

# HIGH TEMPERATURE PIEZOELECTRIC DYNAMIC PRESSURE TRANSDUCER

## Model 522M35A/522M35B-XXX



### Product description

Model 522M35A/B is a high quality piezoelectric pressure sensor designed to measure small dynamic pressure fluctuations, even in the presence of high static pressure. The sensor can also operate at very high temperatures; up to +938°F continuously and up to +1040°F intermittently.

Model 522M35A/B features an all welded, Inconel and stainless steel construction with a metal-sheathed, mineral-insulated integral braided hardline cable. Output is via an integral three-pin (one pin not used) receptacle. A differential input charge amplifier is appropriate for use with this sensor. The 522M35A has a fixed length of 24 inches, the 522M35B has a variable length specified by a dash number in inches.

The unit with its mating cable is certified EExnA II T1-20°C < Tamb < 399°C for use in explosive environments.

Model number definition:  
522M35B = basic model number  
522M35B -ZZZ  
ZZZ = cable length in inches

### Key features and benefits

- 986°F (+530°C) operation
- 1040°F (+560°C) intermittent operation
- Sensitive dynamic pressure measurements under high static pressure (not sensitive to static pressure)
- Balanced differential output
- Hermetically sealed, Inconel/SST construction
- Integral hardline cable
- RoHS compliant

### Applications

- Combustion Monitoring
- High Pressure Steam
- Turbine exhaust pressure measurements



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### Specifications

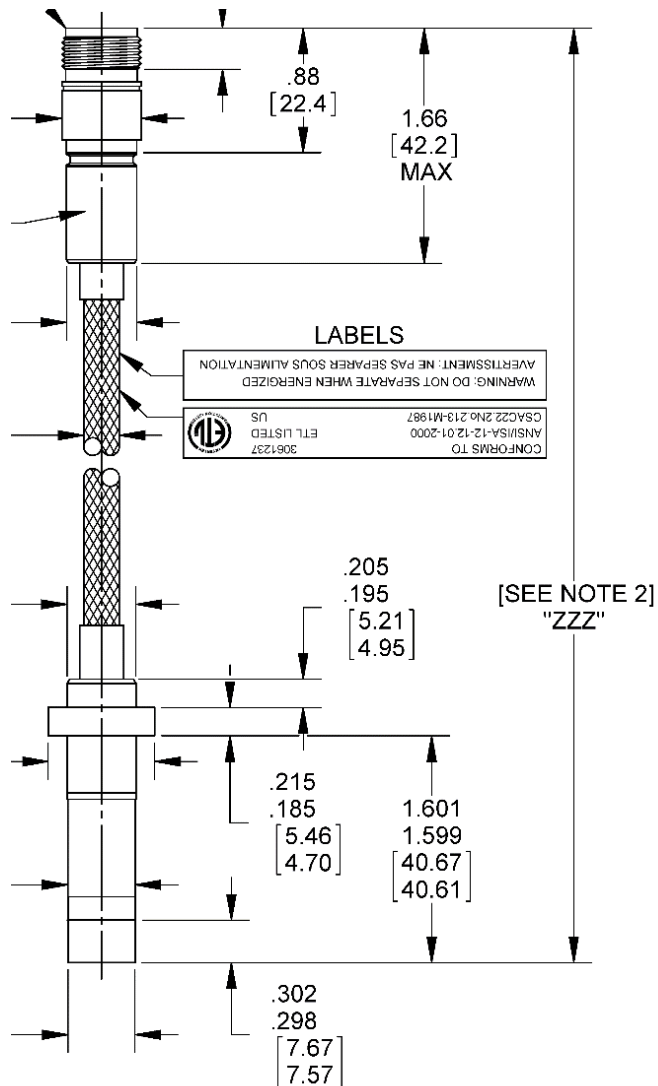
<b>Dynamic characteristics</b> Measurement range Sensitivity Resonance frequency, minimum Sensitivity deviation over temperature -67°F to +986°F (-55°C to +530°C) Vibration sensitivity	<b>Units</b> 522M35A psi ± 500 pC/psi 17 ± 20% kHz 20 % ± 10 typical pC/g 0.05 typical
<b>Electrical characteristics</b> Output signal type Resistance Room temperature, +75°F (+24°C) Internal (between pins 2 and 3) Insulation (between pins 2 or 3 and case) Maximum temperature, +986°F (+530°C) Internal Insulation Capacitance (between pins 2 and 3)	Balanced differential Ω 1 G minimum Ω 100 M minimum Ω 50 k minimum Ω 10 k minimum pF 165 + 65 pF/ft
<b>Environmental characteristics</b> Temperature range, operating Transducer and hardline cable Continuous Maximum intermittent exposure [1] Receptacle [2] Humidity Maximum static pressure Minimum bend radius of hardline cable	°F (°C) -67 to +986 (-55 to +530) °F (°C) +1040 (+560) °F (°C) -67 to +500 (-55 to +260) Hermetically sealed psi 400 inch 0.3
<b>Physical characteristics</b> Dimensions Weight Material Transducer Hardline cable and receptacle	See drawing detail grams (oz) 55 (1.9) + 3(.1) per inch of cable Inconel alloy Stainless steel
<b>Calibration Supplied</b> Sensitivity Internal resistance Insulation resistance Capacitance	pC/psi Ω Ω pF
Notes: 1. Intermittent exposure is defined as 5 minutes over a 30 minute period. 2. 'ZZZ' is the cable length in inches 3. Compatible cables: twisted pair cable assemblies terminating to pigtail, BNC and PC06A-8-2P connector respectively.	



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Continued product improvement necessitates that MEGGITT reserve the right to modify these specifications without notice. MEGGITT maintains a program of constant surveillance over all products to ensure a high level of reliability. This program includes attention to reliability factors during product design, the support of stringent Quality Control requirements, and compulsory corrective action procedures. 010121



Note: Due to continuous process improvement, specifications are subject to change without notice. TCO Review # 312