



## Product Information - HA

## LIFE SCIENCES

# "HA" Mini Pressure Transmitters

## Introduction

Anderson-Negele's HA "Mini" sanitary pressure transmitter is specifically designed for critical measurements in fractional size lines. The product can be ordered with 3/4", 1", or 1-1/2" Tri-Clamp® connections as well as our CPM fitting. This eliminates the need for reducers or adapters, thus reducing hold-up volumes in small lines. Internal zero and span adjustments and easily accessible test points greatly simplify calibration and validation. 316 "L" stainless steel wetted parts are electro-polished to an  $R_a=8$ . Finally, since it's an Anderson-Negele "Life Sciences Series" product, every transmitter includes a calibration certificate and permanent tag at no charge. Complete specifications appear below, with an ordering matrix and dimensions on the reverse.



## Specifications

|                               |  |                            |   |
|-------------------------------|--|----------------------------|---|
| Excitation:                   | 10-40 VDC (Absolute), 24 VDC Nominal regulated or unregulated                      | Over-Range Rating:         | 2 times base range  |
| Output:                       | 4-20 mA DC, 2 wire with non-interrupting circuit verification test points          | Response Time:             | 200 uSec  |
| Loop Resistance:              | 0-700 ohms at 24 VDC   | Wetted Parts:              | 316L stainless steel electropolished (Ra max. = 8 microinches, .2 microns)                                  |
| Wiring Connection:            | 16 AWG max.; Screw Terminal; Accessible via removable screw cap conduit housing    | Housing Material:          | 304 stainless steel   |
|                               | Optional 5pin M12 Quick Disconnect Receptacle                                      | Actuating Fill:            | 100% mineral oil. Meets FDA requirements (21 CFR, 172.878 and 178.3620(a))                                  |
| Recommended Cable:            | 22-24 AWG, foil shielded, and PVC coated. (3/16 - 1/4 OD insulation)               | Zero and Span Adjustments: | ± 10% of range  |
| Accuracy:                     | ± 0.5% of full scale   | Mounting:                  | Direct connection   |
| Repeatability:                | ± 0.3% of full scale   | Electrical Ratings:        | Intrinsically safe for use in Class 1, Div. 1, Groups A-D; CE Compliant (EMC Industrial Locations)          |
| Hysteresis:                   | ± 0.10% of full scale  | Standards:                 | Designed and manufactured to sound engineering practices in accordance with Article 3.3 of the PED 97/23/EC |
| Linearity:                    | ±0.10% of full scale   |                            | NEMA 4X   |
| Stability:                    | ±0.30% of calibrated range/6 months  |                            | IP66  |
| Storage Temperature:          | -40°C to 65°C (-40°F to 149°F)   |                            | CSA B51-03  |
| Process Temperature Limits:   | -1°C to 149°C (30°F to 300°F)<br>(Horizontal Mount recommended over 135°C (275°F)) |                            | CRN# CSA0F9754.5C (except Mini CPM fitting 161)   |
| Ambient Temperature Limits:   | -18°C to 49°C (0°F to 120°F)   |                            |   |
| Effect of Temperature Change: | ± 0.1 psig/5.5°C (10°F) typical  |                            |   |


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Order Information



**HOUSING**

6 Conduit Housing

**RANGE/(AVAILABLE UNITS)**

|     |                   |           |
|-----|-------------------|-----------|
| 025 | 30" Hg/0          | (M)       |
| 028 | 30" Hg/0/15 psig  | (C)       |
| 029 | 30" Hg/0/30 psig  | (C)       |
| 031 | 30" Hg/0/60 psig  | (C)       |
| 032 | 30" Hg/0/100 psig | (C)       |
| 056 | -1/0/4 BAR        | (B)       |
| 057 | 0/2 BAR           | (B, T)    |
| 060 | 0/6 BAR           | (B)       |
| 061 | 0/10 BAR          | (B, T)    |
| 066 | 0/30              | (G, A, M) |
| 068 | 0/50              | (G, A, B) |
| 069 | 0/60              | (G, A, B) |
| 071 | 0/100             | (G, A)    |
| 073 | 0/150             | (G, A)    |
| 077 | 0/300             | (G, A)    |
| 081 | 0/500             | (G)       |
| 084 | 0/1000            | (G)       |
| 192 | 0/4 BAR           | (B, T)    |
| 217 | -1/0/3 BAR        | (B)       |
| 235 | 0/3 BAR           | (B, T)    |
| 251 | -1/0/1 BAR        | (B)       |
| 286 | -1/0/2.5 BAR      | (B)       |
| 304 | -1/0/7 BAR        | (B)       |

**ENGINEERING UNITS**

|   |                             |
|---|-----------------------------|
| G | PSIG                        |
| M | " Hg (inches mercury)       |
| A | PSIA                        |
| B | BAR                         |
| C | Vacuum/Pressure (Hg & PSIG) |
| T | BAR (Absolute)              |

**FITTING**

|     |                 |
|-----|-----------------|
| 002 | 3/4" Tri Clamp® |
| 003 | 1" Tri Clamp®   |
| 004 | 1.5" Tri Clamp® |
| 123 | CPM*            |
| 161 | Mini CPM        |

**0 STANDARD SENSOR**

**CABLE LENGTH**

|    |                                       |
|----|---------------------------------------|
| 00 | No Cable                              |
| 05 | 25'                                   |
| 10 | 50'                                   |
| 15 | 75'                                   |
| 20 | 100'                                  |
| 24 | 200'                                  |
| A0 | Quick Disconnect Receptacle(QDR)**    |
| A1 | QDR & Field Wireable Connector(FWC)** |
| A2 | QDR w/25 ft Molded Cordset**          |
| A3 | QDR w/50 ft Molded Cordset**          |
| A5 | QDR w/100 ft Molded Cordset**         |
| A9 | QDR w/200 ft Cable**                  |

**FINISH**

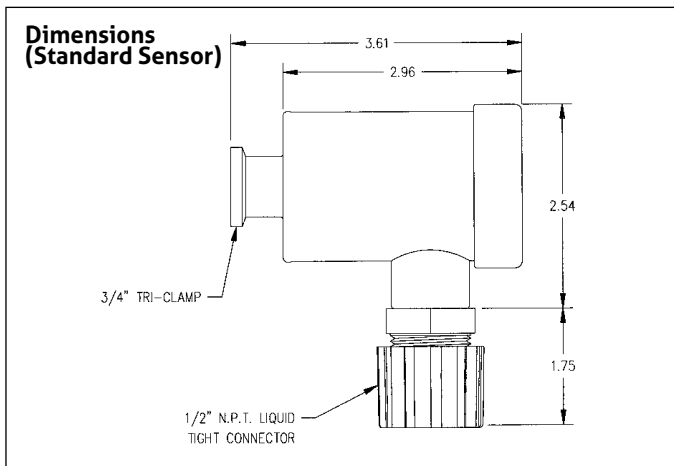
2 Electropolished (R<sub>a</sub> = 8)

**DIAPHRAGM MATERIAL**

1 316L Stainless Steel

\* Standard O-Ring material is EPDM USP Class VI  
Silicon or Viton available as an option

\*\* UL Certification for Intrinsic Safety Pending



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