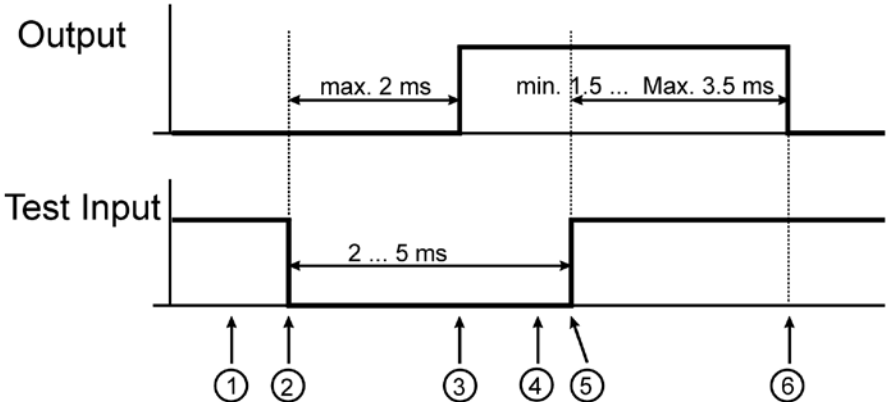


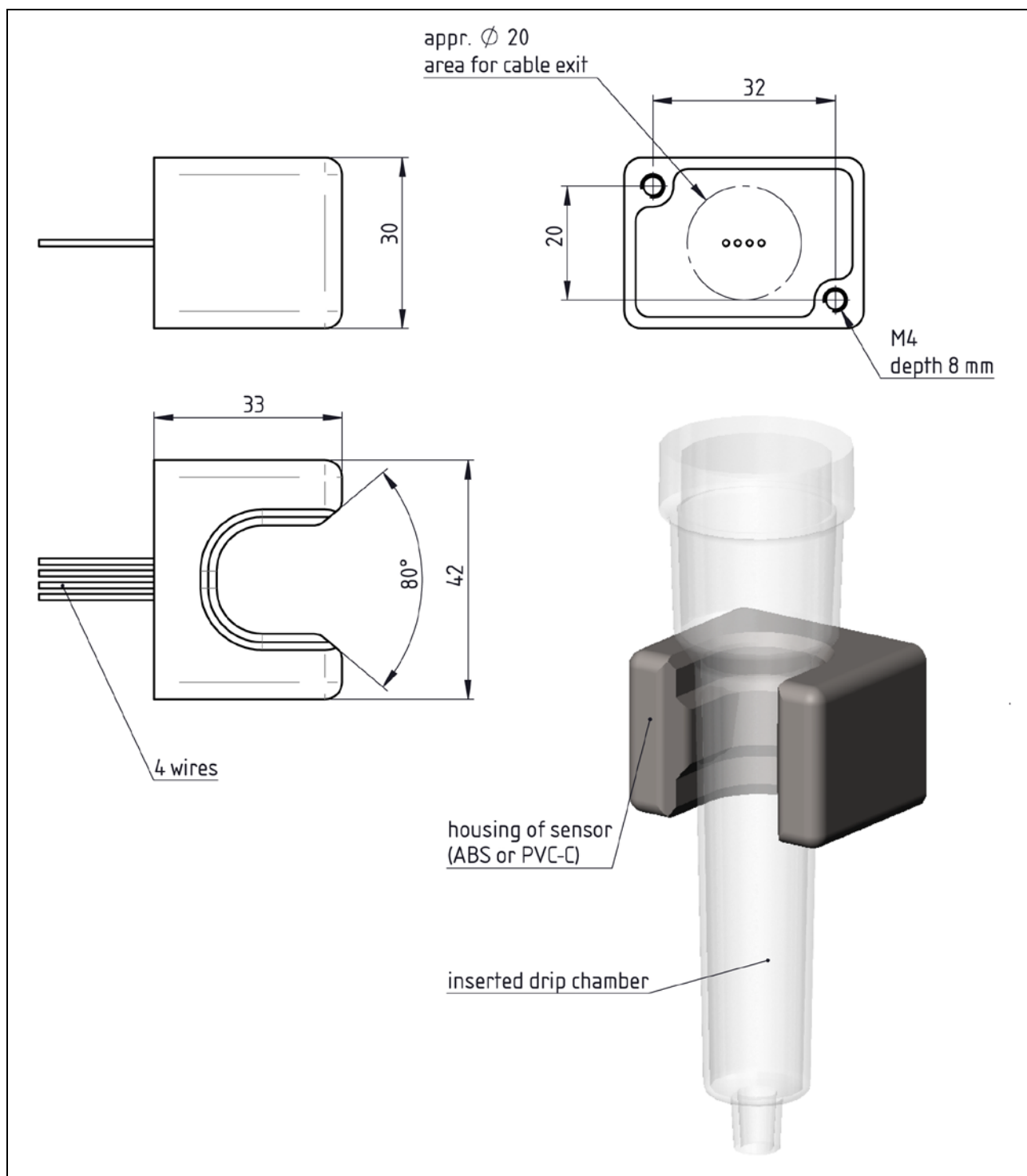
The detector **SONOCHECK ALD01.xxx** is a single channel level detector for drip chambers.

