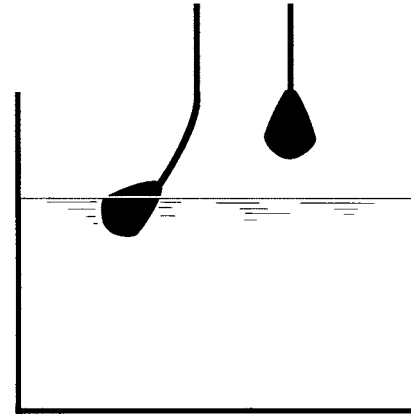


# MODEL FT

## CABLE SUSPENDED FLOAT SENSOR



### Features

- Usable in a wide range of liquids
- Available NO or NC contacts
- Adjustable switch points
- Reliable/Long switch life
- Easy installation

### General Description

The FT series cable suspended float sensors are designed for high or low level indication. The FT series are miniature switch actuated design ideally suited to operate pumps, valves and similar equipment used in the sewage or municipal wastewater treatment plant. A high capacity micro switch in the ABS float provides a reliable long life level control.

A number of float units can be used together to give multiple level switch points in one flanged holder. Each float can be easily assembled on site and the switch operating points are adjusted by altering the length of the cable.

### Operational Description

The buoyant float is weighted on one side. As the liquid rises, it tilts in a fixed direction to operate the micro switch, which uses a movable iron ball to actuate the switch.

### Chemical Resistance

The ABS covered float and PVC cable are compatible with a wide range of liquids. However, there are some liquids that may damage these materials.

ABS can be quickly damaged by the following liquids:

- Aromatics (benzene, toluene, xylene) cause the float to dissolve.
  - Esters and ketones cause the float to swell.
- PVC cable can be used with the following cautions:
- Oils, especially vegetable oils and fats, tend to absorb the plasticizer of PVC cable. Consequently the cable stiffens.

If necessary, alternative SCM cable is available with FT-3A and FT-3B. In general, the resistibility depends on concentration, duration of immersion, presence of suspended solids and/or corrosive gasses and temperature. Although these cable suspended floats are designed for long life, we recommend that they are replaced at adequate intervals.

### Technical Notes

- The FT-3 is ideal for direct pump control, with 2A 250V AC switch rating. For PLC and DCS usage, we recommend to use the FT-2, with 0.1A 125V AC rating.
- SCM cable is available with FT-3A and FT-3B.
- To avoid personal injury and protect the switch for electrical surges, connect the float to our relay unit Model RE7000 or similar devices.

### Ordering Information

|    |   |                    |                             |
|----|---|--------------------|-----------------------------|
| FT |   |                    |                             |
|    | 2 | Standard           |                             |
|    | 3 | High Switch Rating |                             |
|    |   | A                  | up ON actuation             |
|    |   | B                  | down ON actuation           |
|    |   | C                  | up On or down ON, C contact |
| FT | 2 | A                  | = FT-2A                     |

## Specifications

| Model                      | FT-2                         | FT-3           | FT-5*1 | FT-7*1          | FT22/FT33/FT55/FT77 |
|----------------------------|------------------------------|----------------|--------|-----------------|---------------------|
| Drawing                    |                              |                |        |                 |                     |
| Operation Characteristic   |                              |                |        |                 |                     |
| Operating Temperature      | -10 to 50°C                  |                |        |                 |                     |
| Maximum Pressure           | 200 kPa                      |                |        |                 |                     |
| Allowable Impact           | 500 m/s <sup>2</sup>         |                |        |                 |                     |
| Minimum S.G.               | 0.9                          |                | 0.8    |                 |                     |
| Operational Characteristic | FT-□A                        | Up ON, 100±15  |        | Up ON, 186±40   |                     |
|                            | FT-□B                        | Down ON, 80±10 |        | Down ON, 123±20 |                     |
|                            | FT-□C                        | SPDT           |        | SPDT            |                     |
| Cable Length               | 6 meter (Max. 20 meter)      |                |        |                 |                     |
| Life Expectancy            | 2×10 <sup>5</sup> Operations |                |        |                 |                     |
| Material                   | Cable                        | φ 8.1, PVC*2   |        |                 |                     |
|                            | Float                        | ABS            |        |                 |                     |
|                            | Housing                      |                |        |                 |                     |
|                            | Flange                       |                |        |                 |                     |
|                            | Weight                       |                |        |                 |                     |
|                            | Rope                         |                |        |                 |                     |
| Mounting                   | JIS10K100A (4 holes)         |                |        |                 |                     |
| Cable Entry                | G3/4                         |                |        |                 |                     |
| Protection                 | IP45*3                       |                |        |                 |                     |
| Maximum Detection Points   | 6                            |                |        |                 |                     |

\*1 FT-5/FT-7 are only available for maintenance and repair parts of FT55/FT77.

\*2 SCM (2-core) cable is optionally available.

\*3 IP65 is optionally available.

## Contact Rating

| Model        |    | FT-2            | FT-3             | FT-5            | FT-7             |
|--------------|----|-----------------|------------------|-----------------|------------------|
| Max. Current | AC | 0.1A            | 2A               | 0.1A            | 2A               |
|              | DC | 0.1A            | 3A               | 0.1A            | 3A               |
| Max. Voltage | AC | 125V            | 250V             | 125V            | 250V             |
|              | DC | 30V             | 30V              | 30V             | 30V              |
| Max. Load    |    | 5mW(5V DC Min.) | 0.8W(5V DC Min.) | 5mW(5V DC Min.) | 0.8W(5V DC Min.) |

## Minimum setting point

| Model      | Min. ℓ 1  |           | Min. ℓ ~ ℓ | Min.L~ ℓ n |           |
|------------|-----------|-----------|------------|------------|-----------|
|            | ↑ ON, OFF | ↓ ON, OFF |            | ↑ ON, OFF  | ↓ ON, OFF |
| FT22, FT33 | 270mm     | 290mm     | 300mm      | 260mm      | 240mm     |
| FT55, FT77 | 200mm     | 260mm     | 275mm      | 160mm      | 140mm     |