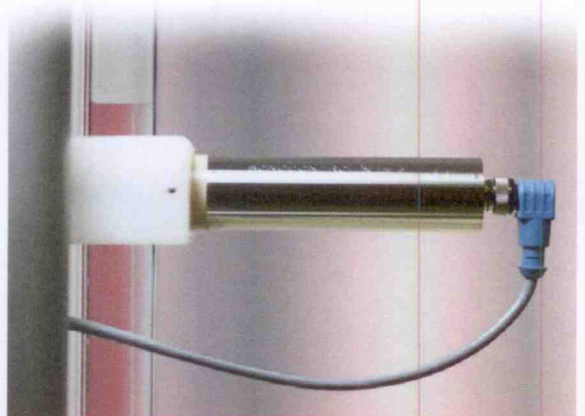
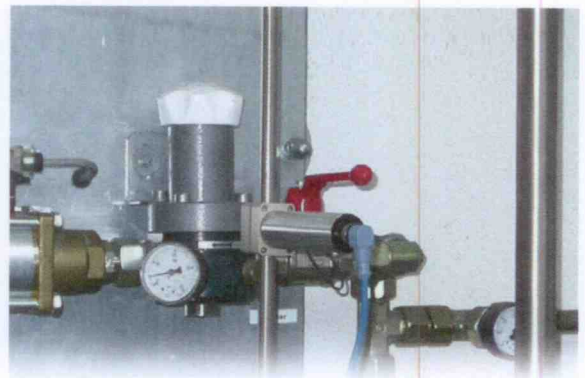


# LIMIT SWITCH FOR LIQUIDS IN SMALL DIAMETER PIPES

*contactless  
through the wall*

## WITH ULTRASOUND



**SONOCONTROL 15**



*short response time  
safe  
cost-effective*

SONOTEC 

# SONOCONTROL 15

## LIMIT SWITCH FOR LIQUIDS WITH SMALL NOMINAL PIPE DIAMETERS



With the ultrasonic liquid level switch SONOCONTROL 15 it is possible to detect easily and reliably if a pipeline is full or empty. The filling of the pipeline at the sensor position causes a reliable switching.

### The advantages

- Easy installation at the pipe
- Retrofit without process interruption
- Low total costs of the system since no process connections are needed
- Short response time
- No wear and tear
- Quick start-up
- Available for the use in hazardous areas

### Application Example

Within the pharmaceutical industry the SONOCONTROL 15 serves as a limit switch detecting if a pipeline with a small nominal pipe diameter is full or empty.

The sensor is mounted sideways at the pipe. After a successful teach-in the sensor distinguishes between liquid and gas/air. The detection point has to be set up on the vertical pipe in order to make sure that in case of a half-filling the switching function is working properly.



SONOCONTROL 15 installed within a pharmaceutical plant

SONOTEC preserves the right to change technical specifications without further notice. (Vers. 02/2013-02-13)

**SONOTEC**

Certified to DIN EN ISO 9001

### Technical data

<b>Type of instrument</b>	Two-wire-detector as empty/ full limit switch at pipes with small nominal diameters for the detection of liquids and for pump protection
<b>Construction of sensor</b>	Compact sensor
<b>Measuring principle</b>	Ultrasound through the pipe wall, no contact of sensor with the liquid, for mounting no structural changes at the pipes are required
<b>Mounting</b>	PVDF-clamp + couple medium
<b>Material of the pipe</b>	Steel, stainless steel, plastic, glass Outside metallic polished or lacquer
<b>Liquid</b>	Water or water like liquids with low bubble concentration
<b>Temperature range</b>	Pipe temperature: -40°C ... 140°C Ambient temperature: -40°C ... 80°C Storage temperature: -40°C ... 85°C
<b>Power supply for standard version</b>	12 - 40 VDC max. 22 mA, max., max. ripple 5% peak value: maximum 40V
<b>Power supply for the version for hazardous areas</b>	12 - 33 VDC max. 22 mA, max. ripple 5% peak value: maximum 33 V
<b>Output</b>	Condition is represented by the current draw of the sensor. 2 LED indicators are inside the housing LED - green: power on Power ON: LED on Power OFF or error: LED off LED - yellow: switch condition „full“: LED on, current 16 mA ± 2% „empty“: LED off, current 8 mA ± 2% „error“: LED off, current ca. 22 mA response time: 0.5 s
<b>Connections</b>	4-pole M12 connection (2 contacts connected)
<b>Protection</b>	IP67, water and oil resistant
<b>Ex-protection (optionally)</b>	II2G Ex ib IIC T6 Gb
<b>Housing</b>	Stainless steel and plastics (PEEK), dimensions without mounting: L = 125 mm, Ø = 30 mm
<b>Maintenance</b>	Maintenance-free

### Order codes

Order number	Description	External pipe diameter
<b>Standard version</b>		
200 01 0163	1	10 mm ... 23 mm
200 01 0164	2	> 23 mm ... 36 mm
200 01 0165	3	> 36 mm ... 54 mm
200 01 0196	4	> 54 mm ... 63,5 mm
<b>Version for hazardous areas</b>		
200 01 0187	1	10 mm ... 23 mm
200 01 0188	2	> 23 mm ... 36 mm
200 01 0189	3	> 36 mm ... 54 mm
200 01 0197	4	> 54 mm ... 63,5 mm

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