

## SPECIFICATION SHEET

# MS3505 ONLINE OIL DEBRIS MONITOR

### Performance

Sensor Bore	8mm (3/8 inch)
Minimum Detectable Particle (sphere)	125µm Fe / 450µm NFe
Minimum Detectable Particle (ESD) <sup>1</sup>	70µm Fe / 270µm NFe
Flow Rate	0.5 L/min - 12L/min (0.13 USGPM to 3.2 USGPM)
Flow Direction	Bi-directional
Maximum Particle Detection Rate	Configurable up to 100 particles/sec

<sup>1</sup>The Equivalent Spherical Diameter (ESD) of an irregular shaped object is the diameter of a sphere of equivalent volume.

### Electrical Interface

Input Power Supply	18 to 30 VDC
Power Consumption	2.4W

### Communication

#### Ethernet 10/100 Mbit/s Serial RS-485 (Optional)

Particle Type Discrimination  
Particle Size Reporting  
Particle Mass Reporting  
Equipment Condition Indication

#### Modbus TCP

#### Modbus RTU

Ferromagnetic (Fe) / Non-Ferromagnetic (NFe)  
Configurable Fe / NFe size bins and Fe / NFe Rate  
Fe Mass and Fe Mass Rate  
Configurable Alarm and Warning Limits  
(Fe, NFe & Temperature)

#### MS3000 Digital Outputs

PULSE  
BIT State  
    Fault  
    No Fault  
Signal Amplitude  
Load Impedance Required

#### Particle Pulse and Built-in-Test (BIT)

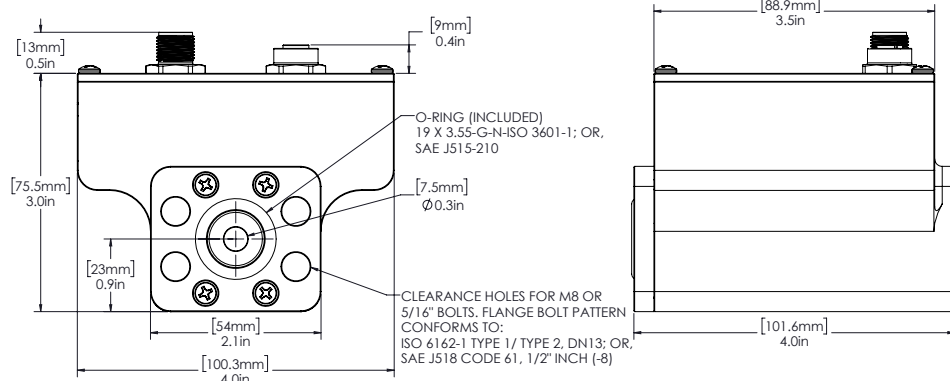
5 ms Square Wave Pulse ± 2 ms  
Hi-LO Logic  
Low Logic  
High Logic  
Power Supply Voltage +0/-2 VDC  
High (≥1 kΩ)

### Environment

Oil Pressure	Maximum 20 bar (300 psi)
Oil Temperature	-40°C to 85°C (-40°F to 185°F)
Ambient Temperature	-40°C to 70°C (-40°F to 158°F)
Vibration	10-50 Hz: 3mm (displacement) 50-300 Hz: 15g (acceleration)
Fluids Compatibility	Hydraulic & lubrication oils; synthetic & mineral based; solvents & cleaning agents

### Mechanical Interface

Weight 0.9kg (1.9 lbs)



### Compliance

Conforms to ASTM D7917  
IP66/67



### Ordering Information

#### Sensors

MetalSCAN 3505 Sensor  
(Order: MS3505)

MetalSCAN 3505-RTU Sensor  
(Order: MS3505-RTU)

#### Software

MetalSCAN Manager  
(included with sensor)

MetalSCAN Monitor  
(Order: MetalSCAN-Monitor)

Gastops Connect  
(Contact Gastops)

#### Accessories

M12, A-Coded, 8-PIN, Straight  
Backshell Cable, 10m  
(Order: Cable-3500-A-10-00)

M12, A-Coded, 8-PIN, 90deg  
Backshell Cable, 10m  
(Order: Cable-3500-A-10-90)

M12, D-Coded, 4-PIN to Ethernet  
RJ45 Straight Connector Cable, 10m  
(Order: Cable-3500-D-10-00)

M12, D-Coded, 4-PIN to Ethernet  
RJ45 90deg Connector Cable, 10m  
(Order: Cable-3500-D-10-90)

Application Installation Kits  
(Contact Gastops)