

# Pneumatic Retractable Fittings

Chem

Energy

Pharm

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Water



## SensoGate® WA 131

**Pneumatic retractable fitting for simple commercially available control units or process applications**

### Variable and reasonably priced

Based on the proven SensoGate® modular design principle, the WA 131 retractable fitting is ideal for applications which do not require completely automated control with central media routing but which still want to make use of superior SensoGate® technology.

SensoGate® WA 131 is ideal for automatic or semi-automatic connections to commercially available or customer-developed control units.

### Individual solutions

The design of the affordable SensoGate® WA 131 models is scalable to meet requirements; when placing an order, customers simply state the types of connections and functions the retractable fitting must have. Every design permits the sensor to be manually serviced or replaced during the process. This can easily be done under process pressures as great as 10 bars.

The fitting adapts perfectly to the application and can even be adapted later to changed conditions.

### Easy retrofitting

For example, if at some later point another media connection is necessary, this can be very easily arranged by the simple replacement of the relevant module. A switch from metal to plastic or a switch to electrodes with a store of liquid electrolyte is possible – one big advantage of the SensoGate® modular design.

The patented lock-gate function, i.e., the reliable shut-off to the process even during movement, is always active. This also applies to the hygienic version, which is a unique design feature in the world market for retractable fittings.

### Facts

- compact, smooth, and dirt-resistant design
- minimum maintenance costs and maximum flexibility thanks to completely modular design
- very simple replacement of gaskets due to divided calibration/cleaning chamber
- increased service life and reduced seal wear
- ATEX approval II 1GD c II for the complete fitting
- cost reduction by simple installation, operation, and maintenance
- very high availability
- protective rinsing of the seals for a long service life
- SensoLock for high safety of operation
- integrated check valves and limit switches
- fast and uncomplicated replacement of calibration chamber and immersion tube
- all maintenance can be performed on site
- cyclone rinsing for optimum cleaning effect
- superior sensor immersion depth
- standard sensor length (225 mm) even for large immersion depths
- multiple process connections available
- flange version with scraper ring
- modular design allows specific replacement of the process-wetted materials: PEEK, PVDF, PP, 1.4571, Hastelloy
- plastic versions with high pressure and temperature resistance due to carbon-fiber-reinforced plastics
- special version for sensors with pressurizable liquid electrolyte

## Specifications

### Permissible process pressure and temperature during movement

Process adaptation 1.4571/ Hastelloy	10 bars (at 0 ... 140 °C)
Process adaptation PEEK HD	10 bars (at 0 ... 140 °C)
Process adaptation PVDF HD	10 bars (0 ... 120 °C), 6 bars (140 °C) 30 min
Process adaptation PEEK/PVDF	6 bars (0 ... 40 °C) falling linearly to 2 bars (120 °C)
Process adaptation PP	6 bars (5 ... 30 °C) falling linearly to 1 bar (80 °C)
Permissible process pressure and temperature, statically in service position	16 bars (at 0 ... 40 °C), PP 10 bars (at 5 ... 20 °C)

Ambient temperature	-10 ... +70 °C
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Ingress protection	IP 66
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Housing material	stainless steel A2/PP
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Permissible pressure for probe control	4 ... 7 bars
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### Quality of compressed air

Standard	gemäß ISO 8573-1:2001
Quality class	3.3.3 oder 3.4.3
Solid contaminants	class 3 (max. 5 µm, max. 5 mg/m <sup>3</sup> )
Water content for temperatures > 15 °C	class 4, pressure dew point 3 °C or below
Water content for temperatures 5 ... 15 °C	class 3, pressure dew point -20 °C or below
Oil content	class 3 (max. 1 mg/m <sup>3</sup> )

### Sensors

With gel electrolyte	Ø 12 mm, length 225 mm with temp detector, Pg 13.5 thread
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With liquid electrolyte	Ø 12 mm, length 250 mm with temp detector
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### Process adaptations

Flanges, DIN EN 1092-1	DN 32 ... 100
Flanges, ANSI B 16.5	1 1/2" to 3"
Dairy pipe, DIN 11851	DN 50 ... 100
Ingold socket, 25 mm	25 mm
G 2 1/4"	for Knick ARF 210/30X

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## SensoGate® WA 131 for process applications

### Specifications – continued

#### Connections

Outlet

G 1/8" internal, 3 m EPDM hose

For pressurized sensors

hose connection NW 6, pressure in sensor chamber  
0.5 ... 1 bar above process pressure (max. 7 bars)

For compressed air (control air  
for retractable fitting)

push-in connector DN 4/6

Immersion depths/  
Installation dimensions

see dimension drawings

Process-wetted materials

see order code

## Product Line

Order No.

