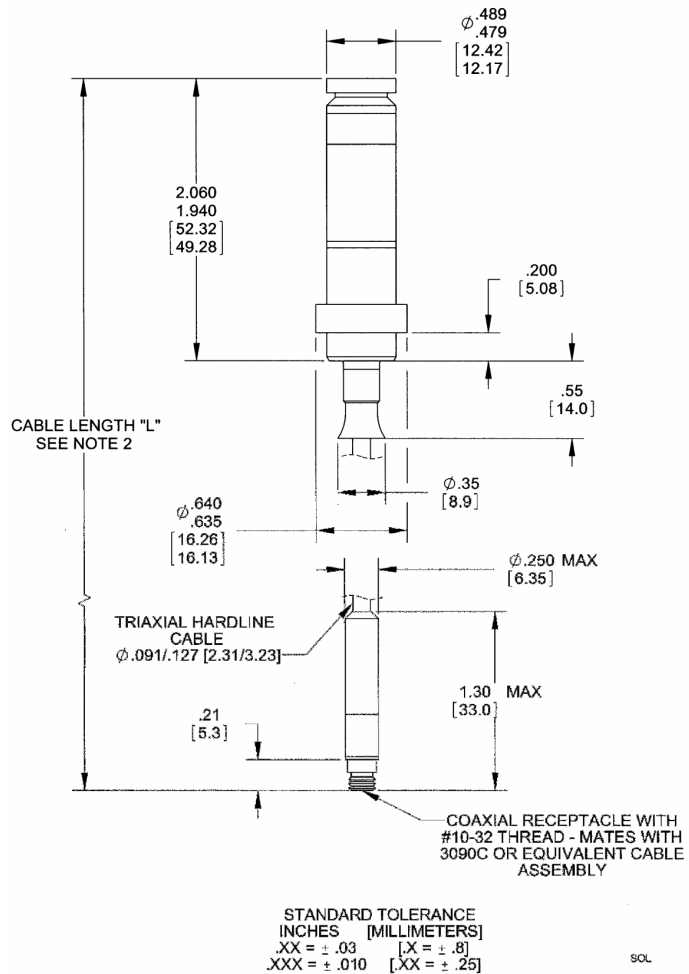


Piezoelectric dynamic pressure transducer

Model 522M17



Key features

- 1000°F (+538°C) operation
- Sensitive dynamic pressure measurements under high static pressure
- Requires no external power
- Inconel construction
- Integral hardline cable

Description

The Meggitt model 522M17 is a precision piezoelectric pressure transducer designed for sensing dynamic pressure fluctuations, even in extreme temperatures and high static pressure. The transducer is manufactured with all welded construction using high temperature inconel. The model 522M17 operates at temperature extremes of up to 1000°F continuous and up to 1200°F intermittent.

The integral metal-sheathed cable is of triaxial construction with a 10-32 coax receptacle which features output signal to case isolation. The electrical design is optimized for use with single-ended amplifiers.

Typical applications include: combustion monitoring, high pressure steam, propulsion testing, and gas turbine testing.

Piezoelectric dynamic pressure transducer

Model 522M17

Specifications

The following performance specifications are typical values, referenced at +75°F(+24°C) unless otherwise noted.

Dynamic characteristics	Units	
Charge sensitivity	pC/psi	12.0
Resonance frequency	kHz	45
Temperature response		Typically ±10%
Vibration sensitivity	pC/g	0.05
Electrical characteristics		
Output polarity	Pressure directed into diaphragm of unit produces positive output	
Internal resistance	GΩ	≥ 1
Insulation resistance	MΩ	≥ 100
Transducer capacitance	pF	100
Cable capacitance	pF/ft.	120
Environmental characteristics		
Operating temperature (max)	Transducer	+1000°F (+538°C) continuous +1200°F (+649°C) intermittent [1]
	Receptacle	+351°F (+177°C) continuous +450°F (+232°C) intermittent [1]
Humidity	Transducer	hermetically sealed
	Receptacle	epoxy sealed, non-hermetic
Operating pressure (maximum)		2500 psi static with 500 psi normal dynamic range
Physical characteristics		
Dimensions		See outline drawing
Weight, sensor, less cable	gm (oz)	25 (0.88)
Case material		Inconel
Connector		10-32 coax connector
Integral cable [2]		The length of cable in inches is indicated by dash numbers in the model number (i.e. 522M17-120 has a 120 inch long cable terminated with a 10-32 receptacle.) Overall cable length tolerance equals "L" +6.0 in / -0.0 in.
Calibration		
Supplied:		
Charge sensitivity	pC/psi	
Internal resistance	Ω	
Insulation resistance	Ω	
Capacitance	pF	

Piezoelectric dynamic pressure transducer

Model 522M17

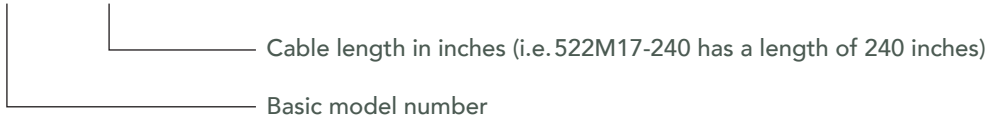
Accessories

Product	Description	522M17
3090C-120	Cable assembly, 10 ft, for under +500°F	Optional
2771C	In-line charge convertor for use with constant current source	Optional
2721B	Charge amplifier	Optional

Notes

- Intermittent temperature exposure is defined as 5 minutes over a 30 minute period.
- Model number definition:

522M17 - ZZZ



- Though the unit withstands a high static pressure, it is not sensitive to static pressure.