

## Lightweight Liquid Level Sensors

High precision liquid level measurement for specialist applications

LevelLite is a specialist sensor for applications where equipment weight is a priority.

Built from quality aluminium with sealed electronics, and with a range of mounting options, LevelLite offers continuous level measurement in harsh environments like Unmanned Aerial Vehicles where high performance and low weight equal maximum flying time.

Factory calibrated to deliver precise measurement as standard, LevelLite is available with either a switched or temperature output and can be used in fuels, oils and coolants for maximum flexibility of use.

### Typical Applications

- Unmanned aerial vehicles
- Formula 1 motorsports and electric hypercars
- Aero applications

### Key Features

- Lightweight 6082 grade aluminium construction
- Accuracy 1% FSD at 20°C
- Wide operating temperature range  $-40^{\circ}\text{C}$   $+125^{\circ}\text{C}$
- Temperature or switched output options
- Multiple standard or custom mounting options
- Measures high performance fuels, oils and coolants
- Any length available between 100mm—750mm

### Benefits

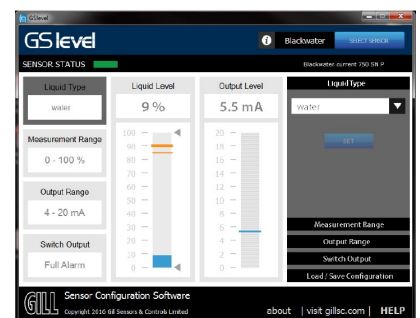
- Lightweight sensor using high grade components
- Compact design for tight spaces
- Continuous level measurement with secondary alarm output
- Solid state electronics for long life in harsh conditions
- Accurate results from irregular shaped tanks
- No moving parts to maintain
- Factory calibration for precision and easy installation
- Proven in exacting applications - motorsport and aerial vehicles



Lightweight sensor



Multiple mounting options



Calibration software

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| PRIMARY OUTPUT    |   |
|-------------------|---|
| Standard Range    | 0.25—4.75V (See drawing Datum A—B)  |
| Maximum Range     | 0.25—10V (See drawing Datum A—B)  |
| Accuracy          | +/- 1% @ 50% FSD<br>(Full Scale Deflection) 20C                                   |
| Volumetric Output | Configurable through GSlevel software<br>Tank profiling wizard or CSV file upload |

| ELECTRICAL             |                                     |
|------------------------|-------------------------------------|
| Supply Voltage         | 5—32v DC                            |
| Supply Current         | <20mA                               |
| Data Interface         | RS232 (USB-RS232 adaptor available) |
| Measurement Resolution | 10 bit (1024 bits over range)       |
| Sample Rate            | 100Hz                               |

| ENVIRONMENTAL      |  |
|--------------------|--|
| Ingress Protection | IP68   |
| Shock              | BS EN 60068-2-27<br>(half sine pulse 25g, 6ms 1000 shocks<br>(positive & negative) in each 3 axis) |
| Vibration          | Resonant frequency search 5 to 2500Hz @<br>0.5g peak   |
| Pressure           | 10 bar (absolute and differential)   |
| EMC                | EN 610000, EN61326, EN 60945   |
| Thermal Shock      | BS EN 60068-2-14, test Na  |
| Dry Heat           | BS EN 60068-2-2 test Bb  |
| Cold               | BS EN 60068-2-1 test Ab  |
| Damp Heat          | BS EN 60068-2-30 test Db   |
| EMC                | BS EN 60945, BS EN 61326 & BS EN61000-6<br>-1/2/3/4  |

This product is not designed or certified for use in ATEX environments








| DIMENSIONS (SUMMARY)   |                                   |
|------------------------|-----------------------------------|
| Total Sensor Length    | Probe length + 12mm flange height |
| Mounting Flange Height | 12mm (excl. cable)                |
| Mounting Flange Ø      | 34mm (excl. mounting bracket)     |
| Measurement Length     | Probe length minus 7mm            |

| ORDERING   |  |
|--|--|
| <p><b>Length Range (mm):</b><br/>1 = 100 - 250<br/>2 = 251 - 500<br/>3 = 501 - 750</p> <p><b>Cable Exit:</b><br/>S = side exit<br/>T = top exit</p> <p><b>Secondary Output:</b><br/>Y = temperature<br/>N = switch</p> <p><b>Sensors</b></p> <p>4223 - 00 - <input type="text"/> <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/></p> <p><b>Exact Length (mm):</b></p> |  |

