Engine & Transmission Condition Monitoring Sensors

REDUCE DOWNTIME. INCREASE RELIABILITY. **REDUCE COSTS.**

The condition monitoring sensors from Gill Sensors & Controls retains and measures ferrous debris from gear and bearing degradation. Installed in the sump or oil line, the sensor also detects water contamination and oil presence in one compact sensor.

- Multiple Output Signals: 0-10V, 4-20mA, CAN
- Continuous real-time monitoring
- Captures and retains debris
- Low cost of ownership
- Local alarm indication
- Small and lightweight, easy to install

For more information, visit
gillsc.com/condition

More information at **gillsc.com**

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T +44 (0)1590 613900

GILL
Sensors & Controls

Continuous, multi-function oil condition sensing

- 4 oil condition measurement parameters
- Captures and retains ferrous debris
- Continuous real-time monitoring
- Easy installation
- Low cost of ownership
- 4-20mA, 0-10v & CAN outputs

ANALOGUE OUTPUT

	Voltage	4-20mA
Channel 1 (fine)	0.25 – 10V DC (configurable)	4mA - 20mA (configurable)
Channel 2 (coarse)	0.25 – 10V DC (configurable)	4mA - 20mA (configurable)
Channel 3 (oil/temp) Switched	0.25 – 10V DC (configurable)	4mA - 20mA (configurable)
Error indication	<0.25 – 10V DC (configurable)	1mA - 20mA (configurable)

DIGITAL OUTPUT

J1939 data length	8 bytes
PGN	130816
Byte 0	Coarse measurement percentage, no scaling Value 255 – optional output inhibited during calibration
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

ORDERING

Output:
045 = 4-20mA
046 = 0-10V
047 = CAN

Mounting Thread Code:
See table overleaf

4212 - PK - ☐ ☐ ☐ - ☐

USB cable = 1000-CO-116
USB stick = 1000-SW-001
Conduit kit = 4212-10-051-X

ELECTRICAL

	Voltage	4-20mA	CAN
Supply voltage	6 - 26V DC	9 - 26V DC	5 - 26V DC
Over voltage protection		>32V DC	
Power consumption	<2.9W	<5.6W	<2.8W
Reverse polarity protection		to -32V DC	
Analogue resolution		10 bit	
Report rate	10Hz	10Hz	1Hz
Sensor configuration		Accessible via USB	

MECHANICAL

Sensor size	57 x ø24.5mm
Display Enclosure	105.5 x 105.5 x 66mm
Enclosure mounting	2 off M6 clearance holes
Materials (sensor)	Aluminium alloy, FEP, PEI
Materials (enclosure)	Aluminium alloy, st/steel, polyester

LIQUIDS

Fuels	Diesel, gasoline
Oils	Hydraulic, gear, mineral, vegetable, synthetic ester, semi-synthetic, polyalphaolefin, polyalkyleneglycol
Coolants	Ethylene glycol, Water
Other	Salt water

ENVIRONMENTAL

Sensor protection	IP66 / IP68 / IP69k
Enclosure protection	IP65
Differential pressure	10 Bar
Sensor operating temperature	-40° to +150°C
Enclosure operating temperature	-40° to +85°C
Humidity	95% RH @ +55°C

