

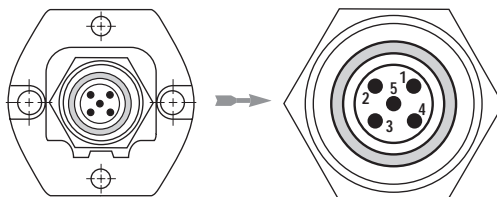
W I R I N G

D6 Connector

Pin No.	Function
1	Shield
2	+ 24 Vdc (customer provided)
3	DC Ground
4	CAN-H (dominant high)
5	CAN-L (dominant low)

CAUTION!

When wiring Temposonics III sensors,
DO NOT connect DC ground to the cable
shield or drain wire.

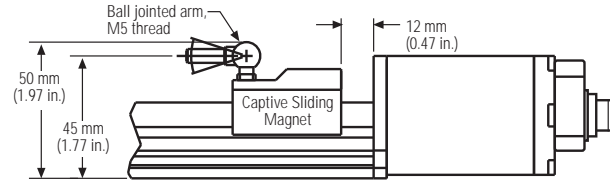
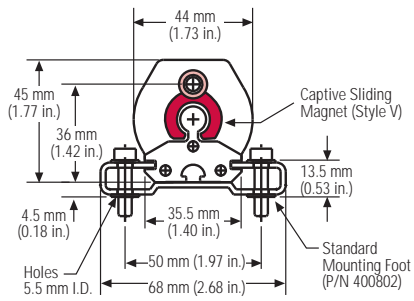
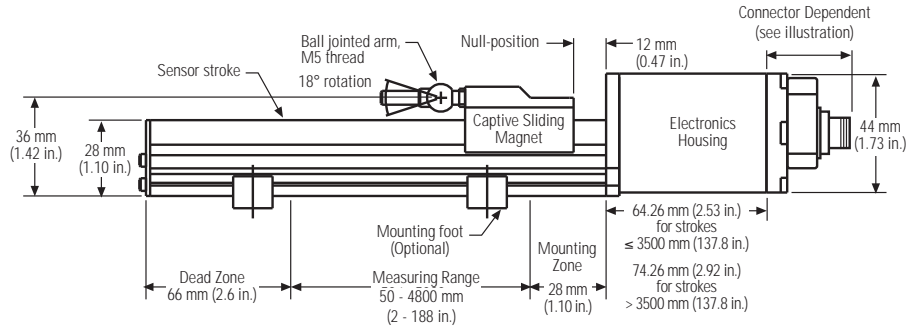


Integral 5-pin
Micro Connector (D51)

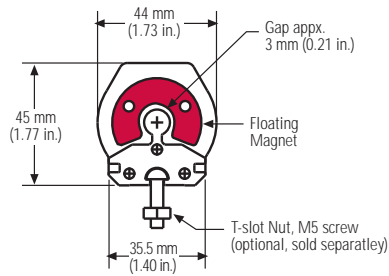
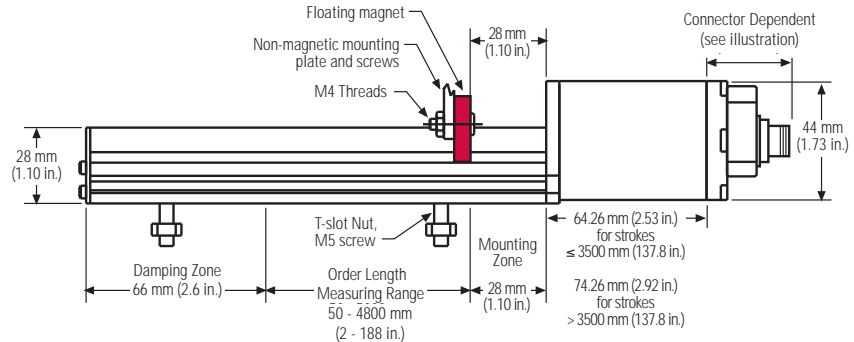
Exploded View of Integral Micro
Connector with Pin Identification
(View as seen from end of sensor)

