

CMS Contamination Monitoring System

The CMS in-line contamination monitor automatically measures and displays particulate contamination, moisture and temperature levels in various hydraulic fluids. It is designed specifically to be mounted directly to systems, where ongoing measurement or analysis is required, and where space and costs are limited.

- Measures and displays the international standard formats ISO 4406:1999, NAS 1638, AS 4059E and ISO 11218
- 8 Channels solid contamination measurement
- Moisture (RH) & Temperature option
- Inline to 400 bar
- 9-36 Volt DC
- Available with large backlit display and keypad
- Multicolour LED status alarms
- Programmable test times
- Manual/ Auto operation
- Programmable alarm relays
- PC/ PLC Operation
- Windows based software included
- RS 485 communication standard
- Manual, automatic and remote control flexibility
- Data logging and 4000 test result memory

CMS Water en Temperature Sensor

The water sensor option measures water content using a capacitive RH (relative humidity) sensor. The results is expressed as percentage saturation. 100% RH corresponds to the point at which free water exists in the fluid, i.e. the fluid is no longer able to hold the water in a dissolved solution.

Technology

LED Based Light Extinction Automatic Optical Particle Counter

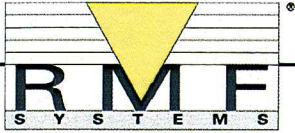
Analysis Range

- ISO 4406:1999 code 0 to 25
- NAS 1638 Class 00 to 12
- AS4059 Rev.E. Table 2 Sizes A-F: 000 to 12 (lower Limits Test Time dependent)

Particle Sizing

4,6,14,21,25,38,50,70 um (c) to revised ISO 4406 Standard





Specification

Formats

ISO 4406:1999, NAS 1638, AS4059E Table 2, AS4059E Table 1, ISO 11218

Accuracy

± 1/2 code on the ISO 4406 standard. Across range ± 1 code

Calibration

Each unit individually calibrated with ISO Medium Test Dust (MTD) based on ISO 11171 (1999) on equipment certified by IFTS.

Hydraulic Fluid Compatibility

Mineral oil & petroleum based fluids (consult RMF Systems for other fluids)

Flow Rate

20-400 ml/minute

Viscosity Range

to 1000 centistokes

Fluid Temperature

-25 to +80°C

Pressure Max

400 bar

Electrical Supply

Voltage 9-36V DC

Test Time

Adjustable 10-3600 seconds. Factory set to 120 seconds

Moisture Sensing

% RH (Relative Humidity) ±3%

Temperature Measurement

±3°C

Data Storage

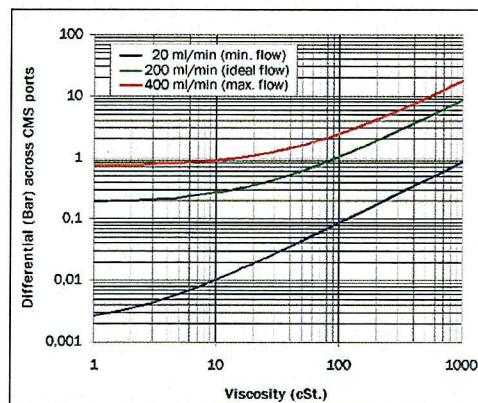
4000 tests

Ambient Temperature

80 °C or 55 °C (K version)

IP Rating

IP 65/67 versatile



CMS alarm relay status LED

All CMS versions have a multicolour indicator on the front panel, which is used to indicate the status or alarm state.

The alarm thresholds can be set from the supplied software via the serial interfaces.



- Green indicates that the test results passed, i.e. none of the alarm thresholds were exceeded.
- Yellow indicates that the lower cleanliness limit was exceeded, but not the upper one.
- Red indicates that the upper cleanliness limit was exceeded.
- Blue indicates that the upper water content limit was exceeded.
- Red and blue alternating indicates both cleanliness and water content upper limits exceeded.
- Pink indicates that the upper temperature limit was exceeded.



Managing your oil contamination