



Design

pH-transmitter type 8205 compact

The pH-transmitter compactly combines a pH-sensor and transmitter with display in splash-proof plastic IP 65 enclosure.

The sensor component consists of a replaceable combination pH-electrode, screwed into the sensor housing with screw-in threads PG 13.5. The measured signal is conveyed to the controller via a coax plug. The Pt1000 for automatic temperature compensation is a standard feature in the sensor housing.

The transmitter component converts the measured signal and displays the actual value.

Compact version for fitting types S020 and 1500 / 1501.

Separated pH-transmitter type 8205

The pH-transmission system combines a pH-sensor type 8200 and a separate pH-transmitter type 8205 with display.

The 8205 separate transmitter is available in panel mounted version and in a wall mounted plastic IP65

enclosure for connection to the pH-sensor type 8200 in short (max. 5 m) or a long distance (max. 500 m) version.

pH-sensor type 8200

A wide range of pH-sensors with different characterized electrodes and process connection types offers large capabilities of mounting and pH measurement.

The Pt1000 for automatic temperature compensation is available as an option feature in pH-sensor housing.

Remote indication with separated transmitter device for wall or panel mounting connected over coaxial cable with pH-sensor 8200 for distances up to 5 metres. Longer distances up to 500 metres will be realized with a special converter mounted on the sensor 8200 for digital signal transmission to the pH-transmitter.

Sensor type 8200 for mounting on different fitting types as S020, 1500 / 1501, TriClamp or sanitary versions.

Advantages / Benefits

- ▶ Easy System integration by Easy LINK provides low cost of ownership
- ▶ Programmable pH-transmitter functions for easy pH-measuring system solutions
- ▶ Compact version with integrated pH-electrodes
- ▶ Remote version with separated transmitter away from the sensor for short and long distances
- ▶ Large range of process connections with different fittings as threads, Triclamp or sanitary versions
- ▶ Easy commissioning due to multi language, menu-guided operation
- ▶ For use in both pipes and tanks installed in custom fittings and submersion kits

