

SensorsX SX-PCAAC Series

Compact General-Purpose Industrial Pressure Transmitter
Industrial Process Pressure Transmitter



±0.5 % FS Accuracy	0.5 – 250 MPa Pressure Range	4-20 mA / 0-10 V / CAN Output Options
IP67 Ingress Protection	EX / SIL Certifications	-40 to +125 °C Media Temperature

Industrial Process Measurement | Pressure | Hydraulics | Process Technology

■ PRODUCT OVERVIEW

The SX-PCAAC series industrial pressure transmitter features an extremely robust construction and a stable metallic sputtered thin-film sensing element, capable of delivering comprehensive accuracy of $\pm 0.25\%$ FS, $\pm 0.5\%$ FS, and $\pm 1\%$ FS across a pressure range of 0.5 MPa to 250 MPa (72.5 to 36,260 psi). The series features excellent long-term fatigue resistance, shock resistance, and high reliability. It has become an ideal solution for a wide variety of demanding industrial applications.

Typical Measurements

Gauge pressure measurement in hydraulic and process systems
High-pressure applications up to 250 MPa (36,260 psi)
OEM pressure sensing for mobile and agricultural machinery
Process monitoring in water treatment and industrial equipment



■ KEY FEATURES

◆ Excellent long-term stability	◆ Fast response time ≤ 1 ms
◆ All stainless steel welded construction	◆ IP67 ingress protection (IEC 60529)
◆ Oil-free design with no fill fluid, reducing leakage risk	◆ Multiple electrical connector designs
◆ Advanced EMI/RFI rejection; vibration- and shock-resistant thin-film	◆ Excellent durability
◆ Wide temperature adaptability	◆ High-pressure capability up to 250 MPa (36,260 psi)

■ TYPICAL APPLICATIONS

Industries Served

• Hydraulic Systems	• Process Engineering	• Mining Machinery
• Rubber & Plastics Equipment	• Water Treatment	• Agricultural & Forestry Machinery
• Mechanical Manufacturing	• Construction Vehicles	• Fire Protection Hydraulics

■ PERFORMANCE SPECIFICATIONS

Measurement

Sensor Technology	Metallic sputtered thin-film
Sensing Element	17-4PH stainless steel
Measuring Range	0 – 0.5 MPa to 0 – 250 MPa (72.5 psi to 36,260 psi)
Pressure Connection	See Ordering Information
Overload Pressure	See Ordering Information
Burst Pressure	See Ordering Information

Accuracy

Accuracy	±0.5 % FS (optional: ±0.25 % FS or ±0.1 % FS)
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Stability

Long-Term Stability	≤0.1 % FS / year
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Response

Response Time	≤1 ms
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■ ELECTRICAL SPECIFICATIONS

Output Signal

Output Options	4 – 20 mA / 0 – 10 V DC / 0 – 5 V DC / 0.5 – 4.5 V DC / 1 – 6 V DC / CAN protocol
Electrical Connection	See Ordering Information

Electrical Protection

Insulation Resistance	≥500 MΩ / 500 V DC
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■ ENVIRONMENTAL SPECIFICATIONS

Temperature

Media Temperature	–40 to +125 °C (–40 to +257 °F)
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Mechanical & Environmental

Ingress Protection	IP67 (IEC 60529)
Vibration	20 g, 20 Hz – 2,000 Hz (IEC 60068-2-6)
Shock	100 g, 6 ms (IEC 60068-2-27)
Durability	10 ⁷ pressure cycles

EMC

Radiated Emissions	IEC 61000-6-3
Radiated Immunity	IEC 61000-6-2

Weight & Housing

Approx. Weight	≈68 g (2.40 oz)
Housing Construction	All stainless steel welded (oil-free, no fill fluid)

■ PROCESS CONNECTIONS & WETTED MATERIALS

Pressure Connection

Available Thread Types	G1/4 Female / G1/4 Male / G1/2 Male / 1/4-18 NPT Female / 1/4-18 NPT Male /
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1/2-14 NPT Male / 7/16-20 UNF Female — see Ordering Information for codes

