

SPECTEC

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0090 • 0091
 DIGISPEC MAGNETIC SPEED SENSOR
 5/8, M16

PRODUCT DESCRIPTION

SPECTEC's DIGISPEC Magnetic pickups produce a digital frequency output proportional to speed. The internal amplifier provides for constant pulse shaping, signal amplitude, logic-level output, robust signal-to-noise ratio, usable at lower RPMs and greater air gap between the sensor and the actuator. All models are also available with an internal temperature probe (RTD100 Ohm, NTC 10k Ohm).

For hazardous location Class 1 Division 1 please refer to IS90 & IS91, or for Class 1 Division 2 please refer to N90 & N91.

SPECIFICATIONS

- Vs, Supply Voltage:** 7.5(12) to 30 VDC regulated
 4.5 to 7.5 VDC, unregulated
- Is, Supply Current:** ≤ 2 mA @ 5 VDC
 ≤ 4 mA @ 12 VDC
 ≤ 10 mA @ 24 VDC
 ≤ 20 mA @ 30 VDC (OC)
- Vo, Signal Out:** @ ≤ 20 mA sink, See page 2
- Input Sensitivity:** 30, 12, or 5 mVpp
- Operating Freq.:** ≥ 3 to 10 kHz
 ≥ 30 kHz at increased signal level, varies with target size, distance and pickup sensitivity. (Options: ≤ 100 kHz)
- Rise/Fall Time:** 0.04 μs / 0.16 μs
- Temperature Range:**
 2TE: -40° to 248°F (-40° to 120°C)
 3TE: -49° to 284°F (-45° to 140°C)
 RTD: -49° to 284°F (-45° to 140°C)
 NTC: -40° to 248°F (-40° to 120°C)
- Magnetization:**
 Standard: ≥ 900 Gauss
 Low Mag: 250 Gauss, TYP.
- Pole Piece:** Flush(FP), Sealed Flush(FPS), Extended(EP), Sealed Extended(EPS), & Chisel Point(CP) Poles are available. (CP must be oriented parallel with gear tooth.)

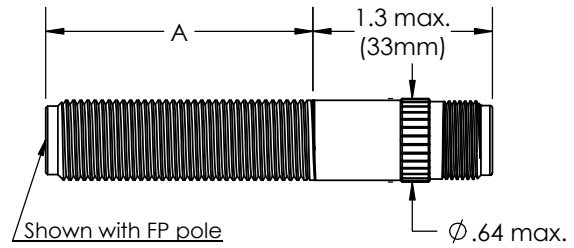
Gear Pitch	Pole Type
≤36 DP (MODULE 0.7)	EP62, CP10
≤26 DP (MODULE 0.98)	EP93
≤24 DP (MODULE 1.06)	FP130, FPS130, EP106, EPS106 EP125, CP45
≤12 DP (MODULE 2.11)	EP188
≤5 DP (MODULE 5.1)	EP250

- Connectors/Pins:** See page 2 for Configurations
 All have gold plated contacts
- Lead Wire Assignments:** See Page 2 for Wire & Cable Options
 Red: Supply (+)
 Black: Common (-)
 White or Green: Signal
 Bare: Cable Shielding
- Construction:** 300 Series stainless steel housing
 Solid epoxy encapsulation
- CE-Compliance:** EN55011, EN50082-2

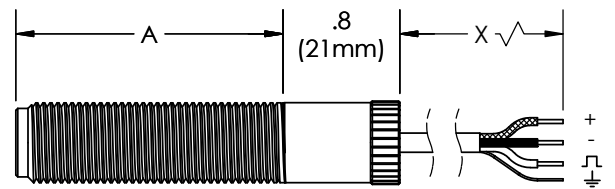
OPTIONS

Custom configurations, thread sizes, special materials, temperature probes (NTC10, RTD100, or others), Please contact sales.

