

Pneumatic Retractable Fittings



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 customer-developed 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 be 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 carbon-fiber-reinforced plastics
- Special version for sensors with pressurized liquid electrolyte

Specifications

Permissible process pressure and temperature during movement

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

Pneumatic Retractable Fittings

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

Pneumatic Retractable Fittings

SensoGate® WA 131 for process applications

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 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

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

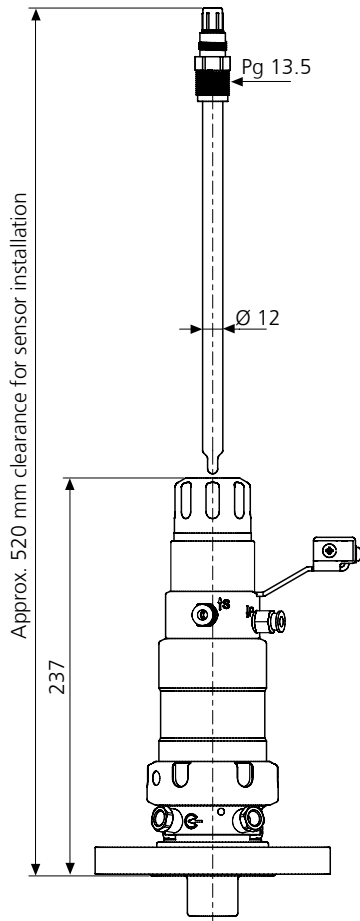
		Order No.
Immersion tube, short	316 SS	ZU 0722
	PEEK	ZU 0724
	PVDF	ZU 0726
	PP	ZU 0825
Immersion tube, long	316 SS	ZU 0723
	PEEK	ZU 0725
	PVDF	ZU 0727
	PP	ZU 0826

Pneumatic Retractable Fittings

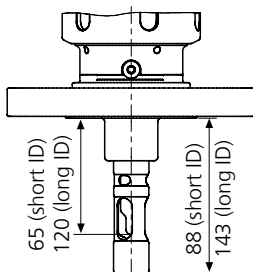
SensoGate® WA 131 for process applications

Dimensional Drawings

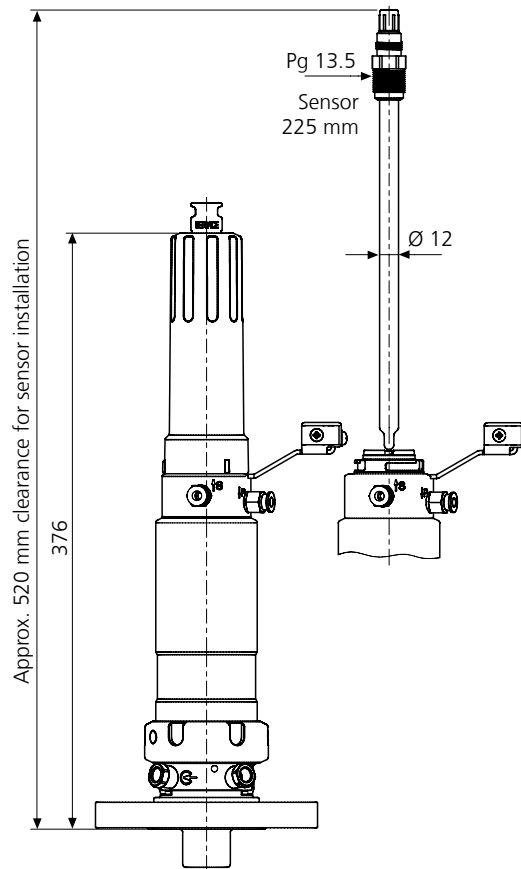
Installation dimensions for SensoGate® WA 131 with short immersion depth for sensors with gel electrolyte



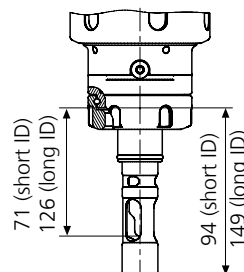
SensoGate® WA 131
Process adaptation for flange, DN 32 ... DN 100 ANSI 316, 1 1/2" ... 3", short and long immersion depth (ID)



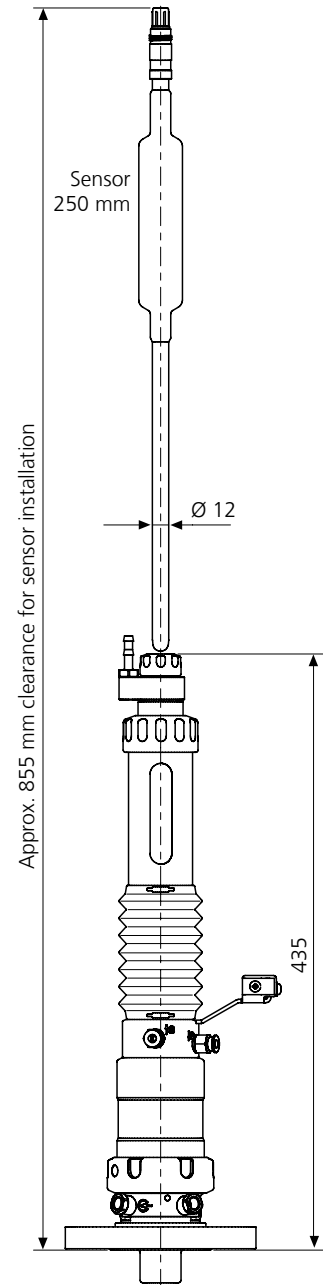
Installation dimensions for SensoGate® WA 131 with long immersion depth for sensors with gel electrolyte



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



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



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