Application

pH-measurements

Waste engineering

Water treatment and process technology

Cooling water monitoring

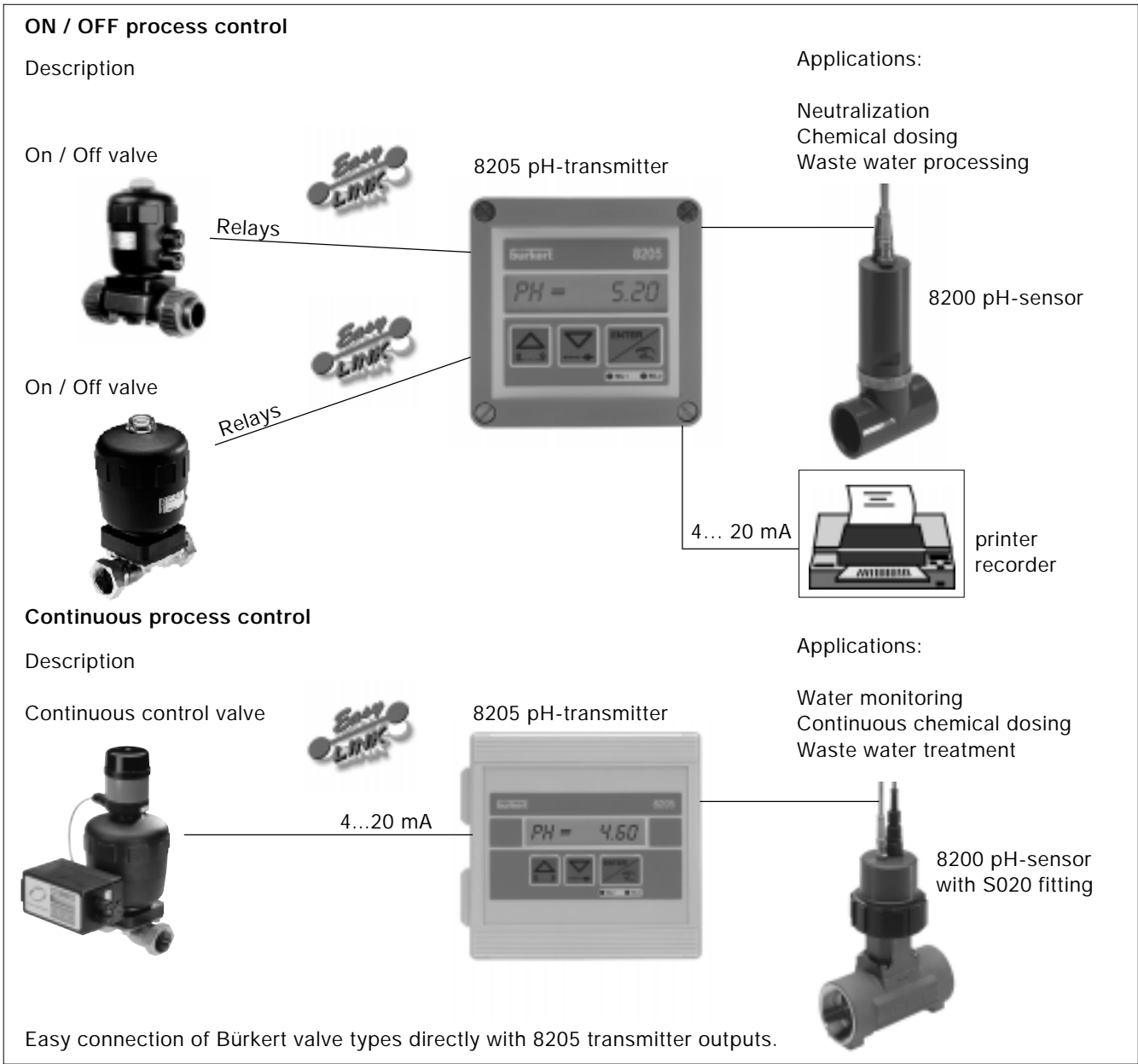
Swimming pool engineering

Chemical dosing

Electroplating

bürkert
Easy Fluid Control Systems

The Easy pH - Control System



Principle of Operation

The most important part of the pH-transmitter is the pH electrode with its pH selective glass membrane. When the electrode is immersed into the solution, an electrical charge caused by H⁺-ions generates a cell voltage between the glass membrane and the solution. This electrical voltage is recorded with reference to a reference electrode, located around the pH glass electrode. The cell voltage of the combination electrode is directly proportional to the pH value.

The transducer without relay functions in a 2-wire circuit and requires a power supply of 12... 30 VDC.

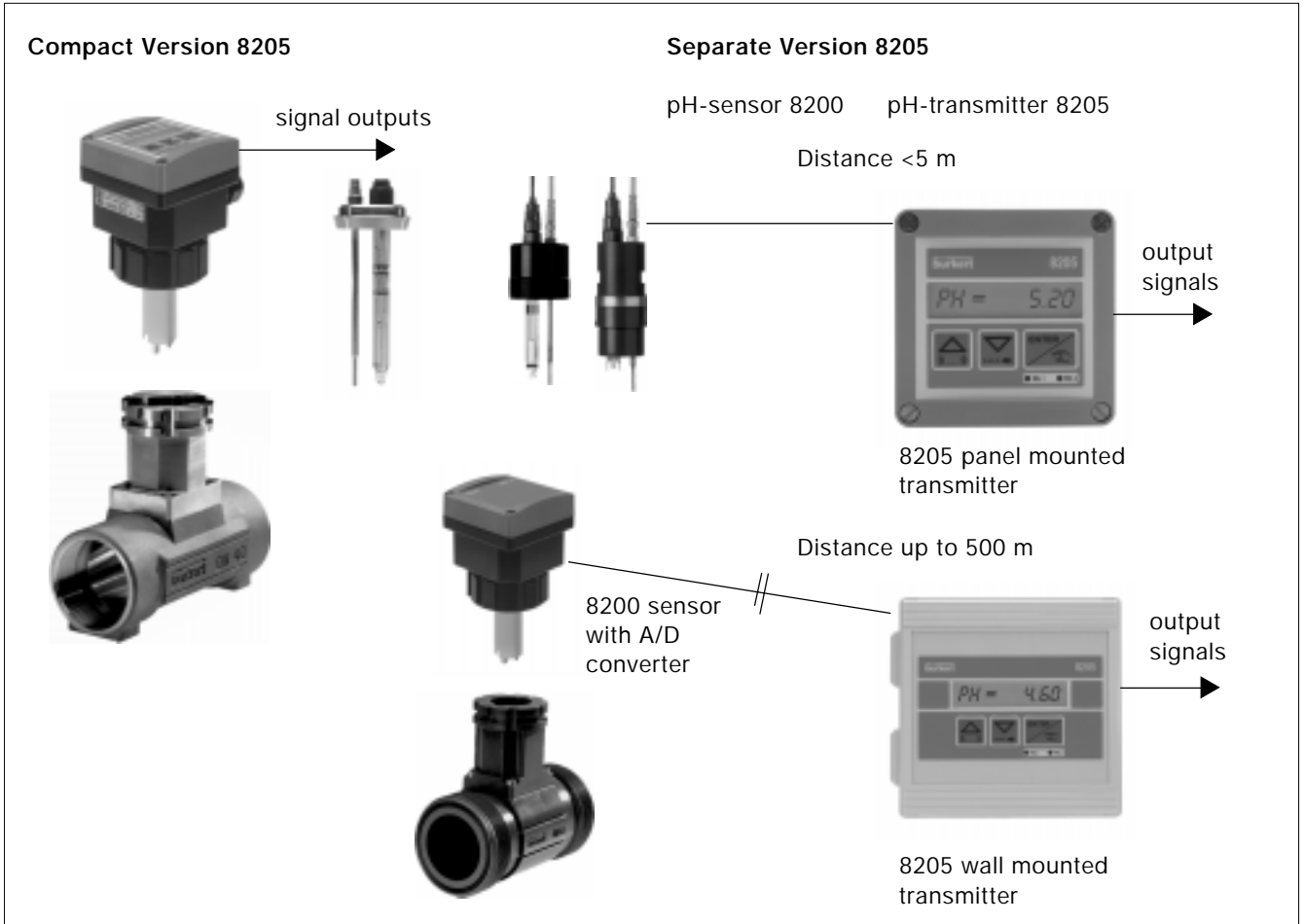
A 4... 20 mA standard signal is available as an output signal, proportional to the pH value.

