MC300 Vacuum Sensor Controller
Part Number: 2-450X-3XX

Operating Specifications[1]	
Operating Range	1 x 10^{-11} up to 1000 Torr
Communications	N/A
Analog Output	0 to 10 VDC (1 per sensor)
Analog Output Resolution	12 bits
Display Output Resolution	3 significant digits
Programmable Set Points	4
Set Point Type	Relay
Supply Voltage	115/230 VAC (0.3/0.15 A), 50-60Hz
Maximum Power	35 W
Calibration Medium	Dry air or nitrogen
Overpressure	Sensor-dependent
Operating Temperature	0 °C to 50 °C
Storage Temperature	-40 °C to 85 °C
Display Readable Distance	35 ft (10 m)
Maximum Sensors Controlled	Up to 3

Physical Characteristics	
Housing	Cold rolled steel
Electrical Connections	Power cord (IEC 60320 C-13)
Weight without Sensor	2.2 kg (5 lbs)
Dimensions	See dimensional drawings
Mounting	Panel mount or half rack adaptable

Benefits

- Competitively priced
- Built-in self-diagnostics
- Easy to read large LED display
- Four process relays with individually assignable set points
- Analog outputs for each sensor
- Excellent customer support
- Designed and manufactured in the United States of America

Description

The MC300 controls up to two Televac thermocouple or convection rough vacuum sensors and an optional cold cathode or mini hot ion high vacuum sensor. It features 4 relay set points and large, bright LED displays, making it easy to read from a distance.

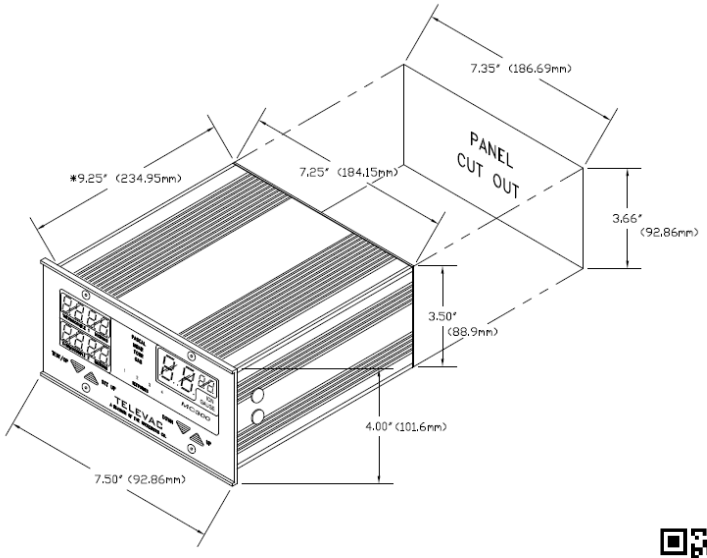
PN: 2-4502-3XX

PN: 2-4503-4XX

Ratings and Compliance

- Certified to UL 61010-1
- CE certified to EN 61326-1:2006

Dimensional Drawings



[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.

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Materials Exposed to Vacuum

Please refer to the appropriate sensor data sheet for materials exposed to vacuum.

Set Points

The MC300 has four relay set points. Individual relay status LEDs are displayed on the front panel. The heavy duty relays have a SPDT (1 Form C) contact form and are rated for 24 VDC. They have a maximum current rating of 8 A at 250 VAC or 5 A at 30 VDC. The data sheet can be found at http://www.omron.com/ecb/products/pdf/en-g6rn.pdf.

High Vacuum Sensor Operation

The MC300 is sold in configurations containing high vacuum sensors (cold cathode or hot ion). The high vacuum sensor is controlled automatically by the low vacuum sensor connected to station 1. It is switched on when station 1 reads below 10 microns. When operating high vacuum sensors, it is recommended that the high vacuum sensor and station 1 low vacuum sensor be located near one another on the same manifold.

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} 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.

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.

Ordering Information

MC300 Wide Range Sensor Controller[2]	2-4502-3**XX**
Sensor Configuration[3]	XX
Dual 2A with 7B	01
Dual 4A with 7B	02
Dual 2A with 7E/7F/7FC	03
Dual 4A with 7E/7F/7FC	04
Dual 2A with Mini BA	05
Dual 4A with Mini BA	06
MC300 Rough Vacuum Sensor Controller[2]	2-4503-4**XX**
Sensor Configuration[3]	XX
Dual 2A	01
Dual 4A	02

Simulators:

2A Octal, Red Line	2-2100-237
2A Octal, 3 Point: 0, 100, 1000 Torr	2-2100-242
2A Mini, Red Line	2-2100-240
2A Mini, 3 Point: 0, 100, 1000 Torr	2-2100-241
4A, Red Line	2-2119-000
4A, 3 Point: 0, 1, 760 Torr	2-2119-003
7B, 2 Point: 10^{-3}, 10^{-5} Torr	2-2100-93
7E/7F/7FC/7FCS, 2 Point: 10^{-3}, 10^{-5} Torr	2-2145-000

Standard Cables[4]

Length	2A Cable	4A Cable	7B Cable
10 ft (3 m)	2-9800-077	2-9820-010	2-9800-09
20 ft (6.1 m)	2-9800-078	2-9820-020	2-9800-41
35 ft (10.6 m)	2-9800-079	2-9820-035	2-9800-42
50 ft (15.2 m)	2-9800-080	2-9820-050	2-9800-43

Length	Mini BA Cable	7 E/F Cable
10 ft (3 m)	2-9854-10	2-9841-010
20 ft (6.1 m)	2-9854-20	2-9841-020
35 ft (10.6 m)	2-9854-35	2-9841-035
50 ft (15.2 m)	2-9854-50	2-9841-050

Contact Us

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[2] Specify 110 VAC or 220 VAC operation – units shipped in 110 VAC configuration if not specified.

[3] Visit the Televac website at www.televac.com for sensor specifications.

[4] Sensor-specific cables will need to be purchased to match the desired sensor configuration.

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CONFIGURATION ADDENDUM

Configuration Selection Guide			
Configuration	**Description**	**Range (Torr)**	**Part Number**
Dual 2A with 7B	Dual Thermocouple with Penning Magnetron Cold Cathode	10^{-7} to 20	2-4502-301
Dual 4A with 7B	Dual Convection with Penning Magnetron Cold Cathode	10^{-7} to 1000	2-4502-302
Dual 2A with 7E/7F	Dual Thermocouple with Double Inverted Magnetron Cold Cathode	10^{-11} to 20	2-4502-303
Dual 4A with 7E/7F	Dual Convection with Double Inverted Magnetron Cold Cathode	10^{-11} to 1000	2-4502-304
Dual 2A with 3F	Dual Thermocouple with Mini Bayard-Alpert Hot Ion	10^{-10} to 20	2-4502-305
Dual 4A with 3F	Dual Convection with Mini Bayard-Alpert Hot Ion	10^{-10} to 1000	2-4502-306
Dual 2A	Dual Thermocouple	10^{-3} to 20	2-4503-401
Dual 4A	Dual Convection	10^{-3} to 1000	2-4503-402