

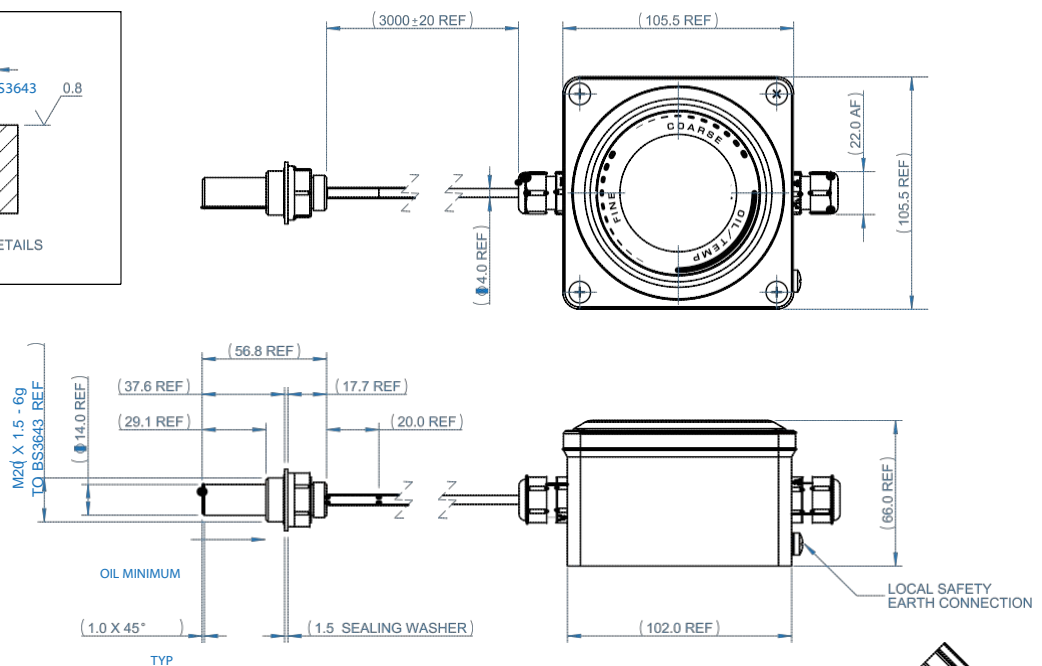
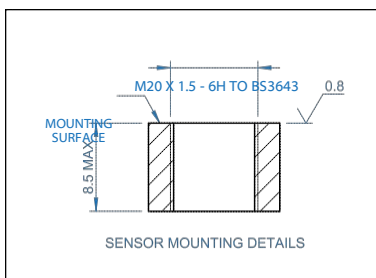
Key Features

- Reduce unplanned downtime
- 4 measurement options
- 3 output options
- Captures and retains ferrous debris
- Continuous real-time monitoring
- Easy installation
- Low cost of ownership

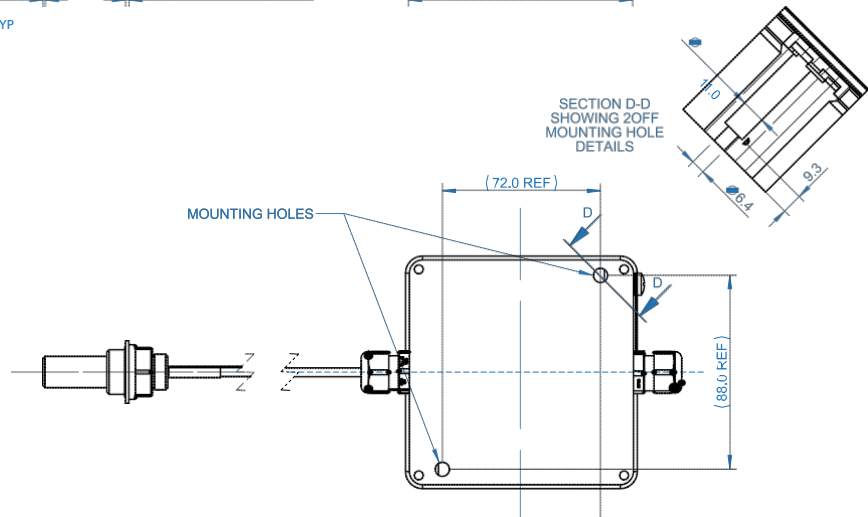
The new Industrial **SI-900 Series Oil Condition Monitoring Sensor** provides continuous real-time monitoring of ferrous wear and failure particles with a water in oil contamination, or temperature indication as a third channel. The **SI-900 Series** provides an early indication of potential breakdowns in gearboxes and transmissions and supports planned preventative maintenance.



