Std.)
 @ ≤ 20 mA sink 0 – 5V (TTL)
 0 – Vs
 (@ ≤ 200 mA for NPN/PNP universal sink/source)

Operating Freq.: Vs = 3.8 - 30VDC: 0.5 to ≤ 5000 Hz
 Vs = 7.0 - 30VDC: 0.5 to ≤ 4000 Hz
 Vs = 11.0 - 30VDC: 0.5 to ≤ 7000 Hz

Air Gap: ≤ .160" (Depending on target mass)

Rise/Fall Time(N.L.): 0.04 μs / 0.18 μs

Temperature Range: 2TE: -40° to 257°F (-40° to 125°C)
 3TE: -49° to 284°F (-45° to 140°C)

Construction: 300 Series stainless steel housing
 Solid epoxy encapsulation

Connectors: See Page 2 for Configurations
 All have Gold Plated Contacts

Lead Wire & Assignments: See Page 2 for Wire & Cable Options
 2TE: PVC, 20-24 AWG
 3TE: TFE, 20 AWG

Red: Supply (+)
 Black: Common (-)
 White/Green: Signal Out
 Bare: Shield

With NTC type Temp. Probe

Red (x2)

With RTD type Temp. Probe

Red (x1)

Black (x2) Dual black leads for lead wire resistance compensation

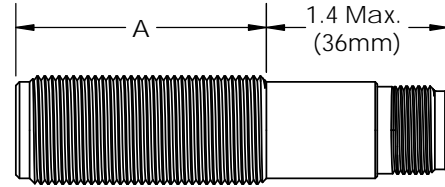
Construction: 300 Series stainless steel housing
 Solid epoxy encapsulation

CE-Compliance: EN55011, EN50082-2

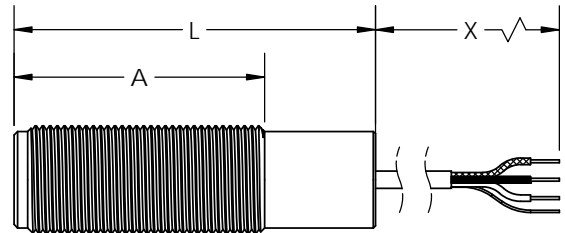
Options

For different length, material of construction, configuration, thread sizes, hermetically sealed, precision custom magnetization, connector and/or cable termination, please contact factory.

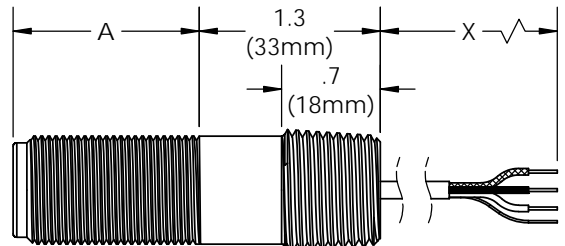
0099 3/4-16 UNF
 0099B 3/4-20 UNEF
 0099M M18x1.5
 0099M1 M18x1.0



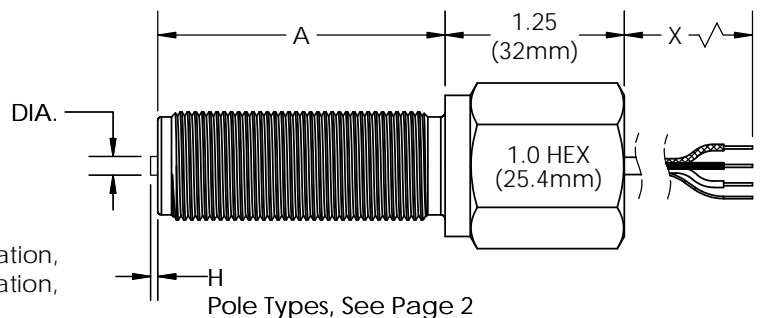
0099L 3/4-16 UNF
 0099LB 3/4-20 UNEF
 0099LM M18x1.5
 0099LM1 M18x1.0



