



TELEDYNE HASTINGS INSTRUMENTS
Everywhere you look™

HFM-205 Flow Meter

HFC-207 Flow Controller

**HIGH CAPACITY FLOW METERS
AND FLOW CONTROLLERS**

FEATURES

- $\pm 1\%$ full scale accuracy¹
- Input Power: +/- 15 VDC or +24 VDC (specify when ordering)
- Available Flow Ranges:
0 - 1000 slm up to 2500 slm (N2 Equivalent)
- NIST Traceable Calibration Certificate

APPLICATIONS

- Leak testing
- Flame Spray
- Aerospace

BENEFITS

- Excellent Stability
- Proven Reliability
- Outstanding Zero Stability

Flow Meters and Flow Controllers



DESCRIPTION

The Teledyne Hastings Instruments (THI) Model HFM Mass Flowmeter and HFC Mass Flow Controller represent over 65 years of experience in designing and manufacturing reliable, high quality mass flow instruments.

The HFM/HFC Series of flow instruments is based on a modular design. At the heart of each instrument is an insulated thermal transfer sensor which provides enhanced zero stability. The instrument's inherent linear response to flow changes and THI's long-proven reputation for quality, result in the finest flow meters and flow controllers available today. The HFC also features a two-stage, pilot-operated control valve.

Instruments are normally calibrated with the appropriate standard calibration gas (air), then a gas conversion factor is used to adjust the output the intended gas. Special calibration for other gases, such as oxygen, helium and argon, are available upon special request.

Our application engineers can help you review your system requirements and work with you to provide a solution. In addition, lifetime technical support is offered with each mass flowmeter and controller manufactured by Teledyne Hastings.

Specifications and Standards

Options:

- Fittings –
 - VCR®
 - VCO®
 - Swagelok®,
- Seals -
 - Kalrez®
 - Neoprene
 - Buna-N

- Output -
 - 0 - 5 VDC
 - 4 - 20 mA

Cleaned for Oxygen Service

EMC

EN 61326-1

Accessories

Power Supplies available with:

- Integral Flow Totalizer
- Alarm Set Points
- Interconnecting cables



THCD-100 Power Supply & Display

COMMON SPECIFICATIONS HFM-205/HFC-207

Accuracy¹	± 1.0% of F.S.
Repeatability	± 0.05% of F.S.
Maximum Operating Pressure	500 psi
Pressure Coefficient	+0.0067% /psi
Leak Integrity	< 1x10 ⁻⁹ sccs He
Temperature Coefficient (zero)	Zero ± 0.035% C of F.S. (0-60°C)
Temperature Coefficient (span)	Span ± .05% C of Rdg (0-60°C)
Standard Output	0 - 5 VDC
Optional Output	4 - 20 mA
Connector (± 15 VDC)	15 - pin subminiature D 9 - pin subminiature D
Connector (+24 VDC)	

SPECIFICATIONS HFM-205

Power Requirements (±15 V)	± (14-16) VDC @ ±30mA (< 1 Watt)
Power Requirements (+24 V)	(14 - 32) VDC (< 1.9 Watt)
Wetted Materials	316 SS, Viton®, Microbrazo 50 and Incusil Braze
Weight (approx.)	8.1 lb (3.65 kg)

SPECIFICATIONS HFC-207

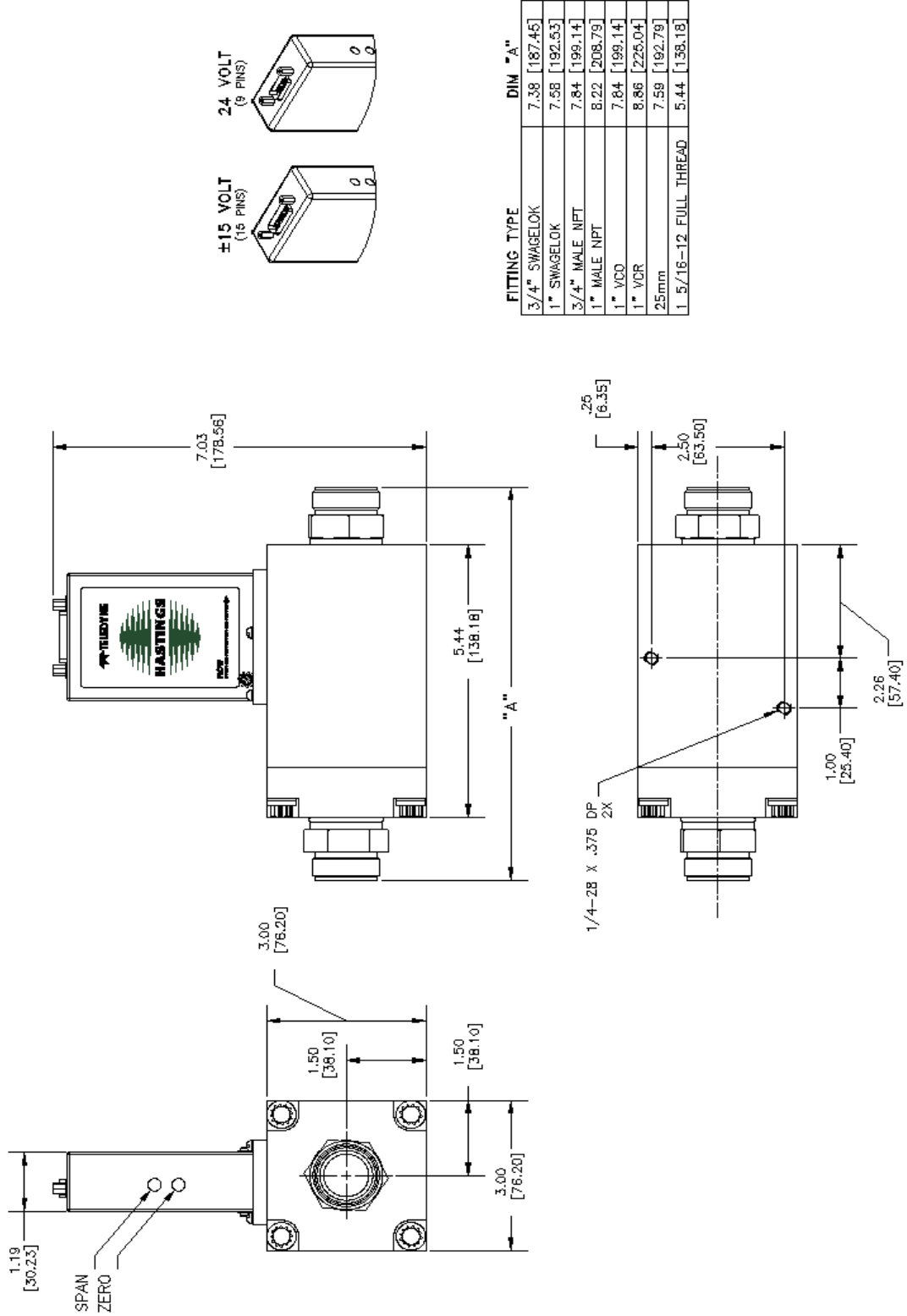
Power Requirements (±15 V)	± (14-16) VDC @ +60 mA/-185 mA (<3 Watt)
Power Requirements (+24 V)	(14-32) VDC (<4.2 Watt)
Wetted Materials	316 SS, 302 SS, Nickel, Microbrazo 50 and Silverbrazo 45 Braze materials, FKM Elastomer, Viton®, PTFE or Delrin
Setpoint Input	0-5 VDC (Std) /4-20mA (optional)
Weight (approx.)	14.9 lb (6.76 kg)

¹ See Product Manual for critical information on instrument accuracy and the use of GCFs (gas conversion factors). Stated accuracy is for nitrogen or other gas specific calibration and use with this gas only.

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.