The transducer with two additional relays functions in a 3-wire circuit. Limit values are freely adjustable.

The wall or panel mount version are available in as a 12... 30 VDC version or with a 115... 230 VAC power supply.

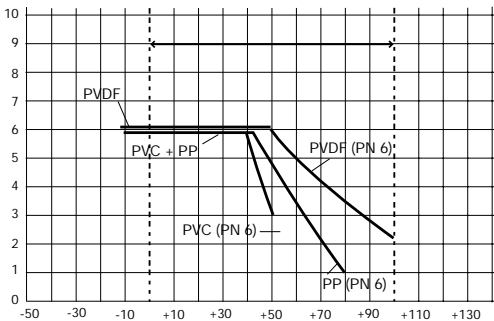
Installation

The compact pH-transmitter can easily be installed into any Bürkert insertion fitting system (S020 or 1500 / 1501) by just fixing the main nut. For the separated transmitter version, a wide range of pH-holders offers large capabilities of mounting and pH-measurement. The pH-transmission system combines a 8200 pH-sensor with a Bürkert fitting type and a separate pH-transmitter type 8205 with display. The transmitter type 8205 is available in panel mounted version or in a wall mounted plastic IP65 enclosure for short or long distance connection to the pH-sensor type 8200.



Pressure-Temperature-Diagramm

Mind pressure-temperature dependence according to the respective fitting material.



Industrial immersion fitting

Allows installation into tanks and containers. The following standard lengths are available: 500, 1000, 1500, 2000mm. Special lengths on request.



Operation / Commissioning

Customized adjustments, such as measuring ranges, engineering units and alarm setpoints can be carried out menu-supported on site via a multi-lingual display. Please consider the respective operating instructions prior to commissioning the devices.

pH electrode

The pH-transmitter is available with five different types of standard electrodes. The adjacent chart indicates the appropriate electrode for the respective application. The service life of the pH-electrode depends on the application. Electrodes in the type 8205 / 8200 can easily be replaced.