Process sensor lock-gate, pneumatic		WA 131 /	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Explosion protection</b>	for hazardous area Zone 1 without	<b>X N</b>																
<b>Sensor</b>	solid electrolyte liquid electrolyte (pressurization possible)	<b>0 1</b>																
<b>Gasket material</b>	elastomeric ring set A, FKM (Viton) elastomeric ring set B, EPDM elastomeric ring set E, EPDM FDA elastomeric ring set K, FFKM, compl. (Kalrez)	<b>A B E K</b>																
<b>Process-wetted materials*)</b>	1.4571/1.4571/1.4571 Hastelloy/Hastelloy/Hastelloy	<b>A B</b>																
	PEEK/PEEK/PEEK PVDF/PVDF/PVDF	<b>C D</b>																
	PEEK HD/PEEK HD/PEEK HD PVDF HD/PVDF HD/PVDF HD	<b>E F</b>																
	PP reinforced	<b>P</b>																
	1.4571/1.4571/PEEK	<b>Z</b>																
<b>Process adaptation</b>	flange, steel, 1.4571, DN 32 flange, steel, 1.4571, DN 40 flange, steel, 1.4571, DN 50 flange, steel, 1.4571, DN 65 flange, steel, 1.4571, DN 80 <sup>1)</sup> flange, steel, 1.4571, DN 100 <sup>1)</sup>	<b>B 0 B 1 B 2 B 3 B 4</b>																
	dairy pipe, DN 50 dairy pipe, DN 65 dairy pipe, DN 80 dairy pipe, DN 100	<b>C 1 C 2 C 3 C 4</b>																
	flange, ANSI 316, 1 1/2" flange, ANSI 316, 2" flange, ANSI 316, 2 1/2" flange, ANSI 316, 3" <sup>1)</sup>	<b>D 0 D 1 D 2 D 3</b>																
	Ingold socket, 25 mm	<b>H 0</b>																
<b>Immersion depth</b>	short long	<b>A B</b>																
<b>Pneumatic-system connection</b>	without pneumatic limit signal with pneumatic limit signal	<b>A B</b>																
<b>Rinse-medium connection</b>	G 1/8" complete with outlet hose (3 m) G 1/8" complete with outlet hose (3 m), inlet G 1/8" G 1/8" complete with outlet hose (3 m), inlet G 1/8" and inlet hose (5 m) complete with coupling nut	<b>0 1 2</b>																
<b>SensoLock</b>	without with	<b>0 1</b>																
<b>Special variant</b>	without equipped with special grease (provided by customer) with scraper ring, reinforced version, PTFE/PEEK (ZU 0760)	<b>0 0 0 0 0 1 0 0 3</b>																

\*) Material combinations: Process-wetted part of calibration chamber/rinse-wetted part of calibration chamber/immersion tube

<sup>1)</sup> With the lower calibration chamber made of plastic, you require one of the following flange protectors: ZU 0755, ZU 0756, ZU 0757, ZU 0758

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## SensoGate® WA 131 for process applications

### Accessories (Details from page 270)

Order No.

