

MODEL FE

ELECTRODE LEVEL SENSOR



Features

- Usable in a wide range of liquids
- Up to 6 points detection
- Safe low voltage and small currents
- Switch points easily adjusted in field
- Simple to install and adjust large terminal enclosure for wiring

General Description

The FE series of level sensors are designed for point level indication of conductive liquids. Used in conjunction with one or more RE7000 relays, the FE can reliably detect up to 6 separate levels in tanks up to 6 meter deep. Model CE, cable suspended electrode level sensor, is available for deep wells with the cable length 6 meter standard and 20 meter maximum.

Operating levels can be easily changed in the field by cutting the length of the electrodes. The material of electrode is selected from 316SS, NW0001 0665, NW0276, and Titanium for the chemical compatibility.

Operational Description

A typical system consists of three major components, an electrode holder, the electrodes, and a relay unit.

The electrode holder serves as a mechanical support for the electrodes and electrically insulates them from the tank. The electrodes are vertically mounted to the holder, above the liquid, with their lower ends positioned at the required actuation levels. The relay unit provides the voltage and current required (8V, 5mA AC Max.) for sensing as well as suitable relay outputs.

Applications

The FE series can be used in any suitable, conductive liquids. Applications involve both alarm point detection and pump valve control. Since the FE series contain no moving parts, it is very reliable and can be used in tanks where mixers or other moving equipment would damage ordinary float switches or level detectors.

Electrode Selection

Material	Model			
316SS	FE2	FE22	FE72	FE82
NW0001,0665*1	FE3B	FE23B	FE73B	FE83B
NW0276*2	FE3C	FE23C	FE73C	FE83C
Titanium	FE4	FE24	FE74	FE84
Carbon	FE5	FE25	-	-

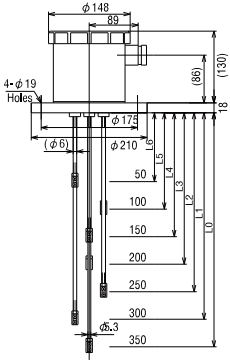
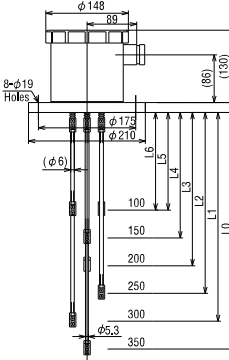
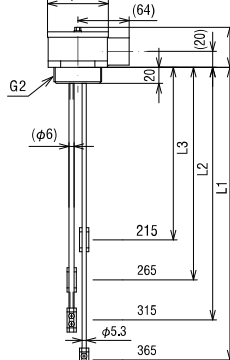
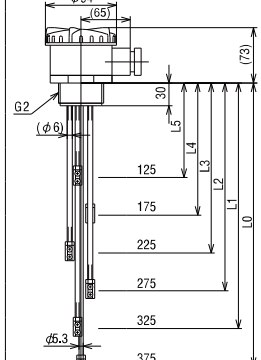
*1 NW0001,0665 is equivalent with HastelloyB®

*2 NW0276 is equivalent with HastelloyC®

The electrode material can be selected according to the liquid.

- 316SS: Water, Ammonia, Caustic soda, etc.
- NW0001,0665: Hydrochloric acid, etc.
- NW0276: Low temp. Hydrochloric acid, Sulfuric acid, etc.
- Titanium: Seawater, High temp. & concentrated Nitric acid, Ferric chloride, etc.
- Carbon: Hydrochloric acid, Sulfuric acid, etc.

Specifications

Model	FE2 series	FE22 series	FE7 series	FE8 series	
Description	Standard	with SS flange	Thread mounting	Thread mounting	
Drawing					
Max. Poles	7	6	4	6	
Mounting	JIS10K100A (4 holes)	JIS10K100A	G2	G2	
Operating Temperature	-20 to 50°C	-20 to 100°C Option 150°C Max.	-20 to 60°C	-20 to 50°C	
Maximum Pressure	Atmospheric	1 MPa	Atmospheric		
Material	Housing	ABS	ABS or 304SS	PF (304SS cover)	
	Mounting	PVC* ¹	304SS* ¹	PF (304SS cover)	
	Electrode	316SS, NW00010665 (Hastelloy B* ³ equivalent), NW0276 (Hastelloy C* ³ equivalent), Titanium			
	Insulation Tube	Polyolefin* ¹			
Cable entry	G3/4				
Protection	IP45* ²		IP43* ²		

*¹ Other materials are available.

*² IP65 is optionally available.

*³ Hastelloy is registered name of manufacturer.

