

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

## ELECTRICAL

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

## DIGITAL OUTPUT

|                          |   |
|--------------------------|---|
| <b>J1939 data length</b> | 8 bytes   |
| <b>PGN</b>               | 130816  |
| <b>Byte 0</b>            | Coarse measurement percentage, no scaling<br>Value 255 – optional output inhibited during calibration   |
| <b>Byte 1</b>            | Fine measurement percentage, no scaling<br>Value 255 – optional output inhibited during calibration   |
| <b>Byte 2</b>            | 8 Status bits<br>Bit 0 - High/low temperature exceeded<br>Bit 1 - Oil upper threshold exceeded<br>Bit 2 - Oil lower threshold exceeded<br>Bit 3 - Fine measurement error<br>Bit 4 - Coarse measurement error<br>Bit 5 - Oil measurement error<br>Bit 6 - Internal temperature sensor error<br>Bit 7 - External temperature sensor error |
| <b>Byte 3-7</b>          | Manufacturer use  |

## MECHANICAL

|                              |                                      |
|------------------------------|--------------------------------------|
| <b>Sensor size</b>           | 57 x Ø24.5mm                         |
| <b>Display Enclosure</b>     | 105.5 x 105.5 x 66mm                 |
| <b>Enclosure mounting</b>    | 2 off M6 clearance holes             |
| <b>Materials (sensor)</b>    | Aluminium alloy, FEP, PEI            |
| <b>Materials (enclosure)</b> | Aluminium alloy, st/steel, polyester |

## LIQUIDS

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

## ENVIRONMENTAL

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

## ORDERING

|                    |                   |                              |                    |
|--------------------|-------------------|------------------------------|--------------------|
| <b>Output:</b>     | 045 = 4-20mA      | <b>Mounting Thread Code:</b> | See table overleaf |
|                    | 046 = 0-10V       |                              |                    |
|                    | 047 = CAN         |                              |                    |
| <b>4212 - PK -</b> | [ ] [ ] [ ] - [ ] | <b>USB cable</b>             | = 1000-CO-116      |
|                    |                   | <b>USB stick</b>             | = 1000-SW-001      |
|                    |                   | <b>Conduit kit</b>           | = 4212-10-051-X    |

