

2A NASA Mini Thermocouple Sensor

Part Number: 2-2100-XX

Operating Specifications¹

Operating Range	1 x 10 ⁻³ 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	125 PSIG
Analog Output Resolution	Controller-dependent
Operating Temperature	-54° to +93° C
Storage Temperature	-54° 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

Materials Exposed to Vacuum

Gold
Glass
Stainless Steel
Tophet
Cupron

Benefits

- Designed and manufactured to NASA specifications
- Reliable, high quality vacuum indication and performance
- Rugged and simple construction
- Compact design
- Operation in any physical orientation
- No calibration required
- Excellent customer support
- Designed and manufactured in the United States of America

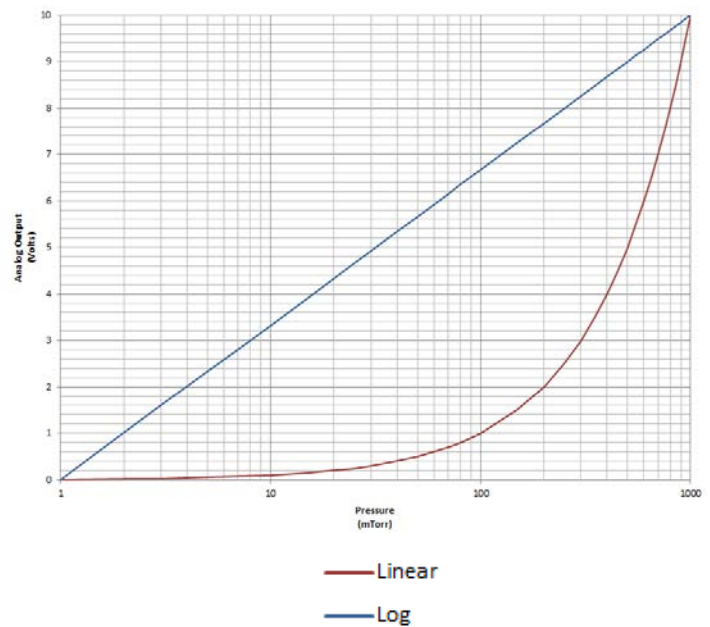
Description

The 2A NASA Mini thermocouple sensor has a measurement range from 1 x 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 controllers, including the MM200, MC300, B2A, Compact 2A, Vacuguard, and MV2A.



Analog Output Behavior (MM200)



Ratings and Compliance

- RoHS compliant

¹ Visit our website at www.frederickscompany.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 NASA Mini Sensor 1/8" NPT Stainless Steel	2-2100-31
2A NASA Mini Sensor VCR 4 male Stainless Steel	2-2100-97

Visit our website at www.frederickscompany.com for a full list of vacuum instruments compatible with the 2A NASA Mini Sensor.

Related Products

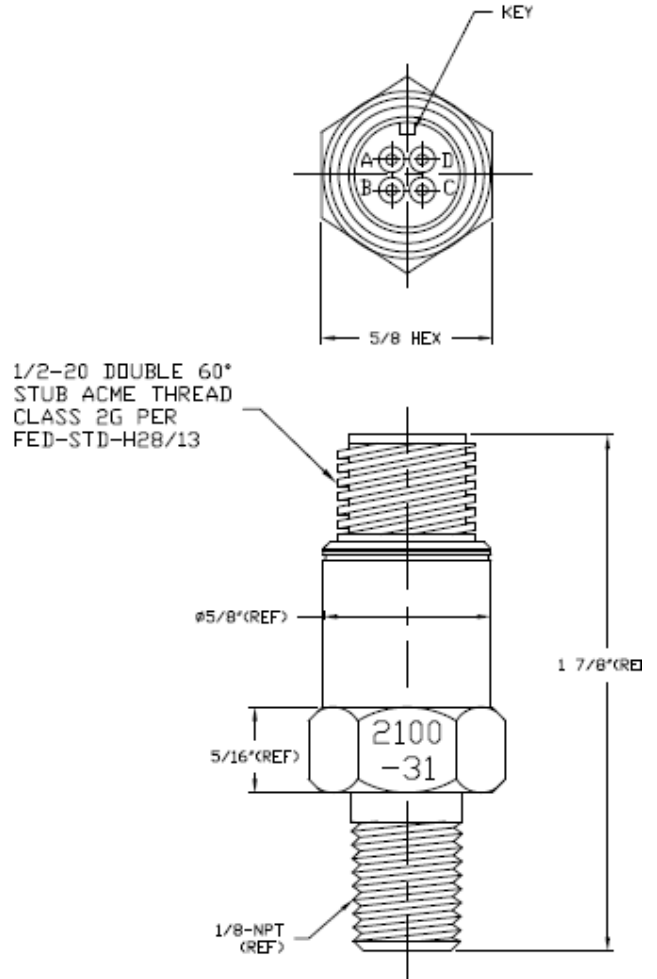
2A VacuMini Thermocouple Sensor – The VacuMini is a commercial version of Televac’s 2A NASA sensor. This thermocouple sensor has a measurement range from 1×10^{-3} up to 20 Torr. It indirectly measures absolute pressure by detecting the thermal dissipation of a filament. It includes a tethered cap that provides IP67 protection for the recessed electrical pins. It also has less than 25% of the internal volume of the Televac 2A vacuum sensor. The VacuMini can be operated by several Televac controllers, including the MM200, MC300, B2A, Compact 2A, Vacuguard, and MV2A.

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 our website at www.frederickscompany.com for a full list of products and product applications.

Dimensional Drawings



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