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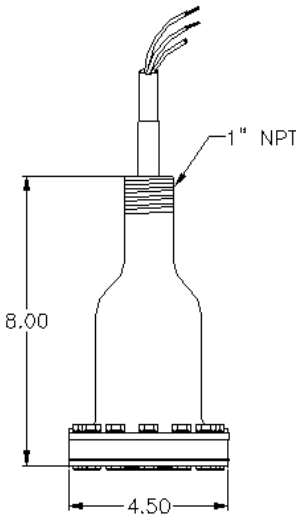
The A1000i is a 9-30VDC, two wire loop powered submersible level transducer with a 4-20mA signal output. It is mounted at a low point in a liquid media. The transducer uses a gauge pressure piezoresistive sensor element to measure the hydrostatic head-pressure. The sensor element is isolated from the media by a Teflon coated Buna-N diaphragm. This pressure is proportional to the height of the liquid above the sensing diaphragm and is converted to a proportional 4-20mA signal. This 4-20mA signal spans the full pressure range of the transducer.

The transducer is barometrically compensated via a rigid breather tube connected to a panel mounted sealed breather assembly. All A1000i transducers require a Breather Assembly Kit.

Part Number	Description
	Sensors
6012950011	A1000i sensor 1.5 PSI 4-20mA output (0-3.5 ft of water)
6012950012	A1000i sensor 5 PSI 4-20mA output (0-11.5 ft of water)
6012950013	A1000i sensor 15 PSI 4-20mA output (0-34.7 ft of water)
6012950014	A1000i sensor 30 PSI 4-20mA output (0-69.3 ft of water)
	Housing/Cable Assembly
6012640002	A1000 Housing/Cable Sub-Assembly 20ft
6012640003	A1000 Housing/Cable Sub-Assembly 30ft
6012640004	A1000 Housing/Cable Sub-Assembly 40ft
6012640006	A1000 Housing/Cable Sub-Assembly 60ft
6012640008	A1000 Housing/Cable Sub-Assembly 80ft
6012640010	A1000 Housing/Cable Sub-Assembly 100ft
60126400XX	A1000 Housing/Cable Sub-Assembly custom lengths (XX equals number of feet)
	Mounting Hardware and Accessories
6011340001	B100 9G CLS Stainless Steel Pipe Mounting Clamps
6014180001	Cable Suspension Mounting Pipe (without SS cable)
60144000XX	Stainless steel cable; each additional 10' ft (XX)
6012880001	Breather Assembly Kit (required for all A1000i sensors)
6012910002	Terminal Connection (Junction) Box w/Built In Breather Assembly

Agency Approval FM and CSA Intrinsically Safe Class I, Div. 1, Groups A,B,C,D with an approved barrier.

Specifications



Environmental

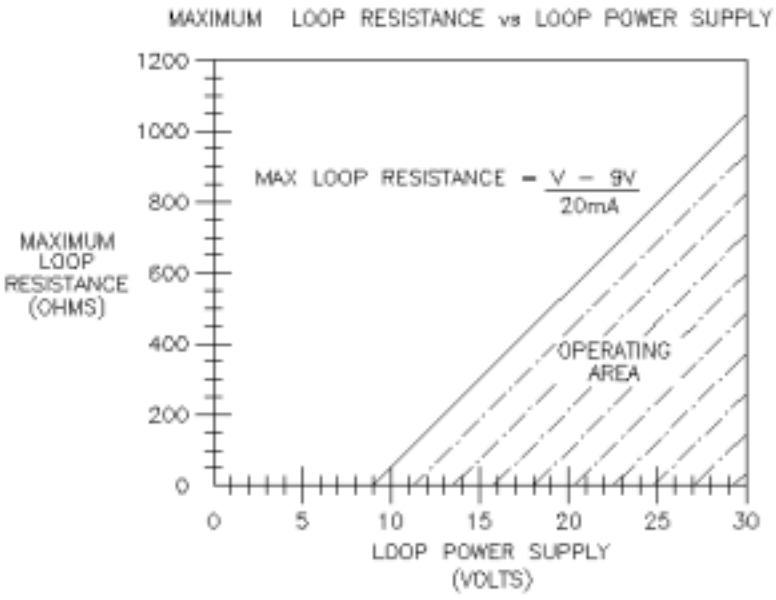
Atmosphere Ventilation	sealed breather system equalizes atmospheric pressure
Operating Temperature	range 32ºF to +158ºF Liquid must remain fluid.