Service set	basic equipment	<b>ZU 0680</b>
	maintenance, repair, retrofit	<b>ZU 0740</b>
	calibration chamber	<b>ZU 0754</b>
Mounting aid	for 20 x 2.5 O-rings	<b>ZU 0747</b>
	for scraper ring	<b>ZU 0746</b>
Bellows	version for liquid-electrolyte sensors	<b>ZU 0739</b>
Protective cap	version for sensors with polymeric electrolyte	<b>ZU 0759</b>
Scraper ring	reinforced version, PTFE/PEEK	<b>ZU 0760</b>
Material Certificate 3.1		<b>ZU 0708</b>
Air supply	for pressurized sensors, 0.5 ... 4 bars	<b>ZU 0670/1</b>
	for pressurized sensors, 1 ... 7 bars	<b>ZU 0670/2</b>
Hose	20 m (extension for ZU 0670)	<b>ZU 0713</b>
Flange protectors	PEEK/FFKM DN 80	<b>ZU 0755</b>
	PEEK/FFKM DN 100	<b>ZU 0756</b>
	PVDF/FFKM DN 80	<b>ZU 0757</b>
	PVDF/FFKM DN 100	<b>ZU 0758</b>
Weld-in socket, beveled, PP		<b>ZU 0821</b>
Safety weld-in socket, straight, 40 mm	for tank wall	<b>ZU 0717</b>
	for pipe, DN 50	<b>ZU 0717/DN50</b>
	for pipe, DN 65	<b>ZU 0717/DN65</b>
	for pipe, DN 80	<b>ZU 0717/DN80</b>
	for pipe, DN 100	<b>ZU 0717/DN100</b>
Safety weld-in socket, beveled 15°, 40 mm	for tank wall	<b>ZU 0718</b>
	for pipe, DN 50	<b>ZU 0718/DN50</b>
	for pipe, DN 65	<b>ZU 0718/DN65</b>
	for pipe, DN 80	<b>ZU 0718/DN80</b>
	for pipe, DN 100	<b>ZU 0718/DN100</b>
	for tank wall, Hastelloy C22	<b>ZU 0718/C22</b>
Retainer clamp for 25-mm socket		<b>ZU 0818</b>
Limit switches, electrical	3 m fixed cable	<b>ZU 0859</b>



## Gaskets

	Set	Contact (process/rinse medium)	Order No.	
Flange or dairy pipe	A/1	FKM	<b>ZU 0689/1</b>	
	A/2	FKM/FKM	<b>ZU 0689/2</b>	
	B/1	EPDM	<b>ZU 0690/1</b>	
	B/2	EPDM/EPDM	<b>ZU 0690/2</b>	
	E/1	EPDM FDA	<b>ZU 0692/1</b>	
	E/2	EPDM FDA/EPDM	<b>ZU 0692/2</b>	
	K	FFKM/FFKM	<b>ZU 0719</b>	
	Ingold socket	A/1	FKM	<b>ZU 0693/1</b>
		A/2	FKM/FKM	<b>ZU 0693/2</b>
		B/1	EPDM	<b>ZU 0694/1</b>
B/2		EPDM/EPDM	<b>ZU 0694/2</b>	
E/1		EPDM FDA	<b>ZU 0696/1</b>	
E/2		EPDM FDA/EPDM	<b>ZU 0696/2</b>	
K		FFKM/FFKM	<b>ZU 0720</b>	

## Spare Parts

		Order No.
Immersion tube, short	1.4571	<b>ZU 0722</b>
	PEEK	<b>ZU 0724</b>
	PVDF	<b>ZU 0726</b>
	PP	<b>ZU 0825</b>
Immersion tube, long	1.4571	<b>ZU 0723</b>
	PEEK	<b>ZU 0725</b>
	PVDF	<b>ZU 0727</b>
	PP	<b>ZU 0826</b>

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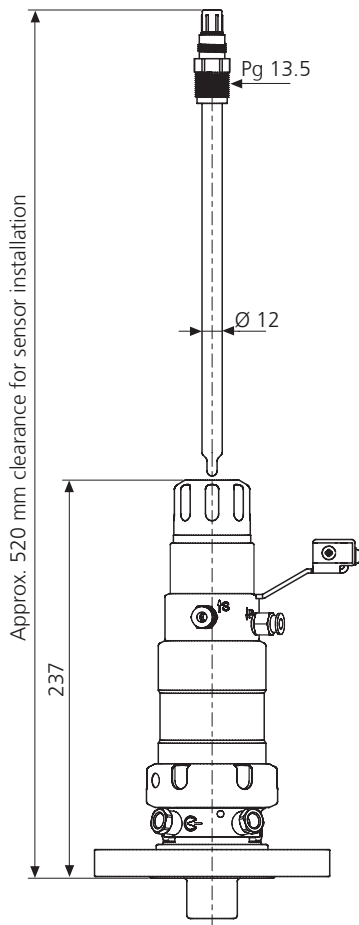
Food

Water

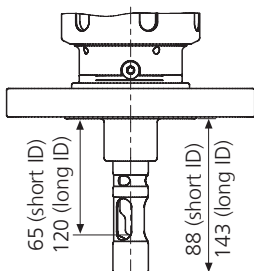
## SensoGate® WA 131 for process applications

