

# Pneumatic Retractable Fittings

Chem

Energy

Pharm

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Water



## SensoGate® WA 130

**Pneumatic sensor lock-gate for demanding fully automated process applications**

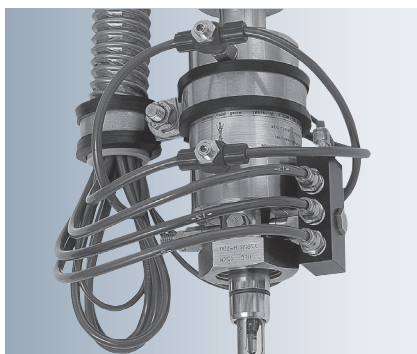
### Easy installation and clear hose connections

SensoGate® WA 130 offers genuine Plug & Play: The central multiplug is simultaneously linked via a single connection to all rinsing, cleaning, and calibration media as well as the control air and limit position mechanisms.

With the complete interior media routing and the multiplug, the connection is just as safe as it is convenient. Media entrainment is minimized and the limit-position mechanism is reliably protected.



*SensoGate® with central multiplug*



*Conventional retractable fittings:*

*Tangled hoses (left) and deposits on unprotected limit-position mechanism (right)*

### Systematic, Fully Automatic Liquid Analysis

The combination of the SensoGate® WA 130 retractable fitting with the Uniclean® 900 (cleaning) or Uniclean® 9000 (cleaning and calibration) control units and the Protos® 3400 measuring system enables fully automated measuring stations with an outstandingly high level of precision and reliability. The system offers the highest levels of safety with monitoring of the compressed air and water supply, the probe position, and the buffer and cleaning solution levels.

Maximum stability and precision due to patented metering-pump technology with separate routing of the media. Short-time measurements and regular cleaning enable longer sensor life. The production process is neither interrupted by automatic cleaning nor by calibrations (for further information, see Controllers chapter from page 306).

## Facts

- compact, smooth, and dirt-resistant design with interior media routing and integrated limit-position mechanism
- 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

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## SensoGate® WA 130 for process applications

### Specifications

Ambient temperature

5 ... 70 °C

Permissible process temp

1.4571, Hastelloy: 5 ... 140 °C  
PEEK HD, PVDF HD: 5 ... 120 °C (temporarily 140 °C, 30 min)  
PEEK, PVDF: 5 ... 100 °C

Permitted process pressure during movement

6 bars overpressure at 140 °C (1.4571/Hastelloy)  
6 bars overpressure at 120 °C (PEEK HD/PVDF HD)  
3 bars overpressure at 140 °C for 30 min (PEEK HD)  
6 bars overpressure at 40 °C, 1 bar at 100 °C (PEEK/VDF)

Permissible static pressure

16 bars (40 °C) in service position

Air supply

4 ... 7 bars, filtered 10 ... 25 µm, oil- and condensate-free

Effective immersion depth

65 mm or 120 mm, measured from lower edge of flange to sensor tip (flange version)

Total immersion depth incl. immersion tube

88 mm or 143 mm (flange version)

Process adaptations\*)

lapped flanges DN 32/DN 50/DN 65/DN 80/DN 100  
lapped flanges ANSI 316, 1 1/2" / 2" / 2 1/2" / 3"  
dairy-pipe screw joint DN 50/DN 65/DN 80/DN 100  
Ingold socket 25 mm (G 1 1/4")

Sensors

225 mm, Pg 13.5 coupling,  
250 mm for pressurized liquid electrolyte sensors

Rinse-medium inlet

1) for Unical® 9000/Uniclean® 900: Connection with hose grommet and coupling  
2) for manual control: ZU 0631/ZU 0646  
3) for free hose connection: 6/4 mm

Rinse-medium outlet

connection: hose grommet with coupling

Rinse function

seal rinsing during stroke movement

Process-wetted materials

stainless steel 1.4571, Hastelloy  
PVDF, PVDF HD (carbon-fiber-reinforced)  
PEEK, PEEK HD (carbon-fiber-reinforced)

Enclosure

stainless steel, 1.4571

Ingress protection

IP 66

Connection to Uniclean® 900/Unical® 9000

compact multiplug connection

Free hose connection

1 x 4/6 mm hose coupling for rinse water/cleaning agent  
2 x 4/6 mm hose coupling for compressed air  
2 x 4/6 mm hose coupling for pneumatic limit switches

Sensor protection in the process

integrated in immersion tube

Limit switches

noncontacting electrical limit-position control in conjunction with Uniclean® 900/Unical® 9000/  
ZU 0631 or pneumatic limit switches for free hose connection

Certificates

3.1 Material Certificate (optional)  
ATEX II 1 GD c II

\*) Special connections on request



**Product Line**

Order No.

