

Mid-West[®] Instrument

Differential Pressure Transmitter

Range 0-5 PSID (0- 0.35 Bar) thru 0-300 PSID (0-20 Bar)

Mid-West Instrument wet/wet differential pressure transmitter utilizes a piezoresistive differential pressure sensor sensing element with stainless steel isolated diaphragm. Silicon oil is filled in between die and two diaphragms. The measured differential pressure is transmitted onto the die through the diaphragm and silicon oil. The signal output generated by the piezoresistive bridge sensor is amplified into a useable voltage or 4-20 mA output as specified by customer. Series 700 is manufactured in China. 1 Year Limited Warranty. (Standard Delivery 4 Weeks ARO.)

Product Features

- Use with Liquid or Gas media compatible with material of construction
- Full stainless steel construction, compact size, easy installation
- Laser welded, fully-sealed construction: NEMA 4X (IP65)
- Utilizes Piezoresistive Differential Pressure Sensor Isolated Diaphragm
- Zero and Span Adjustable
- CE Certified to EMI / EMC Directive
- LCD or LED display available upon request
- (Available with DIN Connector & 4-20mA Output Only)
- Maximum Overpressure (+) Hi-Side equals 2 times specified DP range
- Maximum Overpressure (-) Low-Side is equal to specified DP range
- Maximum Static Pressure 2,900 PSI

It is recommended to install a 3 valve manifold between point of measurement and the transmitter.

Materials of Construction

- **Pressure Port & Housing:** 321 Stainless Steel
- **Diaphragm:** 316L Stainless Steel
- **O-ring:** Viton
- **Process Connections:** 1/4" Female BSPP (STD)
- **Fill liquid:** Silicon Oil

Available Electrical Specifications:

- **Power Supply:** 2-Wire 15~28 VDC
2-Wire 18~28 VDC, 2-Wire 20-28 VDC,
3-Wire 15~28 VDC
- **Output Signals:** 2-Wire 4~20mADC,
3-Wire, 0~5VDC, 1~5VDC, 0~5VDC
0~10VDC, 0-10mADC and 0-20m ADC
- **Electrical Connections:**
Din Plug 43650 or 1.5m 4-pin cable
- Response Time: (10%~90%) ≤1ms
- Insulation Resistance 100MΩ, 50VDC



LCD or LED
3-1/2 Digit Display



1/4" BSPP x 1/4" FNPT
1/4" BSPP x 1/2" FNPT
S.S. Adapters Available

Description	Range	% / Unit	
Accuracy (LIN, HYS, & REP.)	5~300 PSID	0.50% Full Scale	
Zero Thermal Drift	0~15 PSID	±.03% Full Scale / °C Typ.	
	30~300 PSID	±.02% Full Scale / °C Typ.	
FS Thermal Drift	0~15 PSID	±.03% Full Scale / °C Typ.	
	30~300 PSID	±.02% Full Scale / °C Typ.	
Stability	< 30 PSI	0.50%	%FS / Year
	≤ 30 PSI	0.20%	
Static Pressure Effect	±0.05%	FS, ea. 15 PSI	
Compensation Temperature	0~50	°C	
Operating Temperature	-10~80		
Storage Temperature	-40~120		

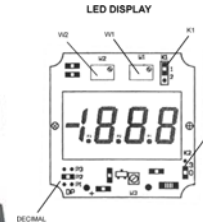
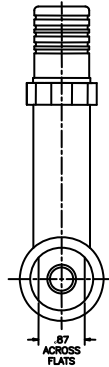
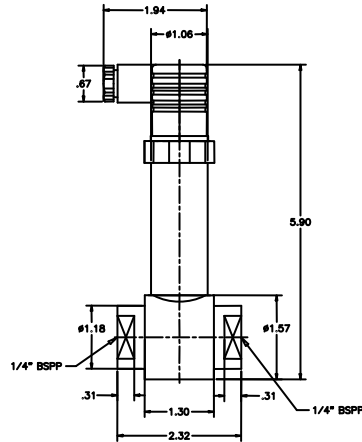
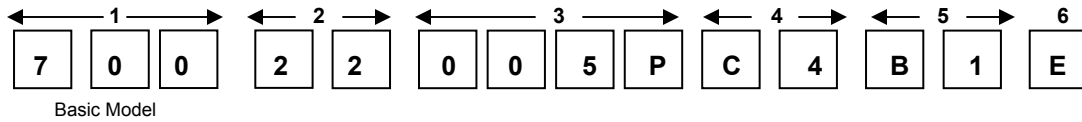
Standard Model Specification: 700-22-005P-C4-B1-E

