

## SensoGate® WA 131

Pneumatic retractable fitting for use with commercially available or customer developed control systems

## **Universal pneumatic fitting**

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 customerdeveloped control units.

#### **Individual solutions**

The SensoGate® WA 131 is scalable to meet customer 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 without interrupting the process. This can easily be done under process pressures as great as 145 psi (10 bars).

### **Easy retrofit**

If another media connection is necessary, it can added by replacement of the relevant module. A change from metal to plastic or a change to electrodes with liquid electrolyte is possible.

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 sanitary version, which is a unique design feature for retractable fittings.

## **Facts**

- Compact, buildup resistant design
- Low maintenance
- Simple replacement of seals due to divided calibration/cleaning chamber
- Increased service life and reduced seal wear
- ATEX approval II 1GD c II for the complete fitting
- Low cost, simple installation, operation, and maintenance
- SensoLock for high operational safety
- Integrated check valves and limit switches
- Fast and easy replacement of calibration chamber and insertion tube

- All maintenance can be performed on site
- Cyclone cleaning effect
- Standard sensor length (225 mm) even for large immersion depths
- Multiple process connections available
- Flange version with scraping ring
- Modular design allows specific replacement of the process-wetted materials:
   PEEK, PVDF, PP, 316 SS, Hastelloy
- Plastic versions with high pressure and temperature resistance due to carbonfiber-reinforced plastics
- Special version for sensors with pressurized liquid electrolyte

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## **Specifications**

-p				
Permissible process pressure				
Process adaptation 216 SS/				
Process adaptation 316 SS/ Hastelloy	145 psi (10 bar) (at 32 284°F (0 140 °C))			
Process adaptation PEEK HD	145 psi (10 bar) (32 284°F (0 140 °C))			
Process adaptation PVDF HD	145 psi (10 bar) (32 248°F (0 120 °C)), 6 bar (284°F (140°C)) 30 min			
Process adaptation PEEK/PVDF	87 psi (6 bar) (32 104°F (0 40°C)) falling linearly to 29 psi (2 bar) (248°F (120 °C))			
Process adaptation PP	87 psi (6 bar) (41 86°F (5 30°C)) falling linearly to 14.5 psi (1 bar) (176°F (80°C))			
Permissible process pressure and temperature, statically in service position	232 psi (16 bar) (at 32 104°F (0 40°C)), PP 145 psi (10 bar) (at 41 68°F (5 20 °C))			
Ambient temperature	14 158°F (–10 70°C)			
Ingress protection	IP 66			
Housing material	stainless steel A2/PP			
Permissible pressure for probe control	58 101 psi (4 7 bar)			
Quality of compressed air				
Standard	According to ISO 8573-1:2001			
Quality class	3.3.3 oder 3.4.3			
Solid contaminants	class 3 (max. 5 μm, max. 5 mg/m³)			
Water content for temperatures > 15 °C	class 4, pressure dew point 37°F (3°C) or below			
Water content for temperatures 5 15 °C	class 3, pressure dew point -4°F (–20°C) or below			
Oil content	class 3 (max. 1 mg/m³)			
Sensors				
With gel electrolyte	Ø 12 mm, length 225 mm with temp detector, Pg 13.5 thread			
With liquid electrolyte	Ø 12 mm, length 250 mm with temp detector			
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			

# SensoGate® WA 131 for process applications

## **Specificatitions** – *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.

ensor lock-gate, pneun	natic	WA 131 /									j –		
Explosion protection	for hazardous area Zone 1 without		X										
Sensor	solid electrolyte liquid electrolyte (pressurization	possible)		0									
Gasket material	elastomeric ring set A, FKM (Vito elastomeric ring set B, EPDM elastomeric ring set E, EPDM FD, elastomeric ring set K, FFKM, co	Д		ı İ	4 3 = (			Ī					
Process-wetted materials*)	316 SS/316 SS/316 SS Hastelloy/Hastelloy/Hastelloy				A B								
	PEEK/PEEK/PEEK PVDF/PVDF/PVDF				C								
	PEEK HD/PEEK HD/PEEK HD PVDF HD/PVDF HD/PVDF HD				E								
	PP reinforced				P								
	316 SS/316 SS/PEEK				z								
Process adaptation	flange, steel, 316 SS, DN 32 flange, steel, 316 SS, DN 40 flange, steel, 316 SS, DN 50 flange, steel, 316 SS, DN 65 flange, steel, 316 SS, DN 801) flange, steel, 316 SS, DN 1001)					B B B	0 A 1 2 3 4						
	dairy pipe, DN 50 dairy pipe, DN 65 dairy pipe, DN 80 dairy pipe, DN 100					C C C	1 2 3 4						
	flange, ANSI 316, 1 1/2" flange, ANSI 316, 2" flange, ANSI 316, 2 1/2" flange, ANSI 316, 3"1)					D D D	0 1 2 3						
	Ingold socket, 25 mm					Н	0						
	NPT 1" (male)					N	1						
Immersion depth	short long							A B					
Pneumatic-system connection	without pneumatic limit signal with pneumatic limit signal								A B				
Rinse-medium connection	G 1/8" complete with outlet hos G 1/8" complete with outlet hos G 1/8" complete with outlet hos and inlet hose (5 m) com	e (3 m), inlet G 1/8 e (3 m), inlet G 1/8	3"							0 1 2			
SensoLock	without with									0			
Special variant	without equipped with special grease (pr with scraper ring, reinforced vers	ovided by custome sion, PTFE/PEEK (ZU	er) J 0760	))								0 0 0	0 0

