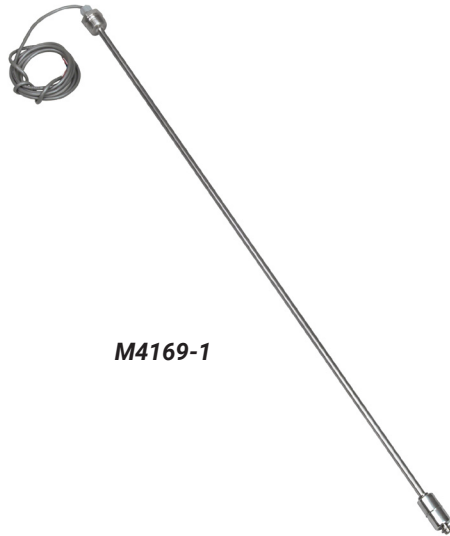




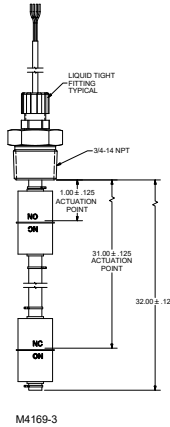
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# M4169 Series Technical Data Sheet

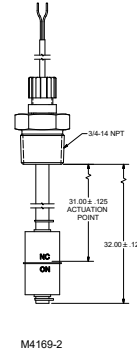
## 316 Stainless Steel Drum Level Indicators



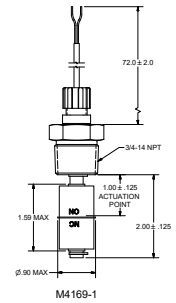
M4169-1



M4169-3



M4169-2



M4169-1

### Applications

- High level detection for standard drum fittings
- 316 SS is frequently used in food processing
- Ideal for high-temperature, medical and petrochemical applications, as well as plating processes
- Suitable in applications where superior corrosion resistance is required

### Custom Solutions

At times, OEMs, end users or military specifiers require a customized solution or sample product to test. Madison Company can design, manufacture and ship a custom switch or sensor in just six business days. Simply communicate the quantity and requirements to our technical sales staff. We will quote the product to establish budget and ROI. Following the quote approval, Madison engineers will design the switch or sensor that satisfies the application specifications, and provide proof of concept. Upon approval, we will build and ship the product or sample.

### Related Products



M4169-2



M4169-3

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# M4169 Series Technical Data Sheet

## 316 Stainless Steel Drum Level Indicators

### Drum Level Indicator Specifications

*Normally Closed unless otherwise indicated*

Model	Approvals	Float/Stem Material	Float Specific Gravity (SG)	Lead Wires	Max. Pressure	Max. Temp.	Mounting	Slosh Shield	Switch Rating
<b>M4169-1</b>	CE, NSF	316 Stainless Steel/ 316 Stainless Steel	0.73	72", 22 AWG, 2 conductor, Halar jacketed Cable	250 PSI	302°F (150°C)	3/4" NPT Pipe Plug	No	30 Watt, SPST
<b>M4169-2</b>	CE, NSF	316 Stainless Steel/ 316 Stainless Steel	0.73	72", 22 AWG, 2 conductor, Halar jacketed Cable	250 PSI	302°F (150°C)	3/4" NPT Pipe Plug	No	30 Watt, SPST
<b>M4169-3</b>	CE, NSF	316 Stainless Steel/ 316 Stainless Steel	0.73	72", 22 AWG, 2 conductor, Halar jacketed Cable	250 PSI	302°F (150°C)	3/4" NPT Pipe Plug	No	30 Watt, SPST

Model	Electrical Ratings	Operation
<b>M4169-1</b>	240 VAC, 0.14A; 120 VAC, 0.28A; 120 VDC, 0.07A; 24 VDC, 0.28A	Normally Open, closes on rising level
<b>M4169-2</b>	240 VAC, 0.14A; 120 VAC, 0.28A; 120 VDC, 0.07A; 24 VDC, 0.28A	Normally Closed, opens on rising level
<b>M4169-3</b>	240 VAC, 0.14A; 120 VAC, 0.28A; 120 VDC, 0.07A; 24 VDC, 0.28A	Top Level, Normally Open, closes on rising level. Bottom Level, Normally Closed, opens on rising level

# M4169 Series Technical Data Sheet

## 316 Stainless Steel Drum Level Indicators

### General Information

1. Switches should be installed rigidly so the float or floats are free to move as the liquid level changes.
2. Switches should be mounted in a tank area free of severe turbulence or protected from such turbulence by appropriate and adequate slosh shields.
3. Vertical switch stems should be vertical for best results, but satisfactory operation is possible in most liquids with the stem at up to a 30° angle from vertical.
4. Side mount switch stems must be mounted with the arrow vertically either up or down depending on switch operation.
5. Care should be taken that switches are always operated within electrical ratings.
6. Orientation for standard Vertical switches can be changed from normally open to normally closed dry or vice versa by removing the float and reversing it in the stem, except with the M3326.

### Maintenance

Maintenance should consist of inspection to see that the float is free to move and not coated with any substance, which would change its weight or volume significantly. If this occurs, the float should be cleaned. This is easily accomplished without disturbing the installation. In addition, the stem may be wiped down to remove any build-up.

The only repair possible in the field is replacement of either the float or stem. Dents or nicks on the float are usually of no consequence to operation.

### Cautions

1. The pressure, temperature and electrical limitations shown for the specified level switches must not be exceeded.
2. The pressures and temperatures must take into consideration possible surges in the temperature and pressure of the system.
3. The liquids used must be compatible with the materials of construction. Specifications of materials will be given upon request.
4. Life expectancy of the switch varies with applications. Contact the factory if life cycle testing is required.
5. Ambient temperature changes can affect switch set points, since specific gravities of liquids vary with temperature. Consult factory for assistance.
6. Level switches have been designed to be shock and vibration resistant. For maximum life, both shock and vibration should be minimized. Consult factory for assistance.
7. Excessive contaminants in fluid may inhibit float operation, and occasional wipe down may be necessary.
8. Level switches must not be field repaired
9. Physical damage to product may render product unserviceable.
10. Installation in a vessel made from magnetic materials may affect operation.

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