How to select the most suitable pH-electrode¹⁾

Applications	Compact Type 8205					Sensor 8200			
	GLS	STE	LEI	SCH	HOL	Easy-control	Metro-code	Poly-lyte Std	Poly-lyte HP
Waste water samples	●	●		●	●	●		●	●
General aqueous solution	●	●	○	●	●	●	○	●	●
Aquariums	●		●		●	●	●		
Beer, juices, wine	○	●		●	●	○		●	●
Butter, compact yoghurt, cheese	○	○		●	●	○		●	●
Protein-containing solutions				●	●			●	●
Aqueous emulsions		●		●	●			●	●
Partly aqueous emulsions		○		○	○			○	○
Soil, earth suspensions		●		●	●			●	●
Extreme pH-values (pH<1, pH>13)	○	●	○			○	○		
Hydrofluoric acid containing solutions			○				○		
Galvanic waste water		●		●	●			●	●
Hot lyes	○	○				○			
Highly viscous solutions		●		●	●			●	●
Infusion solutions	●	●	●	●	●	●	●	●	●
Solutions with low ion content			●	○	○		●	○	○
Jam		●							
Cosmetic products		●		●	●			●	●
Varnish, colours		●		●	●			●	●
Milk	○	○		●	●	○		●	●
Non-aqueous solutions		○	●	○	○		●	○	○
Oil		○	●	○	○		●	○	○
Ultra pure and rain water			●	○	○		●	○	○
Cream, yoghurt	○	○		●	●	○		●	●
Brines	●	●				●			
Swimming pools	●	●	●			●	●		
Soaps, detergents		●		●	●			●	●
Aqueous suspensions		●		●	●			●	●
Partly aqueous suspensions		●	○	●	●		○	●	●
Partly aqueous solutions >10% H2O	○	○	○	○	○	○	○	○	○
Partly aqueous solutions <10% H2O		○	○	○	○		○	○	○
TRIS buffer solutions	○	●	○	●	●	○	○	●	●

- most suitable electrode
- depending on the application

¹⁾ Technical data see: Ordering data Accessories

Operation and display

The operation of the pH-transmitter is classified in the following 3 different menus:

Main Menu

- PH
- Temperature
- Output current
- Electrode voltage
- HOLD function
- pH-electrode calibration

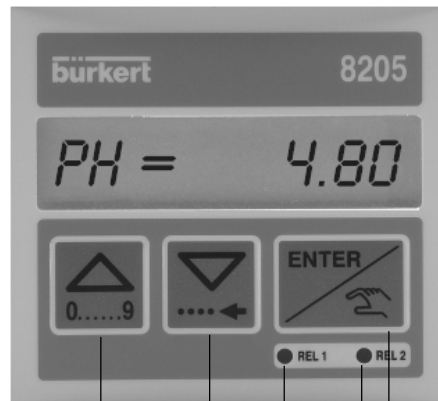
Calibration Menu

- Language
- Temperature unit
- Measuring range 4... 20 mA
- Relay parameter definition
- Selection of temperature compensation (Pt1000 or manual)
- Display or not of electrode voltage in main menu
- Filter selection

Test Menu

- Offset
- Span
- Temperature adjustment
- Simulation of pH

Transmitter 8205 Operating Elements



Direction upwards in menu

Choice of digit value.
Steps from 0 to 9

Direction downwards in menu or sideways for digit selection

Relay 1: contact closed
Relay 2: contact closed

Accept of choosen parameter or adjusted value

Technical Data

General Data

Measuring range	0... 14 pH
Measuring error	+/-0.2%, depending on electrode calibration
Temperature compensation	automatic (integrated Pt1000) reference temperature 25 °C (77 °F)
Ambient temperature	0 to 60 °C (32 °F to 140 °F)
Storage temperature	0 to 60 °C (32 °F to 140 °F)

Compact version

Pipe diameter:	Stainless steel:	DN 15 to DN 50 (1/2" to 2") fitting type S020 DN 65 to DN 100 (2 1/2" to 4") weld-o-let fitting type 1500
	Brass:	DN 15 to DN 50 (1/2" to 2") fitting type S020
	PVC, PP, PVDF:	DN 15 to DN 50 (1/2" to 2") fitting type S020
	PE, PP, PVDF:	DN 65 to DN 100 (2 1/2" to 4") weld-o-let fitting type 1501
Enclosure	IP 65 (NEMA 4). Relative humidity max. 80%	
Electronic housing	PC	
Front plate	Polyester	
Sensor housing	PVDF; O-rings FPM / EPDM	
Voltage supply	12-30 VDC	
Consumption	80 mA (with relays), 20 mA (without relays)	
Display	15 x 60 mm LCD 8 digits, alphanumeric 15 segments, 9 mm high	
Analog output signal	4... 20 mA programable, proportional to the pH or to the temperature	
Load	<700 Ω at 30 V; <400 Ω at 24 V; <100 Ω at 15 V	
Relay output	2 relays 3 A / 230 V; freely adjustable	
Temperature Sensor Pt1000	SS 1.4571 (316 Ti)	

