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## **ASD pressure sensors 420 series** *4..20 mA current output*



**ASD**  
TECHNOLOGIES

ADVANCED  
SENSING  
DEVICES

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## MADE IN ITALY INDUSTRIAL PRESSURE SENSORS

ASD pressure sensors **420 series** are specific designed for critical industrial applications like air conditioning, refrigeration, water and air pressure measurement.

Signal is transduced and transmitted by means of standard current output 4..20 mA, based on a piezoresistive ceramic technology.

**These sensors are fully design and manufactured in Italy** joined the best technological performance with the optimized design and the economic advantages.

## ASD pressure sensors 420 series 4..20 mA current output



### Performances

Resistant to extreme temperatures, excellent hysteresis, high accuracy, fast response time and excellent surge resistance.



### Stability

Performances guaranteed over entire lifetime.



### Design

Extremely compact design for critical installations, rugged construction for highest operational reliability.



### Compatibility

Suitable for HVACR refrigerant gases, also for new gas HFO-1234ze, R-290 and related oils, air, water and other technical fluids.



### Resistances

Suitable for industrial critical application with aggressive fluids. Protected against environmental corrosion and water/dust/oil infiltration according IEC60529 and DIN40050-9 grade IP67.



### Flexibility

Fully customizable with different materials and transfer function, several fluids or for food industry applications.



### Compliance

Compliant with CE, Rohs and Reach Regulation.





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Inox Steel - Male



Inox Steel - Female



Nickel Plated Brass - Male



Nickel Plated Brass - Female



Soldering Type



Brass - Female



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## ASD pressure sensors 420 series 4..20 mA current output

GENERAL FEATURES	
Pressure ranges	0 bar to 51 bar   0 kPa to 5,1 kPa   0 psi to 740 psi (other pressure range and transfer function available on request)
Over pressure <sup>(1)</sup>	25 bar to 81 bar   2,5 MPa to 8,1 MPa   360 psi to 1175 psi (depending on pressure transducer model)
Burst pressure <sup>(2)</sup>	110 bar min   10,1 MPa min   1600 psi min (depending on pressure transducer model)
Pressure connection	7/16" 20UNF (Male or Female), Welded tube (other connections available on request)
Pressure connection material	Brass, Nickel-plated brass, Stainless Steel (other materials available on request)
Tightening torque	Brass, 12 to 16 Nm (depending on pressure port type)
Electrical connection	Packard connector, Integrated cable (other connections available on request)
Electrical connection material	Polymer
ELECTRICAL FEATURES	
Power supply (Vdd)	8...30 Vdc
Output signal	4...20 mA
Output signal limitation	3...23 mA (typical)
Maximum output load resistance	(Vdd – 8V) / 0,025A Ohm
Output response time	< 10ms (typical)
Overvoltage protection	+33 Vdc
Reverse voltage protection	-28 Vdc
Short circuit protected	Yes
PERFORMANCE FEATURES	
Operating temperature <sup>(3)</sup>	-40°C to 150°C
Storage temperature	-40°C to 150°C
Accuracy (Linearity, Hysteresis, Repeatability, Calibration. Static error band @25°C)	± 0,5% F.S. <sup>(5)</sup> max.
Total error band <sup>(4)</sup> (Over Operating Temperature range)	± 1% F.S. <sup>(5)</sup> max. (0...50°C) ± 1,5% F.S. <sup>(5)</sup> max. (-10...80°C) ± 2% F.S. max. <sup>(5)</sup> (-40...135°C)
Cycle life	10 million F.S. <sup>(5)</sup> cycles
IP Code: IEC60529 -DIN40050-9	IP67 (with connector female IP67 plugged) or IP67 unplugged
Fluids compatibility	HVAC refrigerants, new HFO 1234z, R32 R290, refrigerant and associated oils. Air, water, oil according proper sealing materials. (other fluids compatibilities available on request)
Vacuum pressure (referred to refrigerant circuit)	0 bar (abs)   0 kPa (abs)   0 psi (abs)
Drop (any axis)	1,5m
Vibration: IEC 60068-2-64:2008	10g (from 5 to 2000Hz)
Shock: IEC 60068-2-27:2008	75g, 11ms
Weight	40 grams typical

**(1)** Overpressure: The absolute maximum rating for pressure which may be safely applied to the product for it to remain in specification once pressure is returned to the operating pressure range. Exposure to extremely high pressure may cause permanent damage to the product.

