



2A NASA Mini Thermocouple Vacuum Gauge

Part Number: **2-2100-XX**

Operating Specifications

Operating Range	1*10 ⁻³ Torr to 20 Torr
Analog Output	Controller-dependent
Supply Voltage	Controller-dependent
Maximum Voltage	5 V
Maximum Power	55 mW
Maximum Filament Temperature	250 °C
Mounting Orientation	Any
Calibration Medium	Dry air or nitrogen
Overpressure	150 PSIG
Analog Output Resolution	Controller-dependent
Operating Temperature	-54 °C to 93 °C
Storage Temperature	-54 °C to 93 °C
Bakeout Temperature	400 °C
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

Physical Characteristics

Electrical Connections	4-Pin Mates w/Bendix PC-06A-8-4S SR
Weight	28 g (0.062 lbs)
Dimensions	See dimensional drawings

Key Features and Benefits

- Designed and manufactured to NASA specifications
- Reliable, high quality vacuum indication and performance
- Rugged and simple construction
- Operation in any physical orientation
- No calibration required

Applications and Industries

- National labs, research and development
- Space launch applications

Ordering Information

Part Number	Description
2-2100-31	1/8" NPT Stainless Steel
2-2100-97	VCR 4 Male Stainless Steel

Compatible Vacuum Controllers

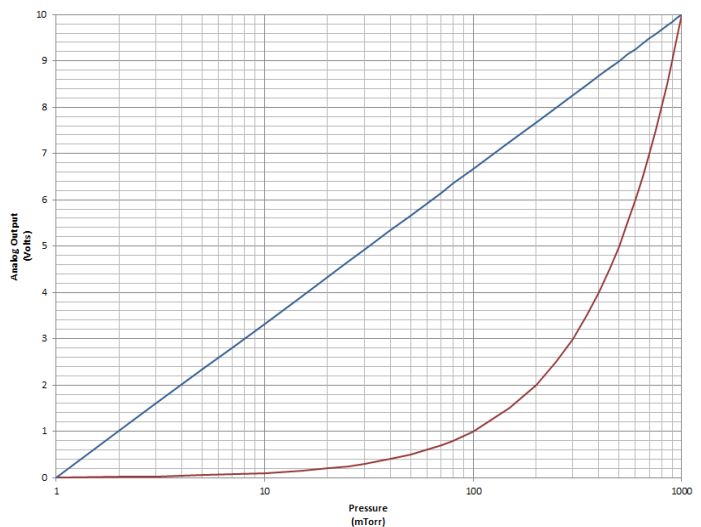
Part Number	Description
2-7900-034	MX200 Vacuum Controller RS-232/RS-485/USB
2-7900-037	MX200 Vacuum Controller EthernetIP/USB
2-7900-071	MV2A Vacuum Controller
2-3014-042	Compact 2A Vacuum Controller
2-3001-10X	VacuGuard™ Portable Vacuum Controller
2-3001-10X	B2A Portable Vacuum Controller

Description

The **2A NASA Mini Thermocouple Vacuum Gauge** has a measurement range from 1*10⁻³ up to 20 Torr. It indirectly measures absolute pressure by detecting the thermal dissipation of a filament. It can withstand high temperature bakeouts up to 400 °C. It also has less than 25% of the internal volume of the Televac® 2A vacuum sensor.

The 2A NASA Mini can be operated by several Televac® vacuum controllers, including the **MX200**, **MX200 EthernetIP**, **MV2A**, **Compact 2A**, **VacuGuard™**, and **B2A Portable**.

Analog Output Behavior



Materials Exposed to Vacuum

- Gold
- Glass
- Stainless Steel
- Tophet
- Cupron

Ratings and Compliance

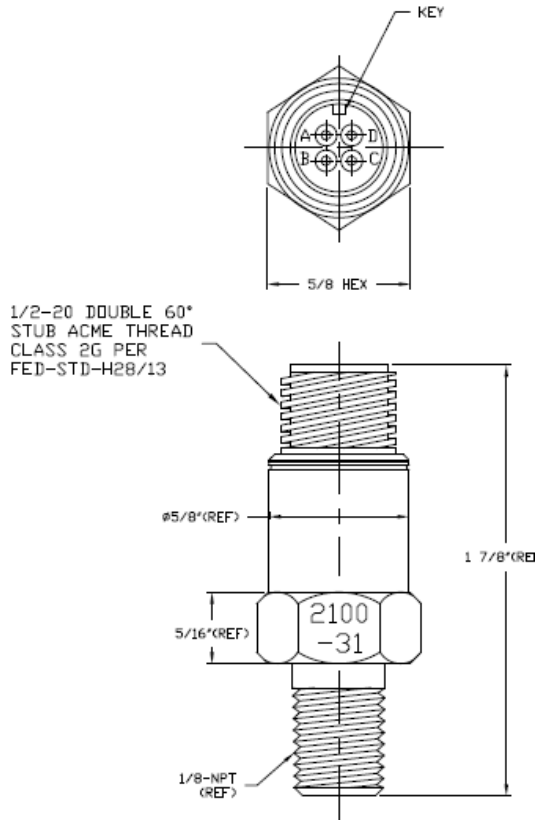
- RoHS complaint

Click to Buy Online from Fredericks Now!



2A NASA Mini Thermocouple Vacuum Gauge
Part Number: 2-2100-XX

Dimensional Drawing



Additional Documentation

- [AN3010 Torr Scientific/Torr Decimal/mTorr/Micron Conversions](#)
- [AN3015 Recommended Practices for Vacuum Calibration](#)
- [AN3020 Vacuum Terminology Reference](#)
- Resource [Televac® Tolerances](#)

Company Information

Specialty manufacturing services that promise precision -
Since 1935, Fredericks 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 achieve even the most complex designs.

High performance products designed and manufactured with pride -
Fredericks is a global provider and U.S. manufacturer and designer of high-performance tilt and 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 -
Fredericks 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 -
Fredericks' world-class vacuum sensors, gauges, and control instrumentation are engineered for the most demanding applications and environments. Our patented 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 sensitivity.

Contact Us

The Fredericks Company
2400 Philmont Avenue
Huntingdon Valley, PA 19006
tel: +1 215 947 2500
fax: +1 215 947 7464
email: sales@frederickscompany.com
web: www.frederickscompany.com

Disclaimer: Specifications subject to change without notice. The Fredericks Company assumes no responsibility for inaccuracies in product specifications or any liability arising from product use.
© 2022 The Fredericks Company