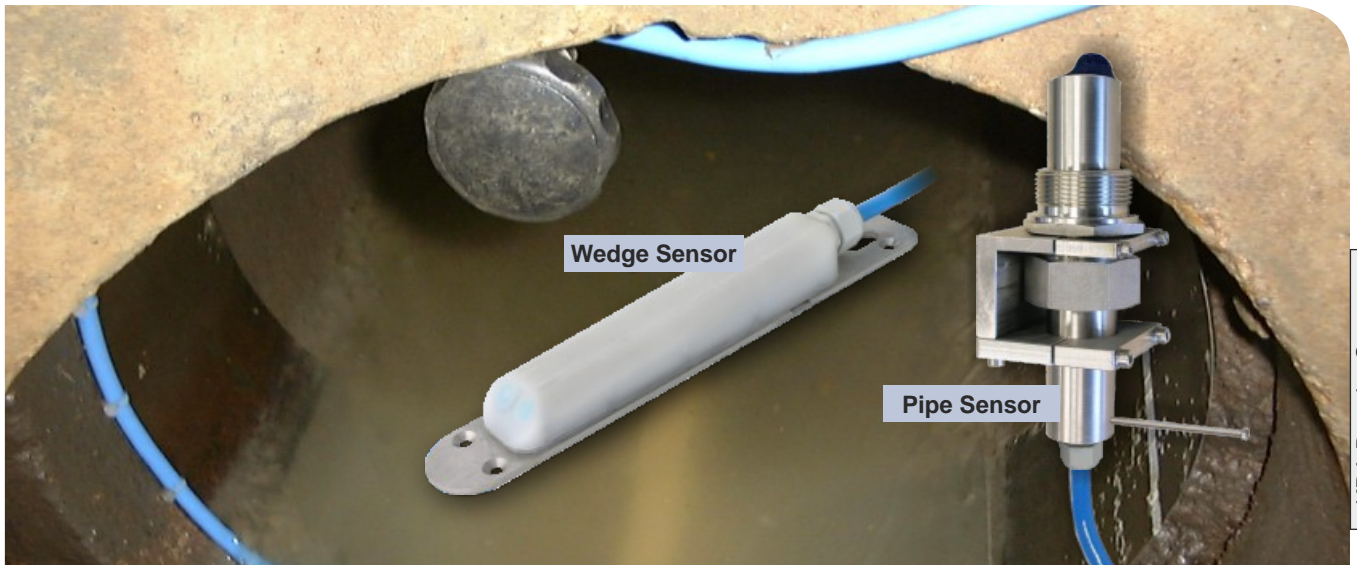




KDA Doppler sensors for detection of flow velocity or flow level in part filled and full pipes and channels