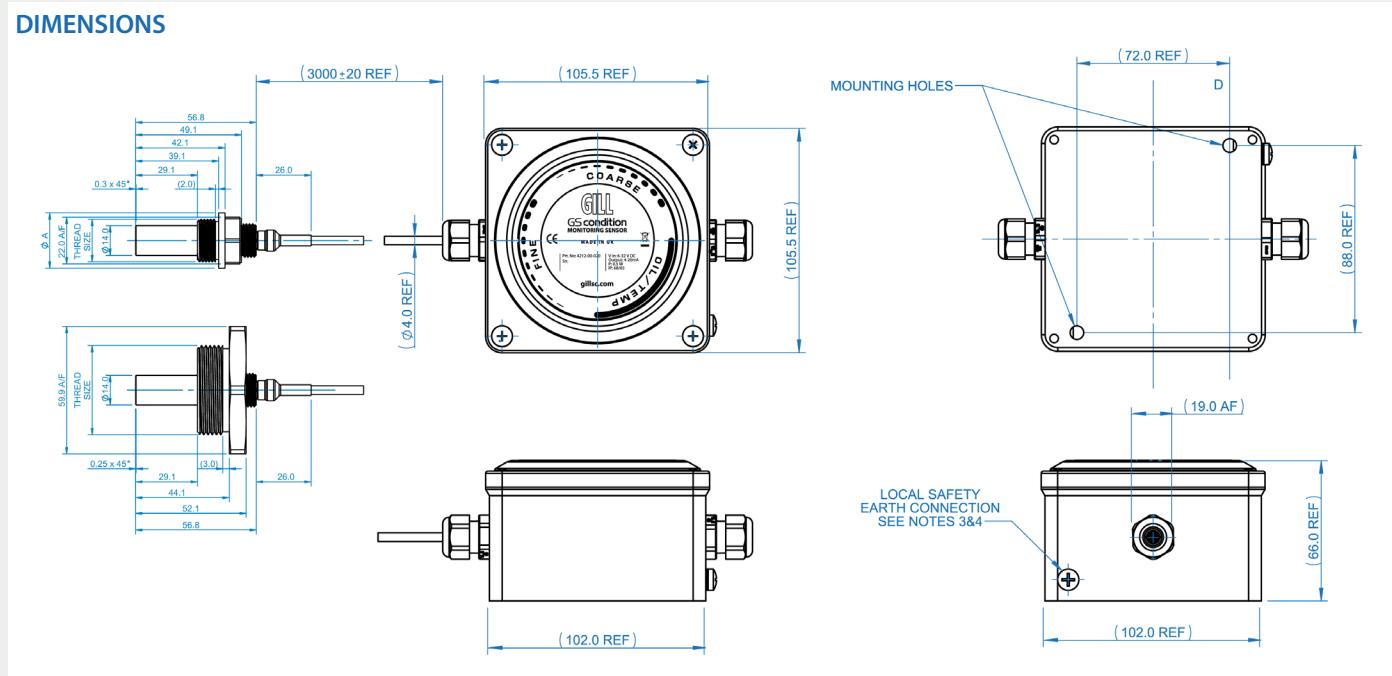


More information at [gillsc.com](http://gillsc.com)

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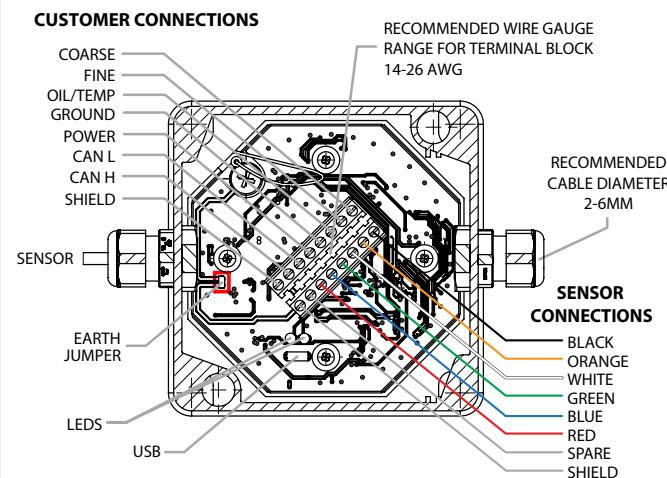
## DIMENSIONS



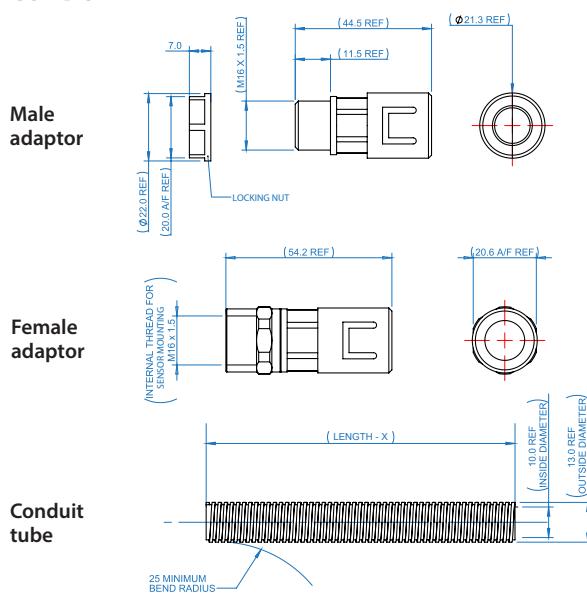
## MOUNTING THREADS

| 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

More information at [gillsc.com](http://gillsc.com)

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Sensors &amp; Controls