SUNSTAR传感与控制 http://www.sensor-ic.com/ TEL:0755-83376549 FAX:0755-83376182 E-MAIL:szss20@163.com

MX4A Active Convection Vacuum Gauge
Part Number: 2-8930-1XX

Operating Specifications[1]

Operating Range	1 x 10^{-4} Torr to 1000 Torr
Communications	RS-485
Analog Output	7 selectable 0 V DC to 10 V DC
Programmable Set Points	2
Set Point 1	Open collector
Set Point 2	Relay
Supply Voltage	+22 V DC to +26 V DC
Maximum Power	8 W
Calibration Medium	Dry air or nitrogen
Overpressure	150 psi
Digital Output Resolution	2 significant digits with exponent
Analog Output Resolution	16 bits
Operating Temperature	0 °C to 50 °C
Storage Temperature	-20 °C to 60 °C
Bakeout Temperature	
Brass (P/N: 2-8930-110)	100 °C (electronics removed)
Stainless (P/N: All Others)	200 °C (electronics removed)
Response Time	≤ 1 s
Accuracy	
0.1 mTorr to 1 mTorr	0.1 mTorr resolution
1 mTorr to 10 mTorr	±1 mTorr
10 mTorr to 1000 Torr	±10% of reading
Analog Output	±5 mV
Display Readable Distance	3 m (10 ft)

Physical Characteristics

Housing	Aluminum
Electrical Connections	D-Sub 15-pin male
Weight with Sensor (typical)	345 g (0.76 lbs)
Weight without Sensor	186 g (0.41 lbs)
Dimensions	See dimensional drawings

RS-485 Commands (assume address 0)[2]

***0R1<CR>**	Read units
***0R2<CR>**	Read SP1L and SP1H
***0W10001<CR>**	Set units to Pascal
***0W10002<CR>**	Set units to Torr
***0W10003<CR>**	Set units to Millibar
***0W2XXXXXXXX<CR>**	Set SP1 low and high values
***0S1<CR>**	Read vacuum

Benefits

- Competitively priced
- Very compact design
- Easy to read color OLED display
- Excellent resolution and repeatability
- Superior unit to unit performance
- Excellent customer support
- Designed and manufactured in the United States of America

Description

The MX4A Active Gauge utilizes an easily replaceable Televac 4A convection vacuum sensor. It has a variety of features including a wide range of measurement from 1 x 10^{-4} Torr 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.

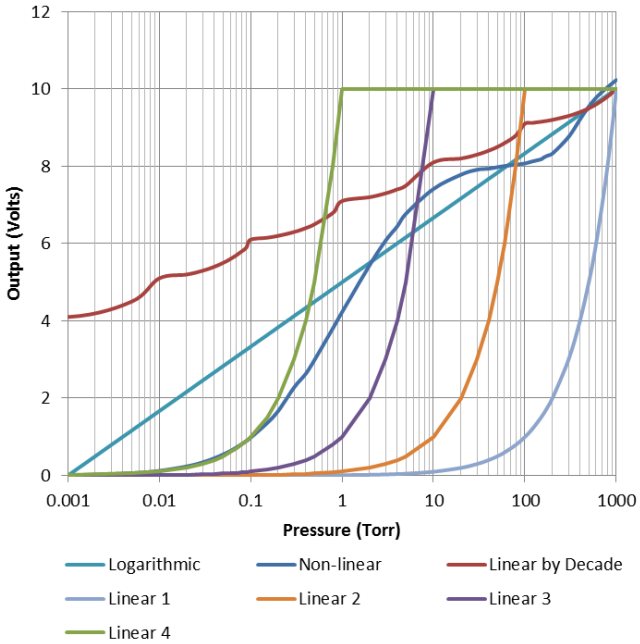
Options can be set from four capacitive touch controls located on the top of the unit or through RS-485 communications. The extensive selection of fittings, simplicity of use, ease of sensor replacement, and competitive cost make this unit an excellent choice for a variety of vacuum applications.

Applications

- Heat treatment and vacuum furnaces
- Thin film deposition and coating processes
- Cryogenics
- Pharmaceutical product processes

Visit the Televac website at www.televac.com for a full list of applications.

Analog Output Behavior



Ratings and Compliance

- IP40
- RoHS compliant
- CE certified to EN 61010-1, EN 61236-1, EN 55011

[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.

[2] See the MX4A Instruction Manual for RS-485 command descriptions and setup instructions.