Remote version short distance (<5 m)

Pipe diameter	Stainless Steel:	DN 32 to DN 50 (1 1/4" to 2"); fitting type S020 DN 65 to 100 weld-in; weld-o-let fitting type 1500
	Brass:	DN 32 to DN 50; fitting type S020
	PVC, PP, PVDF:	DN 15 to DN 50; fitting type S020 (true union ISO) DN 32 to DN 50; fitting type S020 (all other versions) DN 65 to DN 100 PE/PP/PVDF-weld-o-let fitting type 1501
Enclosure	Wall mounted version IP65 (NEMA4). Rel. humidity max. 80%; ABS Panel version IP 20 (rear plate); IP 65 (front plate); PC	
Voltage supply	12 – 30 VDC; (115/230 VAC option wall mounted version)	
Consumption	80 mA (with relays), 20 mA (without relays)	
Display	15 x 60 mm LCD 8 digits, alphanumeric 15 segments; 9 mm high	
Analog output signal	4... 20 mA programable, proportional to the pH or to the temperature	
Load	<700 Ω at 30 V; <400 Ω at 24 V; <100 Ω at 15 V	
Relay output	2 relays 3 A / 230 V; freely adjustable	
Temperature sensor	Pt1000, SS 1.4571 (316 Ti)	
Signal input/connection to sensor 8200	short distance version (<5 m):	analog signal input for coaxial cables from pH-electrode and Pt1000
	long distance version (<500 m):	digital signal input for shielded 4-wire cable from A/D-converter on sensor 8200

Remote version long distance (<500 m)

Pipe diameter:	Stainless steel:	DN 15 to DN 50 (1/2" to 2") fitting type S020 DN 65 to DN 100 (2 1/2" to 4") weld-o-let fitting type 1500
	Brass:	DN 15 to DN 50 (1/2" to 2") fitting type S020
	PVC, PP, PVDF:	DN 15 to DN 50 (1/2" to 2") fitting type S020
	PE, PP, PVDF:	DN 65 to DN 100 (2 1/2" to 4") weld-o-let fitting type 1501
Enclosure	Wall mounted version IP65 (NEMA4). Rel. humidity max. 80%; ABS Panel version IP 20 (rear plate); IP 65 (front plate); PC	
Voltage supply	12 – 30 VDC; (115/230 VAC option wall mounted version)	
Consumption	100 mA (with relays), 60 mA (without relays)	
Display	15 x 60 mm LCD 8 digits, alphanumeric 15 segments, 9 mm high	
Analog output signal	4... 20 mA programable, proportional to the pH or to the temperature	
Load	<1100 Ω at 30 V; <910 Ω at 24 V; <470 Ω at 15 V	
Relay output	2 relays 3 A / 230 V; freely adjustable	
Temperature sensor	Pt1000, SS 1.4571 (316 Ti)	
Signal input/connection to sensor 8200	short distance version (<5 m):	analog signal input for coaxial cables from pH-electrode and Pt1000
	long distance version (<500 m):	digital signal input for shielded 4-wire cable from A/D-converter on sensor 8200

Technical Data

Electrodes for compact version 8205 and sensor 8200 with A/D-converter for long distance (<500 m)

	GLS	STE	LEI	SCH	HOL
Housing	glass shaft	glass shaft	glass shaft	glass shaft	glass shaft
Fluid pressure	0 – 6 bar (0 – 87 psi)	0 – 3 bar (0 – 44 psi)	0 – 2 bar (0 – 29 psi)	0 – 2 bar (0 – 29 psi)	0 – 6 bar (0 – 87 psi)
Fluid temperature	0 – +90 °C (32 – 194 °F)	0 – +130 °C (32 – 266 °F)	0 – +60 °C (32 – 140 °F)	0 – +40 °C (32 – 104 °F)	0 – +90 °C (32 – 194 °F)
Max. pressure at max. temperature	4 bar (58 psi)	2 bar (29 psi)	2 bar (29 psi)	2 bar (29 psi)	4 bar (58 psi)
Diaphragm	zirkondioxide	zirkondioxide	3x zirkondioxide	single pore	single pore
Reference electrolyte	gel	gel	KCl 3-Molar	polymerised	polymerised

