

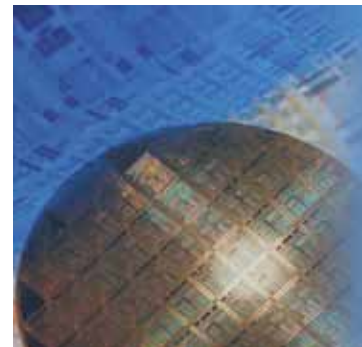


aerospace  
climate control  
electromechanical  
filtration  
fluid & gas handling  
**hydraulics**  
pneumatics  
process control  
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# IQAN-SP Sensors

Electronic Control Systems



ENGINEERING YOUR SUCCESS.

### Application

The IQAN-SP pressure transducers belong to the family of IQAN accessories developed to complement IQAN control systems. IQAN-SP is a range of 0-5V pressure transducers for mobile hydraulic applications. These transducers are available in two pressure ranges; 35 bar (507 psi) and 500 bar (7250 psi). To make the sensors suitable for mobile equipment, we have focused upon properties such as reliability, electromagnetic immunity and ease of installation.

### Properties

#### Reliability

The IQAN-SP has stainless steel construction for strength. The sensor cells use thin film technology with no internal o-rings or fluid. The high pressure capability makes the sensor very robust and able to withstand vibration.

#### Electromagnetic immunity

The design of the IQAN-SP has an EMI cap that separates the sensor electronics from the connector. This ensures a high level of EMI protection.

#### Installation

The IQAN-SP is well designed for the mobile hydraulics industry. The 3 pin connector is a sealed AMP Junior Power Timer (Bosch Jetronic) type designed for automotive use. This connector gives the sensor IP65 protection for exposed outdoor applications.

The hex of the G1/4 BSP threaded transducer has an integrated face seal to eliminate sealing washers. These features provide for easy installation and removal, even in field conditions.

#### EN 13849-1

MTTFd and failure mode distribution available on request.

### General

Weight	0.06 kg
Operating temperature	-40 °C to 125 °C
Storage temperature	-40 °C to 140 °C
Pressure range	
SP035	0 - 35 bar
SP500	0 - 500 bar
Over pressure	
SP035	Max 100 bar
SP500	Max 1050 bar
Burst pressure	
SP035	Min 150 bar
SP500	Min 1500 bar
Total error (-40°C to 105°C) <sup>1)</sup>	Max 4.0 % FS
Total error ( 40°C to 80°C) <sup>1)</sup>	Max 1.0 % FS
Response time <sup>2)</sup>	5.0 msec

1) Total accuracy includes non-linearity, hysteresis, repeatability and temperature effects.  
 2) Measured from initial value to output at 90%.

### Electrical specifications

Output at FS <sup>3)</sup>	4.5 V
Zero output <sup>3)</sup>	0.5 V
Supply Voltage(Vs)	5.0+/-10% Vdc <sup>4)</sup>
Current supply	Max 12.5 mA
Load resistor	Min 5 kΩ
Load capacitor	Max 0.1 μF

3) The output is ratiometric to supply voltage (Vs)  
 4) The max supply voltage with sensor operating is 6 Volt. (switch off app. 6.2Volt)

### Threaded interface

with integral face seal	G1/4 BSP
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### Connector

Integral to sensor	AMP JPT
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### Ordering part numbers

IQAN-SP035	5020026
<b>IQAN-SP500</b>	<b>5020027</b>

### Accessories

Connector kit	5031086
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**Environmental Protection**

**EMI**

ISO 11452-2 (immunity vs EM field)  
ISO 14982 (radiated emission)  
EN 55022 (conducted emission)  
ISO 11452-4 (immunity vs injected RF)  
ISO 7637-2 (immunity vs supply transients)

**ESD**

EN 61000-4-8 (external)

**Mechanical environment**

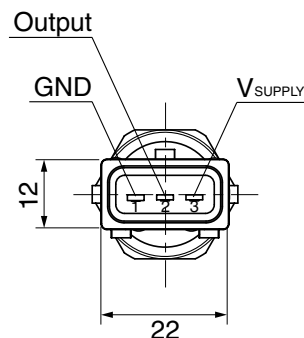
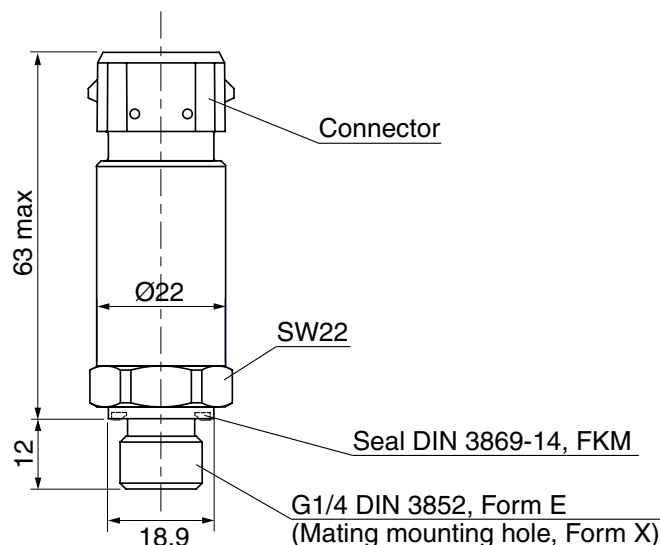
IEC 60068-2-64 Fh,  
24-2000 Hz, 31 Grms, 3\*8 h (vibration)  
IEC 60068-2-27 Es (shock)  
IEC 60068-2-29 Eb (bump)

**Climate environment**

IEC 60068-2-18 Rb3 (water)  
IEC 60068-2-30 Db (var1, damp, cyclic)  
IEC 60068-2-3 Ca (damp, heat steady state)  
IEC 60068-2-2 Bb (heat)  
IEC 60068-2-1 Ab (cold)  
IEC 60068-2-14 Nb (change of temperature)

**Chemical environment**

IEC 60068-2-52 Kb (salt mist, cyclic)



unit = mm

**! WARNING**

**FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.**

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