Without contact to the liquid the clamp-on sensor is suitable for drip chambers in medical devices. It is dry coupled, wear and tear free and highly reliable. It provides a TEST input for self-test.

Technical Data

Single Channel Level Detector		
Measuring method	Ultrasound	
Measuring cycle	200 μ s	
Response time, Holding time	Minimum < 1 ms, typical 2 ms On request: Delays or holding times for bubble events	
Operating temperature	+5 °C to +60 °C	
Storage temperature	-20 °C to +85 °C	
Materials	Transducer and electronics molded in plastic housing	
Drip Chamber	Parameter	Property
	Outer diameter	To be defined
	Material	Plastic, e.g. PVC, PE, silicone, PUR Other materials on request or after test only
	Drip Chamber is inserted into sensor in dry condition	
Requirements for liquid	Water, blood, solutions or other low-viscosity liquids containing no or few solids	
Protection	IP67	
Operating voltage	+5 \pm 0.2 VDC	
Current consumption	\leq 20 mA	
Connecting cable	4 x stranded wires; firmly connected to the sensor; length: 50 \pm 2 cm	

Inputs and outputs	Connection	Color
	Power Supply +5 V ± 0.2 V	red
	Input TEST (5 V logic, TTL)	yellow
	Output (5 V logic, TTL)	white
	Ground (GND)	blue
Output	Standard configuration	
	Condition	Signal at output (H/L: TTL output)
	Air	H
	Liquid	L
	Internal error (self-test)	H
TEST inputs	<p>Simulation of air, time typically needed for complete test: 6 ... 10 ms. Test Input is L-active. If TEST input is not used the line has to be connected to +5V. Recommended duration of pulse: ca. 2 ... 5 ms.</p>	
	<p>Output</p>  <p>Test Input</p> <p>2 ... 5 ms</p> <p>1 2 3 4 5 6</p> <p>1 Filled Tube: Sensor indicates Signal "Liquid" 2 Air Test active 3 Sensor simulates Air and indicates Signal "Air" 4 External Control checks proper Signal "Air" of Sensor 5 Air Test inactive 6 Sensor indicates Signal "Liquid"</p>	
	<p>Test Input is configured after power on for a short time of 1s as serial input. Inside this period the sensors acts to commands of serial interface. Such a way settings of sensor can be changed or verified.</p> <p>ABD Monitor in combination with USB Data Converter Type 007 supports setting operating and the required time management.</p>	
Directives / standards	<ul style="list-style-type: none"> • EMC under consideration of IEC 60601-1-2 • Safety requirements under consideration of IEC 60601-1 • Biological compatibility under consideration of DIN EN 61157 	

Technical drawings

(The drawings are not to scale)

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