The Contamination Sensor CS 1939 is an online fluid sensor for permanent monitoring of particle contamination in fluids. The cleanliness results are presented according to ISO/SAE classifications. This instrument combines the latest materials and technologies with proven engineering and provides the user with a compact and robust stationary sensor. The attractive price/performance ratio makes it particularly advantageous for OEM applications for Condition Monitoring.

Features and Benefits
- Critical machine conditions are identified in early stages
- Continuous monitoring of oil conditions
- Condition-based maintenance planning

Market Applications
- Industrial hydraulic and lubrication systems
- Mobile hydraulics

Specifications
- **Self-diagnosis:** Continuous with error display via status LED
- **Measured variables:**
  - ISO 4406
  - SAE AS 4059
- **Service parameters:**
  - Flow (status)
  - Drive (%)
  - Temp (°F) and (°C)
- **Installation position:** Recommended: vertical direction flow
- **Ambient temperature:** -22°F to 176°F (-30°C to 80°C)
- **Storage temperature range:** -40°F to 176°F (-40°C to 80°C)
- **Relative humidity:** max. 95%, non-condensing
- **Seal Material:** FPM for CS1939-0 / EPDM for CS1939-1
- **Protection class:** III (safety extra-low voltage)
- **Weight:** 2.9 lb (1.3 kg)
- **Measuring range:** Sensor measures from Class ISO 9/8/7 (MIN) to Class ISO 25/24/23 (MAX) Calibrated in the range ISO 13/11/10 to 23/21/18
- **Accuracy:** +/½ ISO class in the calibrated range
- **Operating pressure:** max. 5075 psi / 350 bar
- **Hydraulic connection:**
  - Inline or hose connection (A,B): thread G1/4, ISO 228 or flange connection (C,D): DN 4
- **Permitted measurement flow rate:** 30 to 500 mL/min
- **Permitted viscosity range:** 32 to 4635 SUS (1 to 1000 cSt)
- **Fluid temperature range:** 32°F to 185°F (32°C to 85°C)
- **Connection, male:** M12x1, 5-pole, to DIN VDE 0627 or IEC61984
- **Supply voltage:** 9 to 36 VDC, residual ripple < 10%
- **Power consumption:** 3 watts max.
- **CAN interface:** 2-wire, half duplex
  - SAE CAN J1939 protocol
- **HSI (Sensor Interface):** 1 wire, half duplex

Market Applications
- **Industrial hydraulic and lubrication systems**
- **Mobile hydraulics**

Description
- **Compatibility with:**
  - HY-TRAX®
  - RBSA
  - CSM
  - FCU
  - MCS
  - AS
  - SMU
  - CTU
  - EPK
  - Trouble Check Plus
  - HMG2500
  - HMG4000
  - ET-100-6
  - HTB
  - HFSA
  - HFS-BC
  - HFS-15
  - MFD-BC
  - MFS, MFD
  - MFD-MV
  - MFS-HV
  - AMS, AMD
  - FS
  - AMFS
  - KLS, KLD
  - MCO
  - AKS, AKD
  - LSN, LSA, LSW
  - X Series
  - OLF Compact
  - OLF
  - OLF-P
  - NxtM
  - VEU-F
  - IXU
  - Triton-A
  - Triton-E
  - NAV
  - SVD01
  - SVD
  - OXS
  - Appendix
Contamination Sensor

Dimensions

CS 1939 without display

Bottom view
Pipe or hose connection

Flange connection

Metric dimensions in ( ).
Contamination Sensor

CS 1939 with Block Kit (Requires minimum flow of 0.3 L/min., and minimum pressure of 6 bar)

Dimensions (cont.)

Metric dimensions in ( ).

CS 1939
CS 1000
CS 1939
CSI-C-11
HY-TRAX®
RBSA
CSM
FCU
MCS
AS
SMU
CTU
EPK
Trouble Check Plus
HMG2500
HMG4000
ET-100-6
HTB
RFSA
HFS-BC
HFS-15
MFD-BC
MFS, MFD
HY-TRAX® Retrofit System
MFD-MV
MFS-HV
AMS, AMD
FS
AMFS
KLS, KLD
MCO
AKS, AKD
LSN, LSA, LSW
X Series
OLF Compact
OLF
OLF-P
NxTM
VEU-F
IXU
Triton-A
Triton-E
NAV
SVD01
SVD
OXS
Appendix
### CS 1939 Contamination Sensor

#### Model Number Selection

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS</td>
<td>1939</td>
<td>0</td>
<td>0</td>
<td>000</td>
</tr>
</tbody>
</table>

Example: **NOTE: One option per box**

- **CS**
- **1939**
- **0**
- **0**
- **000** = CS1939-0-0/-000

#### How to Build a Valid Model Number for a Schroeder CS 1939:

- **BOX 1**
  - Type: CS

- **BOX 2**
  - Indicator Code
    - 1939 = Contamination Codes
    - ISO 4406; SAE 4059 (D) / > 4 µm(c) > 6 µm(c) > 14 µm(c) > 21 µm(c)
    - Interface/protocol: CAN/CAN SAE J1939 without Display (Electrical connection Plug M12x1, 5-pole)

- **BOX 3**
  - Fluids
    - 0 = based on Mineral Oil
    - 1 = Phosphate Esters

- **BOX 4**
  - Mounting
    - 0 = Inline or hose connection
    - 1 = Flanged connection

- **BOX 5**
  - Modification Number
    - 000 = Standard
    - K = CS Block Kit (requires mounting option 1)

#### Scope of Delivery

- Contamination Sensor
- 2 x O-Ring
  (only for flange connection version)
- Calibration Certificate
- CD with FluMoS Light Software and manual
- CD with detailed operating and maintenance instructions in different languages (PDF viewer software required)

#### Accessories

<table>
<thead>
<tr>
<th>Designation</th>
<th>Part-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage</td>
<td></td>
</tr>
<tr>
<td>Female connector with 5 m cable, screened, 5-pole, M12x1</td>
<td>3527626</td>
</tr>
<tr>
<td>Female connector with 10 m cable, screened, 5-pole, M12x1</td>
<td>3527627</td>
</tr>
<tr>
<td>Extension cable 5 m, female connector 5-pole, M12x1 / Male connector 5-pole, M12x1</td>
<td>6040852</td>
</tr>
<tr>
<td>Female connector with screw terminal, 5-pole, M12x1</td>
<td>6049128</td>
</tr>
<tr>
<td>CSI-D-5 Contamination sensor interface</td>
<td>3249563</td>
</tr>
<tr>
<td>FluMoS Professional Software (CD)</td>
<td>3371637</td>
</tr>
</tbody>
</table>

### Pressure - Viscosity Range

- Differential Pressure (psig) vs. Viscosity (cSt)
- Differential Pressure (psig) vs. Viscosity (SUS)

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40 SCHROEDER INDUSTRIES