### Dimension Drawings

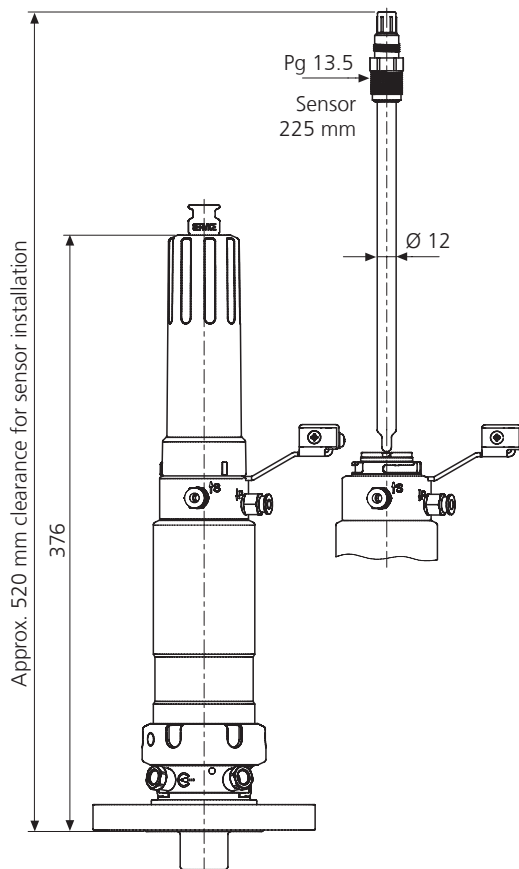
Installation dimensions for SensoGate® WA 131 with short immersion depth for sensors with gel electrolyte



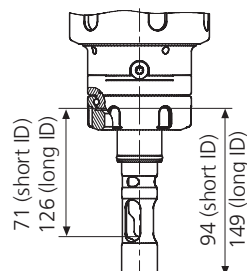
SensoGate® WA 131  
Process adaptation for  
flange, DN 32 ... DN 100  
ANSI 316, 1 1/2" ... 3",  
short and long  
immersion depth (ID)



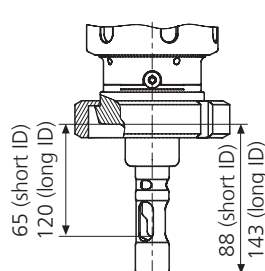
Installation dimensions for SensoGate® WA 131 with long immersion depth for sensors with gel electrolyte



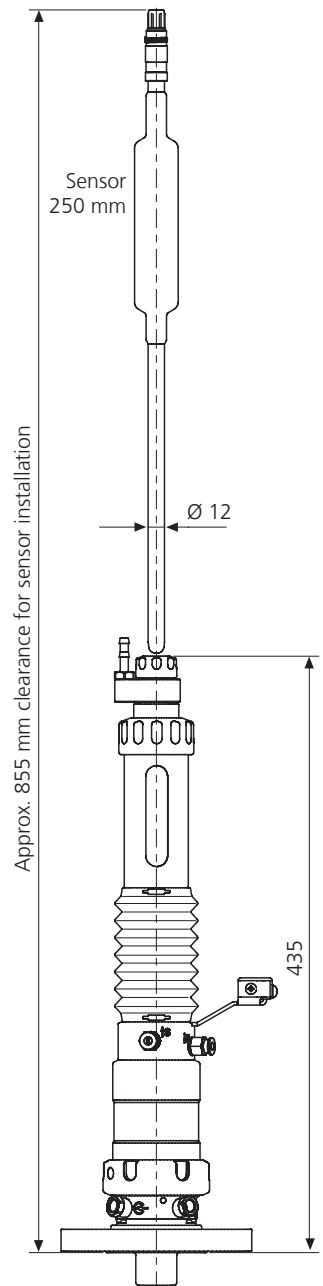
SensoGate® WA 131  
Process adaption for  
25-mm Ingold socket,  
short and long  
immersion depth (ID)



SensoGate® WA 131  
Process adaptation for  
dairy pipe, DIN 11851,  
DN 50 ... DN 100,  
short and long immersion  
depth (ID)



Installation dimensions for SensoGate® WA 131 for sensors with liquid electrolyte





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