HOUSINGS / DIMENSIONS

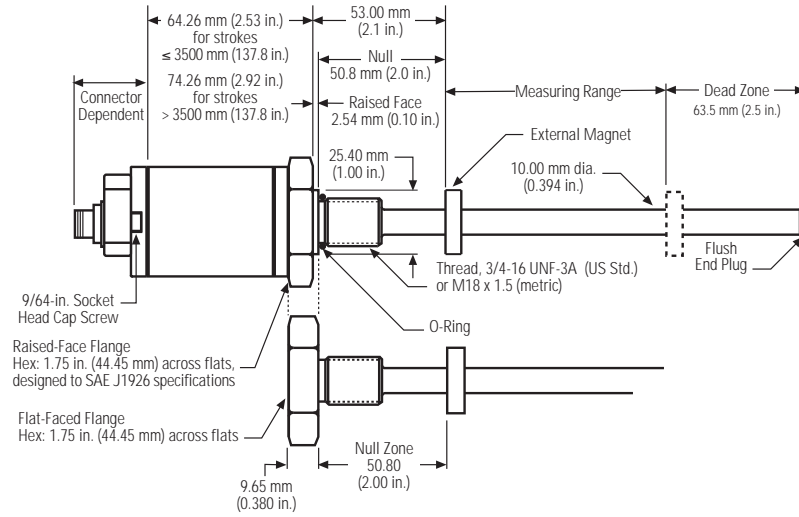
MODEL
PB
w/Captive Sliding
Magnet



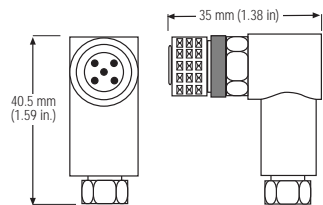
MODEL
PB
w/Floating Magnet



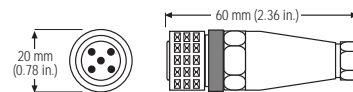
MODEL RH



CONNECTORS



MTS P/N 370376
90° Micro Mating Field-Installable connector



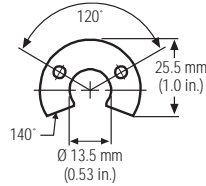
MTS P/N 370375
Straight Exit Micro Mating Field-Installable connector

** Molded extension cables are also available from a third party vendor. Contact MIS for more information*

D I M E N S I O N S

MAGNETS &
MAGNET ACCESSORIES

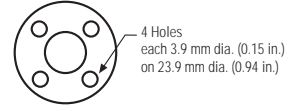
Part No. 251416



ID: 13.5 mm (0.53 in.)
OD: 32.8 mm (1.29 in.)
Thickness: 7.9 mm (0.312 in.)

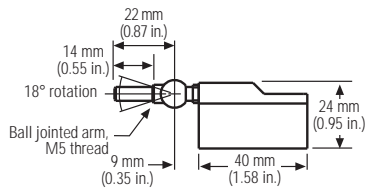
For use with Temposonics
PB & RH sensors

Part No. 201542

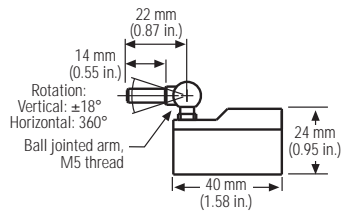


ID: 13.5 mm (0.53 in.)
OD: 32.8 mm (1.29 in.)
Thickness: 7.9 mm (0.312 in.)

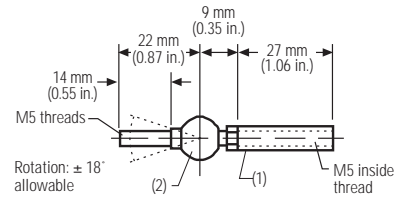
For use with Temposonics RH sensors



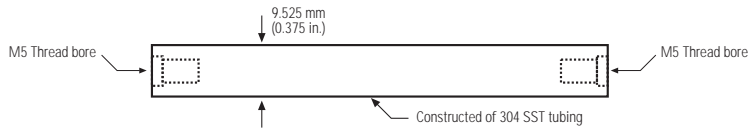
Captive Sliding Magnet, Style V
Part No. 252111-1
For use with Temposonics PB sensors



Captive Sliding Magnet, Style S
Part No. 252110-1
For use with Temposonics PB sensors



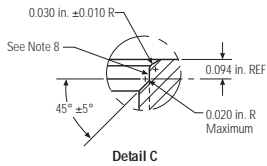
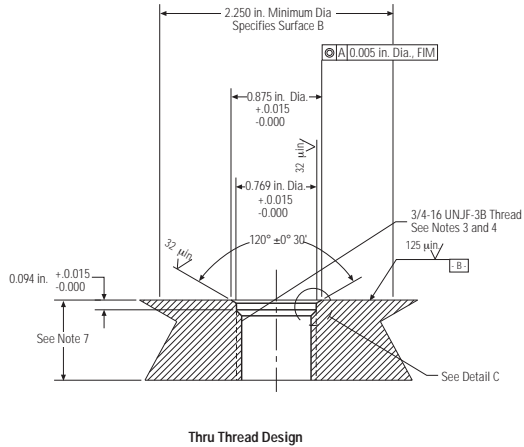
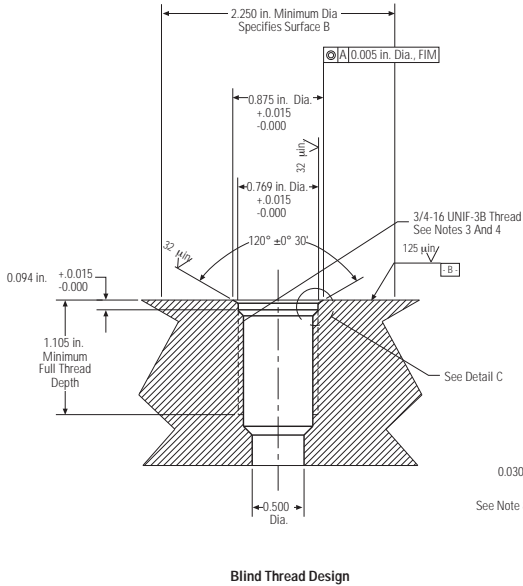
Joint Rod
(1) Sleeve, Part No. 401603
(2) Ball Jointed Arm, Part No. 401600-1
For use with Temposonics PB sensors



Extension Rod
Used with Captive Sliding Magnets
on Temposonics PB sensors

CYLINDER PORT DETAIL

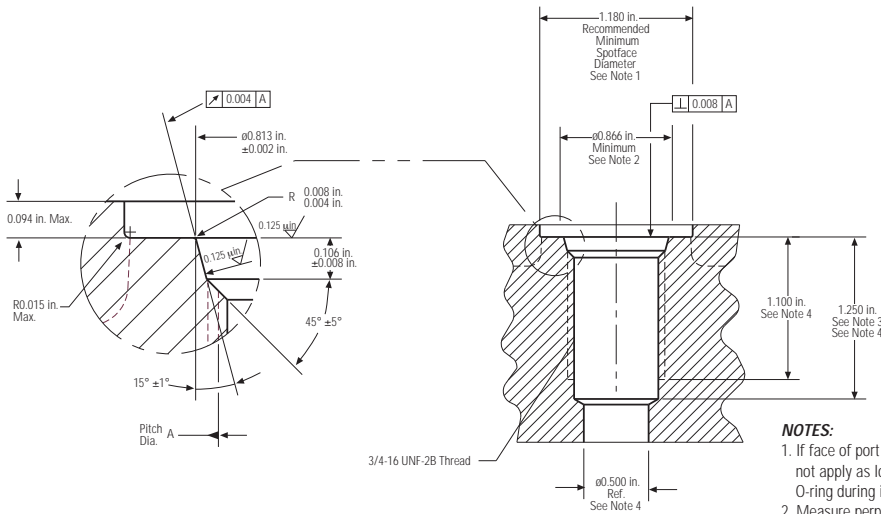
Port Detail for Temposonics RH Sensors with Housing Style 'S'



NOTES:

1. Dimensions and tolerances based on ANSI Y14.5-1982.
2. MTS has extracted all pertinent information from MS33649 to Generate this document.
3. PD must be square with surface B within 0.005 FIM across 2.250 dia minimum.
4. PD must be concentric with 2.250 dia within 0.030 FIM and with 0.769 dia within 0.005 FIM.
5. Surface texture ANSI B46.1-1978
6. Use o-ring MTS part number 560315 for correct sealing.
7. The thread design shall have sufficient threads to meet strength requirements of material used.
8. Finish counter-bore shall be free from longitudinal and spiral tool marks. Annular tool marks up to 32 microinches maximum will be permissible.

Port Detail (SAE J1926/1) for Temposonics RH Sensors with Housing Style 'T'

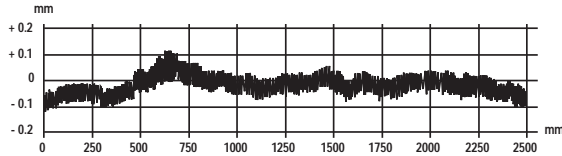


NOTES:

1. If face of port is on a machined surface, dimensions 1.180 and 0.094 need not apply as long as R0.008/0.004 is maintained to avoid damage to the O-ring during installation.
2. Measure perpendicularity to A at this diameter.
3. This dimension applies when tap drill cannot pass through entire boss.
4. This dimension does not conform to SAE J1926/1.

