



IQAN-ST Sensors

Electronic Control Systems



ENGINEERING YOUR SUCCESS.

Application

The IQAN-ST temperature transducer belongs to the family of IQAN accessories developed to complement IQAN control systems. IQAN-ST is a new 0-5V output temperature transducer for mobile hydraulic applications. This transducer is available in three interface types; G1/4 BSP, M10 and 9/16"-18 UNF SAE 6. The G1/4 BSP and M10 sensors have an integral automotive AMP/Tyco connector. The SAE 6 sensor has a short cable-mounted Deutsch connector. To make the sensor suitable for mobile equipment, we have focused upon properties such as reliability, electromagnetic immunity and ease of installation.

Properties

Reliability

The IQAN-ST has stainless steel construction for strength. The PT100 sensor uses thin film technology with internal amplification. All versions of the sensor have high pressure capability. The IQAN-ST is very robust and able to withstand heavy vibrations.

Electromagnetic immunity

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

Installation

The IQAN-ST is well designed for the mobile hydraulics industry. The 3 pin integral connector is a sealed AMP/Tyco Junior Timer type. The Deutsch connector is the 4 pin DT04 type. Both connectors are designed for automotive use. These connectors give the sensor IP65 protection for exposed outdoor applications. The hex of the G1/4 BSP and M10 versions of the transducer have integrated face seals to eliminate loose sealing washers. The SAE 6 sensor type has a factory installed O-ring. These features provide for easy installation and removal, even in field conditions.

Specifications

General

Weight	50 g
Operating temperature	-50 to 150°C
Protection	outdoor use
Pressure rating	
G (1/4 BSP)	Max 700 bar
M (M10)	Max 350 bar
U (SAE 6)	Max 1000 bar

EN 13849-1

MTTF	68 [y] ¹
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Electrical

Voltage supply V_s	5±0.5 Vdc Max 6 Vdc
Current consumption	5.0 µA Max 7.5 µA
Total error (25°C)	1%
Total error (-40 to 150°C)	4%

Output

FS (150°C)	4.75 Vdc
Zero (-50°C)	0.25 Vdc
Span	4.50 Vdc
Ratiometricity	1%
Linearity	1% FS

Threaded interfaces

G	1/4"-19 BSP with integral face seal
M	M10 x 1, with integral face seal
U	9/16"-18 UNF, SAE 6 with nitrile o-ring seal

Connectors

B	AMP/Tyco Junior Timer
D	Deutsch DT04-4P

Orderable unit codes

IQAN-ST-G-B ordering part no.	G1/4 with Junior Timer 20073657
IQAN-ST-M-B ordering part no.	M10 with Junior Timer 20073659
IQAN-ST-U-D ordering part no.	SAE 6 with Deutsch 20073658

¹ Based on parts count method.

Environmental Protection

EMI

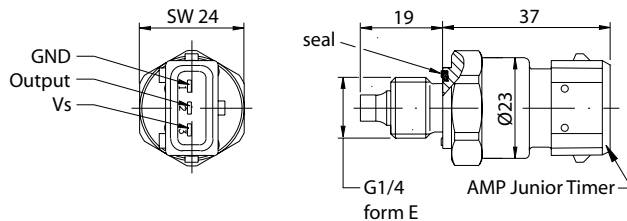
EN 55022 (radiated emission), <30 dBµV/m
 ISO 11452, T5 (immunity vs EM field), 200 V/m
 EN 61000-4-6 (immunity vs injected RF), 10 V
 EN 61000-4-4 (immunity vs supply transients), 1 kV

Mechanical environment

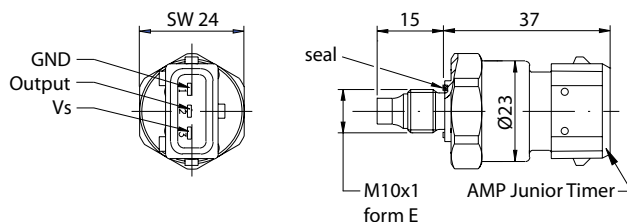
IEC 60068-2-64 (vibration), 0.4 g²/Hz, 1.5 to 250 kHz
 IEC 60068-2-27 (shock)

Climate environment

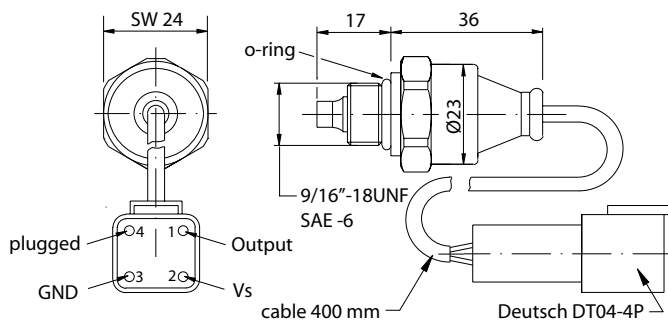
IEC 60529 (water), IP65



IQAN-ST-G-B



IQAN-ST-M-B



IQAN-ST-U-D

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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