

Teledyne Hastings Instruments

Vacuum Products Overview





Teledyne Hastings uses three methods to measure vacuum:

- **1. Direct Force**
- 2. Thermal Energy Transfer
- 3. Ionization



Low Vacuum (Direct Force)

THPS-760 Plus / HPM-760S



- Range: 0.1 to 1000 Torr
- Piezoresistive sensor
- 316SS wetted surfaces
- Multiple fittings available
- Linear output
- Transducer available in:
 - 0 5 vdc
 - 0 10 vdc
 - 4 20 mA
 - 2 10 mA
- Available power supply / display / controller with 2 setpoints – relays (works with 0 – 10 vdc transducer)



Medium Vacuum (Thermal Energy Transfer)

Thermocouple Gauge Tubes



- Ranges:
 - DV-4: 0.1 20 Torr
 - DV-6: 1 1000 mTorr
 - DV-5: 0.2 100 mTorr
 - <u>Tubes are color-coded by range</u>
- Simple / Reliable / Economical
- Multiple fittings available
- Multiple application configurations for:
 - Materials of construction
 - Increased Pressure & Temperature
 - Vibration
 - Outdoor service



Medium Vacuum (Thermal Energy Transfer)

Gauges for Thermocouple Gauge Tubes 🏓









VT/CVT

- Dial-face display
- Controller version available with set points
- 0-1 vdc output
 standard
- Cabinet Mounted version (VT)

Digital VT & CVT

- Digital display
- Controller version available with set points
 - RS232

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HPM 4/6

 Hand-held portable

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- Battery powered
- Digital display
- Carrying case included

DAVC

- System Mounted
- 0-1 vdc output
- Set point
- RS232

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Wide Range Sensor (Hybrid: Direct Force & Thermal Energy Transfer)

HPM-2002 & OBE



- Range: 10⁻⁴ 1000 Torr
- Uses HPM-2002S sensor
- Hybrid sensor includes:
 - Piezoresistive
 - Thin film pirani
- Panel mount or system mount
- Multiple fittings available
- Outputs / Communication:
 - 0-5 vdc
 - 0-10 vdc
 - 4-20 mA
 - RS232 / RS485
- Sensors are exposed to gas (and contamination)



High Vacuum (Ionization)

IGE-3000



- Range: 10⁻¹⁰ 10⁻² Torr
- Miniature Bayard-Alpert ionization gauge
- System mount
- Multiple fittings available
- Communication:
 - RS232
 - RS485
 - Analog outputs not available
- Automatic or selectable emission current
- Purchase sensor and electronics separately