Separate pH-sensor type 8200 long distance (< 500 m)

pH-sensor connection	
Connection	G 2" with union nut
Material	PVDF
housing	same like compact version 8205
pH-electrodes	same like compact version 8205
Signal transmission	A/D-converter for digital signal output
Wiring	shielded 4-wire transmission to the special transmitter 8205 with digital input

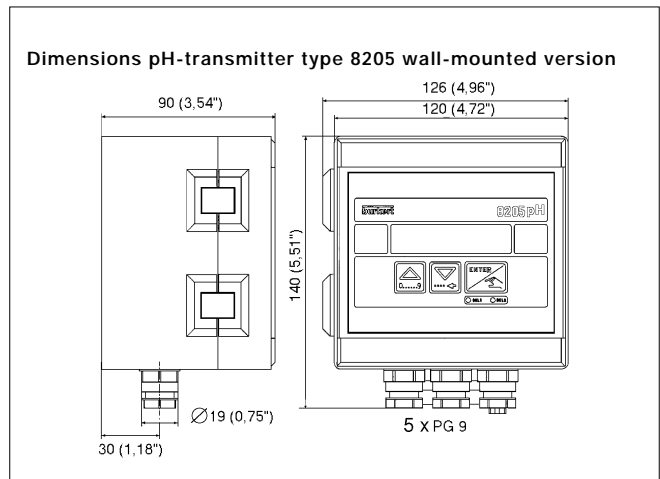
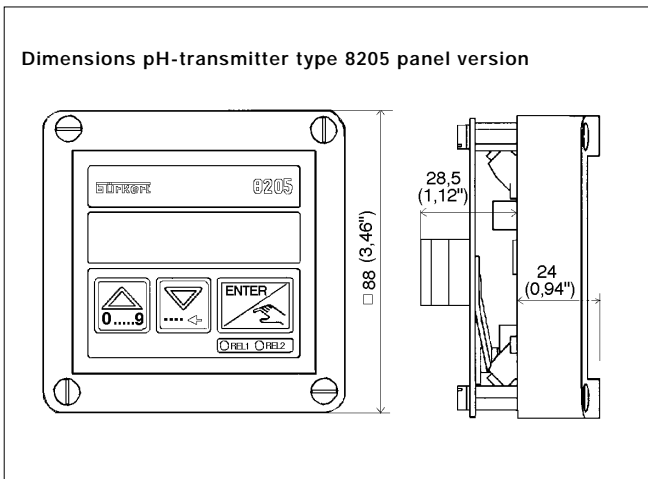
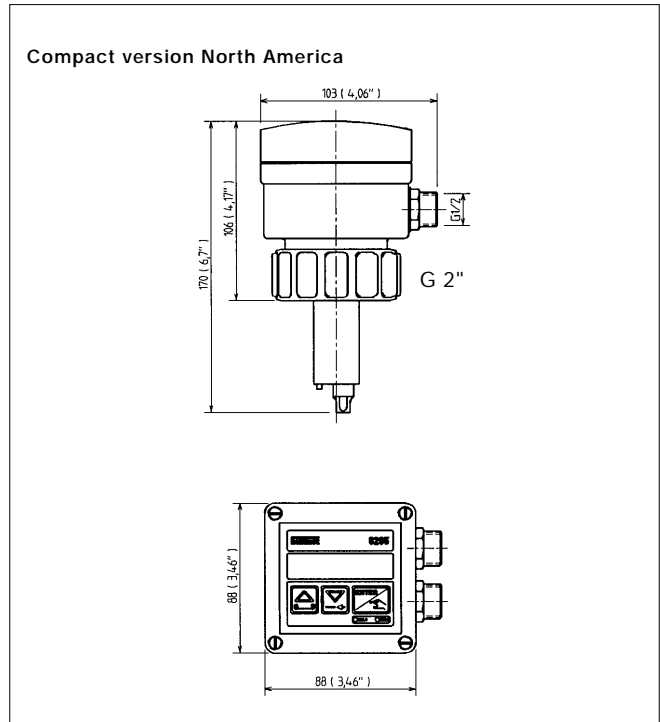
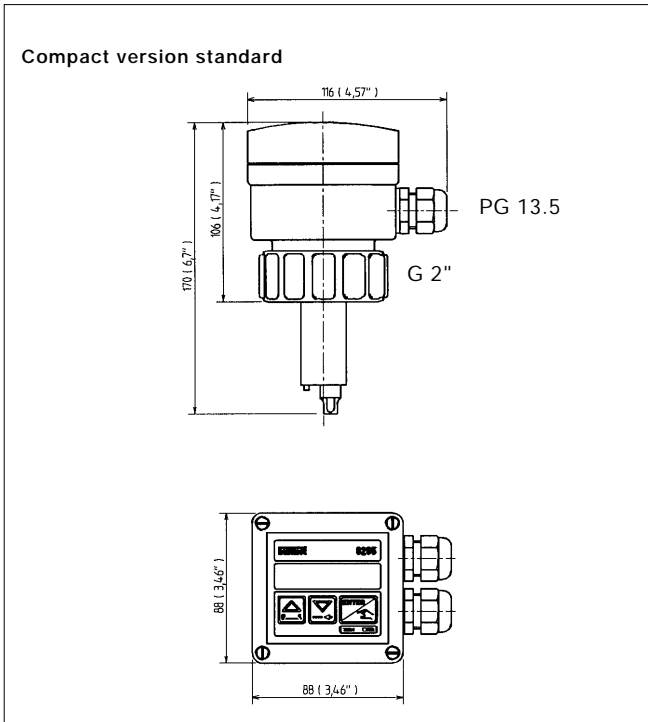
Separate pH-sensor type 8200 short distance (<5 m)

