

2A Thermocouple Sensor

Part Number: 2-2126-0XX



Operating Specifications ¹	
Operating Range	1 x 10 ⁻³ to 20 Torr 1 x 10 ⁻⁴ to 1000 Torr (MX2A)
Analog Output	Controller-dependent
Maximum Voltage	5 V
Maximum Power	55 mW
Maximum Filament Temperature	250° C
Mounting Orientation	1 x 10 ⁻³ to 20 Torr: Any 20 to 1000 Torr: Vertical
Calibration Medium	Dry air or nitrogen
Overpressure	150 PSI
Analog Output Resolution	Controller-dependent
Operating Temperature	0° to +50° C
Storage Temperature	-40° to +85° C
Maximum Bakeout Temperature	120° C (brass) 200° C (stainless steel)
Response Time	≤ 1 s
Accuracy	
1 to 10 mTorr	±1 mTorr
10 to 100 mTorr	±10% of reading
100 mTorr to 1 Torr	±20% of reading
1 to 20 Torr	Indication only
Analog Output	±10 mV
Accuracy (MX2A)	
0.1 to 1 mTorr	0.1 mTorr resolution
1 to 10 mTorr	±1 mTorr
10 mTorr to 10 Torr	±10% of reading
10 to 100 Torr	±30% of reading
100 to 1000 Torr	±10% of reading
Analog Output	±10 mV

Physical Characteristics	
Electrical Connections	Octal connector
Weight	126 g (0.28 lbs) (NW25)
Dimensions	See dimensional drawings

Materials Exposed to Vacuum	
2A P/N: 2-2100-10	2A P/N: All Others
Gold	Gold
Solder	Glass
Glass	Alloy 52
Alloy 52	304/316 Stainless Steel
Nickel	Tophet
Tophet	Cupron
Cupron	

Description

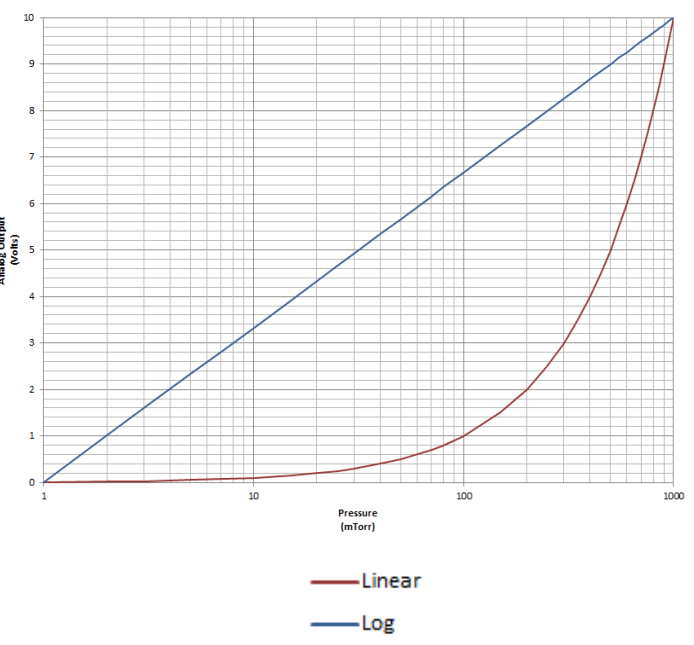
The 2A thermocouple sensor has a measurement range from 1 x 10⁻⁴ up to 1000 Torr. It indirectly measures absolute pressure by detecting the thermal dissipation of a filament.

The 2A can be operated by several Televac controllers, including the MM200, MC300, MX2A, B2A, Compact 2A, Vacuguard, and MV2A.

Benefits

- Competitively priced
- Compact and robust design
- Numerous fittings available
- Excellent resolution and repeatability
- Minimal sensor to sensor output variation
- Excellent customer support
- Designed and manufactured in the United States of America

Analog Output Behavior (MM200)



Ratings and Compliance

- RoHS compliant

¹ See the Televac website at www.televac.com for a list of definitions for terms used in the operating specifications. All test data was acquired at 23° C.