RoHS
Compliant



**RELIABILITY
THRU SIMPLE
DESIGN**



All dimensions in mm.
Due to ongoing product development
specifications are subject to change.

ELECTRICAL

	Voltage	4-20mA	CAN
Supply Voltage	+6 to +32VDC*	+9 to +32VDC	+5 to +32VDC
Over Voltage Protection	>32 VDC		
Power Consumption	<2.9 W	<4.0 W	<2.8 W
Reverse Polarity Protection	to -32 VDC		
Analogue Resolution	10 bit		
Report Rate	10 Hz	1 Hz	
Sensor Configuration	Accessible via USB		

* Supply voltage to be minimum 0.5V above output voltage

ANALOG OUTPUTS

	Voltage	4-20mA
Channel 1 (fine)	0 – 10 VDC (configurable)	1 mA – 20 mA (configurable)
Channel 2 (Coarse)	0 – 10 VDC (configurable)	1 mA – 20 mA (configurable)
Channel 3 (Oil/Temp)	0 – 10 VDC (configurable)	1 mA – 20 mA (configurable)
Error Indication	0 – 10 VDC (configurable)	1 mA – 20 mA (configurable)
Optional Output Inhibit (during zero/span)	0 – 10 VDC (configurable)	1 mA – 20 mA (configurable)

CONNECTIONS

Sensor Wiring	26 AWG PTFE 3G210 Screened with DR-25 Jacket
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CHEMICAL COMPATIBILITY

Fuels	Diesel, Gasoline
Oils	Hydraulic, Gear, Mineral, Vegetable, Synthetic Ester, Semi-synthetic, Polyalphaolefin (PAO), Polyalkyleneglycol (PAG)
Coolants	Ethylene Glycol, water
Fluids	Salt water
Differential Pressure	10 Bar
Cable Pull	3 axis, 50 N
General Handling	1m Within Packaging on all 3 sides

MECHANICAL

Sensor Size	57mm x ø24.5mm
Enclosure	55mm x 30mm x 12mm
Sensor Mounting	2 off M4 Socket Cap Screws (not supplied)
Weight	0.21kg
Materials (sensor)	Aluminum Alloy, FEP, PEI
Materials (Enclosure)	Aluminum Alloy, st/steel, polyester

DIGITAL OUTPUTS

J1939 Data length	8 bytes
PGN	130816
Byte 0	Coarse measurement Value in range 0 – 100
Byte 1	Fine measurement percentage, no scaling Value 255 – optional output inhibited during calibration
Byte 2	8 Status bits
Bit 0	High/Low temperature exceeded
Bit 1	Oil Upper threshold exceeded
Bit 2	Oil Lower threshold exceeded
Bit 3	Fine measurement error
Bit 4	Coarse measurement error
Bit 5	Oil measurement error
Bit 6	Internal temperature sensor error
Bit 7	External temperature sensor error
Byte 3-7	Manufacturer use

ENVIRONMENTAL

Protection Class Sensor:	IP68 / IP69k to EN60529	
Enclosure	IP66 / IP69K to EN60529	
Operating temp	Sensor	-40°C to +150°C to EN60945, EN60068-2-1, ISO16750-4
	Enclosure	-40°C to +125°C to EN60945, EN60068-2-1, ISO16750-4
Humidity	95% RH +55°C EN60945, EN60068-2-30 Test Db, ISO16750-4	
Thermal Shock	EN60945, EN60068-2-14 Test Na, ISO16750-4	