Sensing Element Material

Material 17-4PH precipitation-hardened stainless steel

■ CERTIFICATIONS & APPROVALS

Explosion Protection EX — explosion-proof certified

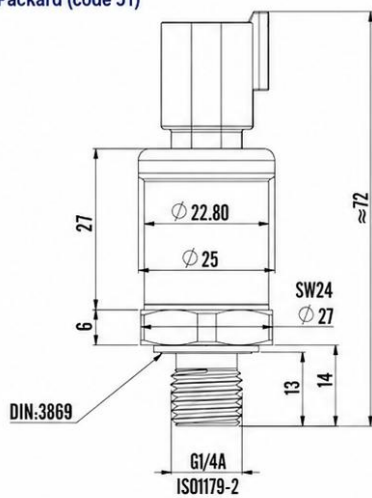
SIL Safety Integrity Level rated

■ MECHANICAL DIMENSIONS

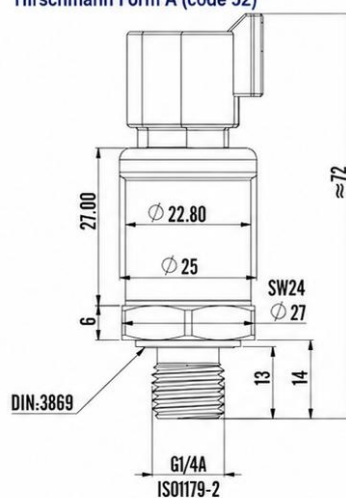
Dimensions & Electrical Connector Diagrams (Units: mm Weight: ≈68 g / 2.40 oz)

Connectors: Packard / Hirschmann EN175301-803 Form A & C / Deutsch DT04-3P, DT04-4P, DTM04-3P

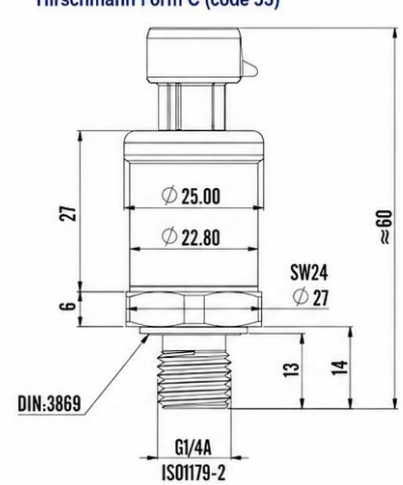
Packard (code 51)



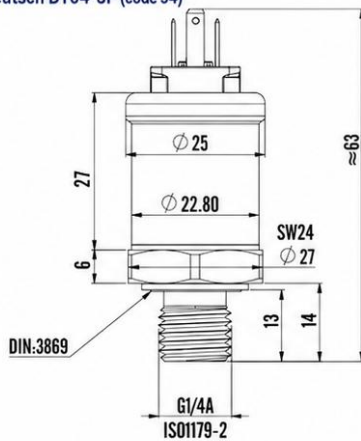
Hirschmann Form A (code 52)



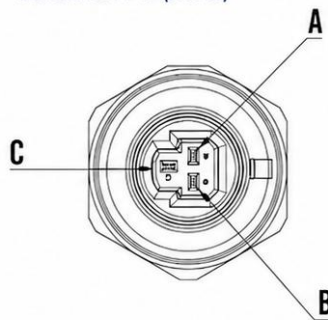
Hirschmann Form C (code 53)



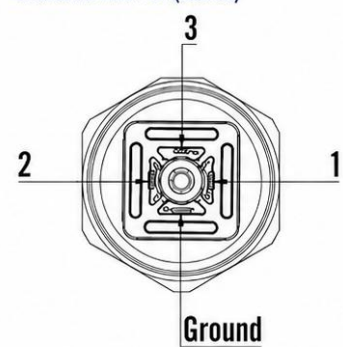
Deutsch DT04-3P (code 54)



Deutsch DT04-4P (code 55)

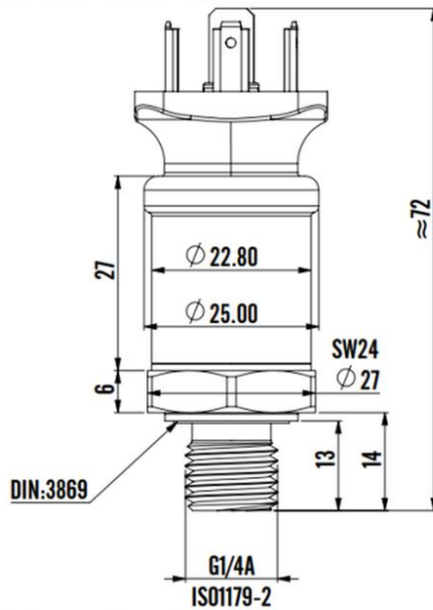


Deutsch DTM04-3P (code 56)

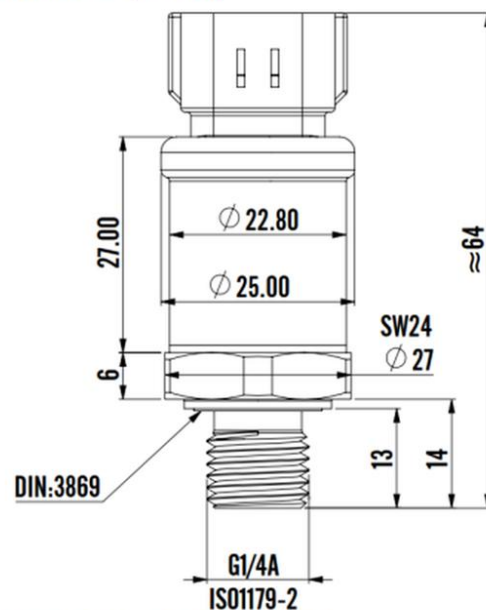


Connectors: M12×1 Plastic / M12×1 Metal / AMP Superseal / Shielded Cable

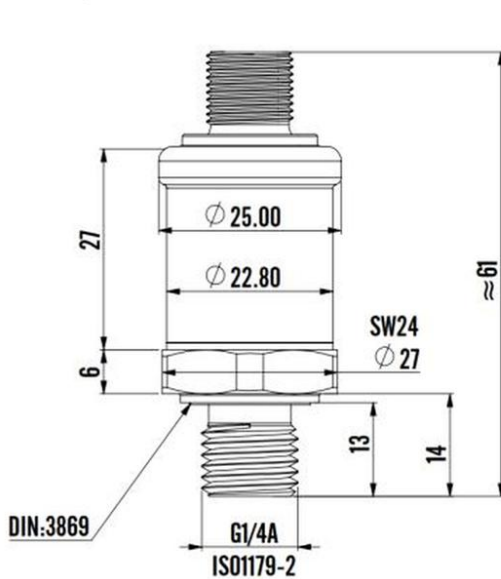
M12x1 Plastic (code 57)



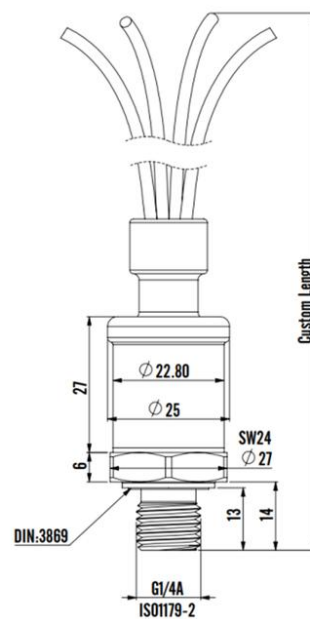
M12x1 Metal (code 58)



AMP Superseal (code 59)



Shielded Cable, 24 AWG (code 60)



■ WIRING DIAGRAM

Pin assignments for all connector types. Refer to dimension drawings above for connector orientation.

Packard Connector (code 51)

PIN #	Voltage Output	Current Output
A	V- Common	V+
B	V+	V+
C	Output	NC

Hirschmann EN175301-803 Form A (code 52)

PIN #	Voltage Output	Current Output
1	V+	V+
2	V- Common	V-

3	Output	NC
4	Ground	NC

Hirschmann EN175301-803 Form C (code 53)

PIN #	Voltage Output	Current Output
1	V+	V+
2	V- Common	V-
3	Output	NC
4	Ground	NC

Deutsch DT04-3P (code 54)

PIN #	Voltage Output	Current Output
A	V+	V+
B	V- Common	V-
C	Output	NC

Deutsch DT04-4P (code 55)

PIN #	Voltage Output	Current Output
1	V- Common	V-
2	V+	V+
3	Ground	NC
4	Output	NC

Deutsch DTM04-3P (code 56)

PIN #	Voltage Output	Current Output
A	V+	V+
B	V- Common	V-
C	Output	NC

M12×1 Plastic & M12×1 Metal (code 57/58)