0099X 3/4-16 UNF w/ 1/2-14 NPT Male
 0099XB 3/4-20 UNEF w/ 1/2-14 NPT Male

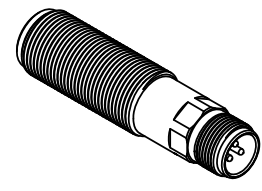


0099Y 3/4-16 UNF w/ 1/2-14 NPT Female
 0099YB 3/4-20 UNEF w/ 1/2-14 NPT Female



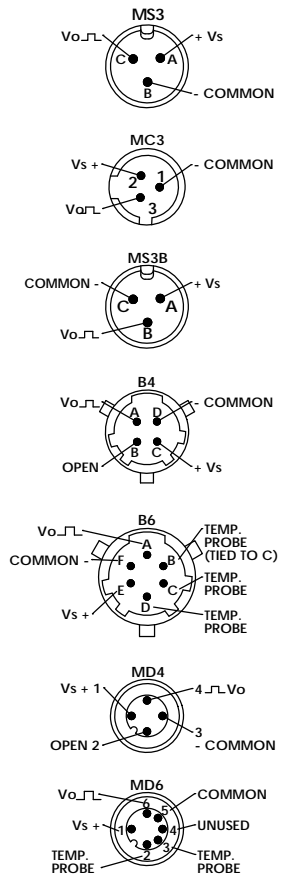
ORDER INFORMATION

STYLE:	OPTIONS:	THREADS/DIA.:
0099	- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	3/4-16 UNF
0099B	- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	3/4-20 UNEF
0099M	- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	M18x1.5
0099M1	- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	M18x1.0
Thread Length(A):		1 - 1.0" (25mm) 4 - 2.5" (65mm) 2 - 1.5" (38mm) 5 - 3.5" (89mm) 3 - 2.0" (51mm) 6 - 5.0" (127mm)
Face:		0 - Epoxy sealed face (for greater sensitivity) 1 - Stainless steel face (Blindshell, for harsh environments)
Vo, Vs:		1 - 0 - 5V, NPN (6 kΩ), Vs: 7 - 30 VDC 2 - 0 - 10V, NPN (6 kΩ), Vs: 11 - 30 VDC 3 - 0 - Vs, NPN (6 kΩ), Vs: 7 - 30 VDC 4 - 0 - Vs, NPN (OC), Open collector, Vs: 7 - 30 VDC 5 - 0 - Vs, NPN (OC), Open collector, Vs: 3.8 - 30 VDC 7 - 0 - Vs, NPN (6 kΩ), Vs: 3.8 - 30 VDC 8 - 0 - 5V, NPN (6 kΩ), Vs: 3.8 - 30 VDC 9 - 0 - Vs, NPN/PNP Universal sink/source, Vs 7 - 30 Vdc (@ ≤ 200mA)



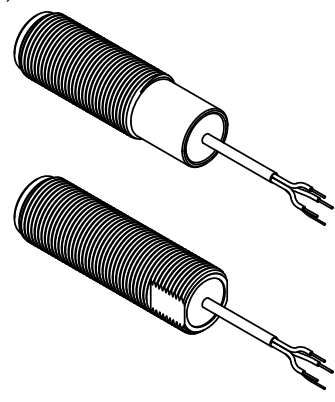
Shown with 5/8" Hex Wrench Flats option per note #1.

Connector Pinouts



Temperature Range & Probe:	Options:
	1 - 2TE: -40° to 257°F (-40° to +125°C) 2 - 3TE: -49° to 284°F (-45° to +140°C) A - 3TE: -49° to 284°F (-45° to +140°C) with RTD100Ω C - 2TE: -40° to 257°F (-40° to +125°C) with NTC10kΩ

Connector:	Options:
	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-H8A-4P (See Bulletin 3001) 5 - B6: 6 Pin Bayonet, MS3111-H10A-6P (See Bulletin 3001) 7 - MD4: 4 Pin Micro DIN (See Bulletin 3005) 8 - MD6: 6 Pin Micro DIN (See Bulletin 3005)



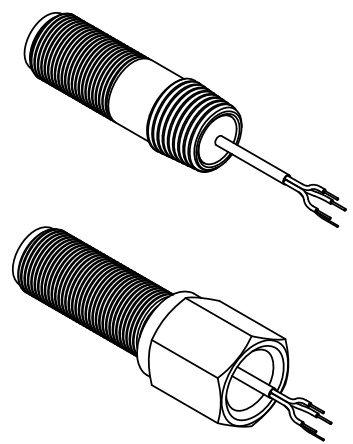
5/8" Wrench Flats on all 4" and longer fully threaded sensors

Style	Options	Thread (A) & Housing Length:																		
0099L	- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	3/4-16 UNF																		
0099LB	- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	3/4-20 UNEF																		
0099LM	- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	M18x1.5																		
0099LM1	- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	M18x1.0																		
		<table border="1"> <thead> <tr> <th>A</th> <th>L</th> </tr> </thead> <tbody> <tr> <td>1 - 0.9" (23mm)</td> <td>1.75" (44mm)</td> </tr> <tr> <td>2 - 2.0" (51mm)</td> <td>Fully Threaded</td> </tr> <tr> <td>3 - 2.0" (51mm)</td> <td>2.5" (64mm)</td> </tr> <tr> <td>4 - 2.5" (64mm)</td> <td>3.0" (76mm)</td> </tr> <tr> <td>5 - 3.5" (89mm)</td> <td>4.0" (102mm)</td> </tr> <tr> <td>6 - 4.0" (102mm)</td> <td>Fully Threaded</td> </tr> <tr> <td>7 - 6.0" (152mm)</td> <td>Fully Threaded</td> </tr> <tr> <td>8 - 8.0" (203mm)</td> <td>Fully Threaded</td> </tr> </tbody> </table>	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
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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

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

Style	Options	Thread Length(A):
0099X	- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	3/4-16 UNF with 1/2-14 NPT Male
0099XB	- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	3/4-20 UNEF with 1/2-14 NPT Male
0099Y	- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	3/4-16 UNF with 1/2-14 NPT Female
0099YB	- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	3/4-20 UNEF with 1/2-14 NPT Female



Thread Length(A):	0099X	0099Y
0 - 0.9" (23mm)	---	---
1 - 1.3" (33mm)	2.0" (51mm)	2.8" (71mm)
2 - ---	2.8" (71mm)	4.0" (102mm)
3 - ---	4.0" (102mm)	6.0" (152mm)
4 - ---	6.0" (152mm)	---

SAME AS ABOVE

Notes: 1. The optional 5/8" hex is designated by adding a "H" immediately after the four digit base number. i.e.: 0099HB, designating a hex added to the 3/4-20 connector type 0099.