

OEM Pressure Transducer for Low Pressure Applications Type IPS3

FEATURES

- Piezoresistive sensor technology
- Ranges from 0.1 through 6 bar
- IP65 or 67 Ingress rating
- Accuracy 0.5 or 1.0 % of span

TYPICAL USES

- Construction machinery
- Agricultural equipment
- Engine monitoring
- Hydraulic & pneumatic sensing
- Renewable Energy
- Machine equipment



IPS3
Low Pressure
Transducer



PERFORMANCE SPECIFICATIONS

Reference Temperature:	21 °C ±2 °C (70 °F ±2 °F)
Static Accuracy:	±0.5 % of span for ranges > 160 mbar ±1.0 % of span for ranges ≤ 160 mbar Terminal Point Method includes: hysteresis, linearity, repeatability, offset and span acc. IEC 60770
Durability:	10 ⁸ load cycles
Stability:	≤±0.2 % of span/year at reference conditions

PHYSICAL SPECIFICATION

Process Connection Size:	G 1/4 A (DIN 3852 Form E) or G 1/4 B (EN 837) G 1/2 B (EN 837) 1/4 NPT Male
Ranges:	See all available ranges at page 2 table 1
Ingress Rating:	IP65 (with manting connector) IP67 (with M12 or PVC cable connection)
Weight:	~120 g

ENVIRONMENTAL SPECIFICATIONS

Thermal Coefficients:	Span: ≤±0.3 % / 10 K
Temperature Limits:	Storage: -40 °C to 85 °C Operating: -25 °C to 85 °C Media: -25 °C to 125 °C Compensated: 0 °C to 70 °C
Humidity:	0-100 % R.H. (non-condensing)

FUNCTIONAL SPECIFICATIONS

Response Time:	2-wire: ≤ 10 ms 3-wire: ≤ 3 ms
Measuring Rate:	1 kHz
Gauge Pressure Ranges:	0 to 6 bar (see Table 1 at page 2)
Shock:	100 g, 1 ms (DIN EN60068-2-27)
Vibration:	Random: 10 g RMS 25-2000 Hz (DIN EN60068-2-6)

ELECTRICAL SPECIFICATIONS

Electrical Connection:	Hirschmann EN175301-803 Form A M12x1 or Cable outlet (2 m and PVC)
Permissible Load in Ohm [Ω]:	2-wire: $R_{max} = [(V_s - V_{s min}) / 0.02 A] \Omega$ 3-wire: $R_{min} = 10 k\Omega$

KEY BENEFITS

- High sensitive piezoresistive sensor
- Low pressure applications
- Reliable performance for price-sensitive applications

Current Consumption:	2-wire: max. 25 mA 3-wire (Voltage): max. 7 mA (max. 20 mA short-circuit current) 3-wire (ratiometric): typical 1.5 mA
Short-circuit:	Permanent protection (no protection for 3-wire ratiometric execution)
Circuit Protection:	Reverse polarity protected
Output Signal:	Supply Voltage: (unregulated) Min. Max. 4-20 mA (2-wire) 8 Vdc 32 Vdc 0-10 Vdc (3-wire) 14 Vdc 30 Vdc 10-90 % of V_{supply} (ratiometric) 2.7 Vdc 5 Vdc
Cable:	2 m length, PVC insulated (-5 °C to 70 °C) other lengths and cable types on request

WETTED COMPONENTS

Process Connection:	Stainless steel 304 (1.4301)
Seal:	FKM (Viton) others on request
Diaphragm:	Stainless steel 316L (1.4435)

NON-WETTED COMPONENTS

Housing:	Stainless steel 304 (1.4301)
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APPROVAL

CE	EMC Directive 2014/30/EU
REACH & RoHS	Directive 2011/65/EU and 2015/863

Data Sheet

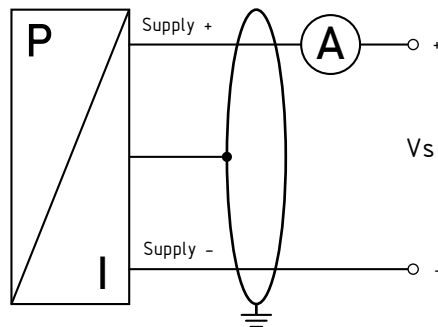
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ORDERING CODE		EXAMPLE:		IPS3	5	MGA	42	FC	FKM	0P25BR	X
Model				IPS3							
IPS3		OEM Pressure Transducer with ceramic sensor element		IPS3							
Accuracy					5						
5		0.5 % of span									
7		1.0 % of span									
Process Connection						MGA					
MGA		G 1/4 A male (DIN 3852-part 11 Form E)									
MG2		G 1/4 B male (EN 837-1)									
MG4		G 1/2 B male (EN 837-1)									
M02		1/4" NPT Male									
Electrical Output							42				
42		4-20 mA (2-wire)									
10		0-10 Vdc (3-wire)									
RM		0.5-4.5 Vdc ratiometric to 5 Vdc supply (3-wire)									
Electrical Connection (check pin configuration below at table 2)								FC			
DA		Hirschmann EN175301-803 Form A									
EW		M12x1 (4-Pin)									
FC		PVC cable (Cable colours acc. to IEC 60757)									
Mating Connector											
M		With mating connector									
X		Without mating connector							X		
Sealing											
FKM		FKM (Viton) Sealing								FKM	
Ranges (all available ranges see below at table 1)											
0P25BR		0.25 bar								0P25BR	
Options (If choosing an option(s) must include a "X")		on request									X

