



UL/CUL Approved For Intrinsically Safe Areas Media Isolated OEM Pressure Sensor

The AST4400 is a low cost, high quality all stainless steel media isolated Pressure Sensor intended for use in the measurement of gases and liquids compatible with stainless steel. The AST4400 is approved to UL 913 (CSA 157) Class 1, Div 1, Groups C and D for use in intrinsically safe areas when used with an approved barrier. The AST4400 is suitable for use in the oil patch regions, refineries, water treatment plants, natural gas compressors and pharmaceutical applications. The AST4400 has been designed specifically for those applications with demanding price and performance requirements.

The competitively priced AST4400 offers wide range of outputs. The high strength stainless steel construction contains no silicone oil, no welds and no internal "O" rings. Measurements are available in gauge and sealed gauge pressure covering ranges up to 10,000 PSI.

The AST4400 is ideal for applications needing high accuracy, excellent long-term stability, trouble free operation, long life and high performance. The AST4400 is backed by AST's one-year warranty.



Class I, Div. 1,
Groups C, D
Hazardous Location

Nonhazardous Location

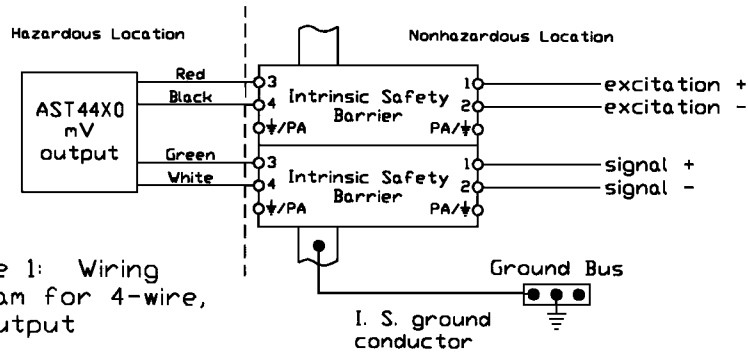


Figure 1: Wiring diagram for 4-wire, mV output

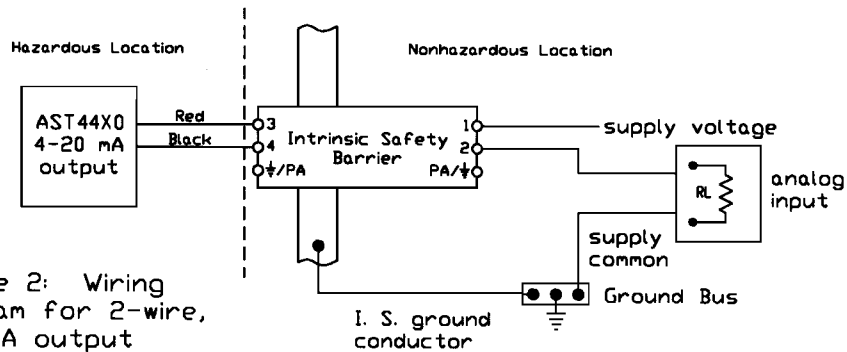


Figure 2: Wiring diagram for 2-wire, 4-20mA output

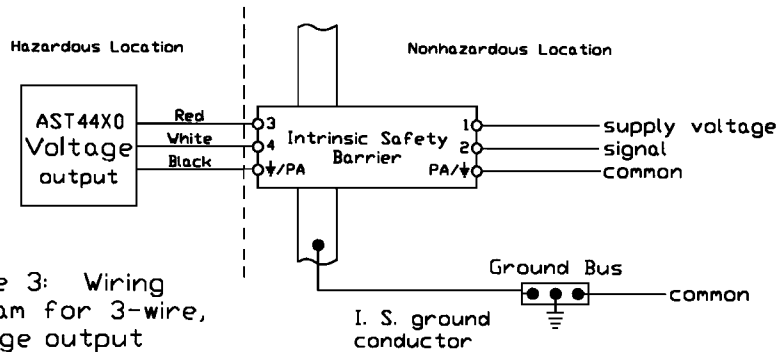


Figure 3: Wiring diagram for 3-wire, Voltage output

The transducers listed above are designed for installation in a Class 1, Division 1, Groups C and D, hazardous location when connected to Associated Apparatus as described in Note 1.