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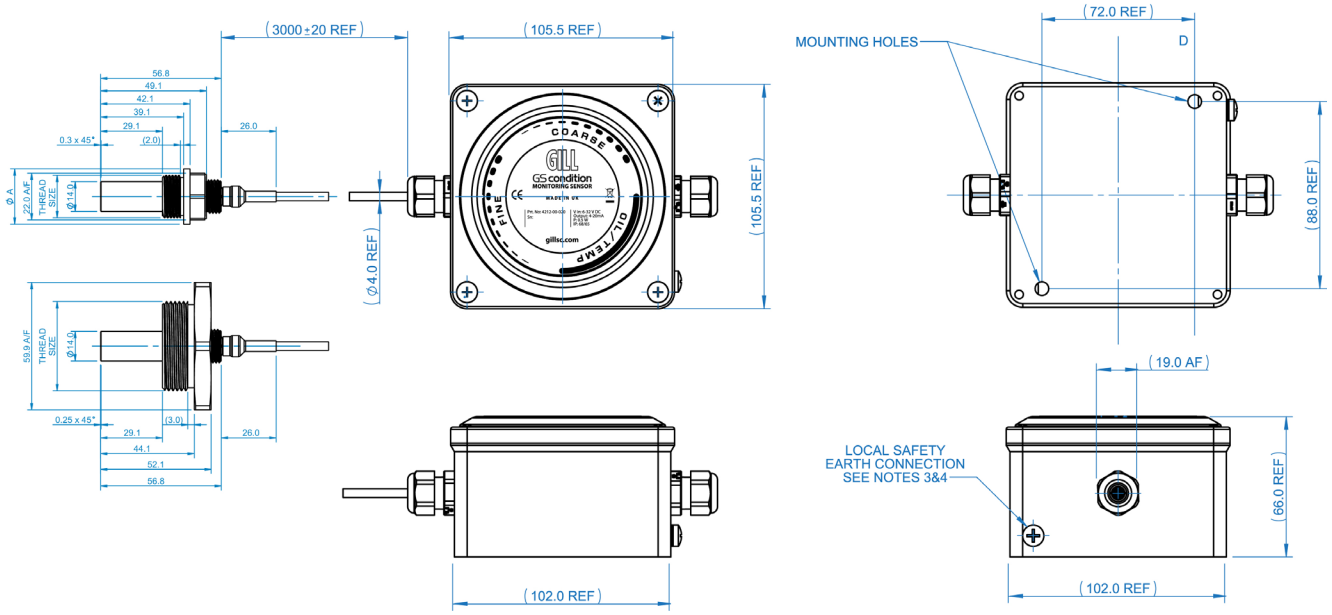
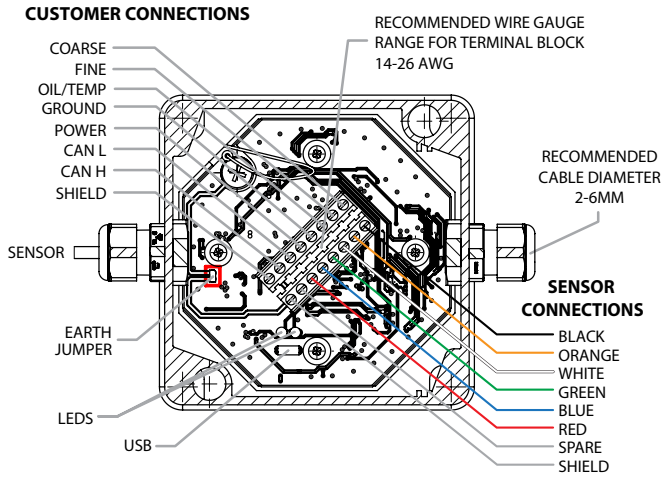
DIMENSIONS



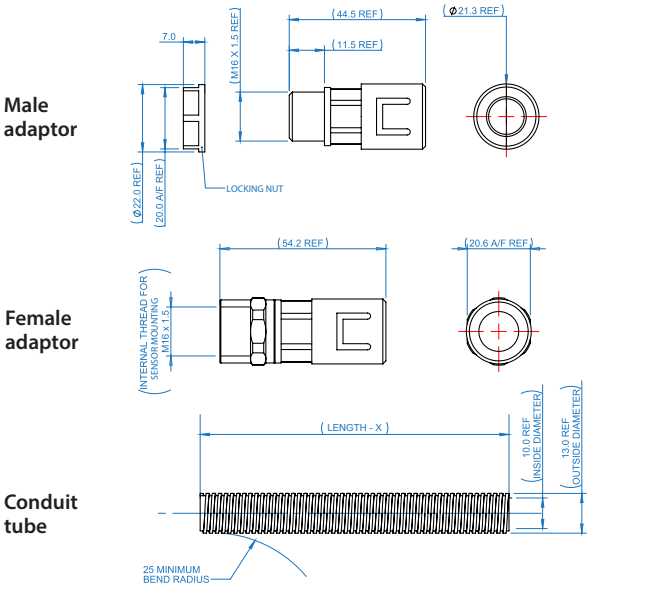
MOUNTING THREADS

Thread Code	Thread Size	Outside Dia A	Spanner A/F	Torque ±10%	Thread Code	Thread Size	Outside Dia	Spanner A/F	Torque ±10%
A	M22 x 1.5	26.0	22.0	50 Nm	N	M42 x 2.0	67.0	60.0	100 Nm
B	M24 x 2.0	26.0	22.0	50 Nm	P	1 1/2" BSPP	67.0	60.0	100 Nm
C	3/4" x 16 UNF	26.0	22.0	50 Nm	Q	1" BSPP	67.0	60.0	100 Nm
D	1/2" BSPP	26.0	22.0	50 Nm	R	1 1/8" 12 UNF	67.0	60.0	100 Nm
E	M20 x 1.5	26.0	22.0	50 Nm	S	1 5/16" 12 UNF	67.0	60.0	100 Nm
F	M25 x 1.5	32.0	22.0	50 Nm					
G	M26 x 1.5	32.0	22.0	50 Nm					
H	M27 x 2.0	32.0	22.0	50 Nm					
J	M30 x 1.5	32.0	22.0	50 Nm					
K	3/4" BSPP	32.0	22.0	50 Nm					
L	1" 14 UNF	32.0	22.0	50 Nm					
M	1" 18 UNF	32.0	22.0	50 Nm					

CONNECTIONS



CONDUIT KIT



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	Voltage	4-20mA	CAN
Supply voltage	6 - 32V DC	9 - 32V DC	5 - 32V DC
Over voltage protection		>32V DC	
Power consumption	<0.7W	<2.6W	<0.7W
Reverse polarity protection		to -32V DC	
Analogue resolution		10 bit	
Report rate	10Hz	10Hz	1Hz
Sensor configuration		Accessible via USB	

