

# TELEDYNE HASTINGS

## DIGITAL VACUUM CONTROLLER WITH SET POINTS

# INSTRUMENTS

## THPS 760 Plus

### FEATURES

- **Range:**  
0.1 to 1000.0 Torr
- **Two Control Points**
- **Fast Response and Linear Output**
- **0-10 VDC Standard (0-5 VDC Optional)**
- **Optional Instrument Configurations and Sensor Fittings**
- **Complete Installation and Calibration Accessories**

### APPLICATIONS

For Any Situation Requiring Accurate Vacuum Measurement & Control:

- Cryogenics
- Thermal Food Containers
- Vacuum Furnaces
- Pharmaceutical Production
- Freeze Drying
- Agricultural Processes
- Air Conditioning
- Accelerators
- Plasma Coating
- Refrigeration (HVAC)
- Glove Boxes
- Appliance Manufacturing



THPS 760 Plus



HPM-760S

### DESIGN FEATURES

The THPS 760 Plus Vacuum Controller is an exceptionally stable, accurate and repeatable absolute pressure gauge that provides excellent linearity and is unaffected by gas composition. A full 4½ digit meter indicates in 0.1 Torr units from 0.1 to 1000.0 Torr.

The heart of this vacuum controller is the HPM-760S module, a stainless steel measurement volume attached to a small and rugged piezo-resistive transducer on a silicon chip. The chip includes a sealed vacuum reference, a resistive bridge circuit and a temperature compensation network which provides outstanding accuracy and stability.

The THPS 760 Plus is pictured with the HPM-760S Module. For applications where the THPS-760+ meter, controller, power supply functions are not needed, please see PB 108S for complete technical description of the HPM-760S.

When exposed to atmosphere, the instrument measures barometric pressure. Calibration is simple, no test equipment is necessary, only an accurate barometric reading is required to set the high end. The HPS-760 power supply includes an LED digital readout and two vacuum alarm relays. Set point pressure is displayed by pressing corresponding Set Point Push Button. The display will immediately default back to measured pressure when the switch is released. The two SPDT relays are rated for 240 VAC maximum at 2A.

### Installation Accessories

Teledyne Hastings Instruments (THI) offers a complete line of system attachments allowing for easy maintenance and contamination resistance operations. Gauge tubes are offered with various system fittings to match almost any system attachment requirement.



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*Hastings Instruments*

A Teledyne Technologies Company

# THPS 760 Plus

## DESIGN FEATURES (cont)

Additionally, THI's complete line of quick disconnect attachments allows customers to install these special fittings once and then easily replace sensors without vacuum sealant or tape. For particularly dirty systems, THI offers a particle drop-out trap containing a series of nine separate baffles which prevent solid contaminants from having a direct path to the sensor's thermopile.

## Selection Chart

Each THPS HPM-760+ is shipped with a 6-ft. power cable and 8-ft. sensor cable (lengths approximate). The HPM-760S sensors are sold separately.

### Instrument Style & Options

Double Point Controller	760 Plus
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### Sensors: HPM-760S-02-(Fitting)

A = 1/8" NPT

B = KF-16

C = KF-25

D = VCR-4

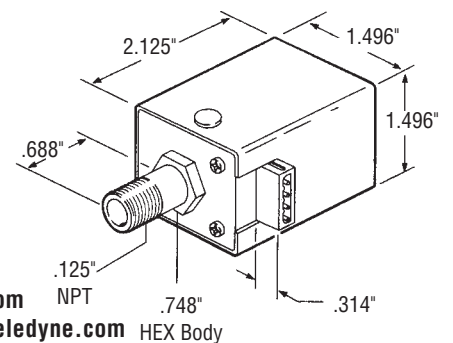
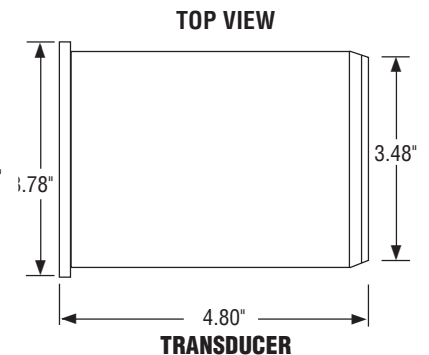
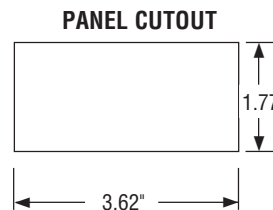
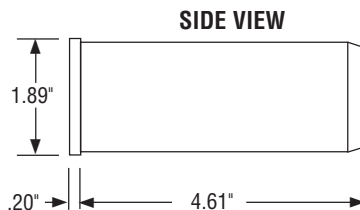
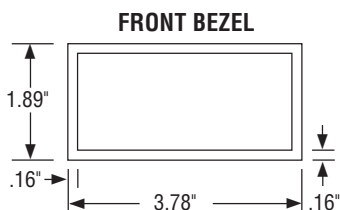
Exp: HPM-760S-02-A (10 VDC/1/8" NPT)

### Cable Types: TB-\* -TB

\* = 8, 25, 50, or 100 (length in feet)

<sup>1</sup>THPS 760 Plus is supplied with an 8-ft. cable unless otherwise requested.

<sup>2</sup>The THPM-760+ are typically set up for 0-10 VDC analog output signals. Please specify any requests for 0-5 VDC output at time of order entry.



## Pressure Measurement Range

HPM-760S Sensor (for THPS 760 Plus)

10 <sup>-3</sup>	10 <sup>-2</sup>	10 <sup>-1</sup>	10 <sup>0</sup>	10 <sup>+1</sup>	10 <sup>+2</sup>	10 <sup>+3</sup>
Reading in Torr						

## SPECIFICATIONS THPS 760 Plus

Range	0.1 to 1000.0 Torr
Accuracy	± 0.25% F.S. up to 760 Torr <sup>1</sup>
Resolution	0.1 Torr
Output <sup>2</sup>	0 to 10 VDC standard; 0 to 5 VDC optional
Dual Relays	2 A @ 240 VAC SPDT Form "C"
Input Power	85 to 240 VAC 50/60 Hz
Output Power	24 VDC ±10% @ 30 mA
Dimensions	3.78"(W) x 1.89"(H) x 4.80"(D) 96mm(W) x 48mm(H) x 122mm(D)
Weight	2 lbs (0.9 Kg)
Gauge Tube	Type HPM-760S (see Bulletin 108S for configuration)
Response Time	< 2 sec
Leak Tested	10 <sup>-8</sup> SCCS
Over Pressure	30 psig
Operation Temperature	0-50° C.
Wetted Materials	316 Stainless Steel
Connection	1/8" NPT, KF-16, KF-25, or VCR-4

<sup>1</sup>Accuracy 0.25% F.S. (calibration based on a 0.15%RDG standard)

*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.*

## THPS 760 Plus

### POWER SUPPLY/READOUT

Your Customer Service Representative



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