Physical

Housing	316 cast stainless steel, Teflon™ coated
Cable	heavy-duty polyethylene with vent tube, shield and 18 AWG conductors
Mounting	suspension cable mount or 1” pipe mount
Pressure Ranges	1.5 PSI to 30 PSI
Max Over Pressure Range	1.5 PSI 8X full scale 5.0 PSI 4X full scale 15 PSI & 30 PSI 2X full scale
Exposed Materials	316 cast stainless steel Teflon™ coated, synthetic rubber and urethane
Sensing Head	two-layer diaphragm with Teflon™ and Buna-N material

Electrical

Power Required	9 – 30 VDC	
	Typical Loop Resistance	250 ohm @ 15VDC
	Maximum Loop Resistance	750 ohm @ 24VDC
Signal Output	4 - 20mA	
Accuracy	±0.25 % full scale with long term stability of 0.2 % full scale per year.	



Intrinsically Safe Barrier Applications

When selecting an intrinsically safe barrier consider the following: cable length, classification of hazardous area, cable inductance and capacitance, and the intrinsic safe ground system.

Barriers whose entity parameters meet the following requirements can be used.

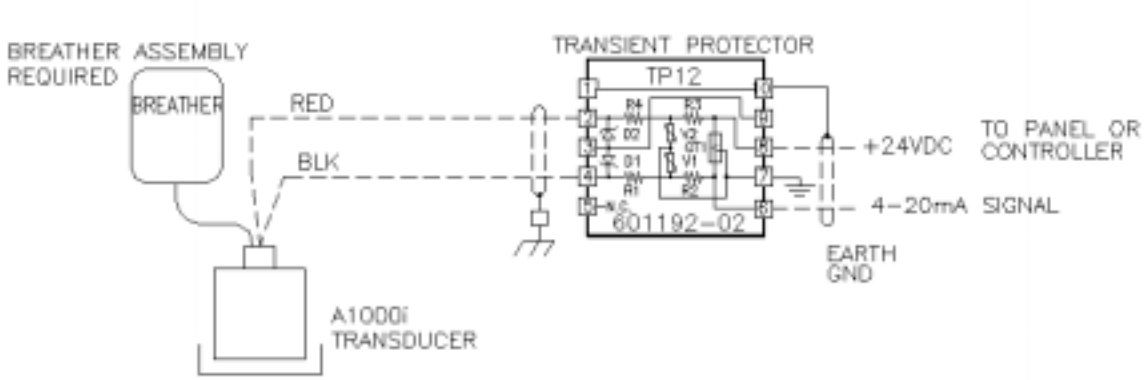
Voc ≤ Vmax
Isc ≤ Imax
Ca > Ci + Ccable
La > Li + Lcable

A1000i Transmitter Entity Parameters			
Vmax	**Imax**	**Ci**	**Li**
28V	93mA	0.11 uF	0.22mH

Compatible Barriers		
Manufacture	**Type**	**Part No.**
Stahl	Zener	9001/51-280-091-14
Stahl	Galvanic Isolated	9303/11-22-11
MTL	Zener	MTL 706
MTL	Amplified Zener	MTL 7206
MTL	Galvanic Isolated	MTL 5041

