



Industrial Filters · Accumulators

### Description:

Water in oil causes severe failures in hydraulic and lubrication systems

Especially free water is a dangerous contamination in lubrication systems and causes corrosion during machine downtime.

Therefore it is necessary to keep the fluid in its best possible condition by predictive maintenance.

The examination of the water concentration is a very important part of a complete maintenance concept.

By continuously measuring the water content, an alarm signal can be triggered before the system fails. Hereby a considerable reduction of the maintenance cost (for example in lubrication systems of paper mills) can be achieved.

A water dehydration unit (e. g. EPE VacuClean®) can be switched on if the water concentration reaches a preset value.

Thereby unnecessary machine downtime can be dramatically reduced.

The WGM 07 ensures a fast and reliable online control of the water activity in hydraulic and lubrication oils. Furthermore, the efficiency of dehydration units can be monitored.

## Online water-in-oil measuring device WGM 07



### Technical Data:

Test Point: pressure line, maximum pressure 40 bar (600psi)

Principal: capacitive measurement with a polymer thin film sensor

Accuracy:  $\pm 0,02$  (0...0,9)  
 $\pm 0,03$  (0,9...1,0)

Response time: 10 min

Temperature:  
- range:  $-40^{\circ}\text{C} \dots +180^{\circ}\text{C}$   
- accuracy:  $\pm 0,2^{\circ}\text{C}$   
- sensor: Pt 100

Output: 2 analog output  
0...20 mA, 4...20mA  
0...1V, 0...5V, 0...10V

digital output RS 232

As further development the WGM 07 replaces the previous type WGM1.

New: optional graphic/ numeric display for trend monitoring up to 1 year. Improved sensor sensitivity.

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Quality assured

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### Principle:

The WGM 07 measures the water activity ( $a_w$ ) as well as the oil temperature online.

The water activity  $a_w$  is related to the saturation level of the oil. An activity range of 0...1 is related to 0... 100% of the saturation level of the oil.

Oil without any water shows a saturation level  $a_w$  of almost 0. Fully saturated oil shows a saturation level  $a_w$  of 1,0.

Compared to the conventional measurement of the concentration in ppm, the WGM 07 provides many advantages.

This online water measuring device is independant from oil type, the temperature, the age of the oil and the operating conditions.

If water activity reaches a value above 0.9, free water is present. Free water is very dangerous and must be completely eliminated.

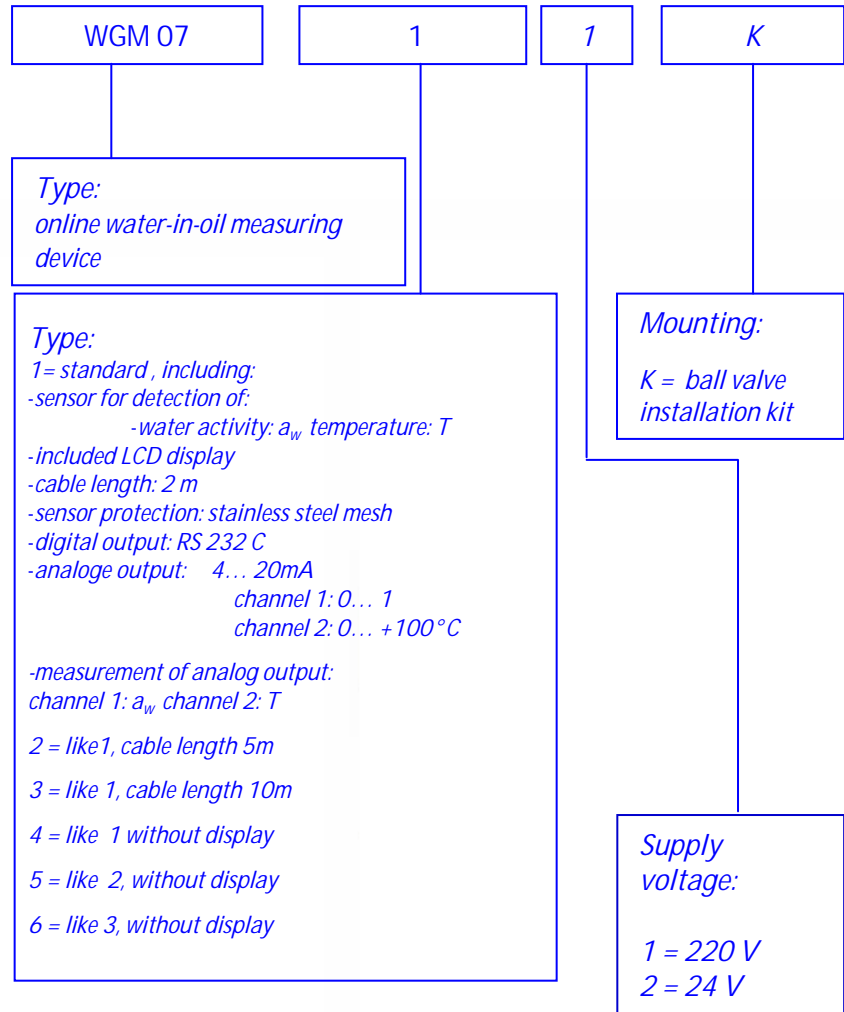
### Installation:

1.) The sensor can be installed trough a 1/2" ball valve. This makes it possible to install the sensor without shutting down the running system or to drain the oil.

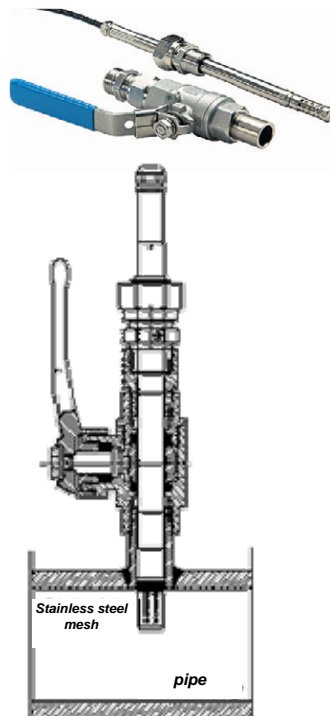
This enables the user to use one WGM 07 at many different measuring points during normal operation of the system. The maximum pressure in the system can be up to 40bar (600psi).

2.) For permanent installation a standard G 1/2" socket with conical thread (DIN 2999) wich is weded on the fluid pipe can be used.

### Ordering information



### Installation principal



### Dimensions

