

Pneumatic Retractable Fittings

Chem

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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

Ingress protection IP 66

Housing material stainless steel A2/PP

Permissible pressure for probe control 4 ... 7 bars

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 ³)
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 ³)

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

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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

For up-to-date information, please visit www.knick.de



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"/>
Explosion protection	for hazardous area Zone 1 without	X N																
Sensor	solid electrolyte liquid electrolyte (pressurization possible)	0 1																
Gasket material	elastomeric ring set A, FKM (Viton) elastomeric ring set B, EPDM elastomeric ring set E, EPDM FDA elastomeric ring set K, FFKM, compl. (Kalrez)	A B E K																
Process-wetted materials*)	1.4571/1.4571/1.4571 Hastelloy/Hastelloy/Hastelloy	A B																
	PEEK/PEEK/PEEK PVDF/PVDF/PVDF	C D																
	PEEK HD/PEEK HD/PEEK HD PVDF HD/PVDF HD/PVDF HD	E F																
	PP reinforced	P																
	1.4571/1.4571/PEEK	Z																
Process adaptation	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 ¹⁾ flange, steel, 1.4571, DN 100 ¹⁾	B 0 B 1 B 2 B 3 B 4																
	dairy pipe, DN 50 dairy pipe, DN 65 dairy pipe, DN 80 dairy pipe, DN 100	C 1 C 2 C 3 C 4																
	flange, ANSI 316, 1 1/2" flange, ANSI 316, 2" flange, ANSI 316, 2 1/2" flange, ANSI 316, 3" ¹⁾	D 0 D 1 D 2 D 3																
	Ingold socket, 25 mm	H 0																
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 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	0 1 2																
SensoLock	without with	0 1																
Special variant	without equipped with special grease (provided by customer) with scraper ring, reinforced version, PTFE/PEEK (ZU 0760)															0 0 0	0 0 1	0 0 3

*1) 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 (Details from page 270)

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, 0.5 ... 4 bars	ZU 0670/1
	for pressurized sensors, 1 ... 7 bars	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 15°, 40 mm	for tank wall	ZU 0718
	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

For up-to-date information, please visit www.knick.de

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	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	

Spare Parts

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

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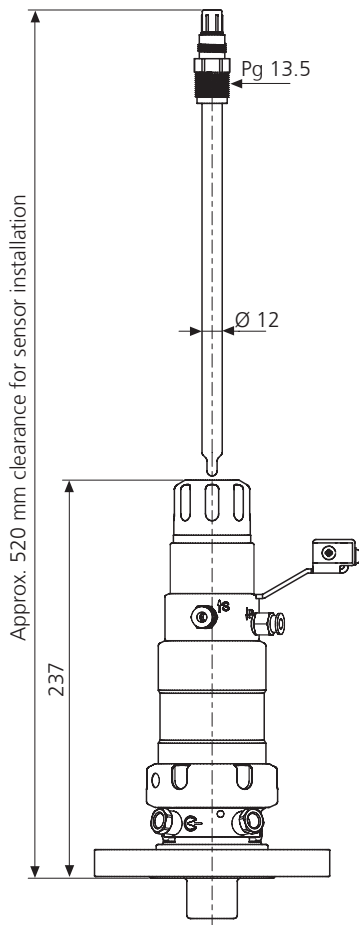
Food

Water

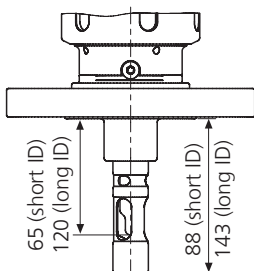
SensoGate® WA 131 for process applications

Dimension Drawings

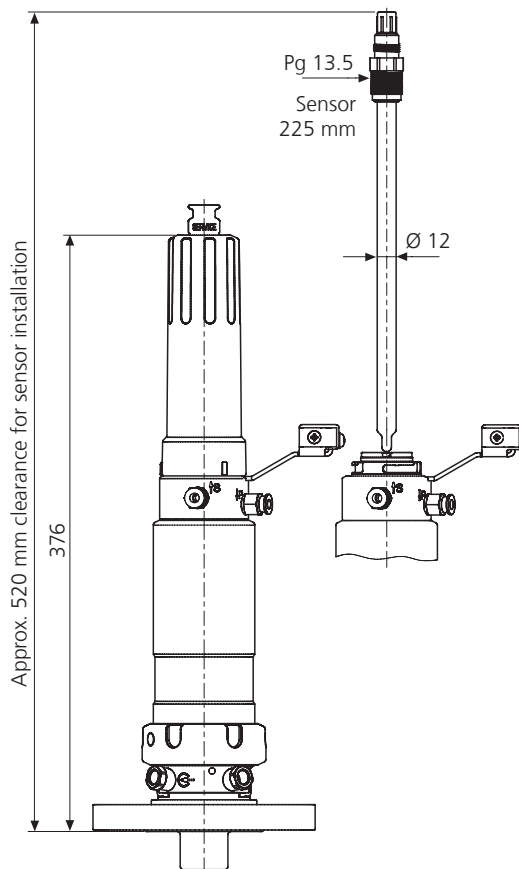
Installation dimensions for SensoGate® WA 131 with short immersion depth for sensors with gel electrolyte



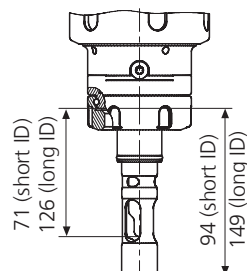
SensoGate® WA 131
Process adaptation for
flange, DN 32 ... DN 100
ANSI 316, 1 1/2" ... 3",
short and long
immersion depth (ID)



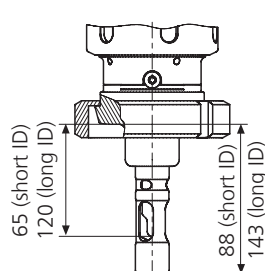
Installation dimensions for SensoGate® WA 131 with long immersion depth for sensors with gel electrolyte



SensoGate® WA 131
Process adaptation 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