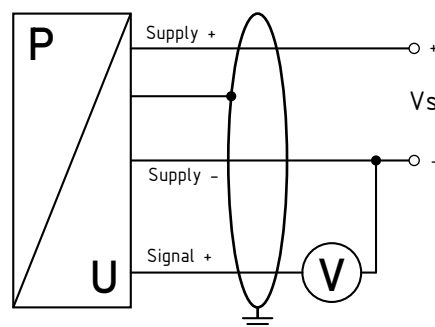
**TABLE 1:
PROOF & BURST
PRESSURE**

Sensor Range	Proof	Burst
in bar		
0,1	1	1,5
0,16	1	1,5
0,25	1	1,5
0,4	1	1,5
0,6	3	5
1	3	5
1,6	6	10
2,5	10	17,5
4	10	17,5
6	21	35

**ELECTRICAL WIRING
2-WIRE SYSTEM (CURRENT)**



**ELECTRICAL WIRING
3-WIRE SYSTEM (VOLTAGE)**



**TABLE 2: PIN
CONFIGURATION**

	DA	EW	FC IEC 60757
Supply +	1	1	White
Supply -	2	2	Brown
Signal + (3-wire only)	3	3	Green
Shield	Ground	4	Green/ Yellow



Data Sheet

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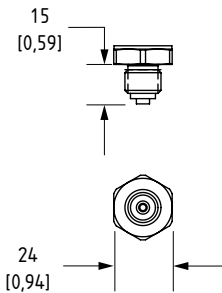
DIMENSIONS IN MM [INCH]

For reference only, consult Ashcroft for specific dimensional drawings

PROCESS CONNECTION

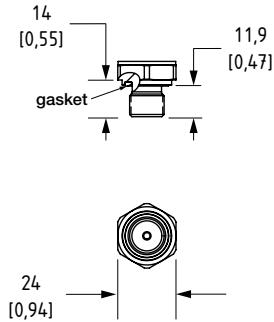
G 1/4 B-Male (EN837-1)

Code: MG2



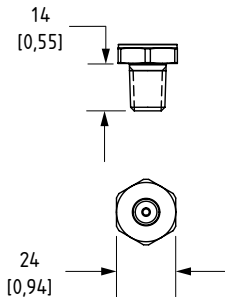
G 1/4 A-MALE (stud end DIN 3852-E G1/4)

Code: MGA



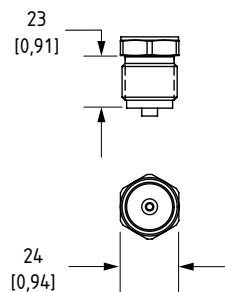
1/4 NPT Male

Code: M02



G 1/2 B-Male (EN837-1)

Code: MG4

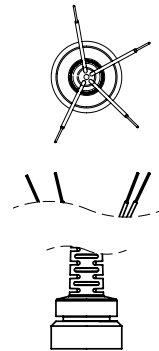


ELECTRICAL CONNECTION

Over-Mold Cable

Code: FC – IP67

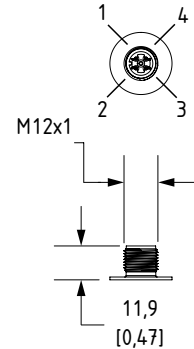
-5 °C to +70 °C



M12 4-Pin

Code: EW – IP67

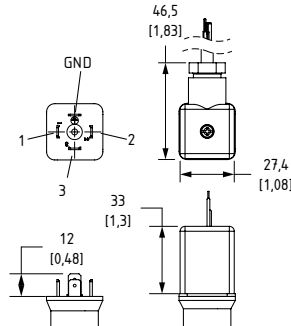
-25 °C to 85 °C



Hirschman EN 175301-803 Form A

Code: DA – IP66

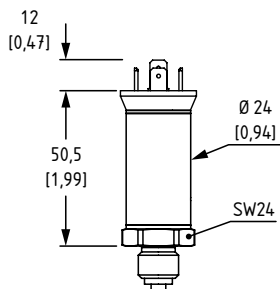
-25 °C to 85 °C



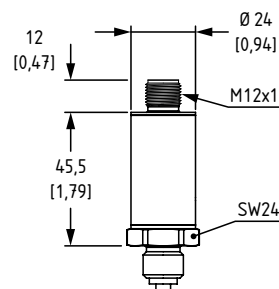
GENERAL DIMENSIONS IN MM [INCH]

For reference only, consult Ashcroft for specific dimensional drawings

DA



EW



FC