**(2)** Burst Pressure: The maximum pressure that may be applied to the product without causing leakage of the pressure media. The product should not be expected to function after exposure to any pressure beyond the rated burst pressure. This rating is also the case burst rating of the product.

**(3)** Specific product data page.

**(4)** Total Error Band: The maximum deviation from the ideal transfer function over the entire compensated temperature and pressure range. Includes all errors due to offset, pressure non-linearity, pressure hysteresis, repeatability, thermal effect on offset, and thermal hysteresis. Specific product data page.

**(5)** F.S. (Full Scale): MAX output – min output = 16mA



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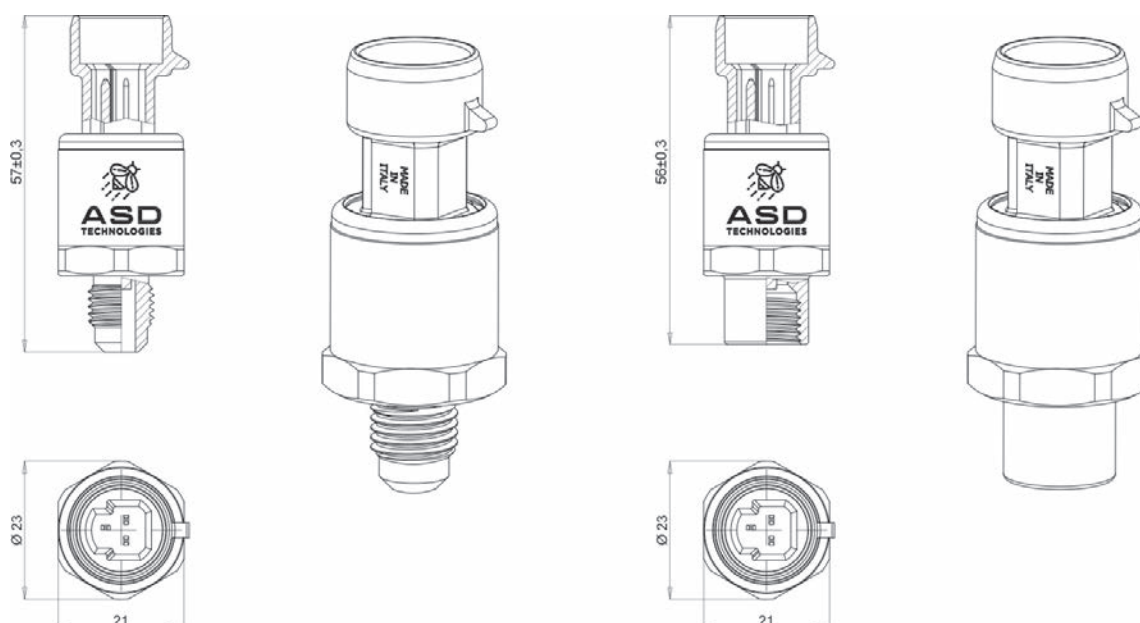
## ASD pressure sensors 420 series

### 4..20 mA current output

#### EMC FEATURES (standards CEI EN 61326-1:2013 and CEI EN 61326-2-3:2014)

Electrostatic discharge: CEI EN 61000-4-2:2011	±4 kV contact ±8 kV air
Radiated immunity: CEI EN 61000-4-3:2007	10V/m (80MHz ÷ 1GHz) 3V/m (1,4GHz ÷ 2GHz) 1V/m (2GHz ÷ 2,17GHz)
Electrical fast transient/Burst: CEI EN 61000-4-4:2013	±1 kV
Surge: CEI EN 61000-4-5:2007	±2 kV
Conducted immunity: CEI EN 61000-4-6:2014	10V (0,15kHz ÷ 80MHz)

## Dimensions







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### Valves

A complete series of valves,  
security valves and caps.



STF-01-25-17



67-450-80-22



67-450-80-50



67-450-80-51



67-450-80-52



08-310-0015



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## ASD pressure sensors 420 series 4..20 mA current output

Length (m)	Code
1,5 m	600101
3,0 m	600125
5,0 m	600132

### Wiring connection

**BLACK wire** - Pin1 - Power supply (+)  
**WHITE wire** - Pin2 - Reference terminal (-)  
**BLACK wire** - Pin3 - Not used



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