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# VIBRATING LEVEL SWITCH INTERFACE MEASUREMENT FOR SOLIDS IN LIQUIDS

## Model SF60

### FEATURES

- Accepts Universal Input Voltage
- Detects Solids in Water / Liquids
- Modular & Simple Design
- Maintenance Free
- No Calibration Required
- Self-Cleaning
- Robust Fork Design with Patented Piezo Crystal Sensing Element

### OPTIONS

- Mounting Plate / Flanges
- Extensions to 156 in. / 3962 mm
- General Purpose Indicator Light

### SOLID / LIQUID INTERFACE APPLICATIONS

SF60 Solid/Liquid Interface units do not sense liquid but will sense the presence of submerged solids such as plastic resins, clay, carbon granules, sand, clay and corn. The SF60 is ideal to use when emptying bins with a high sediment level or maintaining level of a submerged solid. Not recommended for slurries or in water with high turbidity.



### DESCRIPTION

The Model SF60 is a vibrating level switch designed for interface detection of solids in liquids stored in steeping tanks. The SF60 provides a contact output indicating a high or low level alarm. Typical applications include sand, plastic pellets and food products submerged in water.

The SF60 is a compact and robust design, suitable for top or side mounting. The constant vibration of the fork tines provides self-cleaning characteristics for products that do not coat or cake. The unique design of the fork and crystal assembly eliminates false level readings.

The SF60 sends a signal from the electronic circuitry to excite a patented piezo element in the probe. This causes the fork to vibrate at a frequency of 350 Hz. If the fork is covered by material, the change in vibration is detected by the circuitry which causes the relay to change state after a one second delay. When the fork is free from material, full vibration resumes and the relay reverts to its normal condition.

### SPECIFICATIONS

Enclosure	Single Compartment Cast Aluminum, Powder Coated
Electrical Connection	3/4 in. FNPT
Power Supply	Universal Input Voltage: 19 - 253 VAC, 50/60 Hz 19 - 60 VDC
Fork Material	316 Stainless Steel
Material Specification	Granular bulk solids and powders, submerged in water / liquid, that do not cake or coat
Process Connection	1-1/2 in MNPT
Temperature Range	Sensor: -13 to 302°F / -25 to 150°C Electronics: -13 to 140°F / -25 to 60°C
Output	1 ea SPDT Relay; Maximum Contact Ratings: AC: 253 VAC, 4 A, 500 VA, Resistive DC: 253 VDC, 4 A, 60 W Switch Status Display via Integral LED Signal Delay: Probe Free to Covered: 1 Sec.; Probe Covered to Free: 1 - 2 Sec. Sensitivity: Adjustable in 2 levels
Pressure Classification	Maximum 145 psi / 10 bar General Purpose



**ORDERING INFORMATION:**

Ordering Notes:

- 1) Accessories must be ordered separately.

**SF60 / a / b / c / d:**

**/a Insertion Length**

- X Standard length 6.25 in. / 159 mm
- Lxxx Custom Length; xxx from 7.25 - 156 in. / 184 to 3962 mm

**/b Process Connection**

- P 1.5 MNPT (Standard)
- WP Welded Flange, 2 inch minimum; (Specify Type & Size from FLNG-0202-1 Flange Guide)
- FL Flange Shipped Loose with 1-1/2" FNPT Process Connection Drilled & Tapped; 2 inch minimum; (Specify Type & Size from FLNG-0202-1 Flange Guide)

**/c Approvals**

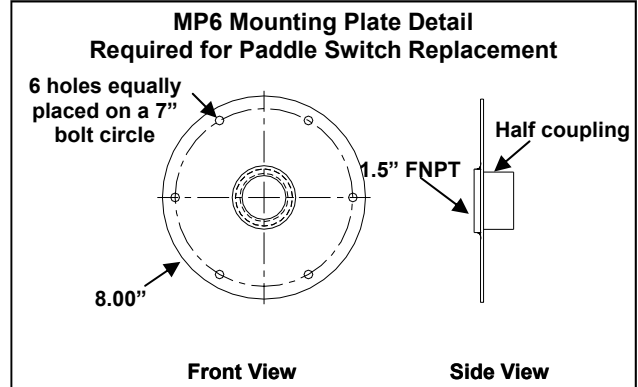
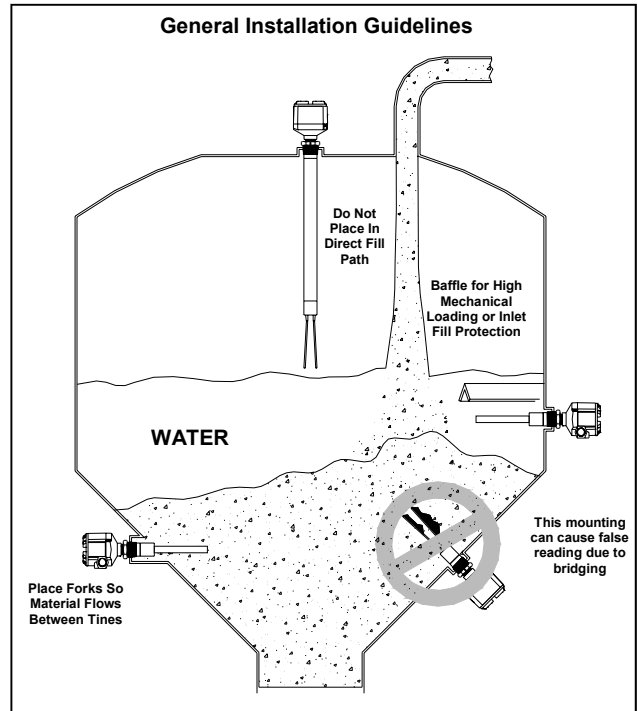
- X None (Housing is FM Approved)

**/d Options**

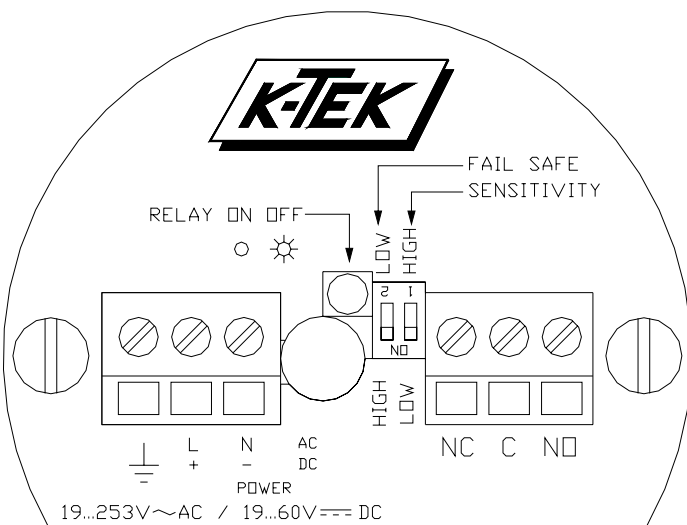
- X None
- L2 120 VAC - Indicating Lamp (General Purposes Only)
- L3 240 VAC - Indicating Lamp (General Purposes Only)

**AVAILABLE ACCESSORIES**

- SF/MP6** 304SS Mounting Plate with 1-1/2 in. NPT half coupling (to replace existing paddle switch)



**WIRING CONNECTIONS**



**DIMENSIONS**

