

SLM - Solid Level Switch *(Deprecated - Refer to next generation product, 'Vital')*

Version 2.1

SLM series vibrating forks are point-level limit switches for free-flowing solids, granules, and powders. These are available with explosion-proof housings for hazardous areas.

Principle

A specially shaped tuning fork is kept vibrating using piezo-electric elements. The oscillation of the fork damps when in contact with the material. The loss of oscillation amplitude is detected and used for switching a relay. The output contacts of the relay are in turn used for annunciation or control.

Approvals CE Marking, RoHS Compliance



Features

- Independent of material's electrical properties
- High temperature durability (up to 200°C)
- No moving parts, maintenance-free
- Suitable for detection of underwater chips
- Configured for high and low level fail-safe detection
- Insensitive to mechanical vibrations and material build-up

Applications

- Material Handling
- Food grains
- Granular materials
- Pulverized coal
- Cement
- Powders, sand, sugar

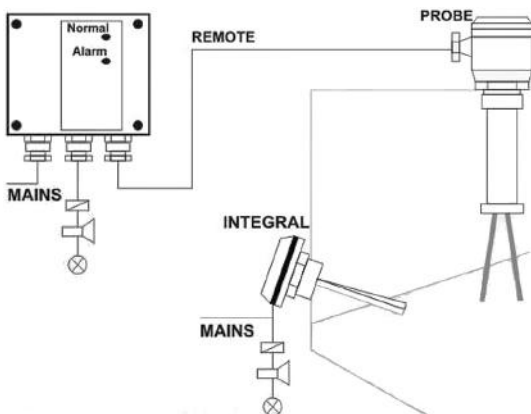


Figure 1: System Diagram of SLM

Parts

The parts of SLM are explained in Figure 2. All dimensions are in millimeters.

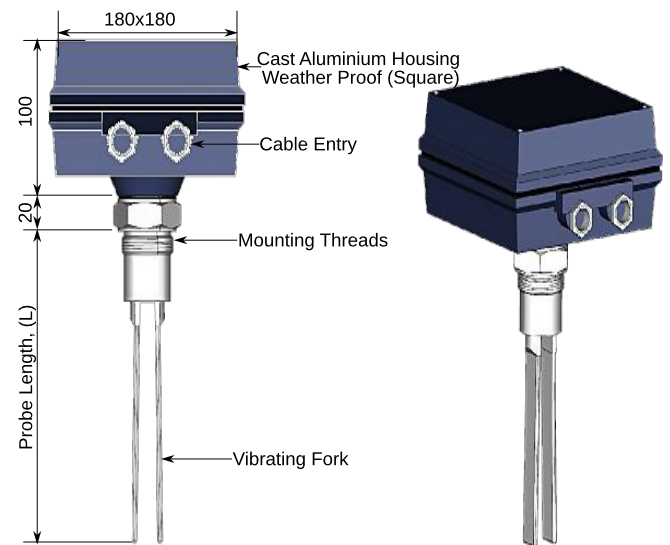


Figure 2: Parts of SLM

Why Sapcon

- Sapcon ~ Synonymous with Level Measurement.
- Pioneers in this field with over 32 years of expertise.
- Understanding your problems, always ready with solutions.
- Masters in customization.
- Offering accelerated delivery, saving your inventory costs.

