

Key Features

- Suitable for Blackwater, Greywater, Salt and Fresh Water
- Non-stick Coating
- No Moving Components
- Compensates for Irregular Tanks
- Continuous Measurement
- No Holes to Block

The GSlevel Blackwater Liquid Level Sensor has been designed for all applications where consistently reliable and maintenance-free measurement of Black and Grey water is needed.

The sensor probe does not have any holes that could block up and has a non-stick coating that prevents the build-up of substance accumulation that can lead to false measurements.

Capacitive technology provides continuous measurement with no moving parts. Tank profiling software offers compensation for irregular tank shapes and multiple output options, including NMEA2000, providing compatibility for the widest range of applications.



OUTPUT SPECIFICATION (VOLTAGE)

Primary Output Standard Range	0.25 - 4.75V DC (*limited by supply voltage) Range is Datum A to Datum B (see Page 3)
Primary Output Maximum Range	0.25 - 10V DC (*limited by supply voltage) Configurable through user software
Primary Output Accuracy	+/-10% FSD @ 20°C
Thermal Drift	<10% FSD over full temperature range
Primary Volumetric Output	Configurable through user software using tank profiling wizard or CSV file upload
Secondary Output	Open collector output 50V / 0.5a max switch to ground (V-)
Secondary Output Hysteresis	Configurable through user software

OUTPUT SPECIFICATION (CURRENT)

Primary Output Standard Range	4-20mA (*limited by supply voltage) Range is Datum A to Datum B (see Page 3)
Primary Output Maximum Range	4-20mA (*limited by supply voltage) Configurable through user software
Primary Output Accuracy	+/-10% FSD @ 20°C
Thermal Drift	<10% FSD over full temperature range
Primary Volumetric Output	Configurable through user software using tank profiling wizard or CSV file upload
Secondary Output	Open collector output 50V / 0.5a max switch to ground (V-)
Secondary Output Hysteresis	Configurable through user software

OUTPUT SPECIFICATION (RESISTIVE)

Primary Output Standard Range	10-180Ω or 240-33Ω selectable through user software Range is Datum A to Datum B (see Page 3)
Primary Output Maximum Range	10-1000Ω or 1000-10Ω Configurable through user software
Primary Output Accuracy	+/-10% FSD @ 20°C
Thermal Drift	<10% FSD over full temperature range
Primary Volumetric Output	Configurable through user software using tank profiling wizard or CSV file upload
Secondary Output	Open collector output 50V / 0.5a max switch to ground (V-)
Secondary Output Hysteresis	Configurable through user software

OUTPUT SPECIFICATION (NMEA2000)

Output	0-100%
Output Accuracy	+/-10% FSD @ 20°C
Thermal Drift	<10% FSD over full temperature range
Volumetric Output	Configurable through user software using tank profiling wizard or CSV file upload
Communication Interface	NMEA2000 compliant marine network standard

ELECTRICAL

Supply Voltage*	+5 to +32V DC
Over Voltage Protection	<40V DC
Supply Current	<20mA
Reverse Polarity Protection	To -32V DC
Resolution	12 bit (4096 points over measurement range)
Output Update Rate	0.4Hz (NMEA 2000) 100Hz (Resistive) 10Hz (0-10V & 4-20mA)
Configuration Interface	Accessible via local micro USB port






MECHANICAL

Wetted Materials	Stainless Steel 316, FEP, EPDM
Probe Length	50mm to 2000mm
Probe Diameter	21mm
Mounting	1.25" BSP threaded
Tank Seal	EPDM O-ring or Klingersil Panel Gasket






WIRING

Cable	NMEA2000 compliant screened cable (temperature rating -40°C to +75°C)
Cable Length	500mm





CONNECTIONS (VOLTAGE)

Colour	Description
	Red Power +V DC
	Black Ground -V DC
	Blue Switch Output
	White Voltage Output (0-10 V DC)
	Bare Shield

CONNECTIONS (RESISTIVE)