MECHANICAL

Sensor size	57 x ø24.5mm
Enclosure	55 x 30 x 12mm
Enclosure mounting	2 off M4 clearance holes
Materials (sensor)	Aluminium alloy, FEP, PEI
Materials (enclosure)	Aluminium alloy, st/steel, polyester

LIQUIDS

Fuels	Diesel, gasoline
Oils	Hydraulic, gear, mineral, vegetable, synthetic ester, semi-synthetic, polyalphaolefin, polyalkyleneglycol
Coolants	Ethylene glycol, Water
Other	Salt water

ENVIRONMENTAL

Sensor protection	IP66 / IP68 / IP69k
Enclosure protection	IP66 / IP68 / IP69k
Differential pressure	10 Bar
Sensor operating temperature	-40° to +150°C
Enclosure operating temperature	-40° to +125°C
Humidity	95% RH @ +55°C

ORDERING

Output:
048 = 4-20mA
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050 = CAN

Mounting Thread Code:
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4212 - PK - ☐☐☐ - ☐

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USB software = 1000-SW-001

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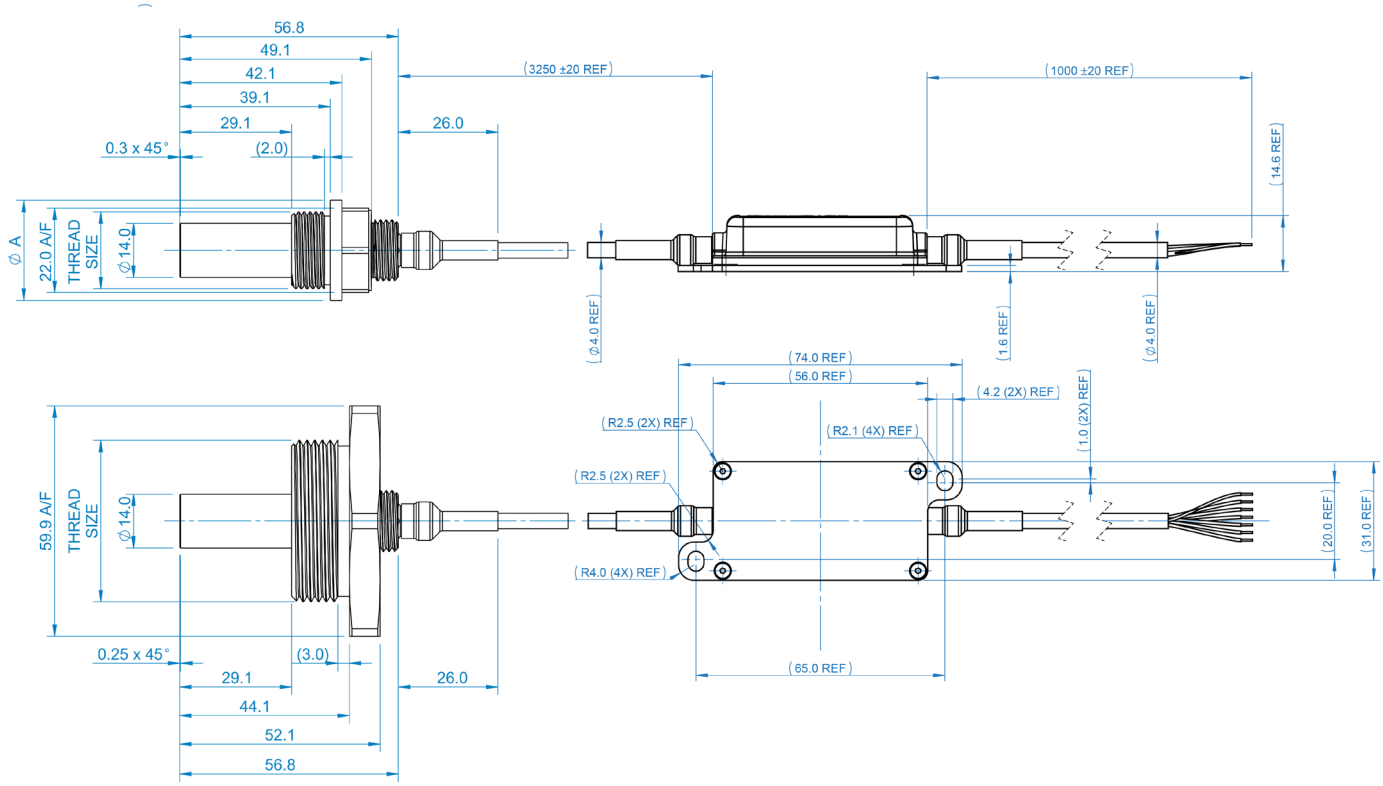

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WIRING DESIGNATION

4-20mA & 0-10V

White	Fine
Red	Power
Black	Power ground
Orange	Oil / temperature
Blue	(Not connected)
Green	Coarse
Spare (clear)	Screen

WIRING DESIGNATION

CAN

White	CAN H
Red	Power
Black	Ground
Orange	(Not connected)
Blue	CAN L
Green	(Not connected)
Spare (clear)	Screen