321 Stainless Steel Pressure Port & Housing, 316 Stainless Steel Diaphragm
 Viton O'Rings, 1/4" Female BSPP Connections, DIN 43650/IP65 Plug-In Type Connector
 Electrical Input & Output: 2-wire 15~28VDC / 4~20mADC
 Accuracy ±0.5% Full Scale



Mid-West Instrument
 1-800-648-5778

Range: 0-5 PSID (0-0.35 Bar) to 0-300 PSID (0-20 Bar)



1	Description
700	Differential Pressure Transmitter
710	Differential Pressure Transmitter W/LCD Readout (Available with DIN Connector & 4-20mA Output only)
715	Differential Pressure Transmitter W/LED Readout (Available with DIN Connector & 4-20mA Output only)
2	Materials of Construction
22	Pressure Port & Housing = 321 S.S. / Diaphragm = 316L S.S.
3	Differential Pressure Range
PSID=P	5, 10, 15, 30, 50, 100, 150, & 300 PSID
Bar=B	.35, .70, 1, 2, 3.5, 7, 10, 20
kPa=K	35, 70, 100, 200, 350, 700
4	Process Connection
C4	1/4" Female BSPP (STD)
5	Electrical Connection
B1	DIN 43650/IP65 Plug-In Type
B2	Cable Connection / Standard Length 1.5m
6	Power Supply Input / Output Signal
E	2-wire 15~28VDC / 4~20mADC / LCD Display 18-28 VDC / LED Display 20-28VDC
F	3-wire 15~28VDC / 1~5VDC
J	3-wire 15~28VDC / 0~5VDC
Q	3-wire 15~28VDC / 0~10mADC
U	3-wire 15~28VDC / 0~20mADC
V	3-wire 15~28VDC / 0~10VDC
316 S.S. Adapters (includes Viton O'ring)	
113319	1/4" MALE BSPP to 1/4" FNPT 316 S.S. Adapter
113320	1/4" MALE BSPP to 1/2" FNPT 316 S.S. Adapter

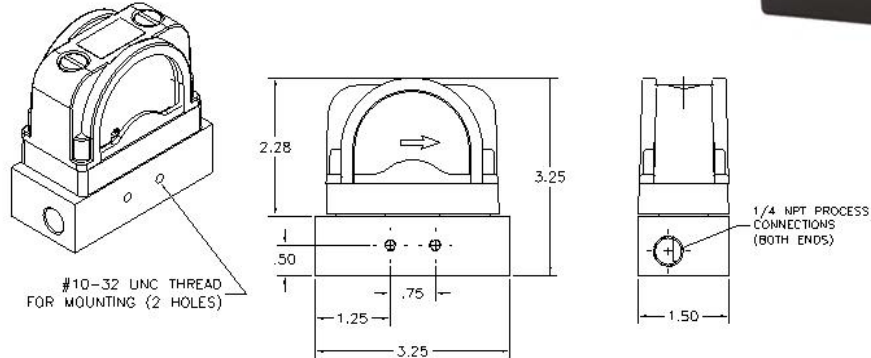
Mid-West[®] Instrument

Differential Pressure Indicator Model 555A

Colored bands allow you to quickly identify pressure drop across element. Divided into three sections, each clearly marked for ease of understanding. Commonly used to indicate when to change or clean a filter.

Example: 555A-10.0 changes from green to yellow at 5 PSID and from yellow to red at 7.5 PSID.

Mounting block has 1/4" FNPT in-line process connections for ease of installation. Accuracy is ±5% Full Scale



Model Number	DP Range	Transition Points		
		Green	Yellow	Red
555A-3.5	0-3 PSID	0-2.0	2.0-2.5	2.5-3.5
555A-5.0	0-5 PSID	0-3.0	3.0-4.5	4.5-5.0
555A-10.0	0-10 PSID	0-5.0	5.0-7.5	7.5-10.0
555A-12.0	0-12 PSID	0-6.0	6.0-9.0	9.0-12.0
555A-15.0	0-15 PSID	0-7.5	7.5-12.0	12.0-15.0
555A-25.0	0-25 PSID	0-11.0	11.0-18.5	18.5-25.0
555A-30.0	0-30 PSID	0-13.0	13.0-20.0	20.0-30.0
555A-43.0	0-43 PSID	0-19.5	19.5-29.5	29.5-43.0

SPECIFICATIONS:		Comments:
Pressure (Ratings)		
Maximum Working	300 PSIG	
Maximum Differential	150 PSID	
Accuracy	± 5% of Rated Differential Pressure Range	Calibrated at Color Transitions
Operating Temperature (Max.)	93°C (200°F)	
Materials of Construction		
Body Material	Glass Filled Nylon (GFN)	
Wetted Internals	Stainless Steel, Ceramic, & GFN	
Elastomers	Buna	
Movement	Magnetic Piston and Follower Pointer	
Dial	Plastic Lens with 3 Color Dial	
INTERFACE:		
Process Connections:	1/4" FNPT End Connections. To switch HIGH and LOW pressure connections: (Remove Indicator from base and rotate 180° - Retighten plastic bolts to 20-25 inch pounds.)	Flow Direction Identified on Dial. (Arrow Points to Low Pressure Port)

Mid-West[®] Instrument

**NEED TO MEASURE FLOW?
MID-WEST INSTRUMENT HAS THE GAUGE FOR YOU.**



Veris Verabar
Flow Sensor



Typical Flow Dial



Veris Accelabr
Flow Meter

Flow measurement using Mid-West Instrument differential pressure gauge technology will provide accuracy and reliability you've come to know and trust. Our industrial quality differential pressure flow gauge uses modern materials and current technology to provide an easy to read flow scale.

Mid-West differential pressure flow gauges indicate such flow rates as liters per minute up to gallons per hour, even when used at high line pressures. Units can be supplied with reed switches or relays to initiate alarms, activate other equipment, or shut the system down. Two switches are available when high and low limits are required. 4-20 mA Transmitter also available.

Here are some typical flow designators: **GPM, USGPM, ACFM, SCFM, NM3/HR, LBS/HR, L/MIN, L/SEC, KG/HR, TONS/HR.** Flow scale dials are available for the following Mid-West differential pressure gauges: Model 150, 106, 109, 130, 140 and 142



Model 105/106 Range: 0-10" H₂O to 0-400" H₂O (25 mbar to 1 bar)
Model 109 DP Range: 0-15 PSID (0-1.0 bar) to 0-6000 PSID (0-400 bar)
 ± 1/2% or ± 1% Full Scale Accuracy
 Uni-Directional Dial Ranges are available in either
 LINEAR or SQUARE ROOT FLOW SCALES



AVAILABLE FLOW SCALES MODELS: 105, 106, & 109

Uni-Directional Dial Ranges are available in either LINEAR or SQUARE ROOT FLOW SCALES with any appropriate legend (I.E. GPM, SCFM, USGPM, NM3/HR, L/MIN, ETC) at no extra charge			LINEAR Bi-Directional Dials are available with any appropriate Legend at No Charge	
0-0.5	0-30	0-300	1.0-0-1.0	75-0-75
0-1.0	0-35	0-400	2.0-0-2.0	100-0-100
0-1.6	0-40	0-500	5.0-0-5.0	150-0-150
0-2.0	0-50	0-600	10-0-10	200-0-200
0-3.0	0-60	0-700	15-0-15	300-0-300
0-4.0	0-70	0-800	25-0-25	400-0-400
0-5.0	0-75	0-900	30-0-30	750-0-750
0-6.0	0-80	0-1000	50-0-50	1000-0-1000
0-7.0	0-100	0-1500		
0-8.0	0-135	0-1600		
0-10	0-150	0-2000		
0-15	0-160	0-3000		
0-20	0-200	0-4000		
0-25	0-250	0-5000		
		0-6000		



Model 130

Range: 0-5" H2O to 0-400" H2O

0-5" to 0-9.9" H2O ± 5%

0-10" to 0-400" H2O ± 2%

Full Scale Accuracy

Model 140 or 142

142 Range:

0-20" H2O to 0-25 PSID

140 Range:

0-25 PSID to 0-100 PSID

± 2% Full Scale Accuracy

Uni-Directional Dial Ranges are available in either LINEAR or SQUARE ROOT FLOW SCALES