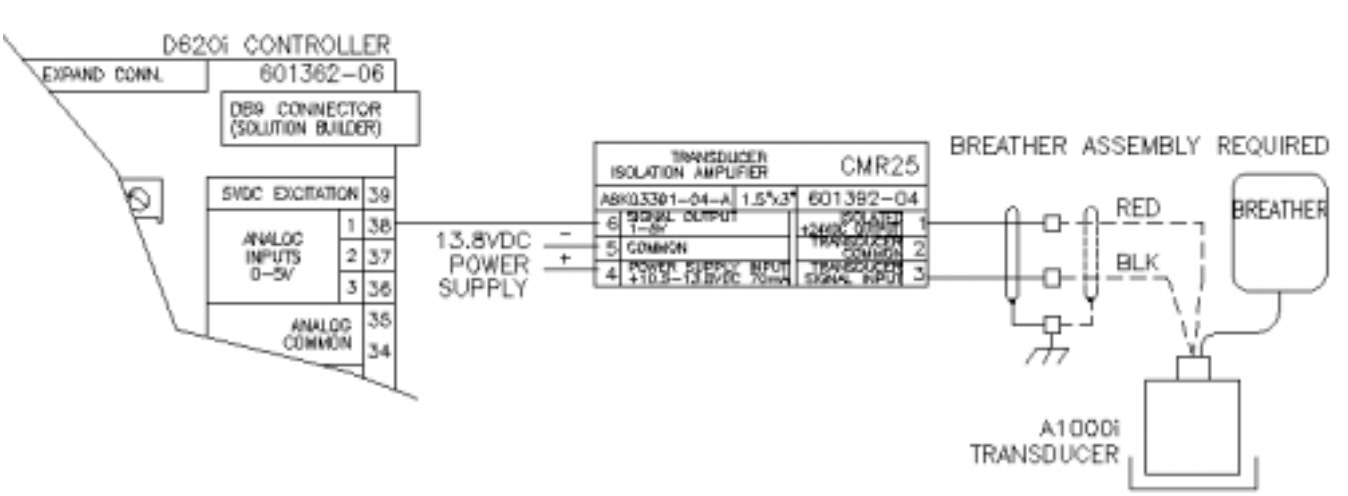
Note: USFCS IS1-2 Part number 6013150004 does not meet these entity parameters. An intrinsically safe system should be designed and tested by a qualified engineering professional.

TP12 Transient Protector Application
Note: This application is not intrinsically safe.



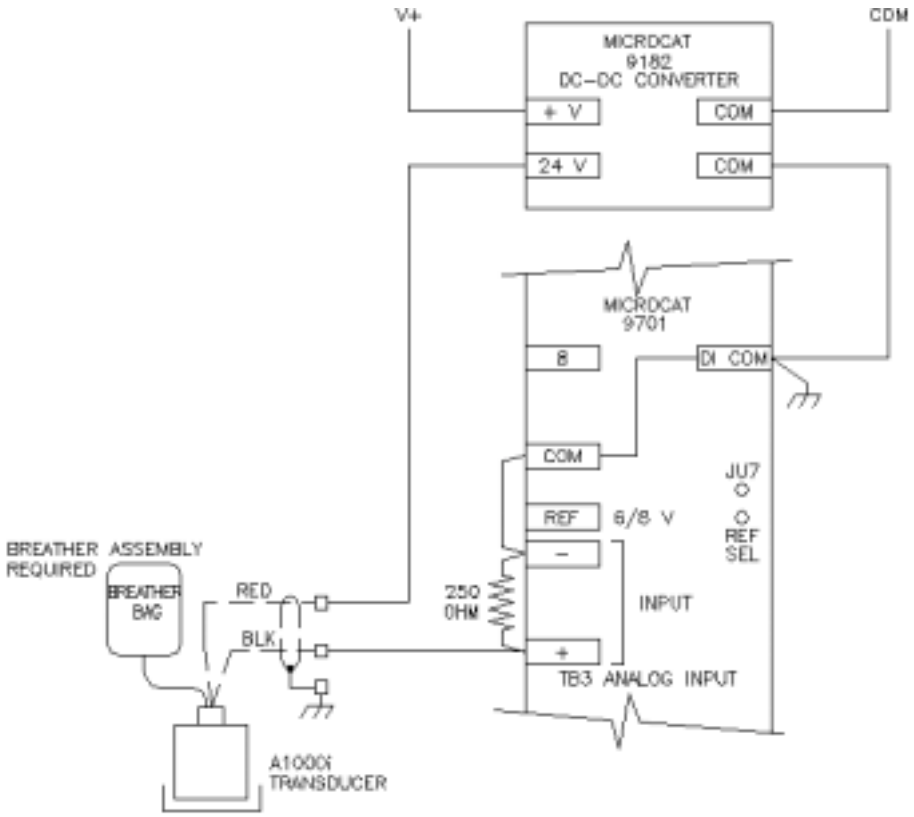
D620i Application

Note: This application is not intrinsically safe.



Microcat Application

Note: This application is not intrinsically safe.



Suspension Cable Mounting