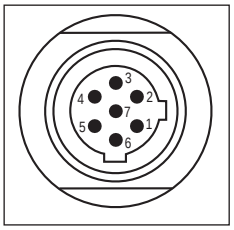
WIRING - CANbus OUTPUTS

CONNECTORS
RG Connector

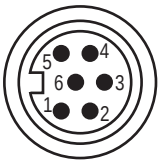
Pin No.	*Wire Color*	*Function*
1	Gray	CAN-L
2	Pink	CAN-H
3	Yellow	No Connection
4	Green	No Connection
5	Red or Brown	Customer Supplied Power (+ Vdc)
6	White	DC Ground
7	-	No Connection



RG Connector
(View as seen from end of sensor)

D6 Connector:

Pin No.	*Wire Color*	*Function*
1	Gray	CAN-L
2	Pink	CAN-H
3	Yellow	No Connection
4	Green	No Connection
5	Red or Brown	Customer Supplied Power (+ Vdc)
6	White	DC Ground



Pin outs for
6-Pin D6 90° and Straight-exit Connector
(View as seen from end of sensor)

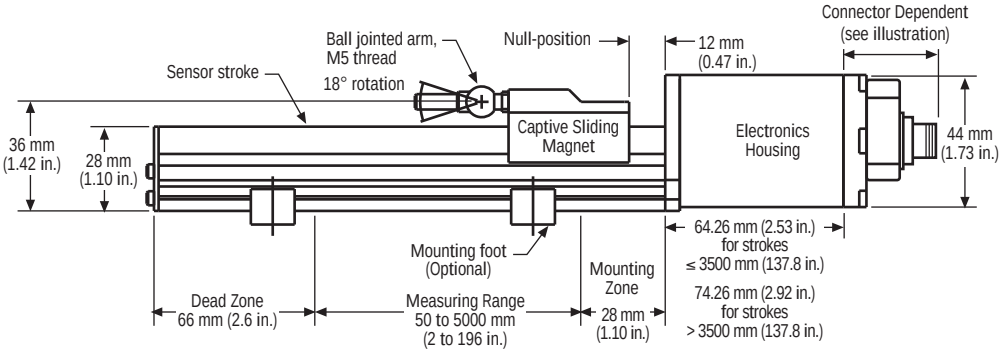
INTEGRAL CABLE
P_ _ Integral Cable

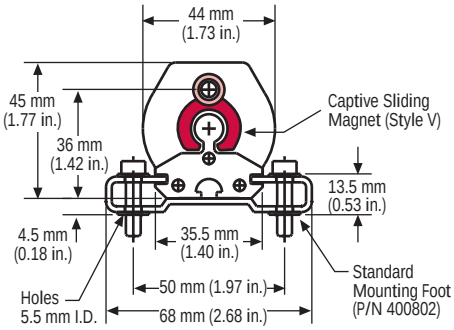
Wire Color	*Function*
Gray	CAN-L
Pink	CAN-H
Yellow	No Connection
Green	No Connection
Red or Brown	Customer Supplied Power (+ Vdc)*
White	DC Ground

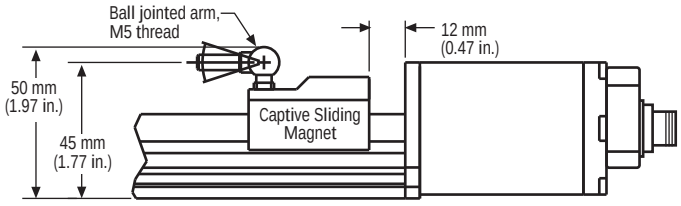
CAUTION!

