

# Manual Retractable Fittings



## SensoGate® WA 131 M

Manual retractable fitting with safe-to-operate rotary drive

### Revolutionary operation

The SensoGate® WA 131 M has a manual rotary drive, which enables the fitting to be operated up to a counter pressure of 145 psi (10 bar) – and this in less than two rotations. Regardless of how unfavorable the angle or the operating height at which the fitting is installed. Little rotary force is required and is easily applied manually. This is not possible with the sliding motion of conventional retractable fittings.

### Maximum process safety

The configuration of the O-rings means that there is never any connection between the drain opening of the cleaning chamber and the process, even during inward and outward movement of the sensor.

For maximum process safety, the sensor can only be removed in the service position. Automatic insertion protection reliably blocks the movement of the fitting and prevents extension into the process position without a sensor.

### 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 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 carbon-fiber-reinforced plastics
- Special version for sensors with pressurized liquid electrolyte

## Specifications

### Permissible process pressure and temperature during movement

Process material 316 SS/ Hastelloy	145 psi (10 bar) (at (32 ... 284°F) 0 ... 140°C))
Process material PEEK HD	145 psi (10 bar) (at (32 ... 284°F) 0 ... 140°C))
Process material PVDF HD	145 psi (10 bar) (32 ... 248°F (0 ... 120 °C)), 6 bar (284°F (140°C)) 30 min
Process material PEEK/PVDF	87 psi (6 bar) (32 ... 104°F (0 ... 40°C)), falling linearly to 29 psi (2 bar) (248°F (120 °C))
Process material 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, in service position	232 psi (16 bar) (at 32 ... 104°F (0 ... 40°C)), PP 10 bars (at 5 ... 20 °C)
Ambient temperature	14 ... 158°F (–10 ... 70°C)
Ingress protection	IP 66
Housing material	Stainless steel A2/PP or stainless steel/PEEK
Permissible pressure for probe control	58 ... 101 psi (4 ... 7 bar)

### 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 connections

Flanges, DIN EN 1092-1	DN 32 ... 100
Flanges, ANSI B 16.5	1 1/2" to 3"
Threaded	1" NPT
Dairy pipe, DIN 11851	DN 50 ... 100
Ingold socket, 25 mm	25 mm
G 2 1/4"	for Knick ARF210/30X

### Connections

Rinse and calibration media (optional)	internal thread G 1/8", hose coupling G 1/8"-DN 4/6
Outlet (optional)	outlet hose, NW 8 EPDM 3m
For pressurized sensors	hose connection NW 6, pressure in sensor chamber 0.5 ... 1 bar above process pressure (max. 7 bar)
Immersion depths/ Installation dimensions	see dimensional drawings
Process-wetted materials	see order code

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## SensoGate® WA 131 M for process applications

Product Line

Order No.

Process sensor lock-gate, pneumatic		WA 131 M /	<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"/>	<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>	316 SS/316 SS/316 SS 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>																	
<b>Process adaptation</b>	flange, steel, 316 SS, DN 32	<b>B 0</b>																	
	flange, steel, 316 SS, DN 40	<b>B A</b>																	
	flange, steel, 316 SS, DN 50	<b>B 1</b>																	
	flange, steel, 316 SS, DN 65	<b>B 2</b>																	
	flange, steel, 316 SS, DN 80 <sup>1)</sup>	<b>B 3</b>																	
	flange, steel, 316 SS, DN 100 <sup>1)</sup>	<b>B 4</b>																	
	dairy pipe, DN 50	<b>C 1</b>																	
	dairy pipe, DN 65	<b>C 2</b>																	
	dairy pipe, DN 80	<b>C 3</b>																	
	dairy pipe, DN 100	<b>C 4</b>																	
	flange, ANSI 316 SS, 1 1/2"	<b>D 0</b>																	
	flange, ANSI 316 SS, 2"	<b>D 1</b>																	
	flange, ANSI 316 SS, 2 1/2"	<b>D 2</b>																	
	flange, ANSI 316 SS, 3" <sup>1)</sup>	<b>D 3</b>																	
	Ingold socket, 25 mm	<b>H 0</b>																	
	G 2 1/4" for ARF 210/30xxxx	<b>K 1</b>																	
	NPT 1" (male)	<b>N 1</b>																	
<b>Immersion depth</b>	short long	<b>A B</b>																	
<b>Electrical limit signal</b>	with without	<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>Housing material</b>	stainless steel / PP (< 6 bars operating pressure) stainless steel / PEEK (< 10 bars operating pressure)	<b>1 2</b>																	
<b>Special variant</b>	without equipped with special grease (provided by customer) with scraper ring, reinforced version, PTFE/PEEK (ZU 0760) reduced stroke (shortened immersion depth)																<b>0 0 0</b> <b>0 0 1</b> <b>0 0 3</b> <b>0 0 4</b>		

## Accessories

Order No.

