DR6431 Water Level Transmitter

Split-type liquid level transmitter with digital signal processing, local LCD display option and IP67/IP68 protection.



Product Overview

The FANDE DR6431 is a split-type liquid level transmitter designed for continuous liquid level measurement. It uses a high-performance diffused silicon pressure sensor as the sensing element and an integrated digital signal-processing circuit. The split-type construction improves installation flexibility, while zero and full-scale output adjustment and high interference resistance provide stable and reliable operation.

Key Features

- High-performance diffused silicon pressure sensor
- Integrated all-digital signal processing circuit
- Split-type construction for flexible installation
- Adjustable zero and full-scale output
- High resistance to electrical interference
- Current limiting protection
- Reverse-polarity protection
- 5-digit backlit LCD display
- 10 commonly used display units selectable
- On-site zero adjustment
- Measuring section with IP68 protection
- Intrinsic-safety design

Applications

- Petroleum, chemical and electric power industries
- City water supply and wastewater treatment
- Hydrological monitoring

Technical Specifications

Pressure Parameter	Specification
Measuring Range	1, 2, 5, 10, 20, 50, 100, 200 mH_2O
Overload	2 × full scale

Electrical Parameter	Specification
Power Supply	11–30 VDC
Output Signal	4–20 mA DC, 2-wire
Load Resistance	≤ (U−11) / 0.02 Ω
Insulation Resistance	100 MΩ @ 50 VDC

Structural Parameter	Specification
Housing	Aluminum alloy
Sensor	316L stainless steel
Sealing Ring	Fluororubber (Viton)
Protection Level	IP67 (connection housing) + IP68 (measuring section)

Environmental Condition	Specification
Media Compatibility	Fluids that are non-corrosive to 316L stainless steel and fluororubber
Compensated Temperature	−10°C to +80°C
Working Temperature	−20°C to +70°C
Storage Temperature	−30°C to +70°C

Performance Parameter	Specification
Accuracy	±0.25% FS typical; ±0.5% FS maximum
Zero Temperature Coefficient	0.03% FS/°C (≤10 mH_2O); 0.02% FS/°C (>10 mH_2O)
Full-Scale Temperature Coefficient	0.03% FS/°C (≤10 mH_2O); 0.02% FS/°C (>10 mH_2O)
Long-Term Stability	±0.2% FS/year maximum

Ordering Guide

The DR6431 ordering code consists of the measuring range, output signal, measuring-section material and optional display.

Item	Code	Description
Range	[0–X] mH_2O	X = actual measuring range; available ranges: 1, 2, 5, 10, 20, 50, 100, 200 mH_2O
Output	E	4–20 mA DC
Measuring Section Material	M1	316L stainless steel diaphragm / 304 stainless steel housing
Measuring Section Material	M2	316L stainless steel diaphragm / 316L stainless steel housing
Additional Function	D	Without display head
Additional Function	D1	With LCD display head
Cable material	E	Polyethylene
Cable material	U	Polyurethane

Complete model example: DR6431-[0~10]mH_2O-E-M1-D1-E

Display & Field Adjustment

The optional LCD display head provides a 5-digit backlit display and supports selection from 10 commonly used display units. The transmitter also provides on-site zero adjustment. Display and adjustment functions depend on the selected D or D1 configuration.

Protection & Reliability

The DR6431 incorporates current limiting and reverse-polarity protection. The connection housing is rated IP67, while the measuring section is rated IP68. The design is intended to provide reliable operation in demanding industrial and hydrological environments.

Selection Notes

1. Before selection, obtain complete information about the medium, measuring point, pressure/level range and actual operating conditions.
2. Select a measuring range appropriate for the actual liquid level to avoid improper application.
3. The standard media compatibility is limited to fluids that are non-corrosive to 316L stainless steel and fluororubber.
4. For locations exposed to strong lightning, ensure reliable power grounding and install additional lightning/surge protection.
5. Special designs can be provided for special applications; please contact FANDE for technical consultation.

Typical Configuration

DR6431-[0~10]mH_2O-E-M1-D1: 0–10 mH_2O measuring range, 4–20 mA DC two-wire output, 316L stainless steel measuring diaphragm with 304 stainless steel housing, and LCD display head.