

# Section 16905 Level Monitoring

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## 1. General

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### 1.1 Description

- .1 For all instrumentation, the Equipment Supplier shall furnish all labour, materials, components, and programming, and shall provide all design, assembly, and start-up services required to provide a complete and workable system.
- .2 Provide assistance to the Owner and Engineer for the testing and commissioning of the instrumentation.

### 1.2 Float Level Switch Application

- .1 Float level switches shall be a high-level alarm float and a low level float and shall be cord suspended utilizing a stainless steel Kellems cable grip. Cord shall be continuous to the junction box and splices will not be acceptable between the float and the junction box.

### 1.3 Operation and Maintenance Manuals

- .1 Provided for insertion within the general project operation and maintenance manuals shall be at least four copies of original equipment manufacturer printed manuals. These shall include at a minimum:
  - Full User Manual
  - Installation Instructions
  - Full list of Parameters/Programming Manual
  - Troubleshooting/Maintenance Manual
- .2 A complete list of all parameters programmed into each instrument at the end of commissioning shall be provided for insertion within the general project operation and maintenance manuals. These lists shall be clearly sorted by instrument tag number.

### 1.4 Submittals

- .1 Submit shop drawings for all level monitoring instrumentation (including float switches) providing full details on make, measuring range, instrumentation tag number, full model number (with options clearly indicated), dimensions, wiring and power requirements, digital communication addresses (Modbus, Profibus, Foundation Fieldbus, etc.), and all installation accessories for each level monitor.
- .2 Shop drawing submittals for level monitors shall be clearly identified by tag number. For example: “Ultrasonic Level Monitor A - LIT-123” and “Radar Level Monitor B – LIT-456”. Like flowmeters can be combined for example: “Ultrasonic Level Monitor C – LIT-123/LIT-456/LIT-789”.



## 2. Products

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### 2.1 UV Area and Clean-In-Place Single Point Level Float Switch

- .1 High level alarm float switch shall be on a single rod, single float level sensor.
- .2 The level sensor shall be CSA approved and mounted vertically.
- .3 Float shall be of Polypropylene.
- .4 Float switch shall have SPDT contact rated for 5A at 120VAC.
- .5 Float activation level shall be:
  - High Level Float - to be confirmed during shop drawing review
- .6 Switch shall be Flygt ENM-10 as available from EB Horsman (604-219-1658)

### 2.2 Containment Tank Two Point Level Float Switches

- .1 High and Low level alarm float switches shall be on a single rod, fixed stem.
- .2 The level sensor's stem and flange shall be of 316 stainless steel and shall be NSF-61 approved. The level sensor shall be mounted vertically.
- .3 Float shall be of 316 stainless steel and shall be suitable for use in 25% phosphoric acid solution. 316 stainless steel collar type float stops shall be used.
- .4 Float switch shall have SPDT contact rated for 20VAC at 120VAC.
- .5 Float activation level shall be:
  - High Level Float - to be confirmed during shop drawing review
  - Low Level Float - to be confirmed during shop drawing review
- .6 Switch shall be Gems LS-800 Series as available from Davis Controls (604-298-9101).

## 3. Execution

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**NOT APPLICABLE**

**End of Section**