| SECONDARY OUTPUT       |  |
|------------------------|--|
| Switched (Option N)    | Open collector output 50V / 1A max<br>switch to ground (V-)                    |
| Hysteresis (Option N)  | Configurable through GSlevel   |
| Temperature (Option Y) | 0.25-4.75V (0.25v = -40C, 4.75V = +125C)<br>(not configurable through GSlevel) |
| Temperature Accuracy   | +/- 1.5°C (0°C—125°C)<br>+/- 2.0°C (-40°C—0°C)                                 |

| MECHANICAL          |  |
|---------------------|--|
| Lengths Available   | 100—750mm in 1mm steps                                 |
| Mounting Options    | 1 hole, 2 hole, 3 hole, 5 hole &<br>M22 x 1.5 threaded |
| Sealing Options     | Panel gasket or O-Ring                                 |
| Cable               | Flying lead, 1000mm                                    |
| Cable Cores         | 6 with drain wire                                      |
| Wire Size           | 26AWG 7/0.15   |
| Wire Sleeve         | XLPE   |
| Cable Exit Options  | Top or Side  |
| Weight (excl cable) | 48g (100mm probe + 0.256g/mm)                          |
| Cable weight        | 0.024g/mm  |

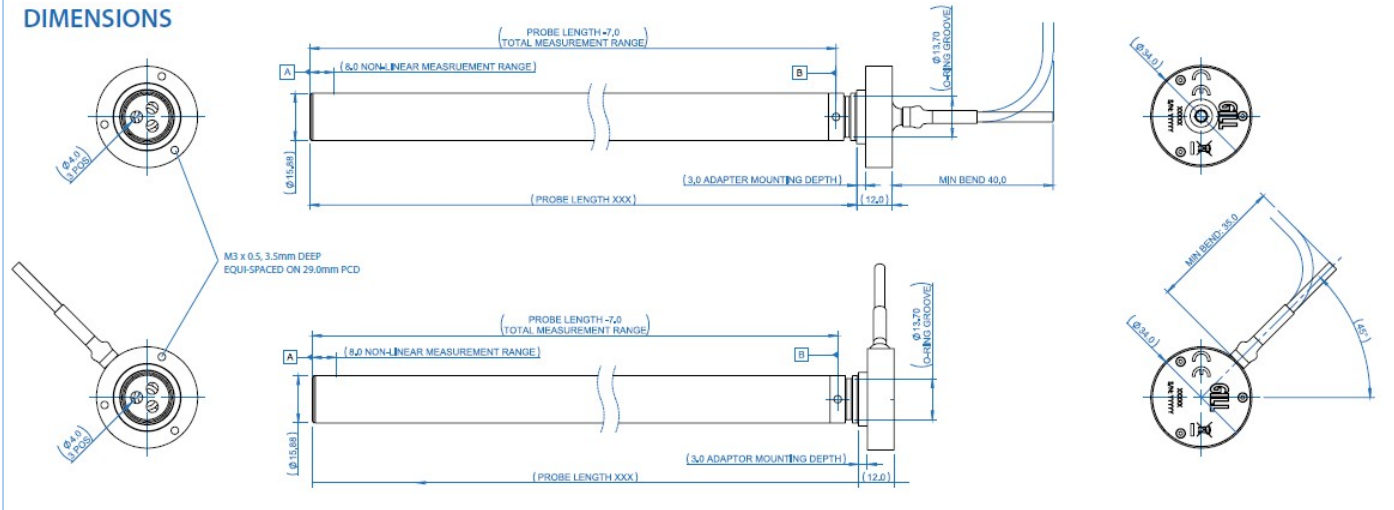
| LIQUIDS  |  |
|----------|--|
| Fuels    | Diesel, Gasoline, Biofuels   |
| Oils     | Hydraulic, Gear, Motor, Vegetable, Syn-<br>thetic Ester, Polyalphaolefin, Polyglycol |
| Coolants | Ethylene Glycol, Water   |
| Other    | Salt Water   |

| CONNECTIONS   |  |
|---|--|
|  | RED +V (5-32VDC)                           |
|  | BLACK -V (GROUND)                          |
|  | ORANGE Primary output (0.25 to 4.75VDC)    |
|  | BLUE Secondary output (refer to datasheet) |
|  | GREEN RS232 Rx line                        |
|  | WHITE RS232                                |
|  | SILVER Drain Wire                          |