SPECIFICATIONS

PARAMETER	SPECIFICATION
Measured Variable:	Displacement
Resolution:	Up to 0.002 mm
Non-Linearity:	< ± 0.01% of full stroke or ± 0.04 mm, whichever is greater



Example: Sensor Type: Tempsonics PB
Measuring Range: 2500 mm
Non-linearity (measured): ± 0.116 mm

Repeatability:	< ± 0.001% of full scale or ± 0.0025 mm, whichever is greater
Hysteresis:	< 0.004 mm
Output Signal:	CAN-Field-bus System ISO 11898
Data Protocol:	DeviceNet/CANbus
Measuring Range:	Profile Style Sensors (PB): 50 to 4800 mm (2 to 188 in.) Rod Style Sensors (RH): 50 to 4800 mm (2 to 188 in.)
Operating Voltage:	+24 Vdc (+ 20%, - 15%)
Power Consumption:	100 mA (typical)
Operating Temperature:	Head Electronics: - 40 to 75°C (- 40 to 167°F) Sensing Element: - 40 to 105°C (- 40 to 221°F)
EMC-Test:	DIN IEC 801-4, Type 4, CE Qualified DIN EN 50081-1 (Emissions), DIN EN 50082-2 (Immunity)
Shock Rating:	100 g (single hit)/IEC standard 68-2-27 survivability
Vibration Rating:	5 g/10-150 Hz/IEC standard 68-2-6
Update Time:	≤ 1 ms typical (length dependent)

PROFILE STYLE (PB MODEL)

Electronic Head:	Aluminum die-cast housing
Sensor Stroke:	Aluminum profile
Sealing:	Electronics Head: IP 67 Extrusion: IP 65
Mounting:	Adjustable mounting feet or T-slot M5 nut in base channel
Magnet Type:	Captive sliding magnet or floating magnet

ROD STYLE (RH MODEL)

Electronic Head:	Aluminum die-cast housing
Sensor Rod with Flange:	304L Stainless steel
Operating Pressure:	350 bar, 530 bar peak (5000 psi static; 10,000 psi spike)
Maximum Hex Torque:	45 nM (33.19 ft. lbs.)
Sealing:	IP 67
Mounting:	M18 x 1.5 or 3/4-16 UNF-3A
Magnet Type:	Ring magnet

Specifications are subject to change without notice. Contact MTS to confirm specifications that are critical to your application.

ORDERING GUIDE

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SENSOR MODEL	_____			
RH = Hydraulic Rod Style PB = Low-Profile Style				
HOUSING STYLE	_____			
<i>Temposonics RH only (magnet must be ordered separately):</i>				
T = US customary threads, raised-faced hex, and pressure tube				
S = US customary threads, flat-faced hex, and pressure tube				
M = Metric threads, flat-faced hex, and pressure tube				
N = Metric threads, raised-faced hex, and pressure tube				
B = Sensor cartridge only (No application housing, stroke lengths ≤ 72 in.)				
<i>Temposonics PB only (magnet included):</i>				
M = Floating Magnet, (Open ring: 140°)				
S = Captive sliding magnet with joint at top				
V = Captive sliding magnet with joint at front				
LENGTH	_____			
____. ____U = Inches (2 - 188 in.; RH: encode in 0.5 in. increments, PB: encode in 1 in. increments)				
or				
____M = Millimeters (50 - 4800 mm; RH: encode in 5 mm increments, PB: encode in 25 mm increments)				
CONNECTOR	_____			
D51 = 5-pin Micro Mating field-installable connector				
INPUT VOLTAGE	_____			
1 = +24 Vdc (+20%, -15%)				
OUTPUT	_____			
C a b c d e f = CANbus Output w/DeviceNet Protocol (Fill in the six blanks with the following codes)				
a) Hardware	b, c) CANbus Protocol Code	d) Baud Rate	e) Resolution	f) Cycle Time
2 = Standard	02 = DeviceNet	2 = 500 Kbits/s 3 = 250 Kbits/s 4 = 125 Kbits/s	1 = 0.005 mm 2 = 0.002 mm	1 = Standard

Suggested Cable Lengths	
Bit Rate	Maximum Bus Distance
500 kbits/s	130 m
250 kbits/s	270 m
125 kbits/s	530 m



SENSORS
G R O U P

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UNITED STATES
Sensors Division
3001 Sheldon Drive
Cary, NC 27513
Phone: 800-633-7609
Fax: 919-677-0200
Internet: www.temposonics.com

GERMANY
Auf dem Schuffel 9, D-58513 Lüdenscheid, Germany
Postfach 8130 D-58489 Lüdenscheid, Germany
Phone: + 49-2351-95870
Fax: + 49-2351-56491

JAPAN
Ushikubo Bldg.
737 Aihara-cho
Machida-shi
Tokyo 194-0211
Japan
Phone: + 81 (42) 775-3838
Fax: + 81 (42) 775-5512



Part Number 8-99 550652 Revision B

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All Temposonics sensors are covered by US patent number 5,545,984 and others. Additional patents are pending.
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