

CONTAMINATION MONITORS

AS 3000 Series

Aqua Sensor



Description

The Aqua Sensor AS 3000 is the further development of the proven AS 1000 series for the online detection of water in oils, particularly as a sensor for condition monitoring.

It records the water saturation and the temperature of the operating fluid. The display allows you to view the current measured values or to adjust the parameter settings.

The measured values are output as a 4 to 20 mA signal and are the basis for two parameterizable switching outputs. The AS 3000 thus enables hydraulic and lubricating oils to be monitored accurately, continuously and online.

Applications

- Mobile hydraulics
- Hydraulics and lubrication systems in industry

Advantages

- 4 digit digital display, can be aligned in two axes
- User-friendly due to key programming
- Individual configuration
- Reliable on account of its compact, rugged design
- Economical sensor
- No calibration necessary for different oil types
- Pressure-resistant, even with pulsations
- Early detection of water problems thus preventing faults and unnecessary interruption to operations

Technical Specifications

Input Data	
Measuring range (<i>temperature</i>)	-13° to 212°F (-25° to 100°C)
Measuring range (<i>saturation level</i>)	0 to 100%
Operating pressure	-7.25 to 725 psi (-0.5 to 50 bar)
Burst pressure	9136 psi (≤ 630 bar)
Flow velocity	max. 16.4 ft/s (5 m/s)
Parts in contact with fluid	Connection part: Stainless steel / ceramic with evaporated metal Seal: FKM or EPDM
Output Data - Humidity Measurement	
Output level (<i>saturation level</i>)	4 to 20 mA
Calibrated accuracy	≤ ± 2% FS max.
Accuracy in media measurements	≤ ± 3% FS typ.
Pressure dependent	+ 0.02% FS / bar
Output Data - Switching Outputs	
Version (<i>parameterizable</i>)	PNP transistor outputs Closer or opener Default settings: opener
Allocation (<i>parameterizable</i>)	Saturation level or temperature Default: saturation level Alarm 80% (SP 2), warning 60% (SP 1), Activation temp: 86° F / 30° C
Switch current	max. 1.2 A per output
Switch cycles	> 100 million
Output Data - Ambient Conditions	
Nominal temperature range (<i>measuring saturation level</i>)	32° to 176°F (0° to 80°C)
Storage temperature range	-40° to 176°F (-40° to 80°C)
Fluid temperature range	-40° to 176°F (-40° to 80°C)
Viscosity range	32 to 23175 SUS (1 to 5000 cSt)
Permissible fluids	Fluids based on mineral oil and synthetic and natural esters
CE mark	EN 61000-6-1/2/3/4
Type of Protection acc. DIN 40050	IP67
Other Data	
Supply voltage	18 to 35 V DC
Residual ripple	≤ 5%
Thread connection	G 3/8 BSPP male thread
Torque rating	approx. 18 ft/lbs (24.4 Nm)
Electrical connection	M12x1.5 pole (DIN VDE 0627)
Display	4-digit, LED, 7 segment, red, height of digits 0.28" (7 mm)
Weight	approx. 3.88 oz (110 g)

Note: FS (Full Scale) = relative to the full measuring range

Model Code

AS 3 0 0 8 - 5 - 000

Series

AS = Aqua Sensor

Measuring Range

3 = 3000 Series

Fluids

0 = Mineral oils

1 = Phosphate esters (HFD-R)

Mechanical Connection

0 = G 3/8A DIN 3852

Electrical Connection

8 = Plug M12x1, 5-pole (connector not included)

Signal Technology

5 = 2 switch outputs / 1 analog output

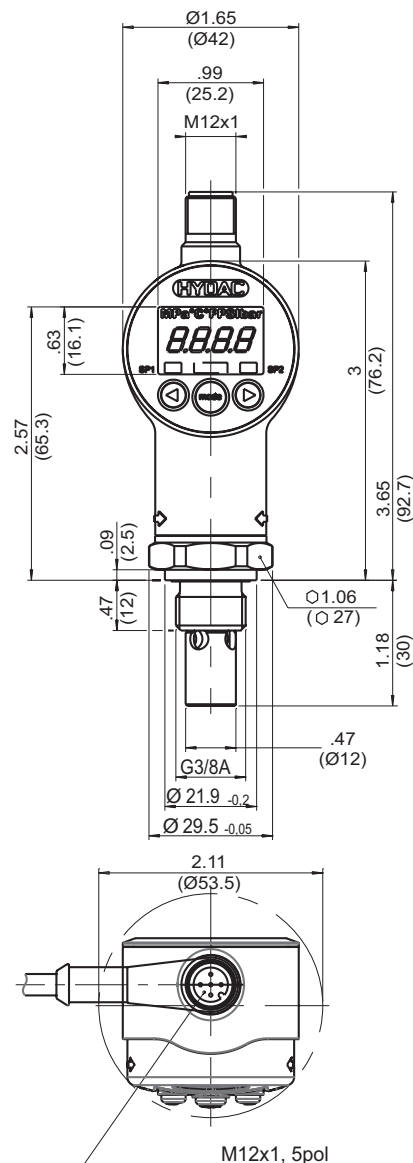
Modification Number

000 = Standard

Items supplied

- Aqua Sensor
- Operation Manual

Dimensions



Accessories

ZBE 08 Connector

Female connector, bent, shielded, 5 Pole, M12x1
Part #6006786

ZBE 08S-02

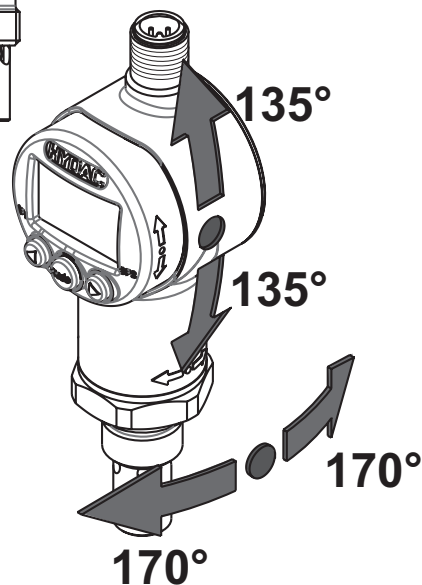
Female connector, bent, with 6.5 ft. (2m) lead, shielded,
5 pole, M12x1
Part #6019455

ZBE 08S-05

Female connector, bent, with 16.4 ft. (5m) lead, shielded,
5 pole, M12x1
Part #6019456

ZBE 47S-05

Female connector, straight, with 16.4 ft. (5m) lead, shielded,
5 pole, M12x1
Part #3527626



Dimensions are inches (millimeters) and for general information only, all critical dimensions should be verified by requesting a certified print.