Colour	Description
	Red Power +V DC
	Black Ground -V DC
	Blue Switch Output
	White Resistive Output (10-1000 ohms)
	Bare Shield






STATUS INDICATION

Colour	Description
	Green Power / All working
	Yellow (flashing) Sensor malfunction
	Red (flashing) Sensor failure
	Red (solid) Sensor upgrade

ENVIRONMENTAL

Ingress Protection	IP6x / IPx6 / IPx8 / IPx9k to EN60529
Operating Temperature	-40°C to +86°C to EN60945 (NMEA2000 cable rated to +75°C)
Humidity	93% RH at 40°C EN60945
Thermal Shock	EN60945
Thermal Cycling	100 cycles over full temperature range
EMC	EN60945 (Marine) EN61000-6-3, EN61000-6-1 (Light Industrial) EN61000-6-4, EN61000-6-2 (Heavy Industrial) EN61326-2-1 (Measurement Control)
Vibration	EN60945
Shock	EN60068-2-27 3 Axis 25g, 6ms, 1000 cycles in each axis
Corrosion Resistance	Marine grade stainless steel 316 construction
Differential Pressure	10 Bar
Absolute Pressure	5 Bar
Cable Pull	3 axis, 50N
General Handling	1m drop onto hard surface within packaging on all 3 sides
Compatible Mediums	Blackwater, Greywater, Saltwater, Fresh water

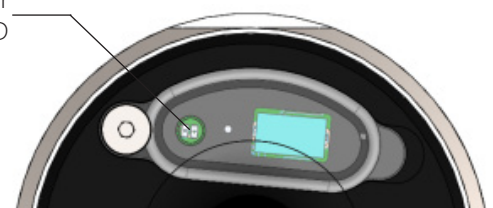
CONNECTIONS (CURRENT)

Colour	Description
	Red Power +V DC
	Black Ground -V DC
	Blue Switch Output
	White Current Output (4-20mA)
	Bare Shield

CONNECTIONS (NMEA2000)

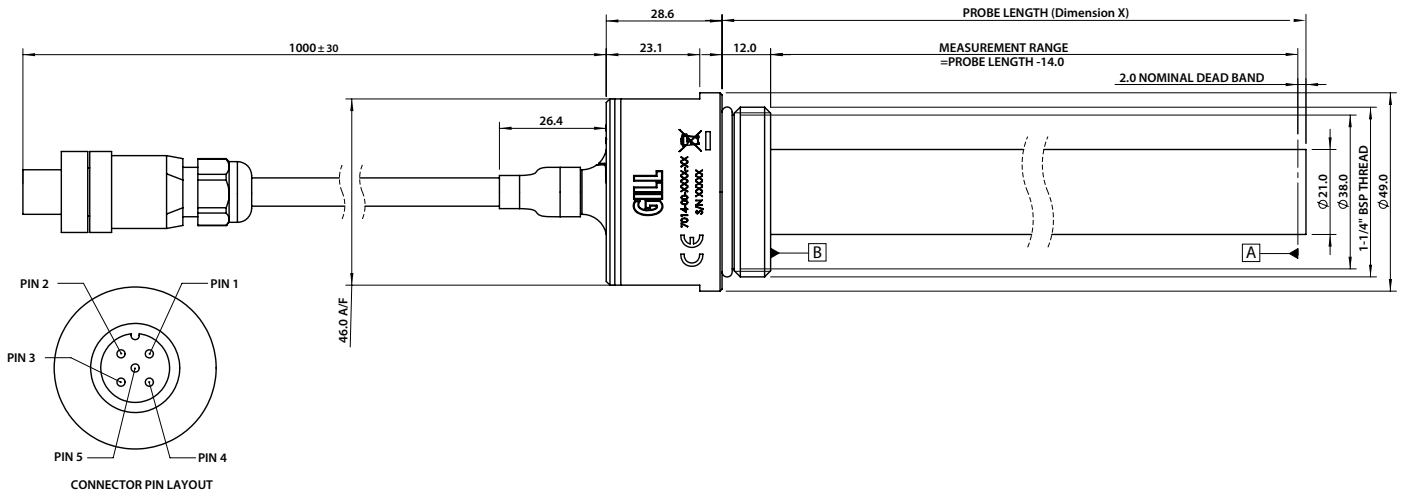
Pin Number	Description
1	Shield
2	NET-S (+V)
3	NET-C (-V)
4	NET-H
5	NET-L

