Combined Oil Condition and Moisture Sensor

The Combined Oil Condition and Moisture Sensor goes beyond the normal protection systems.

It is a permanent sensor for the continuous determination of the oil condition, humidity and temperature in hydraulic and lubricating oils. It permanently monitors dissolved water, temperature and oil quality at the same time. It puts you in control of your lubricant. Prompt informations are given on changes in the fluid allowing immediate actions in case of deteriorating operating conditions.

Monitoring of changes in hydraulic fluids and lubricants are essential for condition based maintenance. Data is continuously evaluated. In that way deterioration and changes in the oil (e.g. water leakage, oil change, ...) can be indicated.

Through this, damage can be recognized or completely avoided at an early stage. This offers the opportunity to prevent machine failures as well as to prolong maintenance and oil change intervals by means of appropriate measures. Furthermore, by monitoring the lubricant, correctly performed maintenance work and the use of the required lubricant quality may be documented.

Supplied with a standard ¾" thread it can easily be integrated in a return line or the tank. The sensor is in the position to issue sequential three analogue autputs (4...20 mA) available for dissolved water, temperature and oil quality.

The sensor records the change in temperature, relative oil humidity and relative permittivity of the fluid. The sensor is able to evaluate condition changes automatically.

Three alarms for moisture, permittivity and temperature can be set and communicated via analogue output (4...20 mA) if needed.

Ordering Information

SEN-CT-16903
Combined Oil Condition and Moisture Sensor

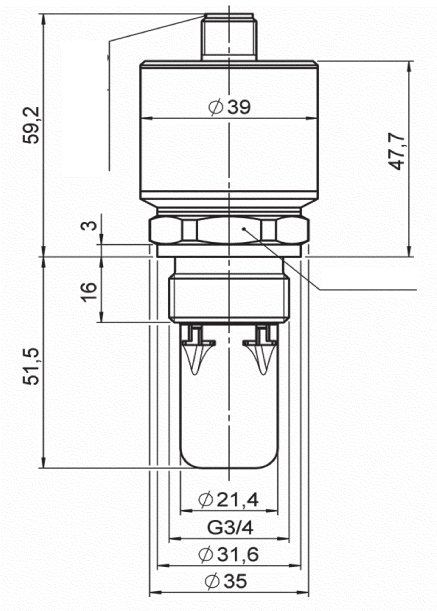
Stainless steel housing - rugged and long life performance

Smart sensor with internal processing power offers wide range of interface options

Widely used 3/4" DIN thread - quick and easy installation to a wide range of machinery

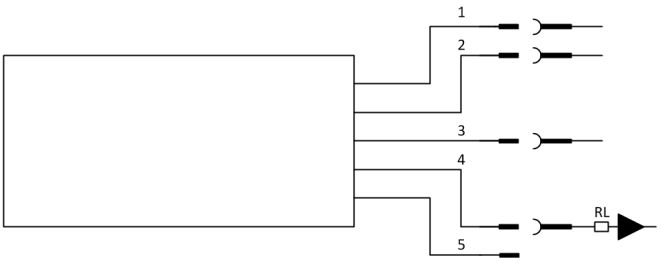
High pressure resistant hermetic seal for fluid pressure up to 50 bar.

Switching output signals for oil condition value, relative humidity and temperature,



Specifications

Moisture:	0 - 100 % saturation (+/- 3%) relative humidity
Temperature:	-25 - +100 °C (+/- 3%)
Oil Condition Value	+/- 30 % of initial value
Resolution:	0.1% relative humidity
Analogue Outputs:	3 x 4-20mA for % Saturation, temperature and oil condition of oil
Switch Output:	3 x Alarm adjustable
Thread Connection	G 3/4 DIN 3852 E (torque value 30 Nm)
Fluid Compatibility:	Mineral oils, HLP ester based fluids, Polyalphaolefine
Material:	304 Stainless Steal
Max Oil Pressure:	50 bar
Pressure resistance	max. 500 bar
Flow velocity	max. 5 m/s
Oil Temperature Range:	-25 to 100 °C
Power Supply:	10 - 36 V (DC) < 0.2 A
Sealing on enclosure:	IP67



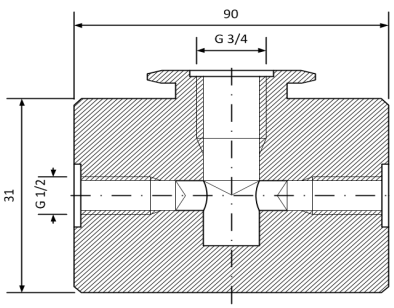
UB
PNP switch output

GND

4 ... 20 mA output
Not in use

By using the sensor different changes of the oil condition can be detected. Providing a % relative humidity, condition of the oil and temperature values. Now you can monitor main parameters real-time. The sensor can be mounted within any lubrication system on any type of machine. The sensor measures the oils percentage Relative Humidity, resulting from the dissolved water within the lubricant, using a combination of proven thin film capacitance sensors, combined with smart algorithms to provide a temperature, oil condition and % RH value.

Whether it's to check on the health of the machine, or an alert of changing moisture ingression rates, the new developed combined sensor provides instant information, complementing your existing laboratory oil analysis programme, and helping you make informed maintenance planning decisions.



To allow an easy installation into a standard G 1/2 inch line CMT does provide an optional mechanical housing for the sensor.