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TERMOREG

automation company

LIMIT LEVEL SENSOR

SILOMAX – P
SILOMAX – PT

USE:

The **SILOMAX** sensor is intended for recognition of limit level of loose materials in bins and silos. Output information, i.e. level is/isn't achieved can be used for alarm indication, blocking and as input to central control system.

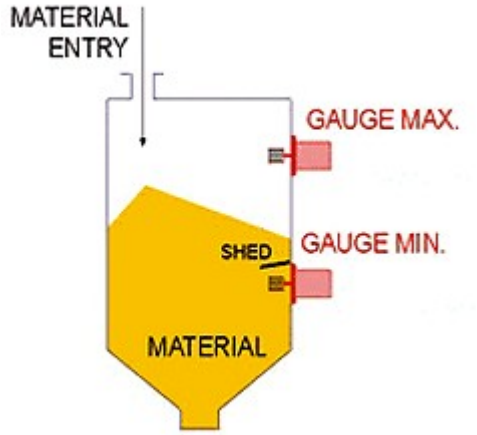
OPERATING PRINCIPLE:

The **SILOMAX** is level switch. If the level exceeds (or falls bellow) a limit value, its relay contact switches. The level of loose material is detected by rotary paddle. Size of the paddle can be adjusted according to character of the measured material.

SENSOR SIGNALING:

The sensor signs its activity by LED situated below translucent DIP-switch cover. In case the paddle rotates, the LED flashing interval is c. 1s. When the paddle is buried and stopped, the flashing interval is decreased to 0.3s and LED blinks faster. LED signaling corresponds to output relay state – ON/OFF.

The sensor also checks its inner temperature. If the inner temperature is higher than safe operational temperature, the sensor indicates state as well as during burying. By contrast at the low temperature such as by technological outage, the vane rotates permanently to increase in inner temperature to the standard level.

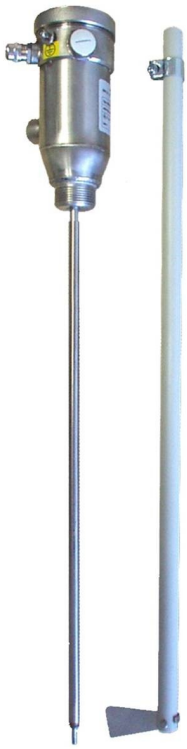


DURING THE MEASUREMENT OF MINIMUM LEVELS IS NECESSARY TO LOCATE A PROTECTIVE ROOF ABOVE MEASURING PADDLE OR USE METER WITH MODIFIED PADDLE.

IMPLEMENTATION:

Sensor is fixed into the measuring opening by screwing (thread G5/4"). Through reduction it is possible to fix the sensor into the flange DN100. Inside the sensor is small motor which turns the shaft with measuring paddle; sensor's case is hermetically closed. The shaft goes through the thread part and through the bearing and packing gufero. Measuring paddle exists in different variants and is exchangeable. All of the sensors are made from stainless steel.

SILOMAX-PT is special version of SILOMAX sensor with extended shaft for vertical assembly into the roof of bin/chamber. This is special telescopic configuration with possibility of setting of angle of repose by changes of shaft length.



In case of mounting in places, where changes of direct solar radiation and rain come up very often, we provide the sensor **SILOMAX-PT** with a special roof.

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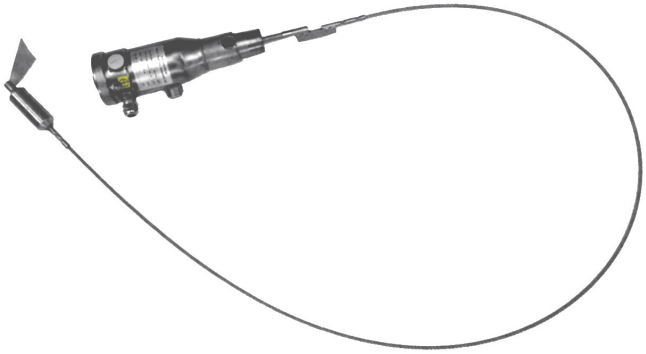
Other possible variants: - with the cooling extender (for temperature of metering media up to +200 °C)
- with flexible funicular extension of measuring vane

SILOMAX with cooling extender

Reflector – for radiant heat reduction



SILOMAX with rope shaft extension

ALL OF THE SILOMAX METERS HAVE CERTIFICATE ISSUED BY INSTITUTE OF TECHNOLOGY AND PHYSICS, OSTRAVA RADVANICE, TO USE THE SENSOR IN DUSTY ENVIRONMENT WITH EXPLOSION DANGER (ATEX EU directive).

MECHANICAL FIXATION:

Meter is placed into the measuring opening by screwing into the inner thread G5/4 (mounting thread length less than 23mm).

ELECTRIC CONNECTION:

Power supply and output signal terminals are placed under screw-on cover. The clips PE+N+L represent power supply 230V/50Hz. Other three clips represent NO and NC contact of output relay.

Power voltage ..…….…..… 230V/50 Hz
Coverage ……...…….…..... IP 65
Consumption ….…….…… max. 10 W
Output ..…...….....….. relay contact 250V AC/ 1A, fuse 0,2A
Max. environment temperature …..…..... +55 °C
Max. medium temperature ……...…..… + 80 °C
With the cooling extender …… up to +200 °C

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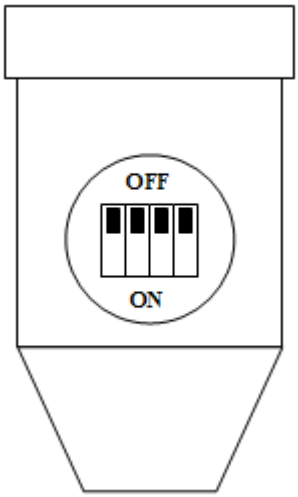
TECHNICAL PARAMETERS:

Note: Other than 230 V AC (for example 24V/DC or 115V, 48V AC) can be made on special order.

SETTING:

The **SILOMAX** sensor is already adjusted from production. It is necessary to change the setting only in specially event.



DIP1	DIP2	RUNNING MODE
OFF	OFF	Standard response of relay
ON	OFF	Delay of relay at regaling (20s)
OFF	ON	Delay relay at vacation (20s)
ON	ON	Inverse function of relay (failsafe)

DIP3	DIP4	TWIST MOMENT
OFF	OFF	1 (the smallest)
ON	OFF	2
OFF	ON	3
ON	ON	4 (the biggest)

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Silomax mounting flange