	Easycontrol	Metrocode	Polylyte Std	Polylyte HP
Measuring range	0 – 14	0 – 14	2 – 14	2 – 14
Housing	glass shaft	glass shaft	glass shaft	glass shaft
Fluid pressure	0 – 2 bar (0 – 29 psi)	0 – 16 bar ¹⁾ (0 – 232 psi)	0 – 2 bar (0 – 29 psi)	0 – 6 bar ¹⁾ (0 – 87 psi)
Fluid temperature	0 – +60 °C (32 – 140 °F)	0 – +130 °C (32 – 266 °F)	0 – +40 °C (32 – 104 °F)	0 – +90 °C (32 – 194 °F)
Max. pressure at max. temperature	2 bar (24 psi)	3 bar (44 psi)	2 bar (24 psi)	4 bar (59 psi)
No. of diaphragms	1	3	2	2
Diaphragm	ceramic	HP-ceramic	single pore	single pore
Reference electrolyte	gel	gel	polymerised	polymerised
pH-sensor connection				
Connection	Material-connection size			
G 2" with union nut	PVC; PP; PVDF; SS			
G 1"	PVC			
Sanitary	SS DN40; DN 50; DN 65			
Triclamp	SS 50.5 / 64			
Signal transmission	analog signal output			
Wiring	coaxial cables for pH and 4-wire cable for Pt1000 : 2 m or 5 m			

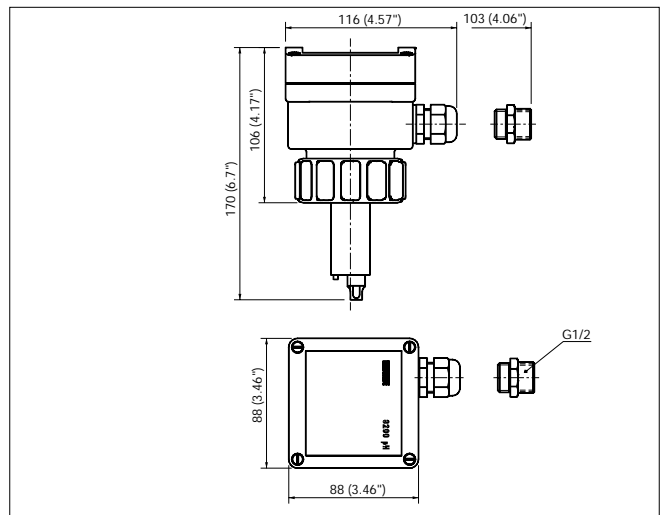
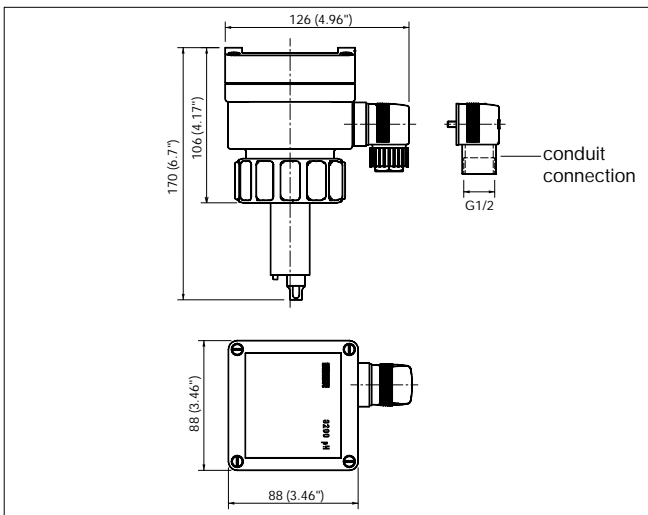
¹⁾ only 0-3 bar if used with Tri-Clamp® or sanitary DIN 11 851 holders type 8200 with protection tube