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

1) 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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Accessories		Order No.		
Service set	basic equipment	ZU 0680		
	maintenance, repair, retrofit	ZU 0740		
	calibration chamber	ZU 0754		
Mounting aid	for 20 x 2.5 O-rings	ZU 0747		
	for scraper ring	ZU 0746		
Bellows	version for liquid-electrolyte sensors	ZU 0739		
Protective cap	version for sensors with polymeric electrolyte	ZU 0759		
Scraper ring	reinforced version, PTFE/PEEK	ZU 0760		
Material Certificate 3.1		ZU 0708		
Air supply	for pressurized sensors, 7 58 psi (0.5 4 bar)	ZU 0670/1		
	for pressurized sensors, 14.5 101 psi (1 7 bar)	ZU 0670/2		
Hose	20 m (extension for ZU 0670)	ZU 0713		
Flange protectors	PEEK/FFKM DN 80	ZU 0755		
	PEEK/FFKM DN 100	ZU 0756		
	PVDF/FFKM DN 80	ZU 0757		
	PVDF/FFKM DN 100	ZU 0758		
Weld-in socket, beveled, PP		ZU 0821		
Safety weld-in socket, straight, 40 mm	for tank wall	ZU 0717		
	for pipe, DN 50	ZU 0717/DN50		
	for pipe, DN 65	ZU 0717/DN65		
	for pipe, DN 80	ZU 0717/DN80		
	for pipe, DN 100	ZU 0717/DN100		
Safety weld-in socket, beveled	for tank wall	ZU 0718		
15°, 40 mm	for pipe, DN 50	ZU 0718/DN50		
	for pipe, DN 65	ZU 0718/DN65		
	for pipe, DN 80	ZU 0718/DN80		
	for pipe, DN 100	ZU 0718/DN100		
	for tank wall, Hastelloy C22	ZU 0718/C22		
Retainer clamp for 25-mm socket		ZU 0818		
Limit switches, electrical	3 m fixed cable	ZU 0859		

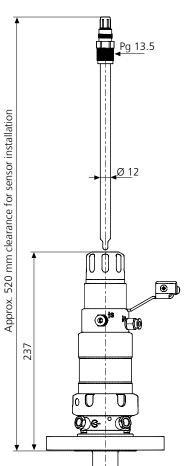
Gaskets	Set	Contact (process/rinse medium)	Order No.
Flange or dairy pipe	A/1	FKM	ZU 0689/1
	A/2	FKM/FKM	ZU 0689/2
	B/1	EPDM	ZU 0690/1
	B/2	EPDM/EPDM	ZU 0690/2
	E/1	EPDM FDA	ZU 0692/1
	E/2	EPDM FDA/EPDM	ZU 0692/2
	K	FFKM/FFKM	ZU 0719
Ingold socket	A/1	FKM	ZU 0693/1
	A/2	FKM/FKM	ZU 0693/2
	B/1	EPDM	ZU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

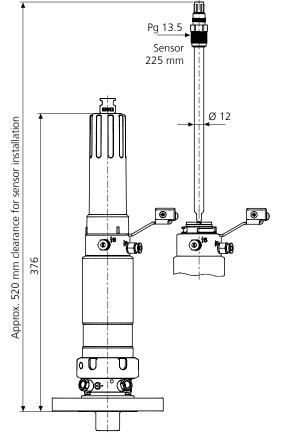
<b>Spare Parts</b>		Order No.
Immersion tube, short	316 SS	ZU 0722
	PEEK	ZU 0724
	PVDF	ZU 0726
	PP	ZU 0825
Immersion tube, long	316 SS	ZU 0723
	PEEK	ZU 0725
	PVDF	ZU 0727
	PP	ZU 0826

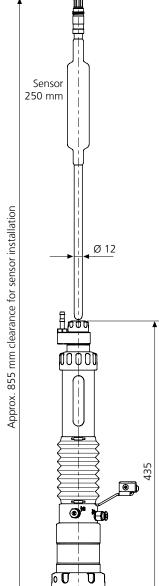
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## **Dimensional Drawings**

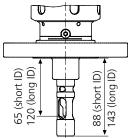
Installation dimensions for SensoGate® WA 131 with short immersion depth for sensors with gel electrolyte Installation dimensions for SensoGate® WA 131 with long immersion depth for sensors with gel electrolyte Installation dimensions for SensoGate® WA 131 for sensors with liquid electrolyte



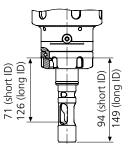




SensoGate® WA 131 Process adaptation for flange, DN 32 ... DN 100 ANSI 316, 1 1/2" ... 3", short and long immersion depth (ID)



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)