Manufacturing Level Instruments & Speed Monitoring Systems

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Measuring System

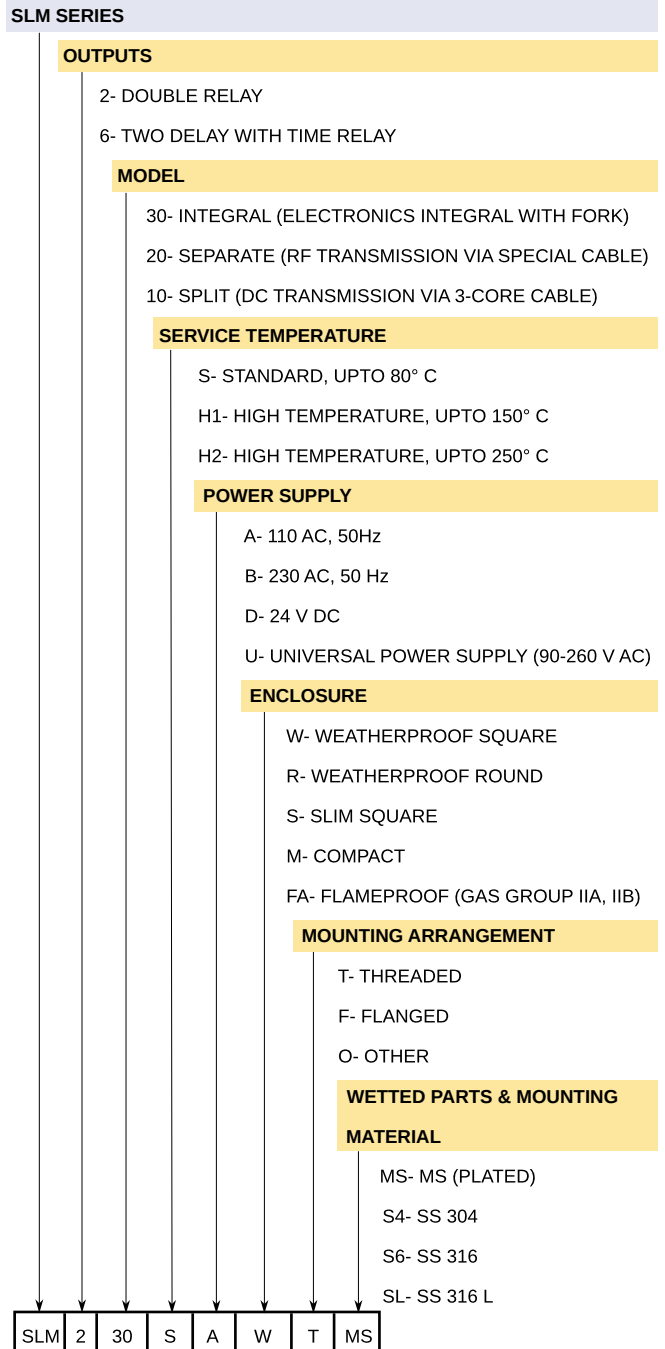
The fork is either side or top mounted on the vessel. Two basic types of constructional arrangements are available. In one, the electronics is separated from the fork, whereas in the other, it is integrated. Mounting arrangements of screwed or flanged type, high temperature models up to 200°C and flameproof versions for hazardous areas are available. Longer probe lengths require pipe extension made of GI or SS. Integral version meant for higher temperature operations are provided with stand-off arrangement for keeping the electronics in relatively cooler environment. Adjustable probe length is provided with gland arrangement.

Technical Specifications

Input Power Supply & Outputs for Different Models:

SLM 130/120/110:	Single SPDT with (90–260 V AC) / 230 V AC / 24 VDC
SLM 130/120/110:	One open collector PNP transistor with 24 V DC
SLM 230/220/210:	Double SPDT with (90 – 260 V AC) / 230 V AC / 24 V DC
SLM 330/320/310:	Single SPDT & Time Delay with (90 – 260 V AC) / 230 V AC / 24 V DC
SLM 630/620/610:	Double SPDT & Time Delay with (90 – 260 V AC) / 230 V AC / 24 V DC
Power Consumption:	0.5 W (maximum)
Power Supply:	24 V DC and 90-260 V AC
Response Time:	2-5 s & for fast switching < 0.8 s
Time Delay Settings:	Cover and Uncover Delay: 2s-20s, through toggle switches
Sensitivity Setting:	Field Selectable (through toggle switches)
Resonant Frequency:	80 - 85 Hz
Probe Length:	Extensible, 200 - 3000mm
Fail-safe:	Field Selectable
Minimum:	Fail-safe Low
Maximum:	Fail-safe High

Model Selection



• In Slip-ON Flange, Probe Length is reduced by 10mm.

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