



## 2A VacuMini Thermocouple Vacuum Gauge

### Part Number: 2-2100-XXX

#### Operating Specifications

|                                     |                                    |
|-------------------------------------|------------------------------------|
| <b>Operating Range</b>              | 1*10 <sup>-3</sup> Torr to 20 Torr |
| <b>Analog Output</b>                | Controller-dependent               |
| <b>Supply Voltage</b>               | Controller-dependent               |
| <b>Maximum Voltage</b>              | 5 V                                |
| <b>Maximum Power</b>                | 55 mW                              |
| <b>Maximum Filament Temperature</b> | 250 °C                             |
| <b>Mounting Orientation</b>         | Any                                |
| <b>Calibration Medium</b>           | Dry air or nitrogen                |
| <b>Overpressure</b>                 | 250 PSI                            |
| <b>Analog Output Resolution</b>     | Controller-dependent               |
| <b>Operating Temperature</b>        | -20 °C to 50 °C                    |
| <b>Storage Temperature</b>          | -40 °C to 60 °C                    |
| <b>Bakeout Temperature</b>          | 60 °C                              |
| <b>Response Time</b>                | ≤ 1 s                              |
| <b>Accuracy</b>                     |                                    |
| 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                    |
| <b>Analog Output</b>                | ±10 mV                             |

#### Physical Characteristics

|                               |                                      |
|-------------------------------|--------------------------------------|
| <b>Electrical Connections</b> | 4-Pin; Mates w/Bendix PC-06A-8-4S SR |
| <b>Weight</b>                 | 28 g (0.062 lbs) (without tether)    |
| <b>Dimensions</b>             | See dimensional drawings             |

#### Key Features and Benefits

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

#### Applications and Industries

- Liquefied Natural Gas (LNG), Industrial Gas, Cryogenics
- National labs, research and development

#### Ordering Information

| Part Number   | Description                                    |
|---------------|--|
| 2-2100-102    | 1/8" NPT Stainless Steel with Cap and Chain    |
| 2-2100-102-01 | 1/8" NPT Stainless Steel without Cap and Chain |
| 2-2100-045    | 4 VCR-F Stainless Steel without Cap and Chain  |

#### 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            |

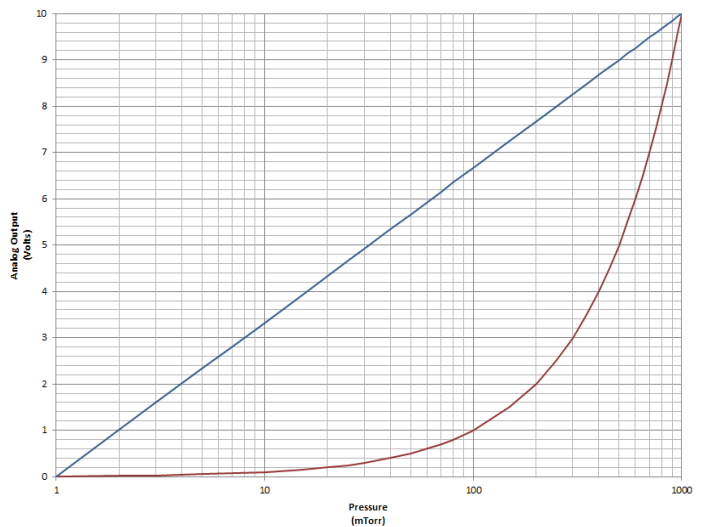
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#### Description

The 2A VacuMini Thermocouple Vacuum Gauge is a commercial version of the Televac® 2A NASA Mini Thermocouple Vacuum Gauge. This vacuum gauge has a measurement range from 1\*10<sup>-3</sup> up to 20 Torr. It indirectly measures absolute pressure by detecting the thermal conductivity of a filament. It includes a tethered cap that provides IP67 protection for the recessed electrical pins. It also has less than 25% of the internal volume of the standard Televac® 2A Thermocouple Vacuum Gauge.

The 2A VacuMini 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  
304L/316L Stainless Steel  
Tophet  
Cupron

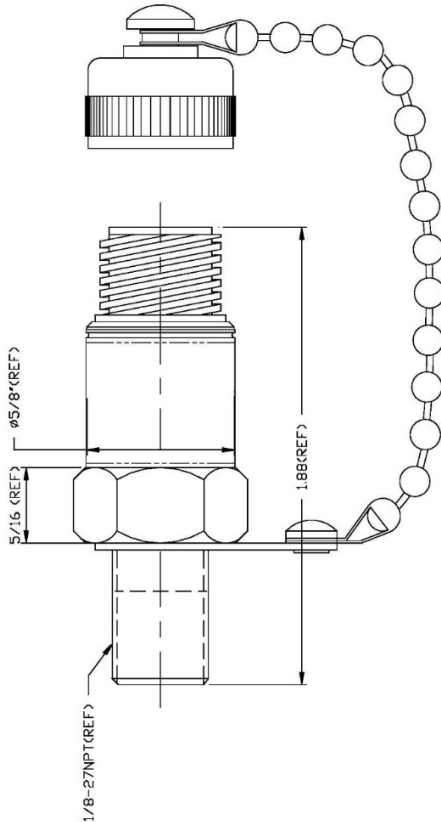
#### Ratings and Compliance

- RoHS compliant



**2A VacuMini Thermocouple Vacuum Gauge**  
**Part Number: 2-2100-XXX**

**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.

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