Entity Parameters

$$V_{max} = 28VDC$$

$$I_{max} = 150mA$$

$$C1 = 0.44\mu f$$

$$L1 = 0$$

I_{max} is the total current consumption available from the Associated Apparatus under any condition.

Notes

- Associated Apparatus shall provide intrinsically safe connections which meet the following parameters:
 V_{oc} or $V_t \leq V_{max}$ $C_a \geq C1 + C_{leads}$
 I_{sc} or $I_t \leq I_{max}$ $L_a \geq L1 = L_{leads}$
- Control Room apparatus shall not generate in excess of 250V (U_{max}).
- Installation should be in accordance with Article 504 in the National Electrical Code, ANSO/NFPA 70.

Model AST4400 SPECIFICATIONS

Performance @ 25°C (77°F)	
Accuracy ¹	<±0.25% BFSL
Stability (1 Year)	±0.25%FS, typ.
Proof Pressure	2X Rated Pressure
Burst Pressure	5X or 25,000 PSI, whichever is less
Wetted Material	17-4PH Stainless Steel (for other material consult Factory)
Pressure Cycles	>100 Million

¹ Accuracy includes: Non-linearity, Hysteresis and Non-repeatability

Environmental Data	
Temperature	
Operating	-40 to 85°C (-40 to 185°F)
Storage	-55 to 125°C (-65 to 250°F)
Thermal Limits	
Compensated Range	0 to 55°C (30 to 130°F)
TC Zero	<±1.5% of FS
TC Span	<±1.5% of FS
Shock	100G, 11msec, 1/2 sine
Vibration	10G peak, 20 to 2000 Hz
Rating	IP66

Electrical Data		
Excitation	5 VDC, typ.	10-32VDC
Output	10mV/V	1-5VDC, 4-20mA 0.5-4.5VDC, ratiometric
Input Impedance	1500 Ohms	N/A
Output Impedance	1000 Ohms	<100Ω, nominal
Current Consumption	<4mA	<10mA
Bandwidth (-3dB)	DC to 5kHz, min DC to 1kHz	
Output Noise	N/A	<2mV RMS
Reverse Polarity Protection	N/A	YES
Zero Offset	<±2% of FS	<±1% of FS
Span Tolerance	<±2% of FS	<±2% of FS
Output Load	> 1mOhms	5k Ohms, min for 1-5VDC for 4-20mA, see Load Line Curve
Agency Approval	UL/CUL 913 for all models	

Physical Description	
Case	304 Stainless Steel
Pressure Fittings	1/8" MNPT, 1/4" MNPT (for others consult Factory)
Electrical Connection	2 feet cable std. for other lengths consult Factory

Pressure Ranges			
Gage psig	Proof psig	Burst psig	Pressure Range Code
0-100	200	500	00100
0-200	400	1000	00200
0-500	1000	2500	00500
0-1000	2000	5000	01000
0-2500	5000	12,500	02500
0-5000	10,000	20,000	05000
0-7500	15,000	20,000	07500
0-10,000	20,000	20,000	10000

Other ranges available, please consult Factory

Specifications are subject to change without notice.

APPLICATIONS

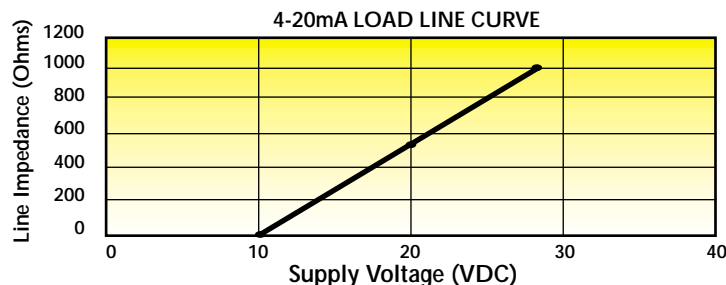
- Industrial OEM Equipment
- Hydraulic Systems
- Train Braking Circuits
- HVAC/R Equipment
- Refrigeration
- Oil Platforms
- Test Stands
- Data Loggers
- Agriculture Equipment
- Energy and Water Management
- Pressure Instrumentation

