Table of Contents

Al Murabbah, 14713 - Riyadh, King Fahad Road, KSA
Tel: +966 (11) 810 73 62 | Email: info@rae-ksa.com

Fuel Level Sensor

(Dry Contact, Low & High Alarm)

Data Sheet

1. General Information

- **Product Name: Fuel Storage Level Sensor**
- **Brand**: **Fluidwell**
- **Model**: **GFL-3000**
- **Manufacturer**: **RAWAAT AL ENJAZ COMPANY.**
- **Part Number**: **FTS-GFL3000**
- **Version/Revision**: **Rev 1.3**
- **Date of Issue**: **July 2024**
- **Made in KSA**
- **Application**: **Generators, Fuel Storage Tanks (Dry Contact Interface for Low and High Alarms)**
- **Description**:
  The GFL-3000 is a highly reliable fuel level sensor designed for use in fuel storage tanks. It features dual dry contact outputs to trigger low and high fuel level alarms, ensuring safe and continuous operation. The sensor is ideal for integration with monitoring and control systems in critical infrastructure, industrial sites, and backup power generators. The rugged design ensures long-lasting performance in harsh environments.

2. Electrical Specifications

- **Supply Voltage**: **12V DC,**
- **Current Consumption**: **30mA**
- **Output Signal Type**: **Dry Contact** (NO/NC for both Low and High Alarms)
- **Low Level Alarm Contact Rating**:
  - **Maximum Switching Voltage**: 17V DC
  - **Maximum Switching Current**: 0.5A
- **High Level Alarm Contact Rating**:
  - **Maximum Switching Voltage**: 17V DC
  - **Maximum Switching Current**: 0.5A
- **Contact Resistance**: **< 100 mΩ**
- **Power Consumption**: **0.5W**

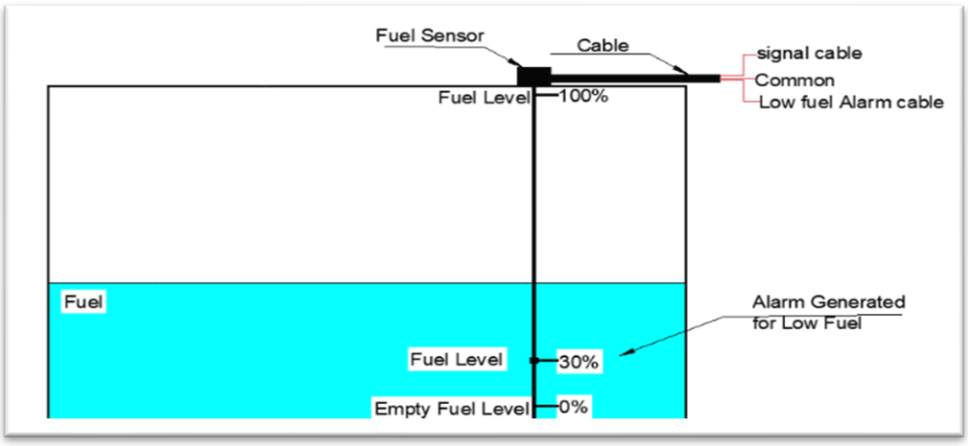
3. Mechanical Specifications

- **Sensor Type**: **Capacitive**
- **Dimensions**: **1300 mm (L) x 15.9 mm (W) x 1.2 mm (D) Can be adjusted as per the requirement.**
- **Weight**: **800 grams**
- **Mounting Type**: **Threaded (3/4)**
- **Connection Box**: **Aluminum**
- **Material**: **Stainless Steel**
- **Connector Type**: **4-wire**
- **Cable Length**: **1.4 meters**

4. Measurement Specifications

- **Measuring Range**: **0 to 5000 liters**
- **Accuracy**: **±5%**
- **Resolution**: **0.5 liters**
- **Response Time**: **100 ms**
- **Operating Temperature Range**: **-15°C to 80°C.**
- **Operating Pressure Range**: **Atmospheric pressure to 2 bar**
- **Output Signal Condition**:
    - **Low Alarm**: Dry contact closes (NO) when fuel reaches minimum threshold (set at 30% of tank capacity).
    - **High Alarm**: Dry contact closes (NO) when fuel reaches maximum threshold (set at 95% of tank capacity).

