

SP60

Vibrating fork level switch

KTEK products

Measurement made easy



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

The Model SP60 is a vibrating level switch designed for interface detection of solids in liquids. The SP60 provides a contact output indicating a high or low level alarm. Typical applications include sand, plastic pellets and food products submersed in water.


The SP60 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.

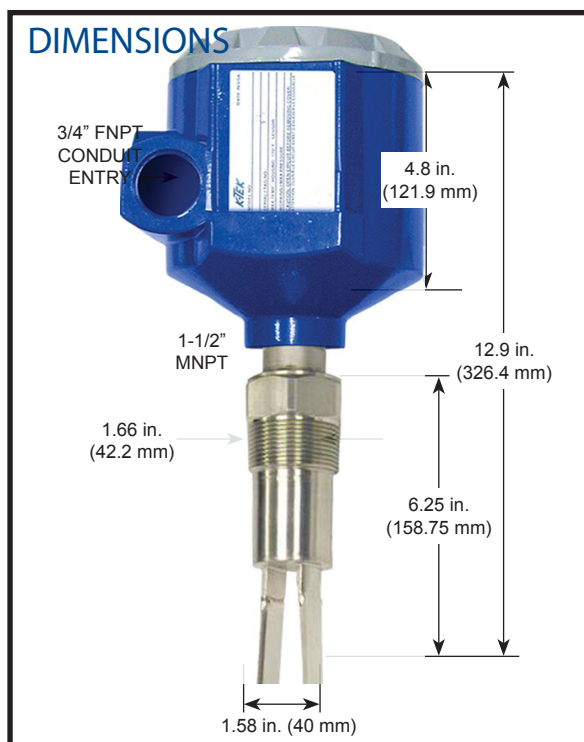
The SP60 sends a signal from the electronic circuitry to excite a patented piezo element in the probe. This causes the fork to vibrate at a frequency of 350 Hz. If the fork is covered by material, the change in vibration is detected by the circuitry which causes the relay to change state after a one second delay. When the fork is free from material, full vibration resumes and the relay reverts to its normal condition.

APPLICATIONS

SP60 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 SP60 is ideal to use when emptying bins with a high sediment level or maintaining level of a submerged solid.

SPECIFICATIONS

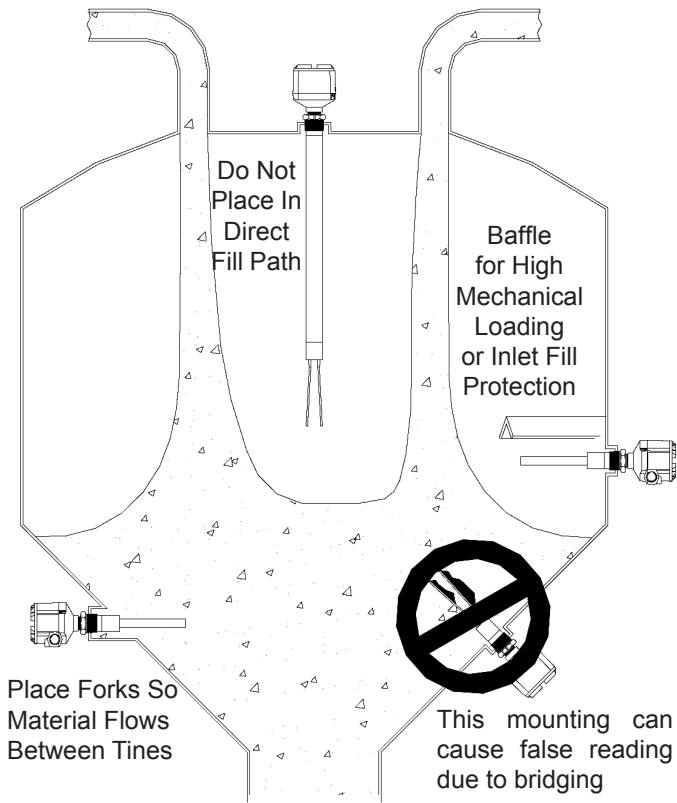
Enclosure	Single Compartment Cast Aluminum, Powder Coated
Electrical Connection	(2) 3/4 in. FNPT Connections
Power Supply	Universal Input Voltage: 19 - 253 VAC, 50/60 Hz 19 - 60 VDC
Fork Material	316 Stainless Steel
Material Specification	Granular bulk solids and powders, submerged in water / liquid, 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	Maximum 232 psi / 16 bar
Classification	General Purpose 



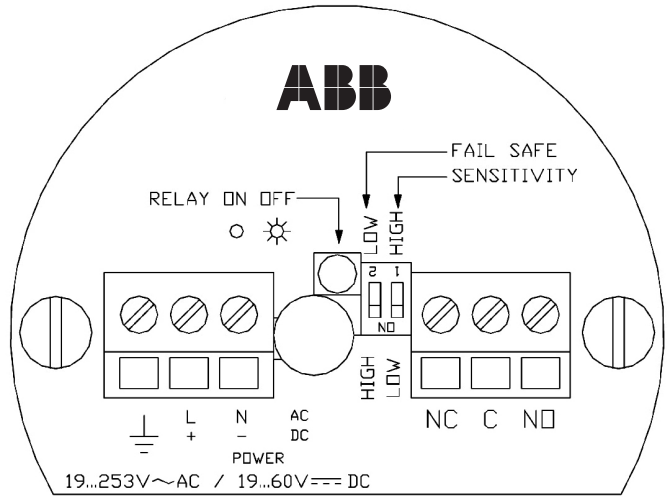
ORDERING INFORMATION

SP60/a/b/c/d:	
Notes:	1. Accessories must be ordered separately.
/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 SLG-0001-1 Flange Guide)
FL	Flange Shipped Loose with 1-1/2" FNPT Process Connection Drilled & Tapped; 2 inch minimum; (Specify Type & Size from SLG-0001-1 Flange Guide)
Tnn	Tri-Clamp; Specify 'nn' as follow: 20 = 2.0", 25 = 2.5" up to 6"
/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)
R	Remote Housing (20 ft. / 6.1m) max.
Available Accessories	
SP/MP6	304SS Mounting Plate with 1-1/2 in. NPT half coupling (to replace existing paddle switch)

GENERAL INSTALLATION GUIDELINES



WIRING CONNECTIONS



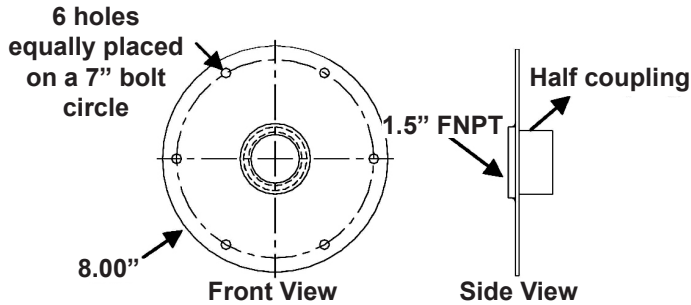
DS/SP60-EN Rev. J 04.2014

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MP6 MOUNTING PLATE DETAIL REQUIRED FOR PADDLE SWITCH REPLACEMENT



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