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

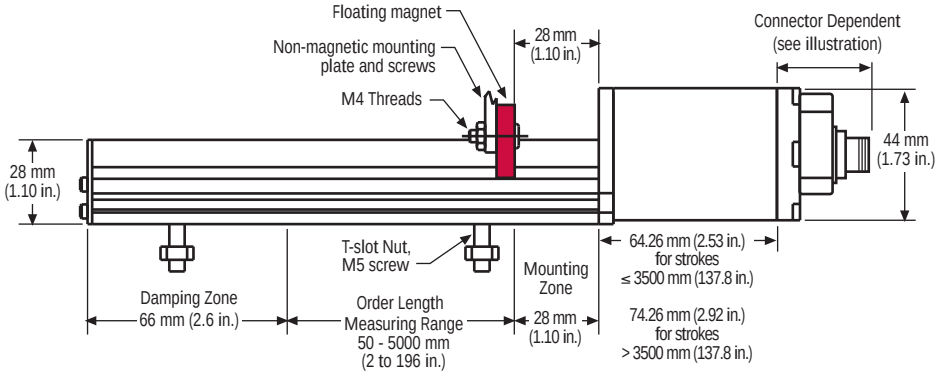
MODEL
PB
w/Captive Sliding Magnet

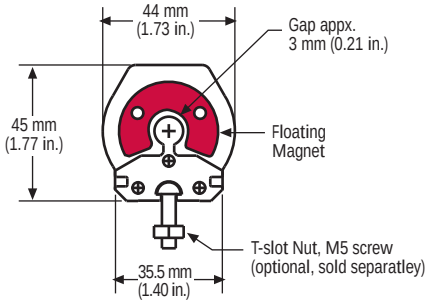






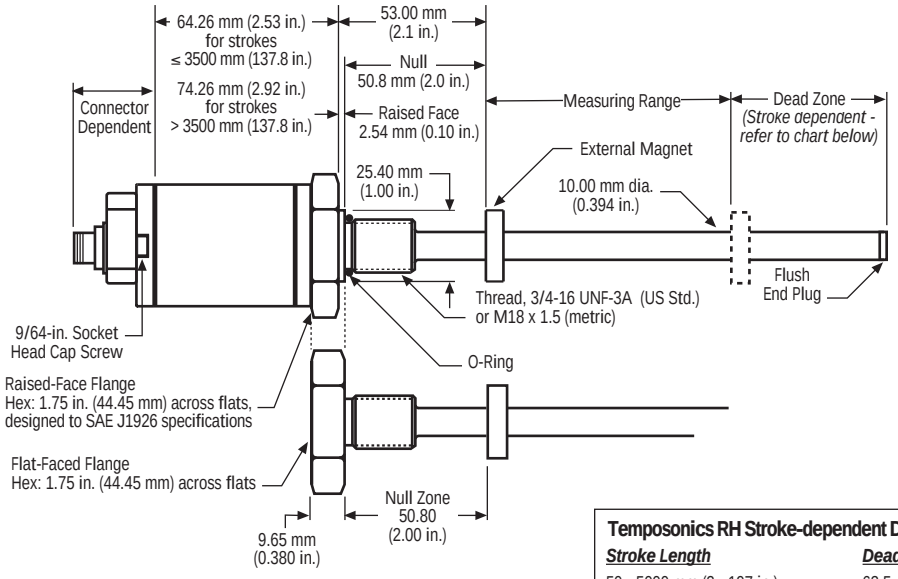
MODEL
PB
w/Floating Magnet





MODEL

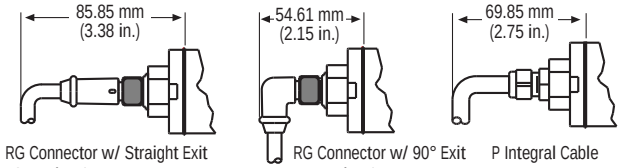
RH

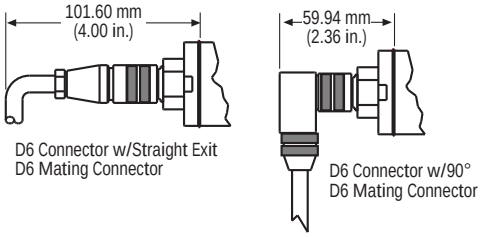


Temposonics RH Stroke-dependent Dead Zones

Stroke Length	***Dead Zone***
50 - 5000 mm (2 - 197 in.)	63.5 mm (2.5 in.)
5001 - 7625 mm (197.1 - 300 in.)	66 mm (2.6 in)

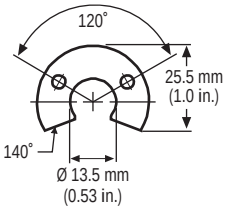
CONNECTORS





MAGNETS & MAGNET ACCESSORIES

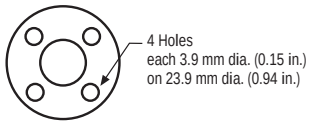
Part No. 251416



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

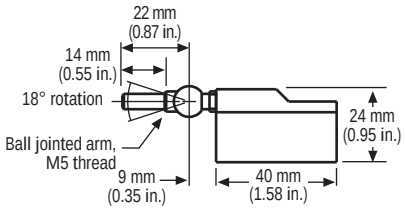
For use with Temposonics PB & RH sensors