BENEFITS

- High Strength Stainless Steel Construction
- No Silicone Oil, No Welds, No Internal "O" Rings
- Wide Operating Temperature Range
- Ranges up to 10,000 PSI
- Low Static and Thermal Errors
- Unparalleled Price and Performance
- Rugged Design Survives Harsh Environments
- Compatible with Wide Range of Gases and Liquids
- Suitable for High Shock and Vibration Applications

WARRANTY

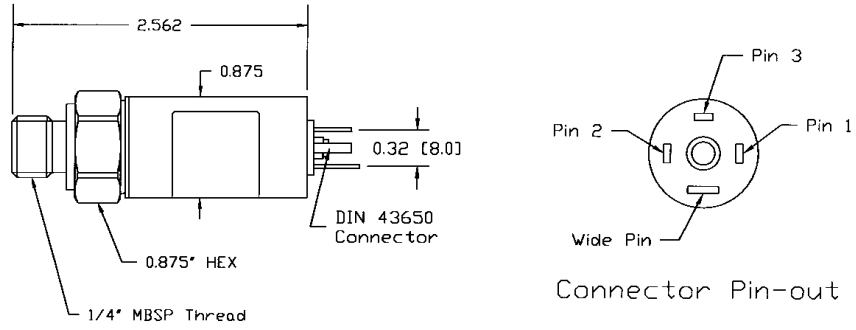
- **Workmanship**
AST, Inc. pressure transmitters have a limited one-year warranty to the original purchaser. AST, Inc. will replace or repair, free of charge, any defective transmitter. This warranty does not apply to any units that have been modified, misused, neglected or installed where the application exceeds published ratings.
- **Installation/Applications**
The purchaser is responsible for compatibility of the media, functional adequacy and correct installation of the transmitter.



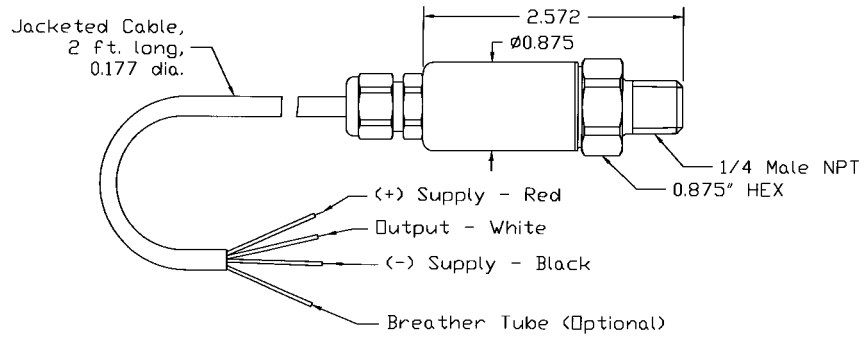
D I M E N S I O N A L D A T A

Output	Red	Black	White
1-5V	+V Supply	-V Supply	Output
4-20mA	+V Supply	-V Supply	N/C

DIN Connection Dimensions



Cable Connection Dimensions



O R D E R I N G I N F O R M A T I O N

How to Order

Use the characters from the chart below to construct a product code.

AST4400-A-05000-P-4-A-0-0000

Series Type	Port Configuration	Pressure Range	Pressure Unit	Outputs	Electrical Interface	Wetted Material	Options
	A=1/4" NPT Male B=1/8" NPT Male C=1/4" BSP Male F=7/16"-20 UNF Male I=1/4" NPT Female J=1/8" NPT Female P=1/2" NPT Male	Insert Pressure Range from Chart on Page 3 Vxxxx= Vacuum Reference for Pressure Ranges up to 2500 psi	B=BAR K=kg/cm ² P=PSI	A=10mV/V 1=0.5-4.5 VDC ratiometric 3=1-5VDC 4=4-20mA 6=1-6V	A=2ft. Cable B=4ft. Cable C=6ft. Cable D=10ft. Cable E=Mini DIN connector 43650 F=Packard Metri Pack	0=17-4 PH 1=316 L	

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