

2A Thermocouple Vacuum Sensor

Part Number: 2-2100-10, 2-2100-0XX, and 2-2126-0XX



Operating Specifications

Operating Range	1*10 ⁻³ to 20 Torr 1*10 ⁻⁴ to 1000 Torr (MX2A)
Analog Output	Controller-dependent
Maximum Filament Temperature	250° C
Mounting Orientation	1*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 °C to 50 °C
Storage Temperature	-40 °C to 85 °C
Maximum Bakeout Temperature	120 °C (brass) 200 °C (stainless steel)
Response Time	≤ 2 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

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 (vertical mount)
100 to 1000 Torr	±10% of reading (vertical mount)

Ordering Information

2A Sensor 1/8" NPT Nickel-plated Brass	2-2100-10
2A Sensor NW16 (DN16 ISO-KF) Nickel-plated Brass	2-2100-016
2A Sensor NW25 (DN25 ISO-KF) Nickel-plated Brass	2-2100-025
2A Sensor 1/8" NPT Stainless Steel	2-2126-001
2A Sensor NW16 (DN16 ISO-KF) Stainless Steel	2-2126-030
2A Sensor NW25 (DN25 ISO-KF) Stainless Steel	2-2126-031
2A Sensor 8-VCO Male Stainless Steel	2-2126-040
2A Sensor 8-VCO Female Stainless Steel	2-2126-041
2A Sensor 8-VCR Male Stainless Steel	2-2126-042
2A Sensor 8-VCR Female Stainless Steel	2-2126-043
2A Sensor 4-VCR Male Stainless Steel	2-2126-044
2A Sensor 4-VCR Female Stainless Steel	2-2126-045
2A Sensor 1.33" CF (DN16 ISO-CF-F) Stainless Steel	2-2126-050
2A Sensor 2.75" CF (DN40 ISO-CF-F) Stainless Steel	2-2126-052

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Materials Exposed to Vacuum

2A P/N: 2-2100-10, 2-2100-0XX	2A P/N: 2-2126-0XX
Gold	Gold
Solder	Glass
Glass	Alloy 52
Alloy 52	304 Stainless Steel
Nickel	Tophet
Tophet	Cupron
Cupron	

Description

The 2A thermocouple vacuum sensor has a measurement range from 1*10⁻³ up to 1000 Torr. It indirectly measures absolute pressure by detecting the thermal dissipation of a filament. This sensor is available in brass and stainless steel with a variety of fittings to fit your system's requirement.

The 2A can be operated by a variety of Televac® controllers and active gauges, see page 2 under Related Products for a full list of products including part numbers.

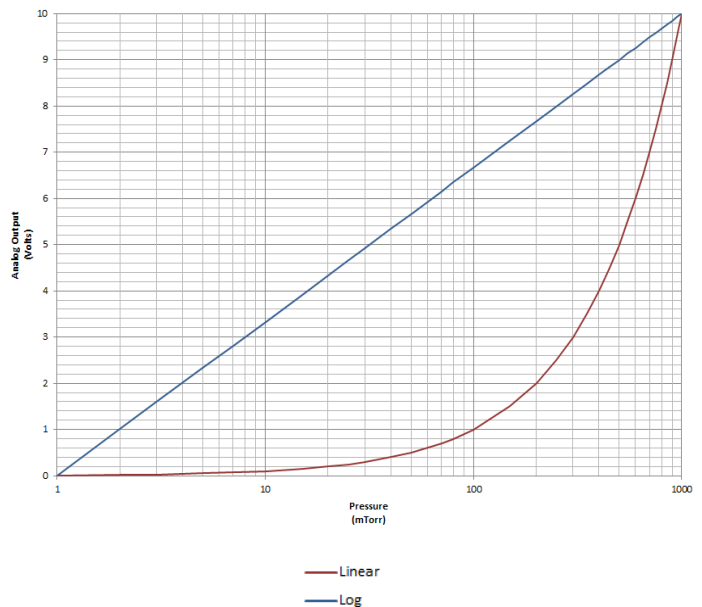
Benefits

- Competitively priced
- Compact, robust design
- Numerous fittings available
- Excellent resolution and repeatability
- Minimal sensor to sensor output variation
- Excellent customer support

Ratings and Compliance

- RoHS compliant

Analog Output Behavior (MM200)



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Additional Documentation

- [Televac® Tolerances](#)
- [AN 3001 - Comparison of the MX2A and MX4A Active Gauges](#)
- [AN 3010 - Torr Scientific/Torr Decimal/mTorr/Micron Conversions](#)
- [AN 3015 - Televac® Recommended Practices for Vacuum Calibration](#)
- [AN 3020 - Vacuum Terminology Reference](#)

Related Products

Description	Part Number
MX2A Active Gauge	2-8930-1XX
MX200 Vacuum Controller RS-232/RS-485/USB	2-7900-034
MX200 Vacuum Controller EthernetIP/USB	2-7900-037
MC300 Vacuum Controller	2-4502-X0X
(Legacy) MM200 Vacuum Controller	2-7900-20
(Legacy) MP4AR Active Gauge	2-7930-XYX



MX2A



MX200 EthernetIP/USB



MC300

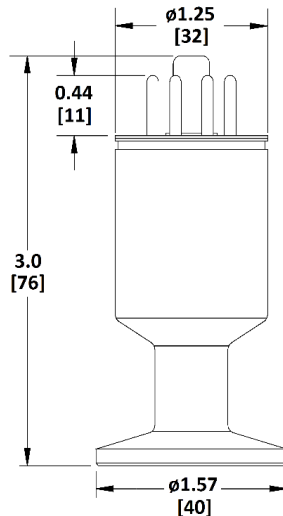
Visit our website at www.televac.com for a full list of compatible instruments.

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Physical Characteristics

Electrical Connections	Octal male
Weight	126 g (0.28 lbs) (NW25)
Dimensions	See dimensional drawings

Dimensional Drawings



*NW25 SS Fitting

Company Information

Specialty manufacturing services that promise precision - For more than 85 years, Televac® has specialized exclusively in tilt and vacuum measurement products. Today, our precise manufacturing processes produce the most accurate and advanced products on the market, ensuring perfection every time. A true specialty service provider, we are willing and eager to put our experience and capabilities to good use, helping OEMs and end users achieve even the most complex designs.

High performance products designed and manufactured in the USA - Televac® is a global provider and U.S. manufacturer and designer of high-performance vacuum measurement products. Built to last, our products are made with state-of-the-art sensing technology, proven processes, and an intrinsic passion for the trade. Offering simple integration and quality and safety benchmarks, our customers benefit not just from standard-setting reliability, but from our commitment to competitive pricing and performance.

A partnership that prioritizes uptime, lead time, and service - Televac® guarantees customer satisfaction and our 'not too big, not too small' operation is what enables us to offer a true partnership experience. Our dedicated representatives and engineers offer exceptionally responsive service and some of the fastest lead times in the industry, knowing that uptime is the key to your success. With anytime-access to our leadership team and solutions that enhance your products, you will feel the Fredericks difference.

Vacuum measurement tools built for the toughest jobs - Televac®'s world-class vacuum sensors, gauges, and control instrumentation are engineered for the most demanding applications and environments. Our Televac® and ETI vacuum brands feature cold-cathode technology, thermocouple and convection gauges, and precision-manufactured hot ionization gauges. Dedicated solely to vacuum gauging and calibration services, we provide industrial heating, national laboratories, cryogenics, and industrial gas applications, among many others, with fast lead times and industry-leading performance. Covering the entire practical vacuum range, our products deliver rapid response vacuum readings and superior sensitivity.

[Read more about us!](#)

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