

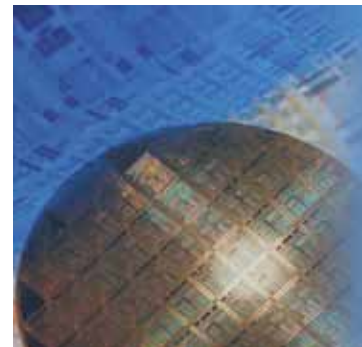


aerospace
climate control
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pneumatics
process control
sealing & shielding



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) ¹⁾	Max 4.0 % FS
Total error (40°C to 80°C) ¹⁾	Max 1.0 % FS
Response time ²⁾	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 ³⁾	4.5 V
Zero output ³⁾	0.5 V
Supply Voltage(Vs)	5.0+/-10% Vdc ⁴⁾
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
IQAN-SP500	5020027

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

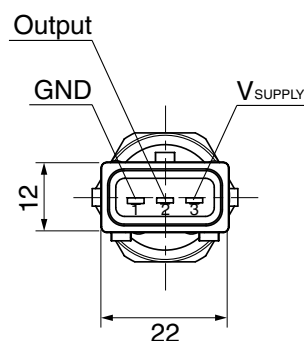
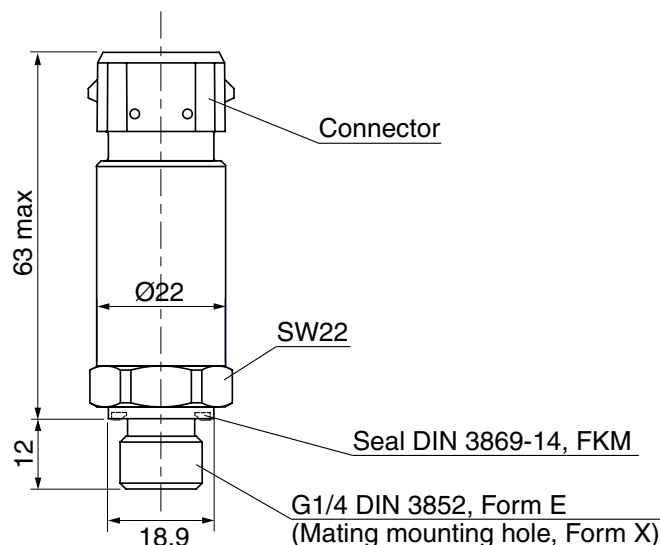
IEC 60068-2-64 Fh,
24-2000 Hz, 31 Grms, 3*8 h (vibration)
IEC 60068-2-27 Es (shock)
IEC 60068-2-29 Eb (bump)

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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