Service set	basic equipment	<b>ZU 0680</b>
	maintenance, repair, retrofit	<b>ZU 0740</b>
	calibration chamber	<b>ZU 0754</b>
Sensor mounting wrench , 19 mm		<b>ZU 0647</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, 7 ... 58 psi (0.5 ... 4 bar)	<b>ZU 0670/1</b>
	for pressurized sensors, 14.5 ... 101 psi (1 ... 7 bar)	<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 15°, PP, length 60 mm		<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>

# Manual Retractable Fittings

## SensoGate® WA 131 M for process applications

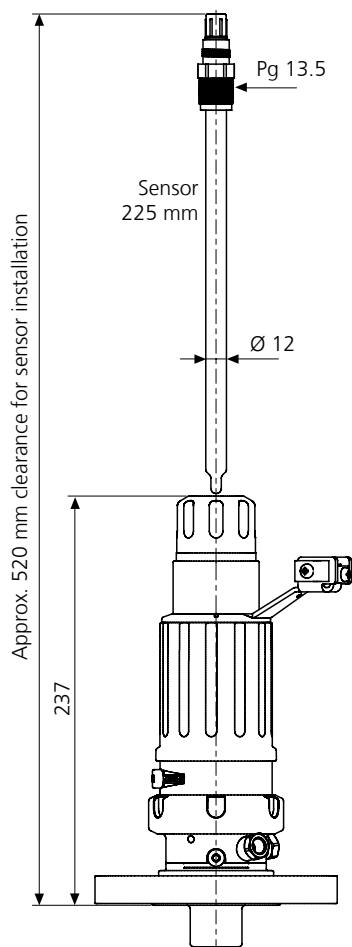
Gaskets	Set	Contact (process/rinse medium)	Order No.
Flange or dairy pipe	A/1	FKM	<b>ZU 0689/1</b>
	A/2	FKM/FKM	<b>ZU 0829</b>
	B/1	EPDM	<b>ZU 0690/1</b>
	B/2	EPDM/EPDM	<b>ZU 0830</b>
	E/1	EPDM FDA	<b>ZU 0692/1</b>
	E/2	EPDM FDA/EPDM	<b>ZU 0831</b>
	K/1	FFKM	<b>ZU 0691/1</b>
	K/2	FFKM/FFKM	<b>ZU 0832</b>
	A/1	FKM	<b>ZU 0693/1</b>
	A/2	FKM/FKM	<b>ZU 0833</b>
Ingold socket H0	B/1	EPDM	<b>ZU 0694/1</b>
	B/2	EPDM/EPDM	<b>ZU 0834</b>
	E/1	EPDM FDA	<b>ZU 0696/1</b>
	E/2	EPDM FDA/EPDM	<b>ZU 0835</b>
	K/1	FFKM	<b>ZU 0695/1</b>
	K/2	FFKM/FFKM	<b>ZU 0836</b>

FKM: Viton  
FFKM: Kalrez, Chemraz, Perlast

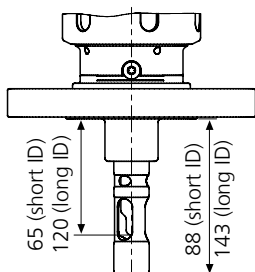
Spare Parts		Order No.
Immersion tube, short	316 SS	<b>ZU 0722</b>
	Hastelloy C22	<b>ZU 0853</b>
	PEEK	<b>ZU 0724</b>
	PVDF	<b>ZU 0726</b>
	PP	<b>ZU 0825</b>
Immersion tube, long	316 SS	<b>ZU 0723</b>
	Hastelloy C22	<b>ZU 0854</b>
	PEEK	<b>ZU 0725</b>
	PVDF	<b>ZU 0727</b>
	PP	<b>ZU 0826</b>

## Dimensional Drawings

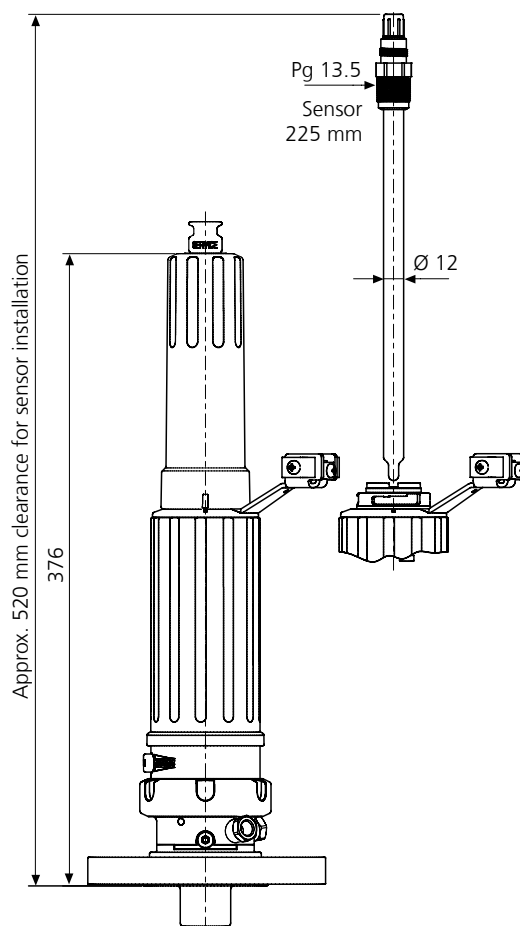
Installation dimensions  
for SensoGate® WA 131 M  
with short immersion depth for  
sensors with gel electrolyte



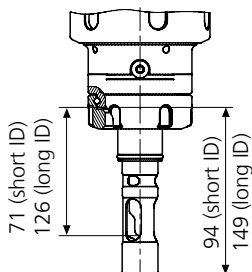
SensoGate® WA 131 M  
Process adaptation for flange,  
DN 32 ... DN 100  
ANSI 316 SS, 1 1/2" ... 3",  
short and long  
immersion depth (ID)



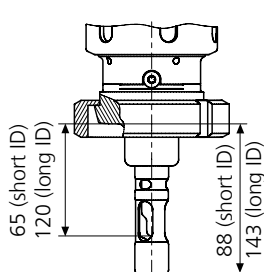
Installation dimensions  
for SensoGate® WA 131 M  
with long immersion depth for  
sensors with gel electrolyte



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



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



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