<b>Process sensor lock-gate, pneumatic</b>		<b>WA 130 /</b>	<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 C, FFKM (Kalrez) elastomeric ring set E, EPDM FDA elastomeric ring set K, FFKM, compl. (Kalrez)	<b>A B C E K</b>													
<b>Process-wetted materials*)</b>	1.4571/1.4571/1.4571 Hastelloy/Hastelloy/Hastelloy PEEK/PEEK/PEEK PVDF/PVDF/PVDF PEEK HD/PEEK HD/PEEK HD PVDF HD/PVDF HD/PVDF HD Hastelloy/PEEK/Hastelloy Hastelloy/1.4571/PEEK 1.4571/1.4571/PEEK PP-H	<b>A B C D E F M N Z P</b>													
<b>Process adaptation</b>	flange, steel 1.4571, DN 32 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> dairy pipe, DN 50 dairy pipe, DN 65 dairy pipe, DN 80 dairy pipe, DN 100 flange, ANSI 316, 1 1/2" flange, ANSI 316, 2" flange, ANSI 316, 2 1/2" flange, ANSI 316, 3" <sup>1)</sup> Ingold socket, 25 mm (G 1 1/4") G 2 1/4" for ARF 210/30xxxx	<b>B 0 B 1 B 2 B 3 B 4 C 1 C 2 C 3 C 4 D 0 D 1 D 2 D 3 H 0 K 1 A</b>													
<b>Immersion depth</b>	short long	<b>A B</b>													
<b>Connection</b>	media connection, PP media connection, PEEK media connection, PEEK, with integr. connection of add. medium	<b>A B C</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 130 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>
Adapter for free hose connection	PP/EPDM (incl. electric feedback)	<b>ZU 0733</b>
	PP/EPDM (without electric feedback)	<b>ZU 0734</b>
	PEEK/EPDM (incl. electric feedback)	<b>ZU 0742</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>
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>

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Isolation Amplifiers  
Transmitters

Indicators

Process Analytics

Portable Meters

Laboratory Meters

Sensors

Fittings

**Knick** 

**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>
	C/1	FFKM	<b>ZU 0691/1</b>
	C/2	FFKM/FFKM	<b>ZU 0691/2</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
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>
C/1		FFKM	<b>ZU 0695/1</b>
C/2		FFKM/FFKM	<b>ZU 0695/2</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>
	Hastelloy C22	<b>ZU 0853</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>
	Hastelloy C22	<b>ZU 0854</b>
	PEEK	<b>ZU 0725</b>
	PVDF	<b>ZU 0727</b>
	PP	<b>ZU 0826</b>

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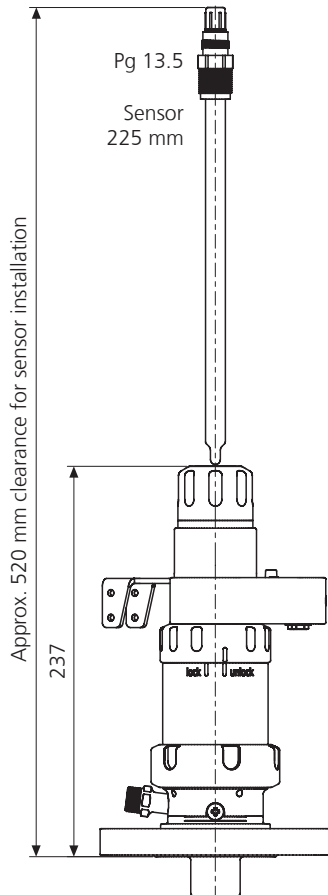
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Water

