



bar

APR3900

Hazardous Area Pressure Transmitter

FEATURES

- ATEX and IECEx certified
- Designed for operating in zone 0, zone 20 and M1 mining
- NACE corrosion resistant materials
- Rugged, weatherproof design
- DNV GL certification available



The advanced sensor design consists of a piezoresistive silicon strain gauge circuit, which is epitaxially grown onto the surface of a sapphire diaphragm to form a single crystalline structure. The sapphire sensor element is then molecularly bonded to a titanium alloy subdiaphragm.

This enables the sensor to endure higher over-pressures and provides superb corrosion resistance. The sensor exhibits virtually no hysteresis and excellent long-term stability over wide temperature ranges.

SPECIFICATIONS

The APR3900 pressure transmitter is designed to meet the majority of industrial pressure measurement applications where installation in an explosive and hazardous area is required. Designed and certified in accordance with the ATEX and IECEx approval this product is intended for installation and operation in potentially explosive atmospheres in zone 0 gas group IIC, temperature class T4 and zone 20 dust and M1 mining. The APR3900 provides a stable and accurate intrinsically safe two wire output signal of 4-20 mA when powered through a safety or isolating barrier such as MTL7706+, MTL5541 or other similar protection device.

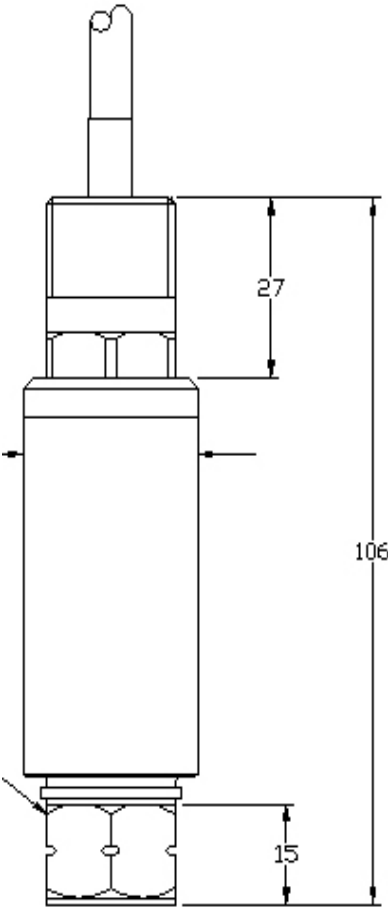
DNV GL rules for classification of ships, high speed & light craft and DNV GL offshore standards.

Typical applications include:

- Any above ground explosive / hazardous environment installations
- Oil and gas industries
- Volatile chemical processing and storage.



DIMENSIONS (in mm)



ELECTRICAL CONNECTIONS

COLOUR CODE	FUNCTION
Red	Supply (13-36Vdc)
Blue	Signal (4-20mA)
Drain	Cable Screen



TECHNICAL DATA

Type	APR3900
Sensor Technology:	Silicon-on-Sapphire (SoS)
Output Signal:	4-20 mA (2 wire)
Supply Voltage:	10-36 VDC
Pressure Reference:	Gauge
Protection of Supply Voltage:	Protected against supply voltage reversal up to 50 V
Standard Pressure Ranges (bar):	0 – 10 bar; 0 – 25 bar; 0 – 60 bar; 0 – 100 bar; 0 – 250 bar; 0 – 600 bar; 0 – 1,000 bar; 0 – 1,500 bar (other options available)
Standard Pressure Ranges (psi):	0-150 psi; 0-300 psi; 0-1,000 psi; 0-1,500 psi; 0-3,000 psi; 0-8,700 psi; 0-15,000 psi; 0-20,000 psi (other options available)
Overpressure Safety:	2x all ranges up to 600 bar; 1.5x for 1000 bar; 1.1x for 1,500 bar
Load driving Capability:	4-20mA: RL <[UB-13] / 20 Ma (e.g. with supply voltage (UB of 36V, max load (RL) is 1150)
Accuracy NLHR:	< +0.3 % of span BFSL (Optional higher accuracy version <'+0,15% of span BFSL available)
Zero Offset & Span Tolerance:	+0.5C %FS at room temperature
Operating Ambient Temperature:	-20C to +85C (-4F + 185F)
Operating Media Temperature:	-20C to +85C (-4F + 185F)
Storage Temperature:	+5C to +40C (+41F to +104F) Recommended Best Practice
Temperature Effects:	+1.5 %FS total error band for -20 to +70C. Typical thermal zero and span coefficients +0.015 %FS/C
ATEX/IECEX Approval:	EX II 1 G Ex ia IIC4 GA (Zone 0), Ex II 1 D Ex ia IIIC T135 C Da (Zone 20), Ex I M1 Ex ia Ma (group 1 M1)
ATEX/IECEX Safety Values:	Ui = 28 V / Li = 119mA / Pi = 0.65 W / Li = 0.1 pH / Ci = 74 nF. Temperature Range = '-20C to '+70C. Max. cable length = 45m
DNV GL Approval Class:	Temperature: D; Humidity: B; Vibration: B; EMC: B; Enclosure: C (contact sales for more information)
Ingress Protection:	Fully welded housing. Rated IP67 when correctly installed to conduit connection.
Electromagnetic Capability:	Emission: EN61000-6-3; Immunity: EN61000-6-2; Certification: CE Marked
Insulation Resistance:	> 100 M @ 50 VDC
Response Time:	1 mS
Wetted Parts:	SAE 316 stainless steel with titanium alloy measurement cell
Pressure Media:	All fluids compatible with SAE 316 stainless steel titanium alloy
Pressure Connection:	1/4" BSP male (G1/4): 1/4" NPT male; 1/2" BSP male (G1/2) and 1/2" NPT male (other options available)
Net. Weight (Kg):	0.3 kg



ORDER MATRIX

Output	Wires	Type	Electrical Connector/Options	Pressure Range	Process Connection
4-20 mA	2	APR3900			
Electrical Connections/Options					
1/2" NPT M conduit fitting with 1m submersible polyurethane cable with integral screen			EX		
DNV GL Approved plus ATEX/IECEx certified			MEX		
Pressure Range in bar					
0-10 bar					
0-25 bar					
0-60 bar					
0-100 bar					
0-250 bar					
0-600 bar					
0-1,000 bar					
0-1,500 bar					
Process Connection					
1/2" NPT male					AS
1/4" NPT female					AB
1/4" BSP male (G1/4)					AM
1/4" NPT male					AC
1/2" BSP male (G1/2)					AN

Order Number Example	APR3900EXM1000AS
For options not listed please contact the sales team	

DISCLAIMER: We reserve the right to change specifications without prior notice. specifications without prior notice. All manufactured products are calibrated with precision calibration equipment that is traceable to national measurement standards.