Part No. 201542

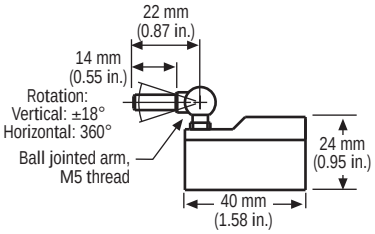


ID: 13.5 mm (0.53 in.)
OD: 32.8 mm (1.29 in.)
Thickness: 7.9 mm (0.312 in.)

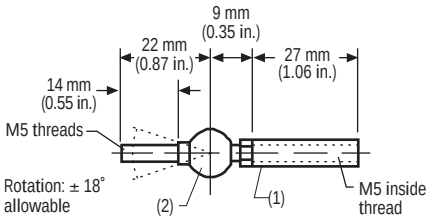
For use with Temposonics RH sensors



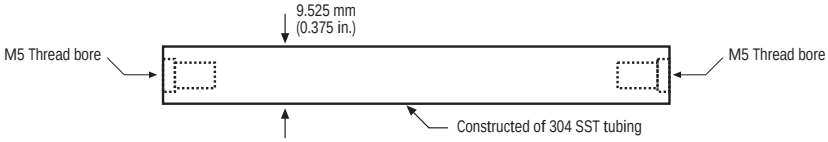
Captive Sliding Magnet, Style V
Part No. 252111-1
For use with Temposonics PB sensors



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

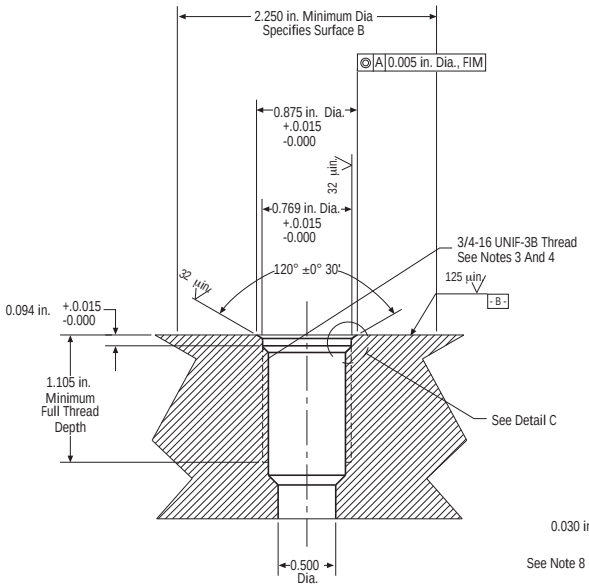


Joint Rod
(1) Sleeve, Part No. 401603
(2) Ball Jointed Arm, Part No. 401600-1
For use with Temposonics PB sensors

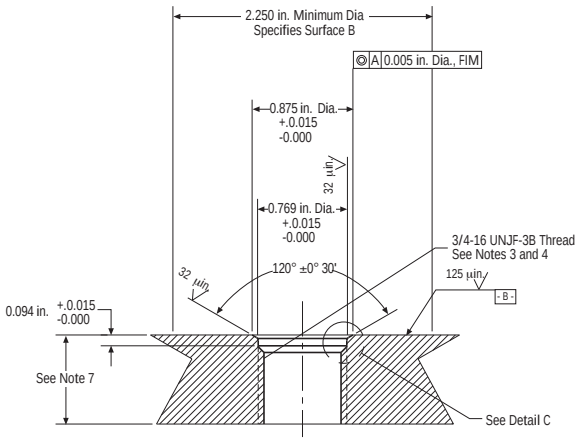


Extension Rod
Used with Captive Sliding Magnets
on Temposonics PB sensors

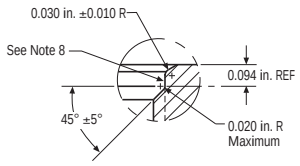
Port Detail for Temposonics RH Sensors with Housing Style 'S'