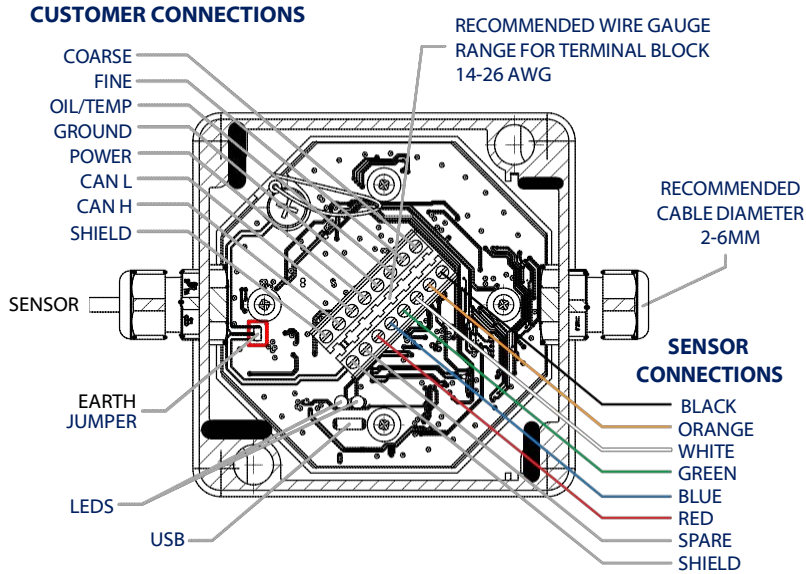
EMC

Marine	EN60945
Vehicle Components	EN 50498 & Automotive E-marking to UN ECE Reg10
Light Industrial	EN61000-6-3, EN61000-6-1
Heavy Industrial	EN61000-6-4, EN61000-6-2
Measurement Control	EN61326-2-1
Construction Machinery	EN13309
Earth Moving Machinery	ISO 13766
Agricultural & Forest Machinery	ISO 14982

VIBRATION

Marine EN60945	3 axis 2 to 13Hz, +/-1mm 13.2Hz to 100Hz constant acceleration of 0.7g
Industrial EN60068-2-6	3 Axis 10 to 55 Hz 0.75mm or 10g
Motorsport / Automotive	3 Axis Random 5 - 2000 Hz Up to 36g
Shock EN60068-2-27	3 Axis 25g, 6ms, 1000 cycles

Connections



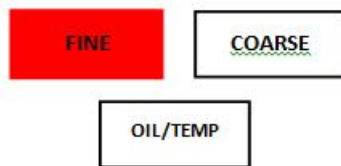
Ordering Information

INDUSTRIAL OIL DEBRIS ASSY 4-20 mA	SI-900-045
INDUSTRIAL OIL DEBRIS ASSY VOLTAGE	SI-900-046
INDUSTRIAL OIL DEBRIS ASSY CAN	SI-900-047
USB CABLE	SI-900-116
USB STICK	SI-900-001
CONDUIT KIT MALE ADAPTOR FEMALE ADAPTOR CONDUIT TUBE M16 SEALINGWASHER	SI-900-051-X

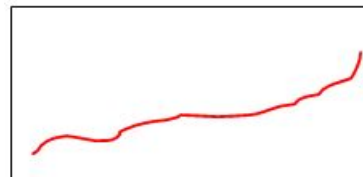
Configuration Software

Each **SI-900 Industrial Oil Condition Monitor Kit** includes software; the software is used to:

- Initially configure the monitor
- Compliment the monitors external indicators with an integral software alarm panel
- Updating of the monitor's alarm settings and re-configuration post 3rd party oil sample testing
- Periodically review archived oil condition data and trends



ALARM PANEL



RECORD / TREND

Kit includes: SI-900 Series Monitor, sensor, 3m interface cable, software, USB cable and user's manual

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Authorized Spectrum Reseller: