AquaSensor AS 1200

Formally Known as "Testmate® Water Sensor"

Applications

- Hydraulic systems that are sensitive to water
- Gear boxes
- Molding machines
- Turbines
- Transferrers

Description

The AquaSensor AS 1200 is an advancement of the proven AS 1000 series for the online-detection of water in hydraulic oils and lubrication fluids as well as in diesel, especially designed as an OEM sensor for condition monitoring. It measures the degree of saturation and the temperature of the fluid.

In the version with 2 analogue outputs, the AS 1200 transmits thev values for the degree of saturation and the temperature as a 4 .. 20 mA signal.

In the version with two switching outputs, the AS 1200 can be configured by the user via the HYDAC service units HMG 2500 and HMG 4000, the Condition Monitoring Unit CMU 1000 and the interface module CSI-B-2. The following parameters can be adjusted:

- Saturation level/temperature
- Switching points
- Switching mode of switch outputs
- Switching direction
- Switching delay times
- Operating temperature range

Specifications

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, ceramic with vacuum- metallized coating; Seal: FKM	
Output Data	**Pin 2: Saturation level**	
Output signal	4 .. 20 mA (corresponds to 0.. 100 %); RLmax = (UB – 10 V) / 20 mA [kΩ] or switching output (configurable)	
Calibration Accuracy	≤ ± 2% FS max.	
Accuracy in media measurements	≤ ± 3% FS typ.	
Response time [1]	~ 2 min. in humid oil	
Pressure dependence	± 0.025% FS / bar	
	Pin 4: Temperature	
Output signal	4 .. 20 mA (corresponds to -25.. 100 °C); RLmax = (UB – 10 V) / 20 mA [kΩ] or switching output (configurable)	
Accuracy	≤ ± 2% FS max.	
Pin 5:	**HSI (HYDAC Sensor Interface) automatic sensor detection**	
Switching Outputs Design	NPN or PNP transistor outputs (configurable as N/O or N/C)	
Switching current	max. 250 mA per output	
Ambient Conditions Compensated temperature range	0 .. +90 °C	
Operating temperature range [2]	**-40 .. +100 °C / -25 .. +100 °C**	
Storage temperature range	-40 .. +100 °C	
Fluid temperature range [2]	-40 .. +125 °C / -25 .. +125 °C	
Viscosity range	1 .. 5000 cSt	
Flow velocity	< 5 m/s	
Fluid compatibility [3]	Mineral oil-based fluids, diesel or ester-based fluids (HEES, HETG)	
CE mark	EN 61000-6-1 / -2 / -3 / -4	
Vibration resistance acc. to DIN EN 60068-2-6	7.5 mm (5 Hz ≤ f < 8.2 Hz) 2 g (8.2 Hz ≤ f < 2000 Hz)	
Shock resistance acc. to DIN EN 60068-2-27	20 g (11 ms in 3 axes)	
Protection type acc. to DIN EN 60529 [4]	IP 67	
Other data Supply voltage	**12 .. 32 V DC**	
Residual ripple of supply voltage	≤ 5%	
Current consumption	≤ 30 mA without outputs	
Weight	~ 145 g	

Note: Reverse polarity protection, short circuit protection provided.

[1] Response time to a step change in RH. Time for the RH output to change by 63 % of the total RH change, RH = Relative Humidity

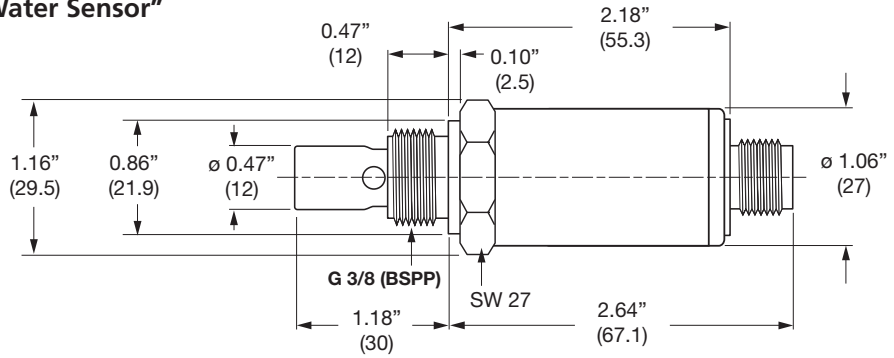[2] In the standard up to -25 °C with FKM seal, -40 °C on request

[3] Other fluids on request

[4] With mounted mating connector in corresponding protection type
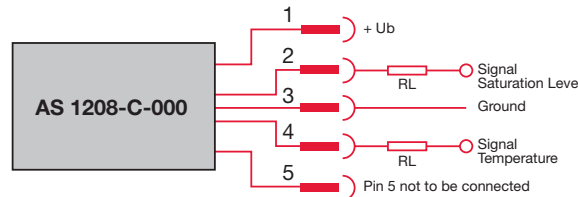
AS 1200 AquaSensor

Formally Known as "Testmate® Water Sensor"

Dimensions

2.18" (55.3)
0.47" (12)
0.10" (2.5)
1.16" (29.5)
0.86" (21.9)
ø 0.47" (12)
ø 1.06" (27)
G 3/8 (BSPP)
SW 27
1.18" (30)
2.64" (67.1)

Dimensions are for general information only, all critical dimensions should be verified by requesting a certified print.
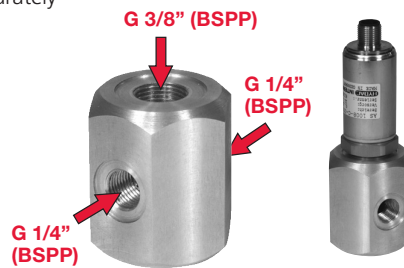
Circuit Connection, Accessories

AS 1208-C-000

1 — + Ub
2 — RL — Signal Saturation Level
3 — Ground
4 — RL — Signal Temperature
5 — Pin 5 not to be connected

Color Codes for connectors with cables:

1 = brown   4 = black
2 = white   5 = gray
3 = blue

AS 1200 G1/4 Housing Block Adapter
Part #03182134
Purchase separately

G 3/8" (BSPP)
G 1/4" (BSPP)
G 1/4" (BSPP)

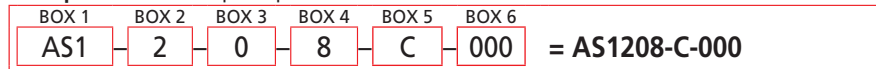PN#02075860 / 05.21 / FSP2105-2273

Accessories	
ZBE 08 Connector 5 Pole M12x1 90°	
ZBE 08 connector only (IP65) Part #06006786	
ZBE 08-02-4 with 6.5 ft. (2 m) (IP67) Part #06006792	
ZBE 08-05-4 with 16.4 ft. (5 m) cable (IP67) Part #06006791	
HDA 5500-0-0-AC-000 Display Part #00908861	
HDA 5500-0-0-DC-000 Display Part #00908862	
HDA 5500-1-0-DC-000 Display Part #00908868	
HDA 5500-1-1-AC-000 Display Part #00908869	
HDA 5500-1-1-DC-000 Display Part #00908870	

Model Number Selection

How to Build a Valid Model Number for a Schroeder AS:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6
AS					
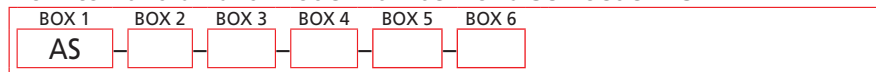
Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	
AS1	2	0	8	C	000	= AS1208-C-000

Note:

[1] Special fluids on request

[2] FKM is usually compatible with diesel, however, this depends on what additives are used. Please contact your diesel supplier and ask for confirmation of the compatibility in combination with FKM.

BOX 1	BOX 2	BOX 3	BOX 4
Series	**Fluid [1]**	**Mechanical Connection**	**Electrical Connection**
AS1 = AquaSensor	2 = Mineral oil-based fluids, diesel or ester-based fluids (HEES, HETG) [2]	0 = G 3/8A ISO 1179-2	8 = Plug M12x1, 5-pole *(connector not included)*

BOX 5	BOX 6
Exit	**Modification Number**
C = Output 1 Pin 2 saturation degree (4 .. 20 mA) Output 2 Pin 4 temperature (4 .. 20 mA)	000= Standard
2 = 2 switching outputs, configurable	