

## Flygt LSU100 Setup with Flygt Controllers

### SUMMARY

This document is intended to provide mounting instructions and controller setup to use an LSU100 ultrasonic transducer with an FMC/APP700 or APP521 controller

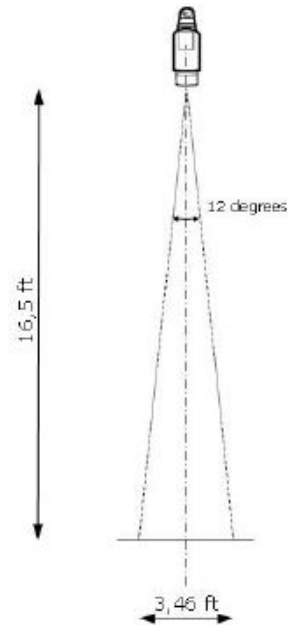
### MOUNTING

Mounting information can be found in the LSU100 manuals, but there are two main considerations:

- Beam Angle: 12°

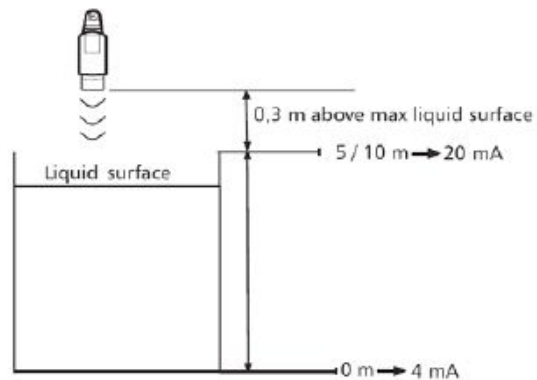
A beam angle of 12 degrees means that you need a surface area on the sump bottom of approximately  $\frac{1}{5}$  of the installation height of the sensor.

This would mean for a 0-16.4 ft (0-5 m) sensor, that you would need at least a diameter of 3.46 ft (1.05 m) at the bottom without any disturbances when using the full range of the sensor.



Blanking distance: 1 ft

Additionally, the LSU100 has a blanking distance and measurement of the sensor starts 1 ft (0.3 m) apart from the end of the sensor.



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### APP700 / FMC SETTINGS

To properly scale an LSU100 with an FMC unit, follow these directions:

**Maximum Level-** Set this to the distance between the bottom of the sump to the sensor minus 1 foot (blanking distance)

**Minimum Level-** Maximum level (as determined above) minus the span of the sensor (either 16.4 ft or 32.8 ft depending on which span sensor you are using). This value will be either zero or a negative value.

### APP521 SETTINGS

To properly scale an LSU100 with an APP521 unit, follow these directions:

**Sensor Range-** Set this to the span of the sensor (either 16.4 ft or 32.8 ft depending on which span sensor you are using).

**Calibration-** Determine the actual level of water in the sump, by measuring or pumping down to a known value. Enter the known value when the transducer is mounted and reading properly, and the controller will shift the span accordingly.

## Additional Flygt LSU 100 Specifications

**Beam angle-** 12°

**Level Accuracy-**  $\pm 0.1$  in. (2,5 mm) for measured distance  $< 3.3$  ft. (1 m),  $\pm 0.25\%$  of distance for measured distance  $> 3.3$  ft. (1 m)

(Under Reference Conditions: *Temperature: 68 °F (20 °C), Pressure: 1013 mbar (atmospheric pressure), Relative Humidity: 50%, calm and stable water surface.*)

**Ultrasonic Pulse Rate-** 1 per second (user configurable 0.5 to 2.0 seconds)