PIN #	Voltage Output	Current Output
1	V+	V+
2	Ground	NC
3	V- Common	V-
4	Output	NC

AMP Superseal (code 59)

PIN #	Voltage Output	Current Output
A	V+	V+
B	V- Common	V-
C	Output	NC

Shielded Cable 24 AWG, PVC Jacket (code 60)

PIN #	Voltage Output	Current Output
Red wire	V+	V+
Black wire	Common V-	V-
White wire	Output	NC

Shield / Feedback	Ground	NC
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■ ORDERING INFORMATION — SX-PCAAC SERIES

Complete model number example: SX-PCAAC-42G14M5225MPA1

Product Type		
PCAAC	Compact general-purpose pressure transmitter	
Output / Power Supply		
05	0 ... 5 V	
16	1 ... 6 V	
10	0 ... 10 V	
42	4 ... 20 mA	
46	CAN	
45	0.5 ... 4.5 V	
Pressure Connection		
NPT14F	1/4-18 NPT Female	
G14M	G1/4 Male	
UNF716	7/16-20 UNF Female	
NPT14M	1/4-18 NPT Male	
G12M	G1/2 Male	
NPT12M	1/2 NPT Male	
G14F	G1/4 Female	
Electrical Connection		
51	Delphi Packard Metri Pack (3 Pin)	
52	DIN EN 175301-803-A (DIN 43650-A)	
53	DIN EN 175301-803-C (DIN 43650-C)	
54	Deutsch DT04-3P	
55	Deutsch DT04-4P	
56	Deutsch DTM04-3P	
57	M12×1 (plastic)	
58	M12×1 (metal)	
59	AMP Superseal	
60	Cable outlet / Integral shielded cable (24 AWG, PVC jacket)	
Pressure Range		
0.5MPA	0 – 0.5 MPa (0 – 72.5 psi)	Overload: 3× FS Burst: 20× FS
1MPA	0 – 1.0 MPa (0 – 145 psi)	Overload: 3× FS Burst: 20× FS
1.6MPA	0 – 1.6 MPa (0 – 232 psi)	Overload: 3× FS Burst: 15× FS
2.5MPA	0 – 2.5 MPa (0 – 363 psi)	Overload: 3× FS Burst: 15× FS
4MPA	0 – 4 MPa (0 – 580 psi)	Overload: 2× FS Burst: 10× FS
6MPA	0 – 6 MPa (0 – 870 psi)	Overload: 2× FS Burst: 10× FS
10MPA	0 – 10 MPa (0 – 1,450 psi)	Overload: 2× FS Burst: 10× FS
16MPA	0 – 16 MPa (0 – 2,320 psi)	Overload: 2× FS Burst: 5× FS
25MPA	0 – 25 MPa (0 – 3,625 psi)	Overload: 2× FS Burst: 5× FS
40MPA	0 – 40 MPa (0 – 5,800 psi)	Overload: 2× FS Burst: 5× FS

60MPa	0 – 60 MPa (0 – 8,700 psi)	Overload: 2× FS Burst: 5× FS
70MPa	0 – 70 MPa (0 – 10,150 psi)	Overload: 1.5× FS Burst: 5× FS
100MPa	0 – 100 MPa (0 – 14,500 psi)	Overload: 1.5× FS Burst: ≤400 MPa (≤58,000 psi)
120MPa	0 – 120 MPa (0 – 17,400 psi)	Overload: 1.5× FS Burst: ≤400 MPa
140MPa	0 – 140 MPa (0 – 20,300 psi)	Overload: 1.5× FS Burst: ≤400 MPa
160MPa	0 – 160 MPa (0 – 23,200 psi)	Overload: 1.5× FS Burst: ≤400 MPa
180MPa	0 – 180 MPa (0 – 26,100 psi)	Overload: 1.5× FS Burst: ≤400 MPa
200MPa	0 – 200 MPa (0 – 29,000 psi)	Overload: 1.5× FS Burst: ≤400 MPa
250MPa	0 – 250 MPa (0 – 36,260 psi)	Overload: ≤300 MPa (≤43,500 psi) Burst: ≤400 MPa (≤58,000 psi)
Accuracy		
1	0.5 %	
2	0.1 %	
3	0.25 %	
Optional		
D	Customized Information	

※ Other options available on request — consult factory.