KDA Doppler Sensors

Sensors	
Measurement principle	<ul style="list-style-type: none"> • Piezo-resistive pressure measurement (level measurement) • Doppler (flow velocity)
Measurement frequency	<ul style="list-style-type: none"> • wedge sensors 1MHz • pipe sensors 750 kHz
Protection	IP 68
Operation temperature	-20 °C to +50 °C
Storage temperature	-30 °C to +70 °C
Operating pressure	<ul style="list-style-type: none"> • combi sensor with pressure measurement (only wedge sensor): max. 1 bar • sensors without pressure measurement: max. 4 bar
Cable length	10/15/20/30/50/100 m pre-configured, extendable to max. 250 m; if using sensors with integrated pressure measurement cell it is necessary to use a pressure compensation element after 30 m
Cable types	<ul style="list-style-type: none"> • combi sensor with pressure meas.: LiYC11Y 2x1.5 + 1x2x0.34 + PA 1.5/2.5 • sensors without pressure meas.: LiYC11Y 2x1.5 + 1x2x0.34
Outer cable diameter	<ul style="list-style-type: none"> • combi sensor with pressure measurement: 9.75 mm ±0.25 mm • sensors without pressure measurement: 8.4 mm ±0.25 mm
Sensor connection	<ul style="list-style-type: none"> • cable with plug for connection to portable transmitter PCM F, for sensors without pressure measurement, cable type „S“ • cable with plug and replaceable filter element for connection to portable transmitter PCM F, for sensors with pressure measurement, cable type „F“
Sensor types	<ul style="list-style-type: none"> • flow velocity sensor with v measurement using Doppler principle and temperature measurement to compensate temperature effects on velocity of sound • combi sensor (only wedge sensor) with flow velocity sensor using Doppler principle; level measurement via pressure and temperature measurement to compensate temperature effects on velocity of sound
Constructions	<ul style="list-style-type: none"> • wedge sensor for installation on channel bottom • Pipe sensor for installation using nozzle, sensor screw connection and retaining element in pipes
Medium contacting materials	<ul style="list-style-type: none"> • wedge sensor: Polyurethane, stainless steel 1.4571, PVDF, PA Hastelloy C276 (only combi sensor) • pipe sensor: stainless steel 1.4571, Polyurethane, HDPE
Flow Velocity Measurement	
Measurement range	-600 cm/s to +600 cm/s
Measurement uncertainty	±1 % of final values of measurement range
Zero point drift	absolutely stable zero point
Sonic lobe	±5 degrees
Temperature Measurement	
Measurement range	-20° C to +60° C
Measurement uncertainty	±0.5 K
Level Measurement - Pressure	
Measurement range	0 to 500 cm
Zero point drift	max. 0.75 % of final value (0 - 50° C)
Measurement uncertainty	(standing medium) <0.5 % of final value