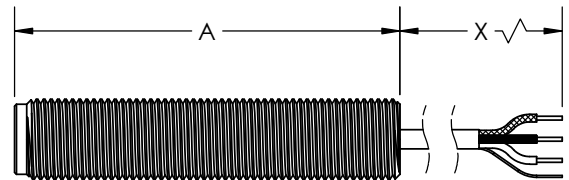
0090 5/8-18 UNF
0090M M16x1.5
0090M1 M16x1.0



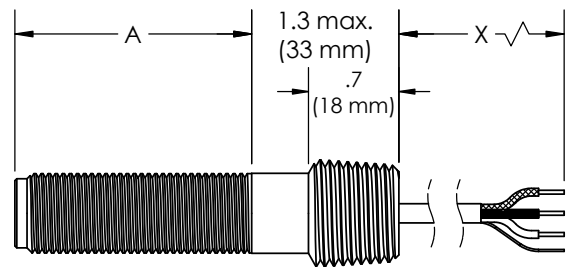
0091 5/8-18 UNF
0091M M16x1.5
0091M1 M16x1.0



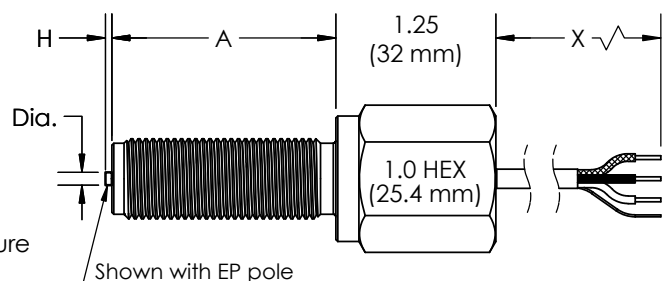
0091A 5/8-18 UNF
0091AM M16x1.5
0091AM1 M16x1.0



0091X 5/8-18 UNF w/ 1/2-14 NPT Male

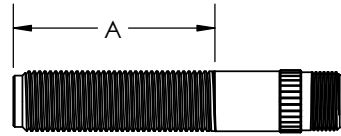


0091Y 5/8-18 UNF w/ 1/2-14 NPT Female



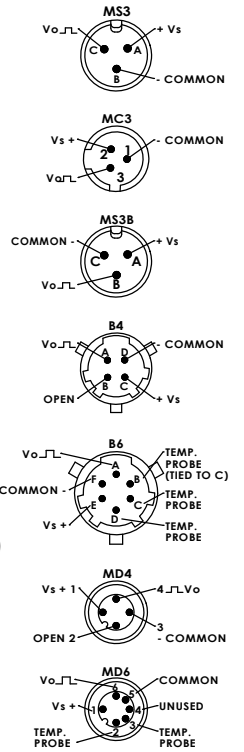
ORDER INFORMATION

STYLE:	OPTIONS:	THREADS/DIA.:
0090	- [] [] [] [] []	5/8-18 UNF
0090M	- [] [] [] [] []	M16x1.5
0090M1	- [] [] [] [] []	M16x1.0
Thread Length(A):		0 - 1.25" (36mm) 4 - 4.0" (102mm) 1 - 1.75" (45mm) 5 - 5.0" (127mm) A - 2.5" (64mm) 6 - 6.0" (152mm) 2 - 3.0" (76mm) 8 - 8.0" (203mm)
Pole Type (Ø, H):		1 - FP130 Flush Pole, Ø.130" 2 - EP106 Extended Pole, Ø.106" x .02" H 3 - EP187 Extended Pole, Ø.187" x .02" H 4 - EP125 Extended Pole, Ø.125" x .07" H 5 - FPS130 Flush Pole, Ø.130" in Sealed S.S. Face 6 - EPS106 Extended Pole, Ø.106" x .02" H in Sealed S.S. Face 7 - SAN Sanitary NEMA 6, IP65, & IP67 Construction w/ FPS130 8 - CP10 Fine Chisel Pole, .01" W 9 - CP45 Course Chisel Pole, .045" W A - EP62 Extended Pole, Ø.062" x .03" H B - EP93 Extended Pole, Ø.093" x .03" H C - EP250 Extended Pole, Ø.250" x .02" H



Note: Not all combinations of options are possible.