Blind Thread Design



Thru Thread Design

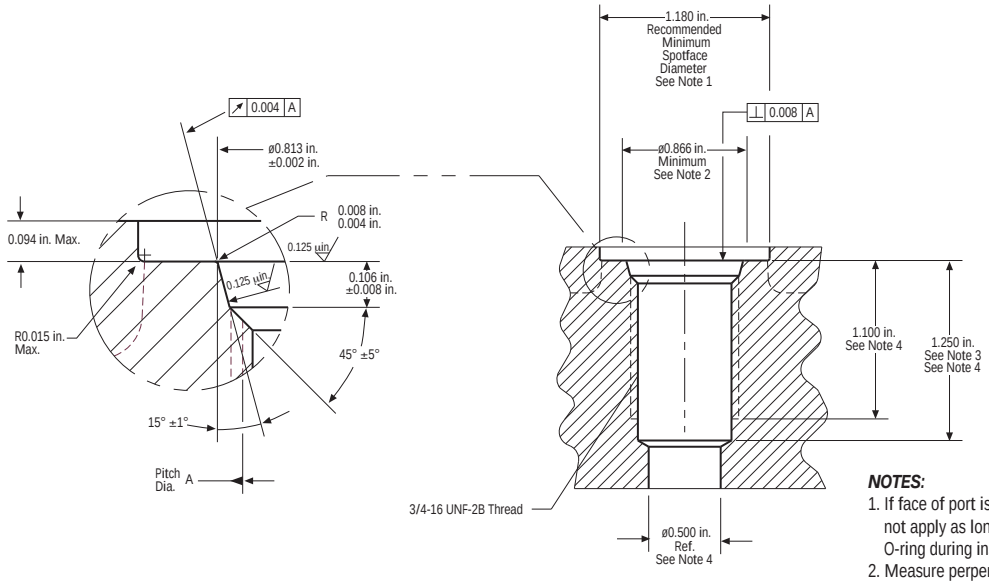


Detail C

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 mi mum.
4. PD must be concentric with 2.250 dia within 0.030 FIM and with 0.769 c 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 require ments 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'

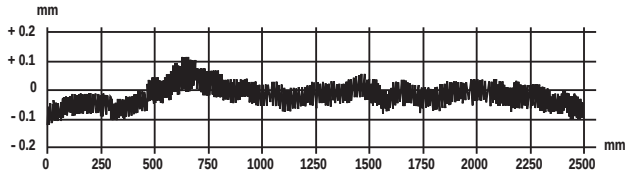


NOTES:

1. If face of port is on a machined surface, dimensions 1.180 and 0.094 nee 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.

S P E C I F I C A T I O N S

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



Example: **Sensor Type: Temposonics 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:	CANbus
Data Protocol:	MTS protocol
Baud Rate:	1 Mbit/sec. maximum
Measuring Range:	*Profile Style Sensors (PB):* 50 to 5000 mm (2 to 196 in.) *Rod Style Sensors (RH):* 50 to 7600 mm (2 to 300 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. Consult the factory for specifications critical to your needs.

O R D E R I N G G U I D E

SENSOR MODEL
RH = Hydraulic Rod Style
PB = Low-Profile Style

HOUSING STYLE
Temposonics RH only (magnet must be ordered separately):
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.)*
Temposonics PB only (magnet included):
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 *(RH: encode in 0.5 in. increments; PB: encode in 1 in. increments)*
or
__ __ __ __**M** = Millimeters (*RH: encode in 5 mm increments; PB: encode in 25 mm increments)*

CONNECTION TYPE/CONNECTOR OR CABLE
Connectors
RG0 = Standard 7-pin micro connector
D60 = Integral 6-pin DIN connector

Integral Cables
P __ __ = Integral Cable, Standard
Cable Length
__ __ = Encode in feet if using US customary stroke length, encode in meters if using metric stroke length
Range: 1 (01) to 99 (99) ft. or 1 (01) to 30 (30) meters

INPUT VOLTAGE
1 = +24 Vdc (+20%, -15%)

OUTPUT
C __ __ __ __ __ __ = CANbus Output *(Fill in the six blanks with the following codes)*
a b c d e f

a) Hardware
1 = MTS Protocol

b, c) CANbus Protocol Code
01 = MTS Protocol

d) Baud Rate
1 = 1000 Kbits/s
2 = 500 Kbits/s
3 = 250 Kbits/s
4 = 125 Kbits/s

e) Resolution
1 = 0.005 mm
2 = 0.002 mm

f) Cycle Time
1 = Standard

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ISO 9001 CERTIFIED

FLUID POWER

MEMBER

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