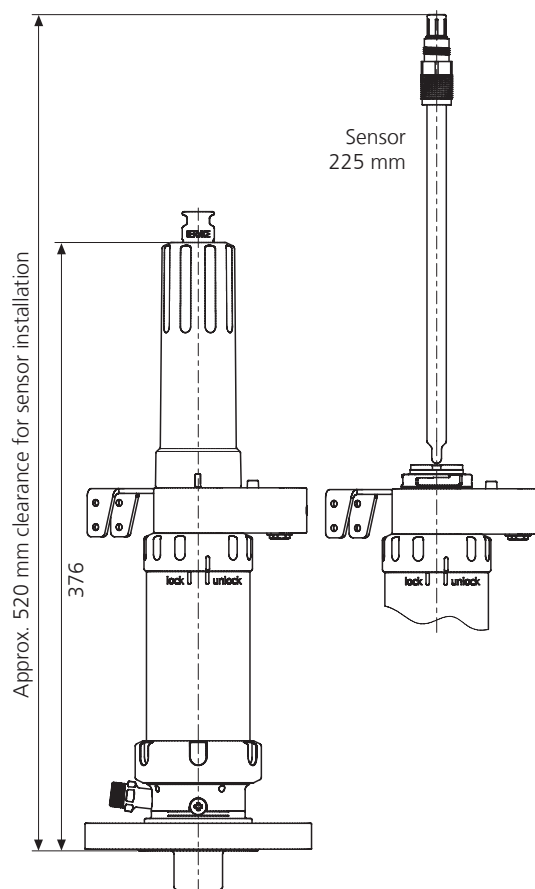
## SensoGate® WA 130 for process applications

### Dimension Drawings

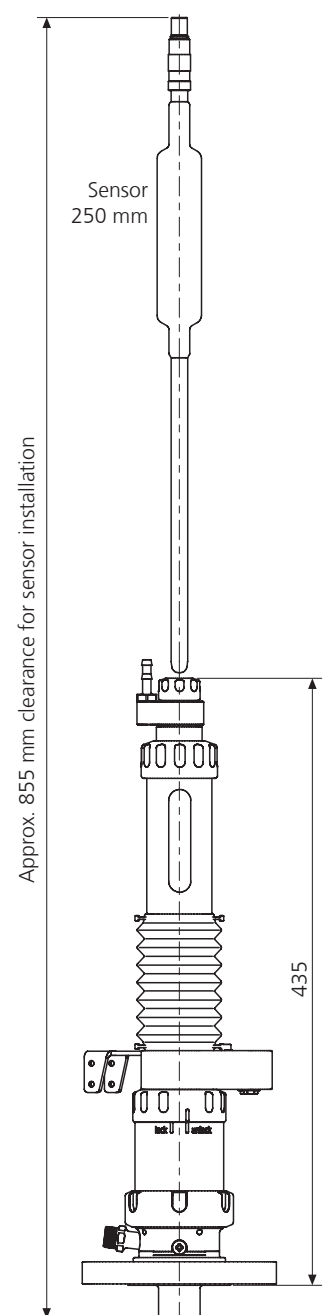
Installation dimensions for SensoGate® WA 130 with short immersion depth for sensors with gel electrolyte



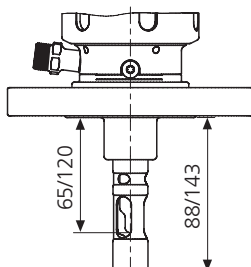
Installation dimensions for SensoGate® WA 130 with long immersion depth for sensors with gel electrolyte



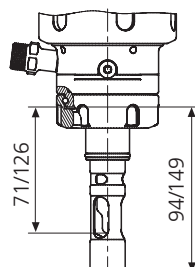
Installation dimensions for SensoGate® WA 130 for sensors with liquid electrolyte



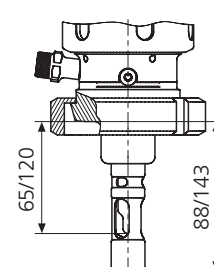
SensoGate® WA 130  
Process adaptation for  
flange DN 32 ... 100  
ANSI 316, 1 1/2" ... 3",  
short and long  
immersion depth



SensoGate® WA 130  
Process adaptation for  
25-mm Ingold socket,  
short and long  
immersion depth



SensoGate® WA 130  
Process adaptation for  
dairy pipe,  
DIN 11851 DN 50 ... 100,  
short and long  
immersion depth



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