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# HORIZONTAL COMPACT SHORT-SWING LIQUID LEVEL SENSORS

LCS Series

High or low level switching

N.O./N.C. SPST output

Mounted on the side wall of a tank

Certified reed switch (UL component listed)

Body material is acetal and float is polypropylene

The LCS series of point liquid level switch demonstrates a high degree of reliability due to the use of non-reactive wetted components and a unique reed switch designed specifically for level sensing applications. The sensor utilizes a moving float with an embedded magnet to activate a reed switch located in the sensor body. As the liquid level raises the float, it moves a magnet into close proximity of the reed switch and actuates it to give an open contact or closed contact switch indication.

The reliability of this sensor results from a very simple operating principle, a single moving part, media compatible wetted materials, and a unique reed switch design that has a UL recognized component certification.

The sensor quickly mounts into the side wall of a liquid storage tank using a unique push fit design. This is an external configuration. The output is a simple N.O. or N.C. SPST reed switch that utilizes Ruthenium contact points for reliability. Changing from a N.O. output to a N.C. output is done by rotating the switch 180° in the mounting hole. This change can be done in the field. Electrical outputs are a single pair of wires with PVC insulation and a length of 0.5m, or one of three optional integrated connector designs.

### Features

- Voltage rating up to 250VAC
- Current rating up to 1.0 amp
- · Compact design and low profile
- · Cable or integrated connector
- · Rapid Push Fit Installation
- EPDM Sealing Grommet

#### **Applications**

- Water storage tanks
- Full and/or empty detection
- Pump on/off controls
- · Marine bilge and ballast tanks
- Flood detection and prevention
- Coolant level indication
- Livestock watering tanks
- Irrigation systems
- Water treatment plants

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## Absolute Maximum Ratings(1)

| Parameter                         | Min  | Max  | Units | Notes/Conditions          |
|-----------------------------------|------|------|-------|---------------------------|
| DC contact voltage                |      | 200  | V     |                           |
| DC contact current                |      | 1.0  | Α     | For LCS-01 only           |
| RMS contact voltage               |      | 250  | V     | Do not exceed 40W         |
| RMS contact current               |      | 1.0  | Α     |                           |
| DC contact voltage                |      | 48   | V     | For LCS-02, -03, -04 only |
| DC contact current                |      | 1.0  | А     | Do not exceed 40W         |
| Storage and operating temperature | -30  | 60   | °C    |                           |
| Fitting pressure                  | -1.0 | 0.34 | Bar   | Internal tank pressure    |

<sup>(1)</sup>Maximum limits the device will withstand without damage

### **Product Specifications**

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|---|--------|--|--|--|
| Parameter                                     |        | Details & Options  |  |  |
| Mounting Orientation                          |        | Side entry   |  |  |
| Fitting                                       |        | External push fit grommet  |  |  |
| Switch Operation                              |        | N.C. when float is horizontal  |  |  |
| Contact Forms                                 |        | Form A (SPST)  |  |  |
| Contact Material                              |        | Ruthenium  |  |  |
| Contact resistance (max)                      |        | 140 mΩ   |  |  |
| Housing Material                              |        | Acetal/polypropylene   |  |  |
| Float Material                                |        | Foamed polypropylene   |  |  |
| Cable Description                             |        | 22 AWG 16/0.2mm PVC insulated, UL/CSA/BS6361 (model LCS-01)                            |  |  |
|   | LCS-02 | TE Connectivity Econoseal 3 P/N 344274 Mating connector – TE Connectivity P/N 344276-1 |  |  |
| Integrated Connector<br>Design Equivalent to: | LCS-03 | Delphi Packard 150 Series<br>Mating connector – Delphi Packard P/N 15336024            |  |  |
|   | LCS-04 | Yazaki 090 W/P 2P male   |  |  |
| Shock   |        | ±50g 11ms half sign duration   |  |  |
| Vibration                                     |        | ±35g 0 – 500Hz   |  |  |
| Ambient Humidity                              |        | 0 – 95% RH (non-condensing)  |  |  |
| Ingress Protection                            |        | IP68 (wetted surfaces) IP65 (non-wetted surfaces)                                      |  |  |
| Approvals & Certifications                    |        | UL file E98428   |  |  |

### **Outline Dimensions and Connection Options**







