



AquaSensor AS 3000

Saturation level

Temperature

With display

2 switching outputs
Analogue output

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 switching 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 available on the AS 3000 are combined in two easy-to-navigate menus. The following parameters can be adjusted:

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

The AS 3000 therefore enables hydraulic and lubrication oils to be monitored accurately, continuously and online. As water problems are detected early on, malfunctions and unnecessary downtime can be reliably avoided.

Technical data:

Input data

Saturation level	0 .. 100 %
Temperature	-25 .. 100 °C
Operating pressure	-0.5 .. 50 bar
Pressure resistance	≤ 630 bar
Mechanical connection	G3/8 A DIN 3852
Tightening torque, recommended	25 Nm
Parts in contact with fluid	Mechanical connection: stainless steel / vacuum-metallised ceramic Seal: FKM or EPDM

Output data

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

Analogue output

Signal	Selectable: 4 .. 20 mA load resist. max. 500 Ω 0 .. 10 V load resist. min. 1 kΩ corresponds to measuring range selected
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Switching outputs

Type	PNP transistor outputs (programmable as N/O or N/C)
Assignment	Selectable: Saturation level or temperature
Switching current	max. 1.2 A per switching 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 ²⁾	Mineral oil based fluids, synthetic and natural esters

CE mark	EN 61000-6-1 / 2 / 3 / 4
Protection class acc. to DIN EN 60529 ³⁾	IP 67

Other data

Supply voltage	18 .. 35 V DC
Residual ripple of supply voltage	≤ 5 %
Current consumption	≤ 50 mA without outputs
Weight	~ 125 g

Note: reverse polarity protection, short circuit protection provided.

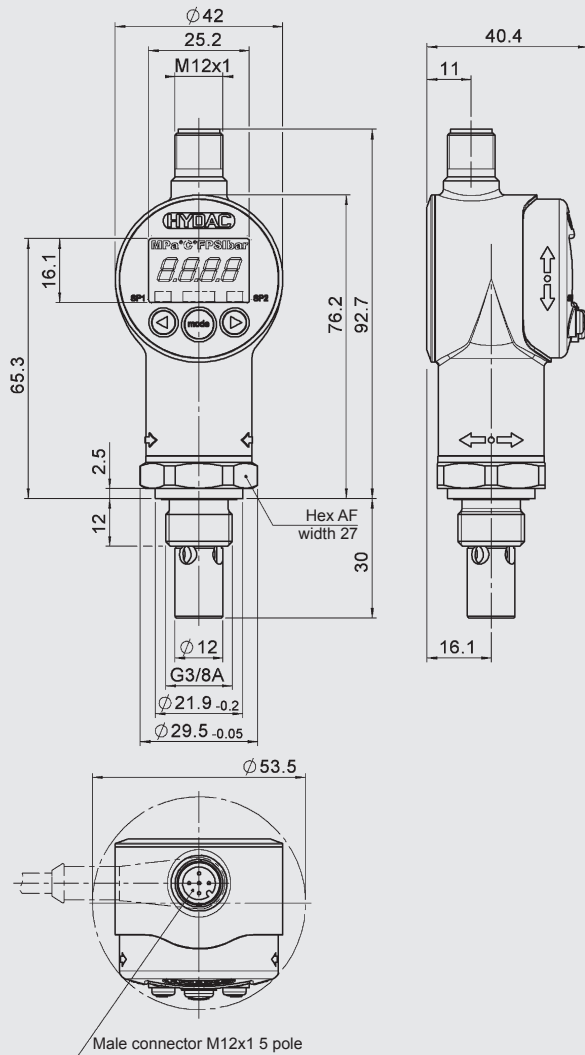
FS (Full Scale) = relative to complete measuring range

¹⁾ -25 °C with FKM seal, -40 °C on request

²⁾ Special fluids on request

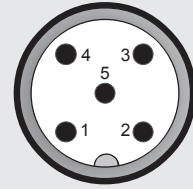
³⁾ With mounted mating connector in corresponding protection class

Dimensions:



Pin connections:

M12x1



Pin	AS 3X08-5
1	+U _B
2	Analogue
3	0 V
4	SP1
5	SP2

Model code:

AS 3 X 0 8 - 5 - 000

Fluid ¹⁾

- 0 = operating fluid mineral oil-based
- 1 = operating fluid phosphate ester-based

Mechanical connection

- 0 = G3/8 A DIN 3852

Electrical connection

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

Output signal

- 5 = 2 switching outputs and 1 analogue output

Modification number

- 000 = standard

Note:

- ¹⁾ Special fluids on request

Accessories:

Appropriate accessories, such as mating connectors and mechanical adapters, can be found in the Accessories brochure.

Note:

The information in this brochure relates to the operating conditions and applications described.

For applications or operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.

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