ADG–730 Technical Datasheet

Pressure Transmitter

Applications:

- Industrial automation
- Hydraulic and pneumatic systems
- Automotive industry
- The water and wastewater industry
- HVAC systems
- Laboratory and test processes

IP65

POOYAC

Pressure Transmitter

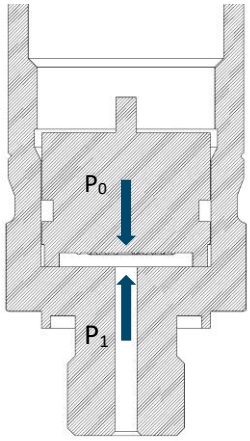
ADG-730

Introduction:

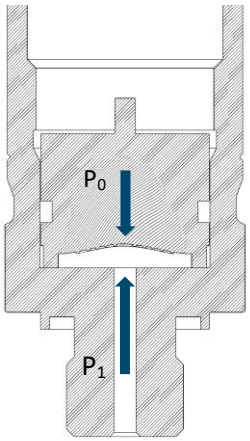
The ADG-730 Pressure Transmitter utilizes a cutting-edge sensor that leverages advanced diffused silicon technology to deliver precise and reliable pressure measurements. Designed for durability and performance, it features a robust SS316L diaphragm, a wide operating temperature range, exceptional stability, and resistance to harsh environments. This makes it an ideal solution for critical industrial processes where accuracy and dependability are paramount.

Working principle:

Applied pressure deforms the SS316L diaphragm, deflecting the sensor membrane and altering the resistance of the pressure sensing element. This change generates a voltage proportional to the applied pressure, which the transmitter's electronics process and amplify to produce a standardized 4-20 mA output signal, compatible with various controllers and measurement systems. The transmitter measures the differential pressure of the process relative to atmospheric pressure.



$P_0 = P_1$



$P_0 < P_L$

P_0 = Atmospheric Pressure
P_L = Process Pressure

Features:

- Stable and reliable
- Rugged and durable
- IP65 Certified dust and water resistance
- Meets the requirements of industrial standards (IEC62828-1,2)

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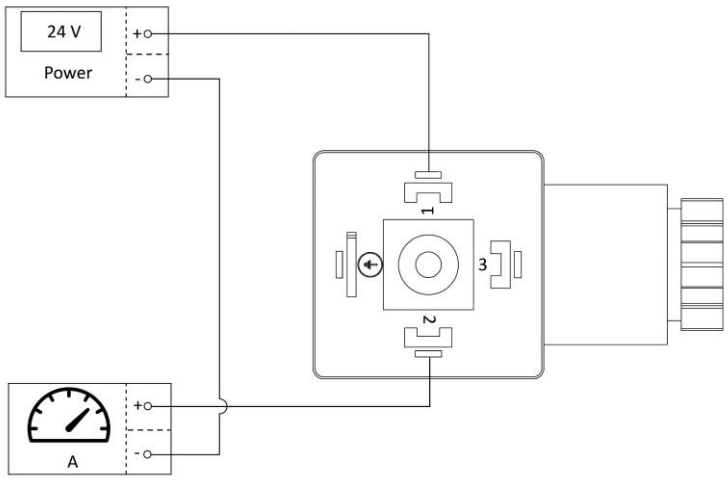
Technical Parameters			
Measuring Range	0 … 0.1 bar to 400 bar (Gauge)	Accuracy	0.5% F.S.
Overpressure Limit	2.0 x Range	Wetted Part Material	SS316L
Burst Pressure	4.0 x Range	Housing Material	SS304, SS316L
Degree of Protection	IP65	O-ring Material	NBR
Sensor Technology	Diffused Silicon	Process Connection	G ¼ Male
Electrical Parameters			
Power Supply	10 … 30vDC	Load Resistance	$R[\Omega] = \frac{(U_{PS}[v] - 8v)}{0.02A}$
Output Signal	4-20 mA (two wire)	Response Time	< 1 ms
Performance			
Nonlinearity	Min: -0.3 %FS Nominal: ±0.2 %FS Max: +0.3 %FS	Operating Temp. Range	-25 … 80°C
Hysteresis, Repeatability	Min: -0.05 %FS Nominal: ±0.03 %FS Max: +0.05 %FS	Medium Temp. Range	-25 … 120°C Direct Measurement
Thermal Hysteresis	Min: -0.075 %FS Nominal: ±0.05 %FS Max: +0.075 %FS		-25 … 170°C By Impulse Line

Wiring diagram:



DIN EN 175301-803-A	
PIN1	U_{PS}
PIN2	$+I_{OUT}$
PIN3	No Connection
⏚	Earth

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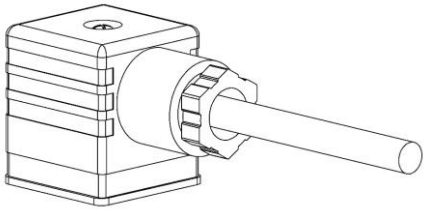
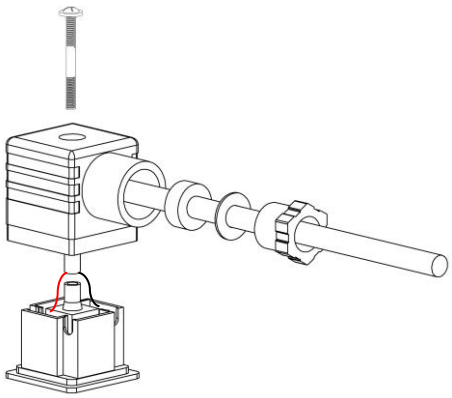
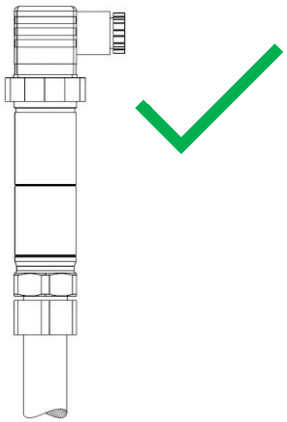
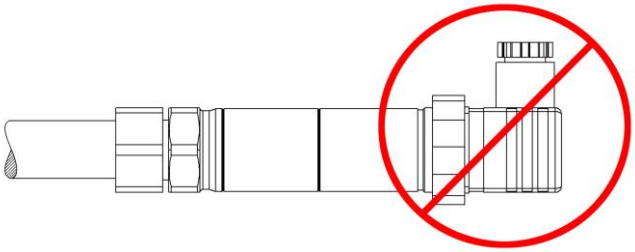
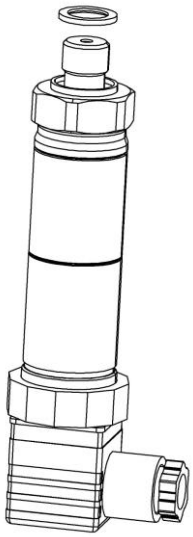
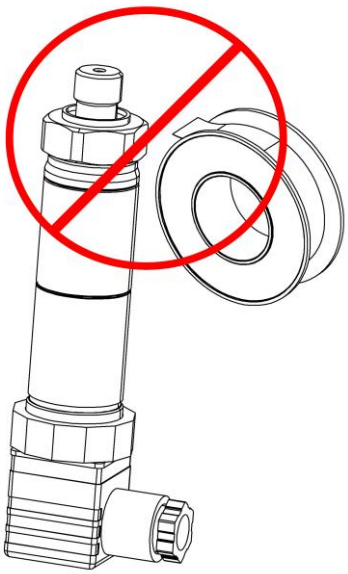
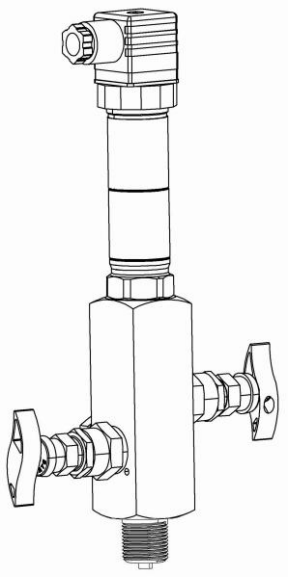
Recommendations regarding installation:

	
In case of high electromagnetic interference, use a twisted pair shield cable	Use a cable with a suitable diameter to fit the connector gasket for proper sealing
	
Mount the transmitter vertically, ensuring it is aligned with the measurement point for accurate results	Avoid mounting the transmitter with the gland pointing upward

		
Use the product gasket to seal the connection	No Teflon tape is required	Using a valve manifold is recommended

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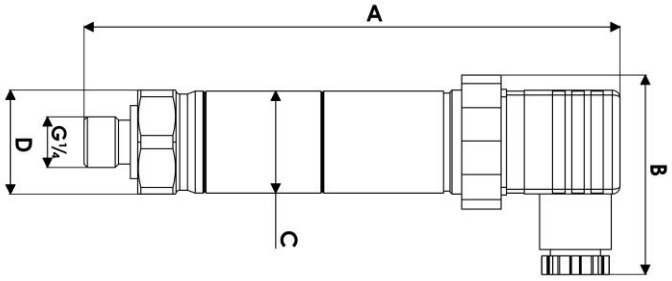
Dimensions:



Parameter	Value (mm)
A	139.80
B	51.81
C	26.50
D	27.00

Ordering Procedure:

Parameters	Code	Description
Model	ADG-730	Piezoresistive gauge pressure transmitter
Accuracy	A5	0.5%FS
Pressure Range	G0.1*	0.1 Bar or 10 KPa
	G0.35	0.35 Bar or 35 KPa
	G0.7	0.7 Bar or 70 KPa
	G1	1 Bar or 100 KPa
	G1.6	1.6 Bar or 160 KPa
	G2.5	2.5 Bar or 250 KPa
	G4	4 Bar or 400 KPa
	G6	6 Bar or 600 KPa
	G10	10 Bar or 1 MPa
	G16	16 Bar or 1.6 MPa
	G25	25 Bar or 2.5 MPa
	S40*	40 Bar or 4 MPa
	S60	60 Bar or 6 MPa
	S100	100 Bar or 10 MPa
	S160	160 Bar or 16 MPa
	S250	250 Bar or 25 MPa
	S400	400 Bar or 40 MPa
Electrical Output	I	4-20 mA
Electrical Connection	A	DIN EN 175301-803-A
Process Connection	M1	G ¼ (Male)
Housing Material	S4	Stainless Steel,304
	S16L	Stainless Steel,316L
O-ring Material	N	NBR

*. 'G' denotes Vented Gauge pressure, while 'S' indicates Sealed Gauge for high ranges where ambient pressure variations are negligible.

Additional Options:

Certification	**/C2**	3rd Party Lab. Certificate

Example: ADG730-A5-G6-I-A-M1-S4-N /C2

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