



AquaSensor AS 3000

Description:

The AquaSensor AS 3000 with an integrated digital display is based on the proven AS 1000 series for the online detection of water in oils, particularly as a sensor for Condition Monitoring. The device has 2 switch outputs and one switchable analogue output signal (4 .. 20 mA or 0 .. 10 V). The AS 3000 detects the water saturation level and temperature of the fluid and transmits the values in the form of an analogue or switching signal. The display shows the actual measured values.

All settings offered by the AS 3000 are grouped in 2 clearly-arranged menus.

The following parameters can be adjusted:

- Saturation level / temperature
- Switch points
- Switch mode of the switch outputs
- Switching direction
- Switch delay times

The AS 3000 thus enables hydraulic and lubricating oils to be monitored accurately, continuously and online.

Special features:

- 4-digit digital display
- Optimum alignment - can be rotated in two axes
- Reliable due to its robust design
- Not necessary to calibrate to different types of oil
- Pressure-resistant, also during pulsations
- Wide fluid temperature range
- Individual configuration
- User-friendly due to key programming
- Early detection of water problems thus preventing faults and unnecessary interruptions to operations.

Technical data:

Input data

Saturation level	0 ... 100 %
Temperature	-25 .. 100 °C
Operating pressure	-0.5 .. 50 bar
Burst pressure	≤ 630 bar
Mechanical connection	G3/8 A DIN 3852
Torque value	25 Nm
Parts in contact with medium	Connector: Stainless steel / Vacuum-metallized ceramic Seal: FPM or EPDM

Output data

Calibration accuracy	≤ ± 2 % FS max.
Accuracy in media measurements	≤ ± 3 % FS typ.
Pressure dependency	± 0.2 % FS / bar

Analogue output

Signal	selectable: 4 .. 20 mA ohmic resist. max. 500 Ω 0 .. 10 V ohmic resist. min. 1 kΩ corresponds to measuring range selected
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Switch outputs

Type	PNP transistor outputs (programmable as N/O / N/C)
Assignment	Selectable: Saturation level or temperature
Switching current	max. 1.2 A per switch output
Switching cycles	> 100 million

Environmental conditions

Compensated temperature range	0 .. +80 °C
Operating temperature range	-25 .. +80 °C
Storage temperature range	-40 .. +80 °C
Fluid temperature range ¹⁾	-40 .. +100 °C / -25 .. +100 °C
Viscosity range	1 .. 5000 cSt
Flow velocity	< 5 m/s
Fluid compatibility	mineral oil based fluids, synthetic and natural esters

CE mark

Protection class to IEC 60529	IP 67
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Other data

Supply voltage	18 .. 35 V DC
Residual ripple of supply voltage	≤ 5 %
Weight	~ 145 g

Note: Reverse polarity protection, short circuit protection are provided.

FS (Full Scale) = relative to the complete measuring range

¹⁾ -25 °C with FPM or EPDM seal, -40 °C on request

Model code:

AS 3 X 0 8 - 5 - 000

Medium

- 0 = Mineral oils
- 1 = Phosphate ester, e.g. Skydrol

Mechanical connection

- 0 = G3/8 A DIN 3852

Electrical connection

- 8 = Male M12x1, 5 pole
(connector not supplied)

Signal technology

- 5 = 2 switch outputs and 1 analogue output

Modification number

- 000 = Standard

Note:

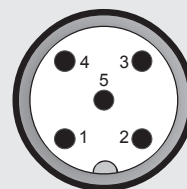
On instruments with a different modification number, please read the label or the technical amendment details supplied with the instrument.

Accessories:

Appropriate accessories, such as electrical connectors, mechanical connection adaptors, etc. can be found in the Accessories brochure.

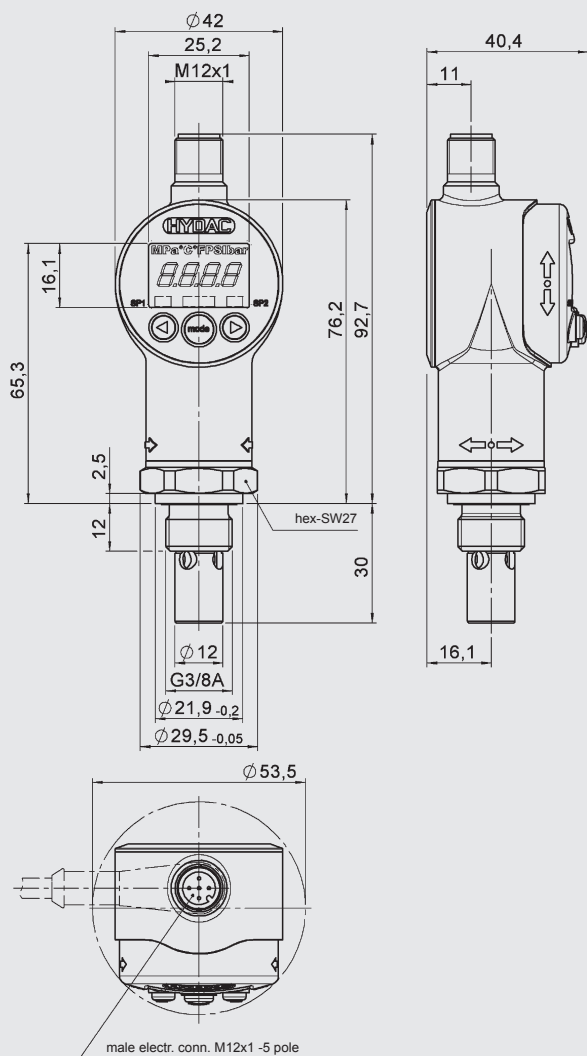
Pin connections:

M12x1



Pin	AS 3X08-5
1	+U _B
2	Analogue
3	0 V
4	SP 1
5	SP 2

Dimensions:



Note:

The information in this brochure relates to the operating conditions and applications described. For applications and operating conditions not described, please contact the relevant technical department. Subject to technical modifications.

HYDAC ELECTRONIC GMBH
Hauptstraße 27, D-66128 Saarbrücken
Telephone +49 (0)6897 509-01
Fax +49 (0)6897 509-1726
E-mail: electronic@hydac.com
Internet: www.hydac.com