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Ordering Information

2A Sensor 1/8" NPT Nickel-plated Brass	2-2100-10
2A Sensor Stainless Steel	2-2126-0XX
Vacuum Fittings	XX
1/8" NPT	01
NW16 (DN16 ISO-KF)	30
NW25 (DN25 ISO-KF)	31
8-VCO Male	40
8-VCO Female	41
8-VCR Male	42
8-VCR Female	43
4-VCR Male	44
4-VCR Female	45
1.33" CF (DN16 ISO-CF-F)	50
2.75" CF (DN40 ISO-CF-F)	52

Visit the Televac website at www.televac.com for a full list of compatible controllers and ordering information.

Related Products

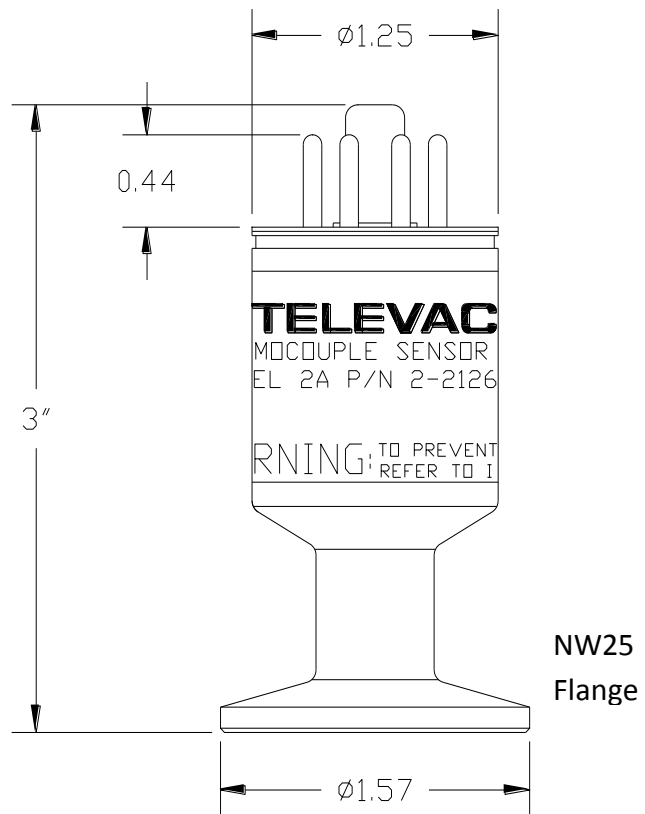
MX2A Active Thermocouple Gauge – This gauge utilizes an easily replaceable Televac 2A thermocouple vacuum sensor. It has a variety of features including a wide range of measurement from 1×10^{-4} up to 1000 Torr, RS-485 communications, two programmable set points, and a selectable analog output. The bright OLED display makes it easy to read from a distance. Options can be set from four capacitive touch controls located on the top of the unit or through RS-485 communications. The extensive selection of fittings, simplicity of use, ease of sensor replacement, and competitive cost make this unit an excellent choice for a variety of vacuum applications.

4A Convection Sensor – The 4A convection sensor has a measurement range from 1×10^{-4} up to 1000 Torr. The sensor features a rapid response time when compared to typical thermal sensors. It indirectly measures absolute pressure by detecting the thermal dissipation of a filament. The 4A can be operated by several Televac controllers, including the MM200, MC300, and MX4A.

MM200 Vacuum Sensor Controller – The MM200 controls any Televac vacuum sensor including cold cathode, convection, diaphragm, hot ion, and thermocouple sensors. It also has optional features including up to 8 relay set points and RS-232/RS-485 communications. The large, bright LED display makes it easy to read from a distance. The MM200 is a modular unit, allowing customers to choose a vacuum sensing solution specific to their needs.

Visit the Televac website at www.televac.com for a full list of products and product applications.

Dimensional Drawings



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