Specifications subject to change.
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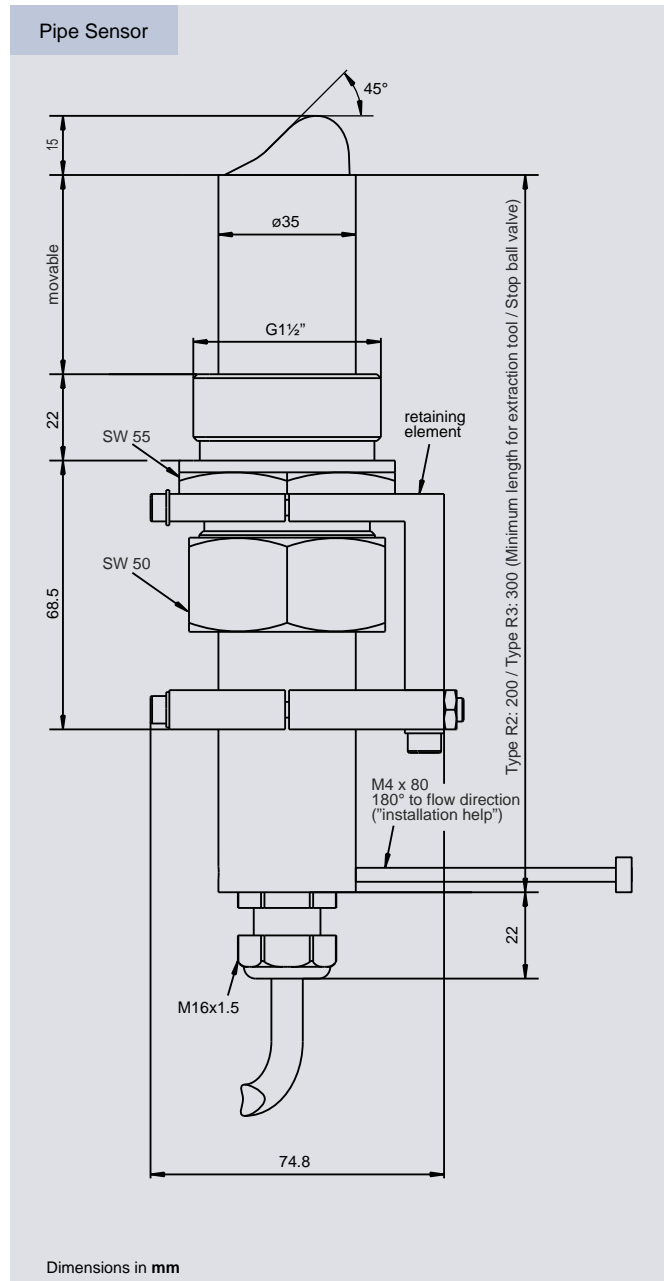
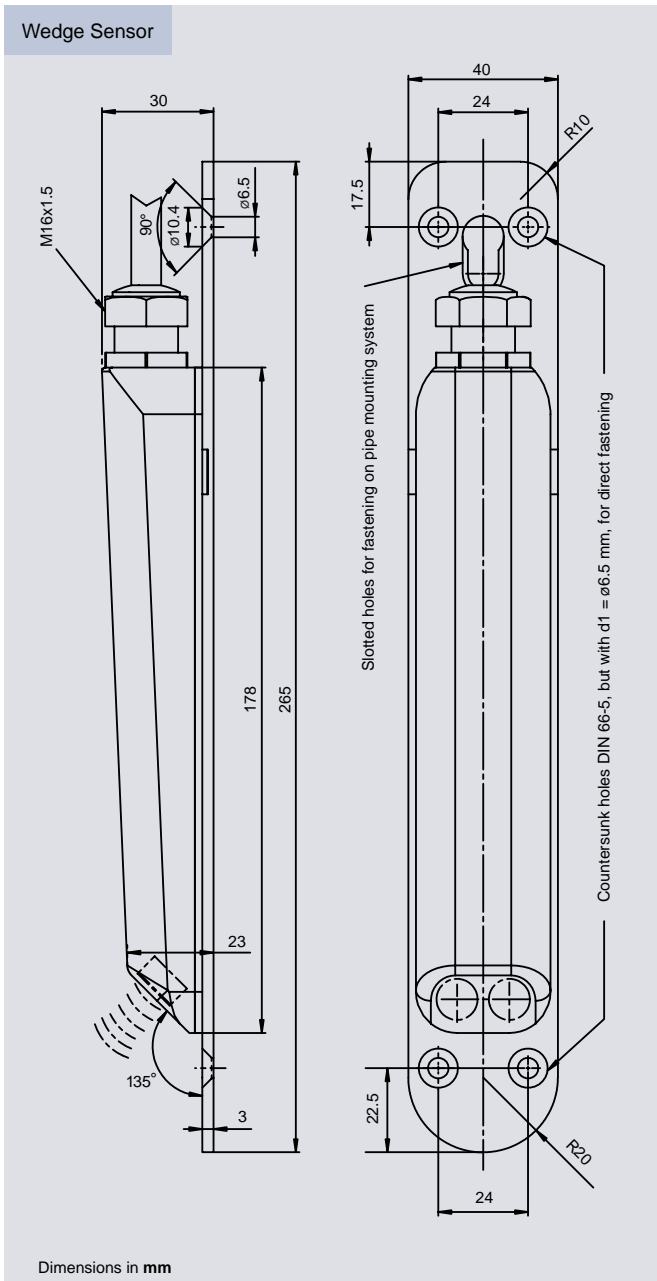
Instrumentation For Water Industry

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Sensor Dimensions



Accessories

Tapping saddle	for pipe sensors (G1 1/2") for sensor mounting in pipes with inner diameters from 100 to 800 mm
Retractable fitting	for removal of pipe sensors (G1 1/2") under process conditions; retractable length 150 mm material: duralumin, brass, stainless steel 1.4571
Stop ball valve	for removal of sensors from pipes without pressure; material: stainless steel 1.4571
Welding nozzle	straight construction (90°) for pipe sensors, steel or stainless steel 1.4571, 1 1/2" inner thread
Pipe mounting system	for temporary, non-permanent clamp fastening of wedge sensors in pipes with inner diameters 200 - 800 mm and egg profiles up to h = 600 mm
Sensor cover	for wedge sensors, stainless steel 1.4571
Pressure compensation element	for connection of combi wedge sensors