5. Working Parameters



6. Environmental Specifications

- **Ingress Protection (IP) Rating**: **IP68** (suitable for outdoor use and exposure to harsh environments)
- **Operating Humidity**: **0% to 100% RH**
- **Vibration Resistance**: **ISO 16750-3 compliant**
- **Shock Resistance**: **30g for 10ms**
- **Storage Temperature Range**: **-50°C to 90°C**
- **Corrosion Resistance**: **Compliant with salt spray testing standards for marine and generator environments**

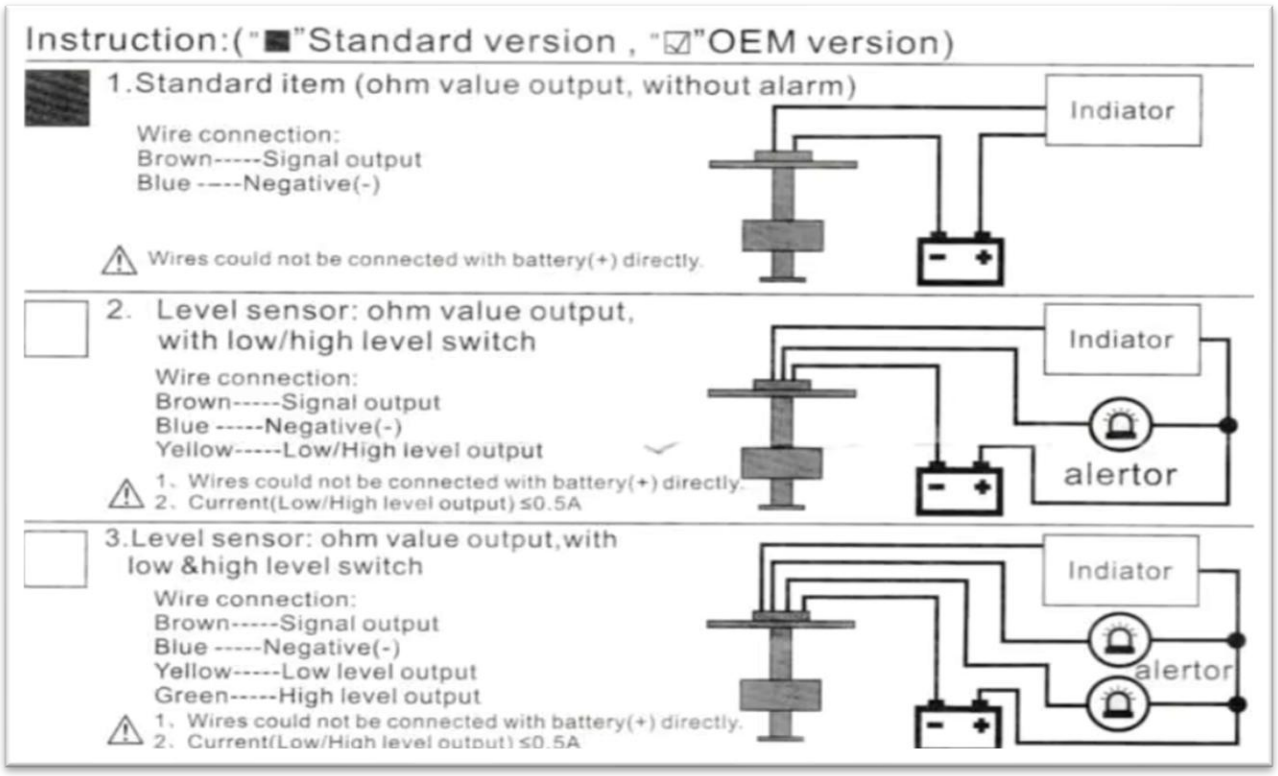
7. Product photos

8. Installation & Calibration

- **Installation Instructions**:
  - Mount sensor onto the fuel tank at the designated port using the 3/4 threaded interface.
  - Ensure proper orientation so that the sensor can accurately detect both low and high fuel levels.
  - Tighten securely using the specified torque settings to ensure leak-free installation.
- **Calibration Procedure**:
  - Connect the sensor's dry contact terminals to the control system or monitoring device.
  - Adjust the sensor thresholds using a control system interface or manually set levels.
  - Verify signal output for both low and high alarms by simulating fuel levels or physically filling and draining the tank.
- **Recommended Tools**:

  Wrench, multimeter, sealing gasket (for mounting)

- **Wiring Diagram**:



TERMINAL	FUNCTION
1	Low Alarm (NC)
2	Common (COM)
3	High Alarm (NC)
4	Common (COM)

9. Maintenance & Troubleshooting

- **Maintenance Frequency**:
  - Inspect annually for any mechanical wear or corrosion on terminals or the sensor body.
- **Common Issues**:
  - Dry contact does not switch (verify wiring connections and fuel levels).
  - Corrosion on terminals (clean or replace connectors as necessary).
- **Troubleshooting Steps**:
  - Check continuity of dry contact terminals with a multimeter.
  - Verify that the correct fuel level triggers the low and high alarms using a control system.
- **Replacement Parts**:
  - Dry contact switch, connector cables, sealing gaskets

10. Warranty & Support

- **Warranty Period**: **1 years from the date of purchase**
- **Support Contact Information**:
  - **Phone**: +966 (11) 810 73 62
  - **Email**: info@rae-ksa.com
  - **Website**: www.rae-ksa.com