

TELEDYNE HASTINGS

IONIZATION GAUGE ELECTRONICS AND GAUGE TUBES

INSTRUMENTS

Model IGE-3000

FEATURES

- Range — 10^{-10} Torr to 10^{-2} Torr
- Miniature Bayard-Alpert Tube
- 24 VDC Input (11.5 VDC – 30 VDC)
- Stable Accurate Electrode Voltages
- Precision Electrometer
- RS232/485 Communication
- Two Independent TTL Setpoints
- Automatic or Selectable Emission Current
- Dual Filaments with Status Indicators
- Automatic High Pressure Shutdown
- Capable of Remote Filament Operation
- CE Compliant: EN61326

APPLICATIONS

- Thin Film Coating
- Plasma Processing
- Vacuum Furnace
- Sputtering
- Calibration Systems
- Accelerator
- Lighting Manufacturing
- CVD



IGE-3000



IGE-3000s

DESIGN FEATURES

The Teledyne Hastings Instruments IGE-3000 line of Ionization Gauge Tubes and Electronics provides the user with accurate, repeatable pressure measurement starting in the medium vacuum range and continuing through into the ultrahigh vacuum range.

A complete measurement system consists of a dual-filament miniaturized Bayard-Alpert ionization gauge tube and electronics package. The gauge tube includes several innovations over conventional Bayard-Alpert tubes. For example, the filaments are precisely tensioned to give repeatable performance. In addition, all tube materials are selected and processed to yield consistent structural integrity.

The electronics package consists of four PC boards. The first board contains a precision electrometer which is capable of measuring ion currents to 1 pA. This board also contains a highly stable anode supply and filament drive circuit.

The second board is a power supply board which contains power conversion circuits for the entire electronics package. Utilizing a separate board ensures that the precision electronics of the first board are isolated from power conversion noise.

A CPU board contains the instrument's firmware. Calibration coefficients are stored on a memory chip; calibration services are available.

The top PC board contains a bright LED display and gauge status indicators. An intuitive user interface makes the gauge very easy to use.

MODEL IGE-3000

Selection Chart

Typical instrument ordering/options number:

Model No.	Output	Calibration	Units
IGE-3000	01	00	00

Order No. Options		Order No. Options	
Output		Calibration	
01	RS232	00	Standard
02	RS-485 Half-Duplex	Units	
03	RS-485 Full-Duplex		
00		00	Torr

Selection Chart

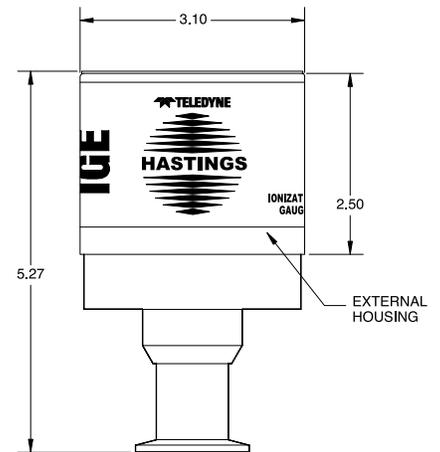
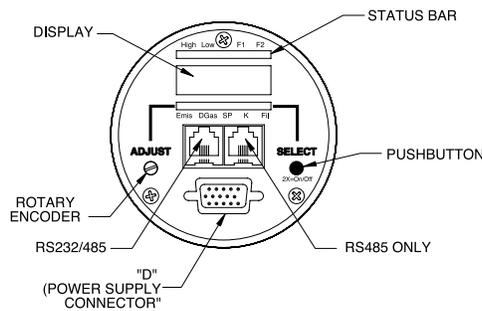
Typical gauge tube ordering/options number:

Model No.	System Connection
IGE-3000s	02

Order No.	Options
Fittings	
02	KF-25™
04	2.75 Conflat™
05	1" OD Smooth Tube

Accessory Order Information

Model No.	Description
12-01-166	Universal Power Supply 100-240 VAC input, 24 VDC output



SPECIFICATIONS IGE-3000

Pressure Range	1x10 ⁻² to 1x10 ⁻¹⁰ Torr
Accuracy	±15% of reading for the range 1x10 ⁻² to 1x10 ⁻⁸ Torr
Degas	5W e-beam
Emission Current	0.01, 0.1, 1 mA, or Auto
X-Ray Limit	< 1x10 ⁻¹⁰ Torr
Filament Bias Potential	+30 V ±0.3%
Grid Potential	+180 V ±0.3%
Operating Temperature	0-50°C
Digital Communications	RS232/485
Connector	15-pin subminiature D
Bakeout Temperature	200°C with electronics removed
Electrical Noise Immunity	ENC 61010 Class A and IEC 61326-1: Section 6.2

Complies with IEC 61010-1 (Safety requirements for measurement, control, and laboratory use)

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Teledyne Hastings Instruments reserves the right to change or modify the design of its equipment without any obligation to provide notification of change or intent to change.

Your Customer Service Representative



TELEDYNE INSTRUMENTS

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