Status Indicator LED



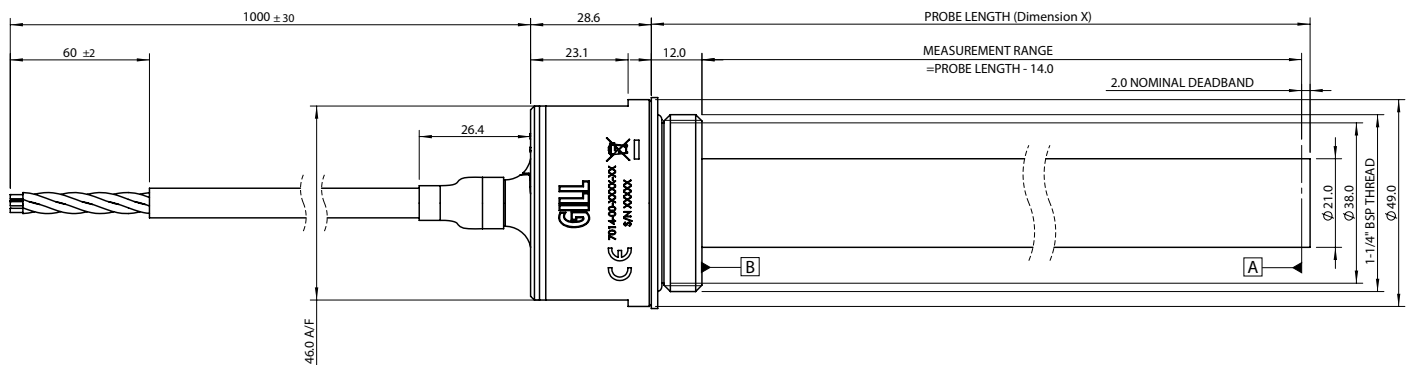
NMEA2000 DIMENSIONS

Dimension X is customer specified

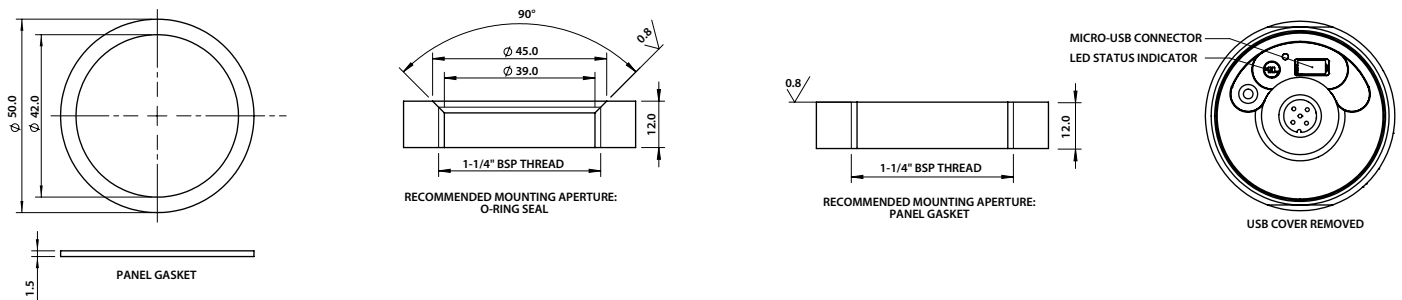


VOLTAGE / RESISTIVE / CURRENT DIMENSIONS

Dimension X is customer specified



GASKET / MOUNTING APERTURE / INTERFACE DETAILS



Sensor supplied with O-ring & gasket

Specifications subject to change without notice

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