

4A Convection Sensor

Part Number: 2-2120-0XX



Operating Specifications ¹	
Operating Range	1 x 10 ⁻⁴ to 1000 Torr
Analog Output	Controller-dependent
Maximum Voltage	
Maximum Power	2.4W
Maximum Filament Temperature	
Mounting Orientation	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
Bakeout Temperature	120° C for brass model 200° C for stainless steel
Response Time	≤ 500 ms
Accuracy	
1 to 10 mTorr	±1 mTorr
10 mTorr to 1 Torr	±10% of reading
1 to 100 Torr	±20% of reading
100 to 1000 Torr	±10% of reading
Analog Output	±10 mV
Accuracy (MX4A)	
0.1 to 1 mTorr	0.1 mTorr resolution
1 to 10 mTorr	±1 mTorr
10 mTorr to 1000 Torr	±10% of reading
Analog Output	±10 mV

Physical Characteristics	
Electrical Connections	Octal connector
Weight	158 g (0.35 lbs) (NW25)
Dimensions	See dimensional drawings

Materials Exposed to Vacuum	
4A P/N: 2-2119-001	4A P/N: All Others
Solder	Glass
Glass	Alloy 52
Alloy 52	Stainless Steel
Nickel	Chromel
Chromel	Constantan
Constantan	

Description

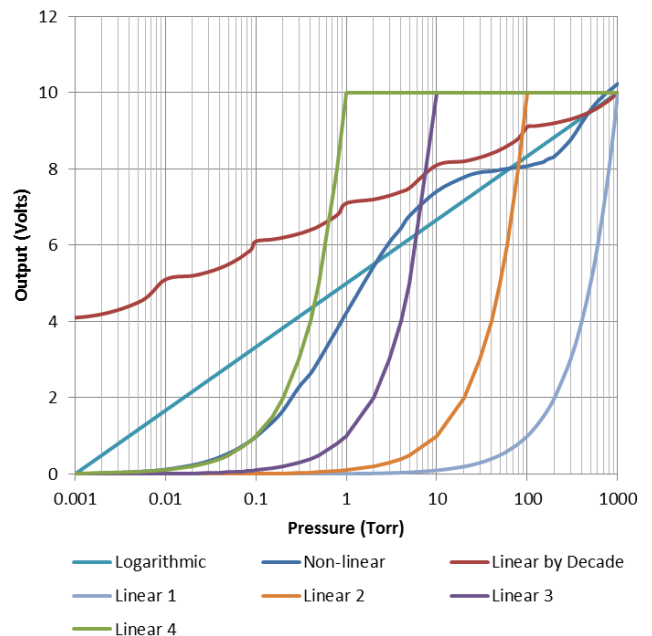
The 4A convection sensor has a measurement range from 1 x 10⁻⁴ up to 1000 Torr. The sensor features a rapid response time when compared to typical thermal sensors. It indirectly measures absolute pressure by detecting the thermal dissipation of a filament.

The 4A can be operated by several Televac controllers, including the MM200, MC300, and MX4A.

Benefits

- Competitively priced
- Rapid response time
- 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 (MX4A)



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.





4A Convection Sensor

Part Number: 2-2120-OXX

Ordering Information

4A Sensor 1/8" NPT Nickel-plated Brass	2-2119-001
4A Sensor Stainless Steel	2-2120-OXX
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 vacuum fittings and compatible controllers.

Related Products

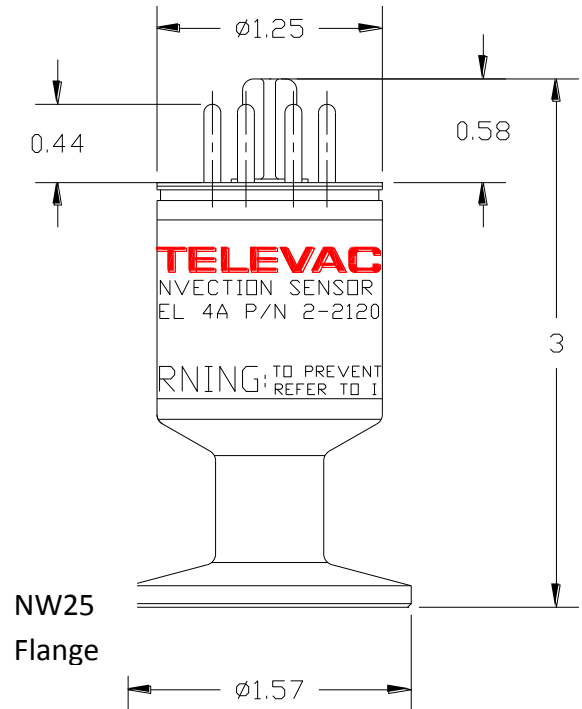
MX4A Active Gauge – This gauge utilizes an easily replaceable Televac 4A convection vacuum sensor. It has a variety of features including a wide range of measurement from 1×10^{-4} up to 1000 Torr, RS-485 communications, two programmable set points, and a selectable analog output. The bright OLED display 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.

2A Thermocouple Sensor - The 2A thermocouple sensor has a measurement range from 1×10^{-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.

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



Contact Us

Televac
The Fredericks Company
2400 Philmont Avenue
Huntingdon Valley, PA 19006
tel: +1 215 947 2500
fax: +1 215 947 7464
email: sales@televac.com
web: www.televac.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.
© 2014 The Fredericks Company