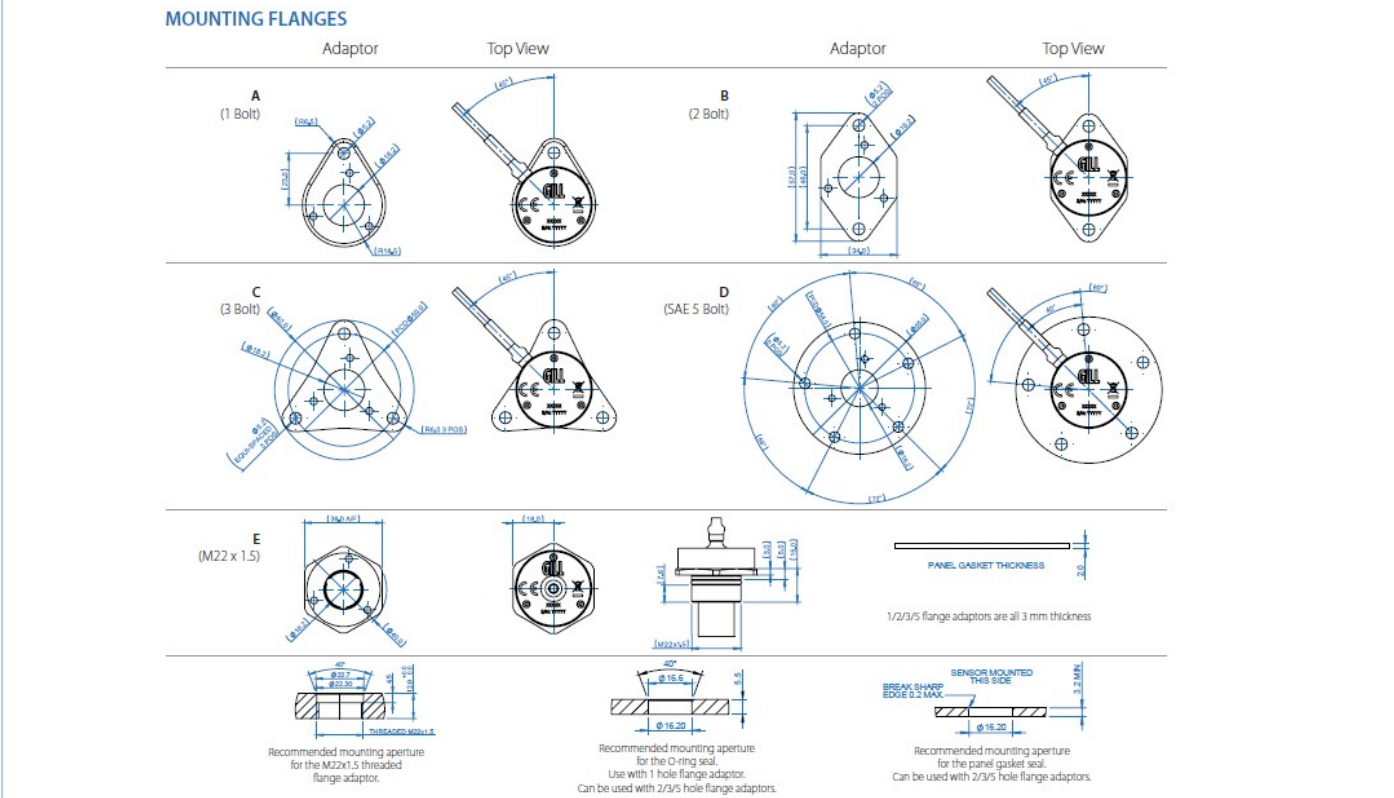
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### DETAILED DIMENSIONS (SENSOR—ALL VERSIONS)



### DETAILED DIMENSIONS (MOUNTING OPTIONS)



For more information about LevelLite please contact Gill Sensors & Controls.

[gillsc.com](http://gillsc.com)