CONNECTOR PINOUTS

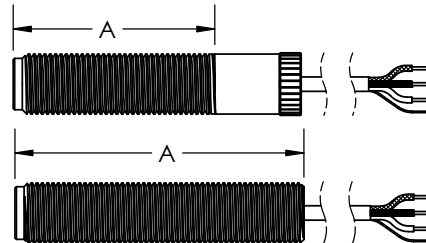


Vo, Pulse Out/ Output Logic:	1 - 0-10V, NPN (Recommend Vs=12 VDC min)	5 - 0-Vs, Sink/Source (125°C max)
	2 - 0-5V, NPN [TTL]	6 - 0-5V, Sink/Source (125°C max)
	3 - 0-Vs, NPN w/2.2k pull-up	7 - 0-Vs, Sink/Source w/Short Circuit Protection (85°C max)
	4 - 0-Vs, NPN (OC), Open collector	8 - 0-5V, Sink/Source w/Short Circuit Protection (85°C max)

Input Sensitivity and Temp.:	1 - 30 mV (2TE, 120°C)	5 - 30 mV (3TE, 140°C)
	2 - 12 mV (2TE, 120°C)	6 - 12 mV (3TE, 140°C)
	3 - 5 mV (2TE, 120°C)	7 - 5 mV (3TE, 140°C)

Connector:	1 - MS3: 3 Pin MS3102A10SL-3P (for mate see Bulletin 3000)
	2 - MC3: 3 Pin Micro-C, 1/2-20 threaded (for mate see Bulletin 3004)
	3 - MS3B: 3 Pin MS3102A10SL-3P (for mate see Bulletin 3000)
	4 - B4: 4 Pin Bayonet, MS3112E8-4P (for mate see Bulletin 3001)
	5 - B6: 6 Pin Bayonet, MS3112E10-6P (for mate see Bulletin 3001)
	7 - MD4: 4 Pin Micro DIN M12 threaded (for mate see Bulletin 3005)
	8 - MD6: 6 Pin Micro DIN M12 threaded (for mate see Bulletin 3005)

STYLE:	OPTIONS:	THREADS/DIA.:
0091	- [] [] [] [] []	5/8-18 UNF
0091M	- [] [] [] [] []	M16x1.5
0091M1	- [] [] [] [] []	M16x1.0
0091A	- [] [] [] [] []	5/8-18 UNF
0091AM	- [] [] [] [] []	M16x1.5
0091AM1	- [] [] [] [] []	M16x1.0

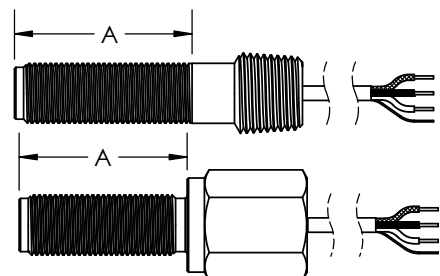


0091, M, M1	0091A, AM, AM1
0 - 1.25" (30mm)	---
1 - 1.75" (45mm)	2.0" (51mm)
2 - 3.0" (76mm)	3.0" (76mm)
4 - 4.0" (101mm)	4.0" (101mm)
5 - 5.0" (127mm)	5.0" (127mm)
6 - 6.0" (152mm)	6.0" (152mm)
8 - 8.0" (203mm)	8.0" (203mm)

SAME AS ABOVE

Lead Wire(X):	2 - 2' (.6m) Single Leads	Note: Cable shielding is not connected to the sensor metal housing. It should be connected to instrument ground.
	7 - 3' (1m) Shielded Cable	
	9 - 10' (3m) Shielded Cable	

STYLE:	OPTIONS:	THREADS/DIA.:
0091X	- [] [] [] [] []	5/8-18 UNF with 1/2-14 NPT Male
0091Y	- [] [] [] [] []	5/8-18 UNF with 1/2-14 NPT Female
Thread Length(A):		0091X 0091Y 2 - 1.3" (33mm) 2.0" (51mm) 3 - --- 2.8" (71mm) 4 - --- 4.0" (102mm)



SAME AS ABOVE

Notes: 1. The magnetization level for special or low mag. sensors, is designated as a suffix to the P/N, i.e.: 0090 -11111-300G, designating a gauss level of 300(±50). (Standard mag. level will not have a suffix.)