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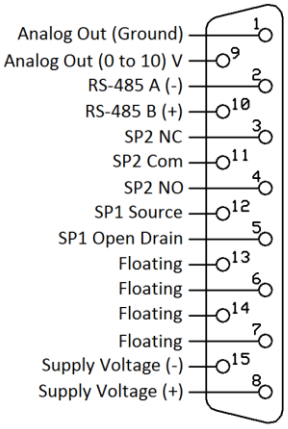
Electrical Connections

Pin	Description
1	Analog Out (Ground)
2	RS-485 A (-)
3	SP2 NC
4	SP2 NO
5	SP1 Open Drain
6	Floating
7	Floating
8	Supply Voltage (+)
9	Analog Out (0 to 10) V
10	RS-485 B (+)
11	SP2 Com
12	SP1 Source
13	Floating
14	Floating
15	Supply Voltage (-)



Materials Exposed to Vacuum

MX4A P/N: 2-8930-110, -116, -125	MX4A P/N: All Others
Nickel	Nickel
Glass	Glass
Gold	Gold
Tophet	Tophet
Cupron	Cupron
Solder	Stainless Steel

Set Points

The MX4A has two set points. Set point 1 is an N-Channel 60 V MOSFET open collector. It has a maximum current rating of 1 A. The data sheet can be found at www.vishay.com/docs/69958/si2308bd.pdf. Set point 2 is a relay with a maximum switching voltage of 220 V DC (250 V AC) and a maximum switching current of 2 A. The data sheet can be found at www.te.com/catalog/pn/en/1393788-3.

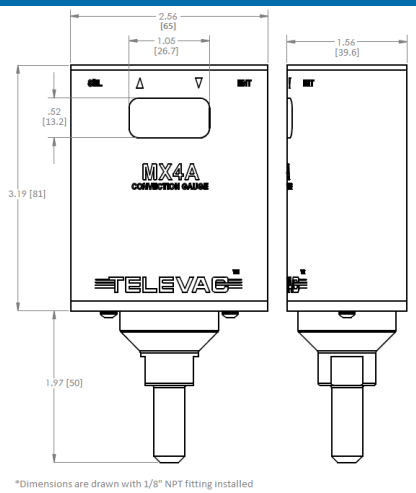
Related Products

CC-10 Active Vacuum Gauge – This gauge utilizes dual sensor technology to replace multiple conventional vacuum gauges, permitting seamless measurement of twelve decades of pressure. It has a variety of features including a wide range of measurement from 1 x 10^{-9} Torr up to 1000 Torr, RS-485 communications, three programmable set points, and a selectable analog output. The bright LED display makes it easy to read from a distance. Options can be set from either four touch controls located on the front of the unit or through RS-485 communications. The simplicity of use and wide measurement range make this unit an excellent choice for a variety of vacuum applications.

MP7ER Active Gauge – This gauge measures high vacuum from 1 x 10^{-8} Torr up to 1 x 10^{-2} Torr utilizing a double inverted magnetron sensor. It has a linear or logarithmic 0 V to 10 V analog output with a relay set point and an LED display of pressure.

Visit the Televac website at www.televac.com for a full list of products.

Dimensional Drawings



*Dimensions are drawn with 1/8" NPT fitting installed

Ordering Information

MX4A Part Number	2-8930-1**XX**
1/8" NPT Stainless Steel	01
1/8" NPT Nickel Plated Brass	10
1/2" Straight Stainless Steel	11
NW16 (DN16 ISO-KF) Nickel Plated Brass	16
NW16 (DN16 ISO-KF) Stainless Steel	30
NW25 (DN25 ISO-KF) Nickel Plated Brass	25
NW25 (DN25 ISO-KF) Stainless Steel	31
NW40 (DN40 ISO-KF) Stainless Steel	32
1.33" CF (DN16 ISO-CF-F) Stainless Steel	50
2.75" CF (DN40 ISO-CF-F) Stainless Steel	52
VCR and VCO available upon request	
4A Sensor Part Number	2-2119-0**XX**
1/8" NPT Nickel Plated Brass	01
NW16 (DN16 ISO-KF) Nickel Plated Brass	16
NW25 (DN25 ISO-KF) Nickel Plated Brass	25
4A Sensor Part Number	2-2120-0**XX**
1/8" NPT Stainless Steel	01
1/2" Straight Stainless Steel	11
NW16 (DN16 ISO-KF) Stainless Steel	30
NW25 (DN25 ISO-KF) Stainless Steel	31
NW40 (DN40 ISO-KF) Stainless Steel	32
1.33" CF (DN16 ISO-CF-F) Stainless Steel	50
2.75" CF (DN40 ISO-CF-F) Stainless Steel	52
D-Sub 15 Pin Cable Part Number	2-9858-0**XX**
10 ft	10
20 ft	20
35 ft	35
50 ft	50

Contact Us

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