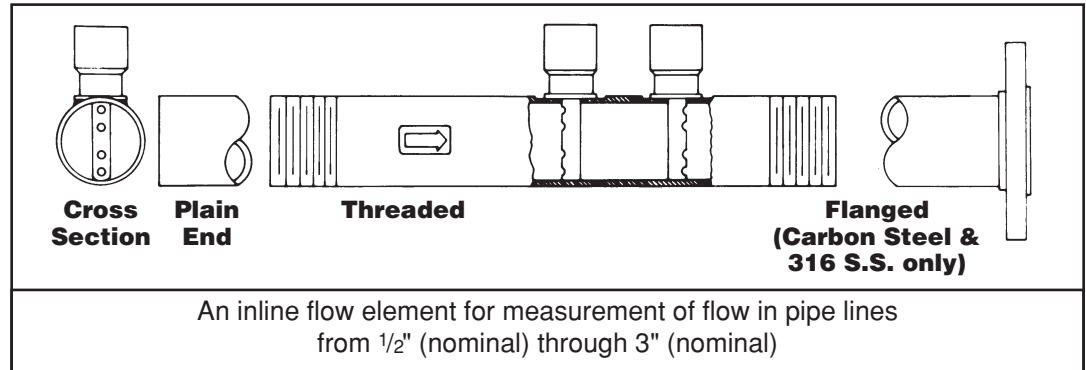
AVAILABLE FLOW SCALES MODELS: 130, 140, 142

Uni-Directional Dial Ranges are available in either LINEAR or SQUARE ROOT FLOW SCALES with any appropriate legend (I.E.GPM, SCFM, USGPM, NM3/HR, L/MIN, ETC) at no extra charge		
Model 130 Flow Dials		Models 140/142 Flow Dials
0-1.0		0-1.0
0-1.25		0-1.5
0-1.5		0-2.0
0-1.75		0-2.5
0-2.0		0-5.0
0-2.5		0-10.0
0-3.0		
0-3.5		
0-4.0		
0-4.5		
0-5.0		
0-5.5		
0-6.0		
0-6.5		
0-7.0		
0-7.5		
0-8.0		
0-8.5		
0-9.0		
0-9.5		
0-10		

Available Multipliers for Flow Dials: X10, X100, X1000, and X10,000

Note: Not all ranges available in all diaphragm materials

MODEL 300



Functions & Applications:

Specifications:

Materials		Carbon Steel (a)		316 Stainless Steel (b)		CPVC Solvent Welded
Pipe Size		1/2", 3/4", 1", 1 1/2", 2", 2 1/2", 3"				1/2", 3/4", 1", 1 1/2", 2", 2 1/2", 3" Schedule 80 only
End Connections		Threaded	Welded	Threaded	Welded	Threaded - Standard Plain End - Optional
Working Pressure (PSIG) Carbon Steel Based on -20 to 600°F 316 S.S. Based on -20 to 200°F CPVC (Water Service) Up to 73.4°F (23°C) For other media and/or temperatures, see Engineering Data.	Pipe Size	Schedule 40	Schedule 40	Schedule 40	Schedule 40	Schedule 80
	1/2	1320	2950	2080	4640	300
	3/4	1130	2400	1770	3770	240
	1	1020	2240	1600	3520	220
	1 1/2	830	1660	1310	2600	170
	2	740	1390	1170	2190	140
	2 1/2	750	1530	1180	2400	150
	3	690	1320	1080	2080	130
NOTES:		For flange applications, see ASME/ANSI B16.5 or Mid-West Bulletin No. ASDE/Latest. (a) Pressures & Temperatures are based on ASTM A53 Grade A Welded Schedule 40 Carbon Steel Pipe. (b) Pressures & Temperatures are based on ASTM A 312 TP 316 Welded Schedule 40 Stainless Steel Pipe. For additional System Pressure (PSIG) vs Temperature (°F) see Mid-West Bulletin No. ASDE/Latest.				
Instrument Connections		1/4" FNPT (Standard), 1/2" (Optional for C.S. or S.S. only)				

Special Features:

Utilizes two averaging flow elements of equal area to sense stagnation (RAM) and static differential pressure providing minimum permanent pressure loss.

Related Products Available:

Indicators & Switches	A broad selection of indicators, with or without switching, are available. For details, please refer to Mid-West Bulletins on Models 105 & 130.
Portable Indicators	A wide variety of portable indicators are also available. Please see Mid-West Bulletin 800/Latest.