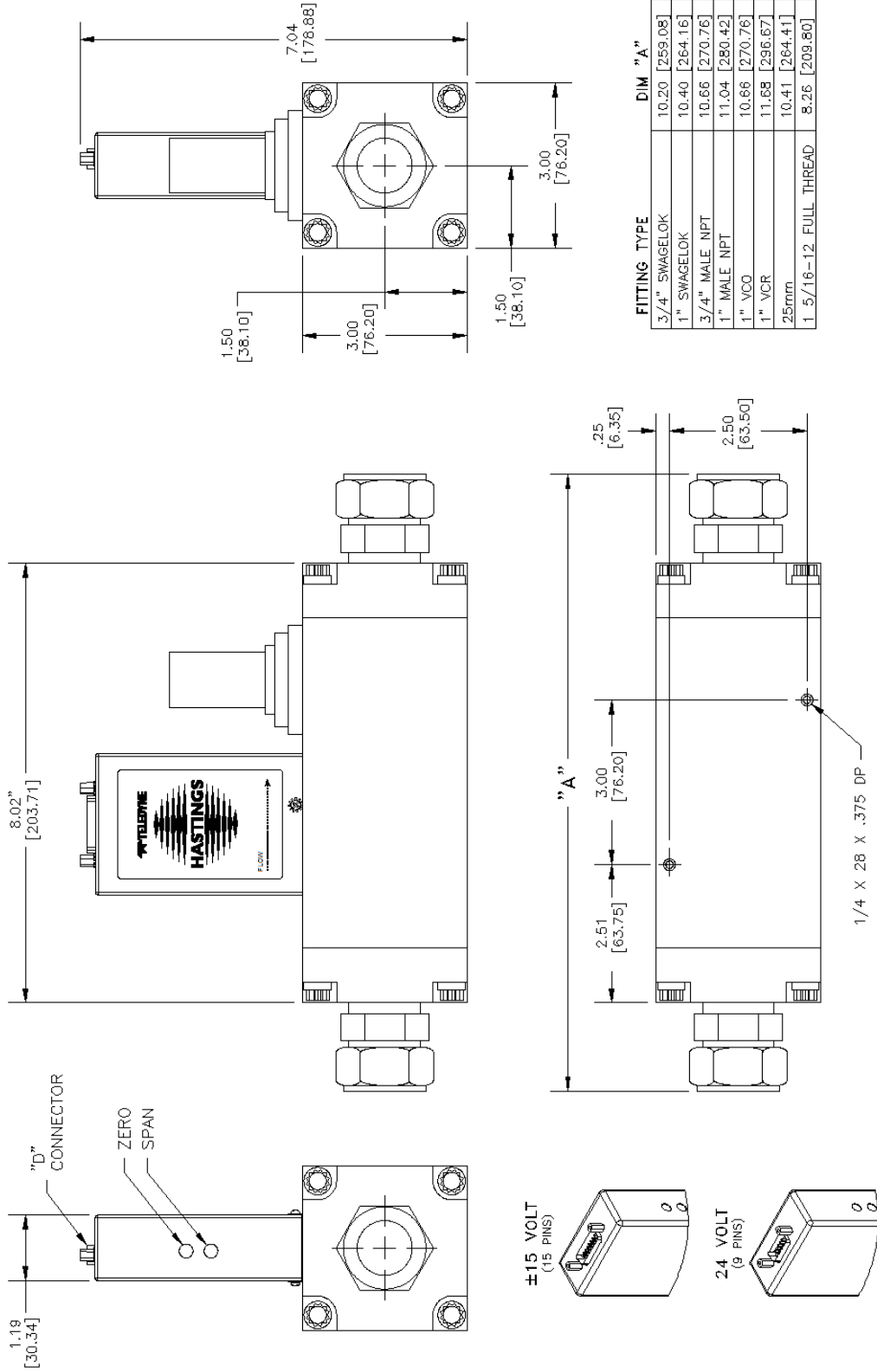
Viton® is a registered trademark of DuPont Performance Elastomers
 Kalrez® is a registered trademark of DuPont Dow Elastomers
 VCR® is a registered trademark of Swagelok Company.

HFM-205 Outline Drawing



FITTING TYPE	DIM "A"
3/4" SWAGelok	7.38 [187.45]
1" SWAGelok	7.58 [192.53]
3/4" MALE NPT	7.84 [199.14]
1" MALE NPT	8.22 [208.79]
1" VCO	7.84 [199.14]
1" VCR	8.86 [225.04]
25mm	7.59 [192.79]
1.5/16-12 FULL THREAD	5.44 [138.18]

HFC-207 Outline Drawing



Selection Chart

Model No.	Circuit Board	Output	Fittings	Seals	Working Pressure	Calibration Type
HFM-205						
HFC-207						

Options

Circuit Board	
01	Standard (± 15 VDC)
03	24VDC Power

Output	
01	0-5 Volts (Std)
02	4-20 mA ** (Output Only)
03	4-20 mA I/O

Fittings	
01	1" Swagelok (Std)
02	1" VCR [®]
03	1" VCO [®]
04	25 mm Swagelok
05	3/4" Swagelok
06	1" Male NPT
07	3/4" Male NPT
08	No Fitting; 1 5/16"-12 M S ST

Seals	
01	Viton [®] (Std)
02	Karlez [®]
03	Neoprene
04	Buna-N

Working Pressure	
01	500 psi (std)

Calibration Type	
01	NIST 5 point (Std)
02	NIST 10 Point
03	NIST 20 Point
04	Curve Fit

Range Information for all Instruments

Each calibration will require the following information:

Range _____

Flow Units _____

Gas _____

For the HFC Instruments also

Upstream Pressure _____
(maximum & minimum)

Downstream Pressure _____
(maximum & minimum)

Does the downstream pressure change with flowrate? Y/N _____

For volumetric units the standard temperature and pressure of the unit is also required 0°C & 760 Torr will be used when other values are not specified

** 0-5 VDC Input



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