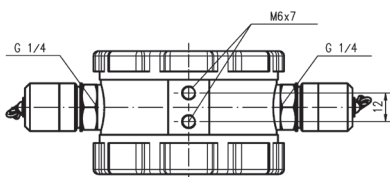
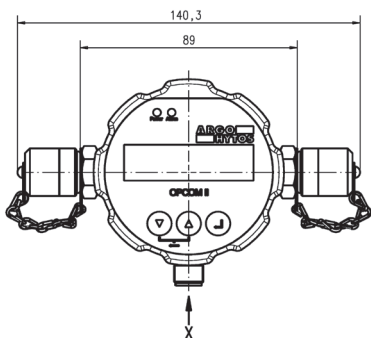


OPCom Particle Monitor

Continuous Oil Condition Monitoring



OPCom Particle Monitor



Dimensional drawing

Description

Application area

The OPCom Particle Monitor is a compact particle measurement device for continuous monitoring of contamination and wear in hydraulic fluids and lubricants.

Performance features

Recognizing changes

Particle monitors precisely display any change in contamination of a system. Thus you can react quickly with an increase in particle concentration and countermeasures can be taken. Subsequent damages are minimized and costs are reduced.

High pressure range

The OPCom Particle Monitor is designed for operating with pressures of up to 420 bar. Thus it can directly be mounted to a pressure line.

Intuitive operating

The OPCom Particle Monitor is equipped with an intensely illuminated graphic display and a keypad by which you may set up all required adjustments. The menu navigation is made up intuitively and logically.

Wide communication possibilities

The OPCom Particle Monitor exports data to a serial interface or optionally to a CAN-Bus (CANopen + SAE J1939). In parallel, the configurable 4 - 20 mA interface can be connected. Over a digital alarm output you will be warned when limits are exceeded or fallen below. Readings can run time-controlled, manually or started and stopped over a digital input. The data can also be stored on the integrated memory unit.

Design characteristics

On the fluid side, the OPCom Particle Monitor is equipped with two Minimes connections to connect the sensor generally in the off-line circuit to the system. The electrical connection is installed via an 8-pole M12 x 1 circular plug. The integrated data memory allows data recording over a longer period. Besides all its technical functions, the OPCom Particle Monitor scores by its compact and optical design.

Measuring principle

The OPCom Particle Monitor is an optical particle monitor which works to a so-called light extinction principle. This means that particles are classified within a measuring cell with the help of a laser regarding their size and quantity. The device is calibrated to ISO 11943. It calculates and displays results according to ISO 4406:99, SAE AS 4059, NAS 1638 und GOST 17216. More details and conversion tables: see manual.

Software

A free PC-software for data recording and evaluation of the measured values can be downloaded from our website at www.argo-hytos.com within our download area.

Versions

The OPCom Phosphate Ester version has specially been developed for use in phosphate ester fluids. This version is delivered without Minimes couplings.

Another variant is the OPCom without display.

Warnings

- › Avoid contact of phosphate ester fluids with the housing of the device!
- › Device can contain remains of the calibration fluid!

Technical data

| Sensor data | Size | Unit |
|--------------------------------|--|-------------------------|
| <i>Max. operating pressure</i> | | |
| dynamic | 420 | bar |
| static | 600 | bar |
| Permissible flow rate | 50 ... 400 | ml/min |
| <i>Operating conditions</i> | | |
| Temperature | -20 ... +85 | °C |
| Rel. humidity | 0 ... 100 | % r.H. (non-condensing) |
| Display readable up to | 60 | °C |
| Compatible fluids | mineral oils (H, HL, HLP, HLPD, HVLP), synthetic esters (HETG, HEPG, HEES, HEPR), polyalkylenglycols (PAG), zinc and ash-free oils (ZAF), polyalphaolefins (PAO) phosphate ester* ¹ , | |
| Wetted materials | Stainless steel, sapphire, chrome, FFKM* ¹ , NBR* ² , Minimes coupling* ² : zinc/nickel | |
| Protection class ¹⁾ | IP67 | |
| Power supply | 9 ... 33 | V |
| Power input | max. 0,3 | A |
| Max. power consumption | 2 | W |

| Sensor data | Size | Unit |
|---|-----------------------|---------------------|
| <i>Output</i> | | |
| Power output ²⁾ | 4 ... 20 | mA |
| Accuracy power output ²⁾ | ± 2 | % |
| Interfaces | RS232/CAN | |
| | Open | - |
| Alarm contact | Collector | - |
| <i>Digital input for start and stop</i> | | |
| Power supply | 9 ... 33 | V |
| Data memory | 3000 | data records |
| <i>Connecting dimensions</i> | | |
| Fluid connections | G¼ | inch |
| | Minimes* ² | - |
| | M16x2 | |
| Electrical connection | M12x1, 8-pole | - |
| Tightening torque M12-connection | 0,1 | Nm |
| <i>Measuring range according to ISO 4406:99</i> | | |
| Cleanliness level (measuring range) | 0 ... 24 | Ordinal number (OZ) |
| Cleanliness level (calibrated range) | 10 ... 22 | Ordinal number (OZ) |
| Measuring accuracy (calibrated range) | ±1 | Ordinal number (OZ) |
| Weight | ~720 | g |

¹⁾ With screwed-on connector

²⁾ Output IOut is freely configurable (see interfaces and communication commands)

³⁾ In relation to the analogue current signal (4 ... 20 mA)

*¹ only applies to phosphate ester version

*² only applies to OPCom Particle Monitor & OPCom without display

Order code

| | |
|--|---------------|
| OPCom Particle Monitor | SPCO 300-1000 |
| OPCom Particle Monitor for phosphate ester | SPCO 300-2000 |
| OPCom Particle Monitor without display | SPCO 300-1200 |

Accessories

| | |
|--|---------------|
| Complete data cable set, 5 m length | SCSO 100-5030 |
| Data cable with open ends, 5 m length | SCSO 100-5020 |
| Contact box for connection of a data cable | SCSO 100-5010 |
| USB adapter - RS232 serial | PPCO 100-5420 |
| Power supply | SCSO 100-5080 |
| Ethernet - RS232 gateway | SCSO 100-5100 |
| Display and storage device LubMon Visu | SCSO 900-1000 |
| Minimess connection with volume flow limiting* ² | |
| Pressure range 1: 2 ... 50 bar | SPCO 300-5105 |
| Pressure range 2: 50 ... 400 bar | SPCO 300-5140 |
| Minimess connection with control loop* ² | SPCO 300-5100 |

*1 only applies to phosphate ester version

*2 only applies to OPCom Particle Monitor & OPCom without display