Dimensions [mm (inch)]

Dimensions of the pH-transmitter type 8205 compact

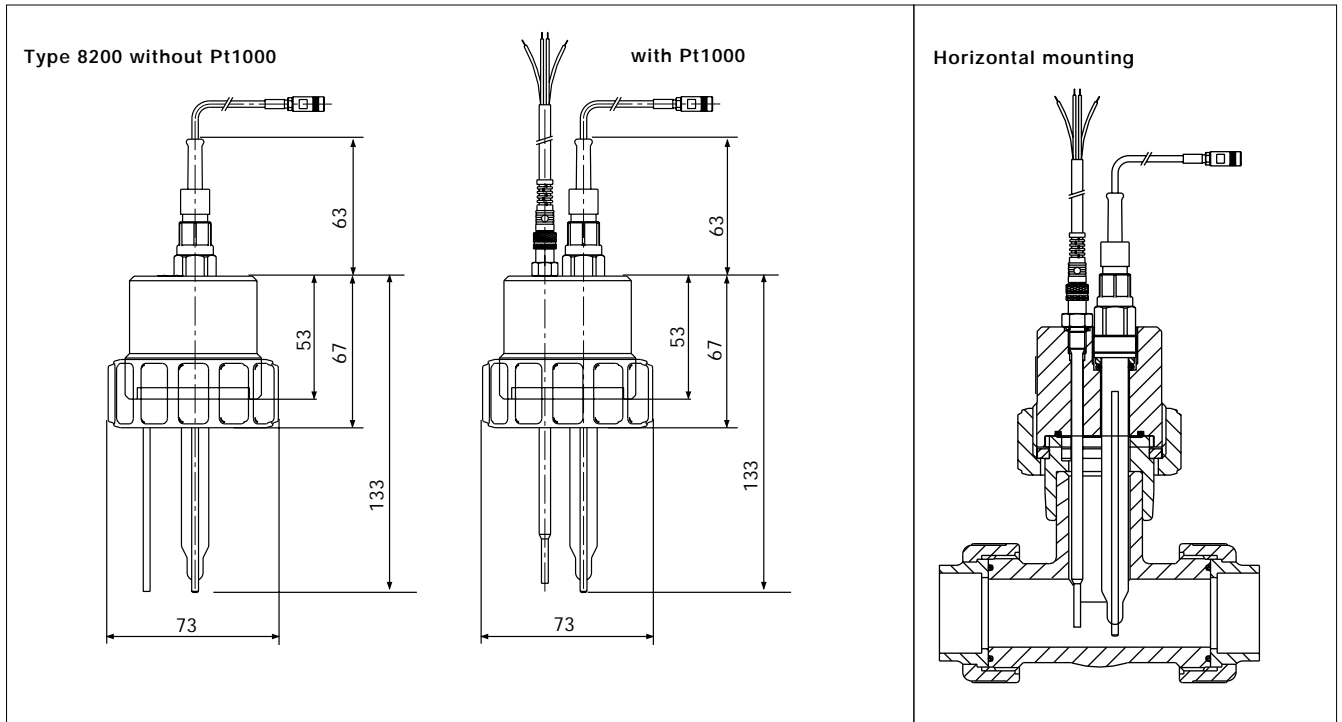


Dimensions of the pH-sensor type 8200 with A/D-converter for long distance

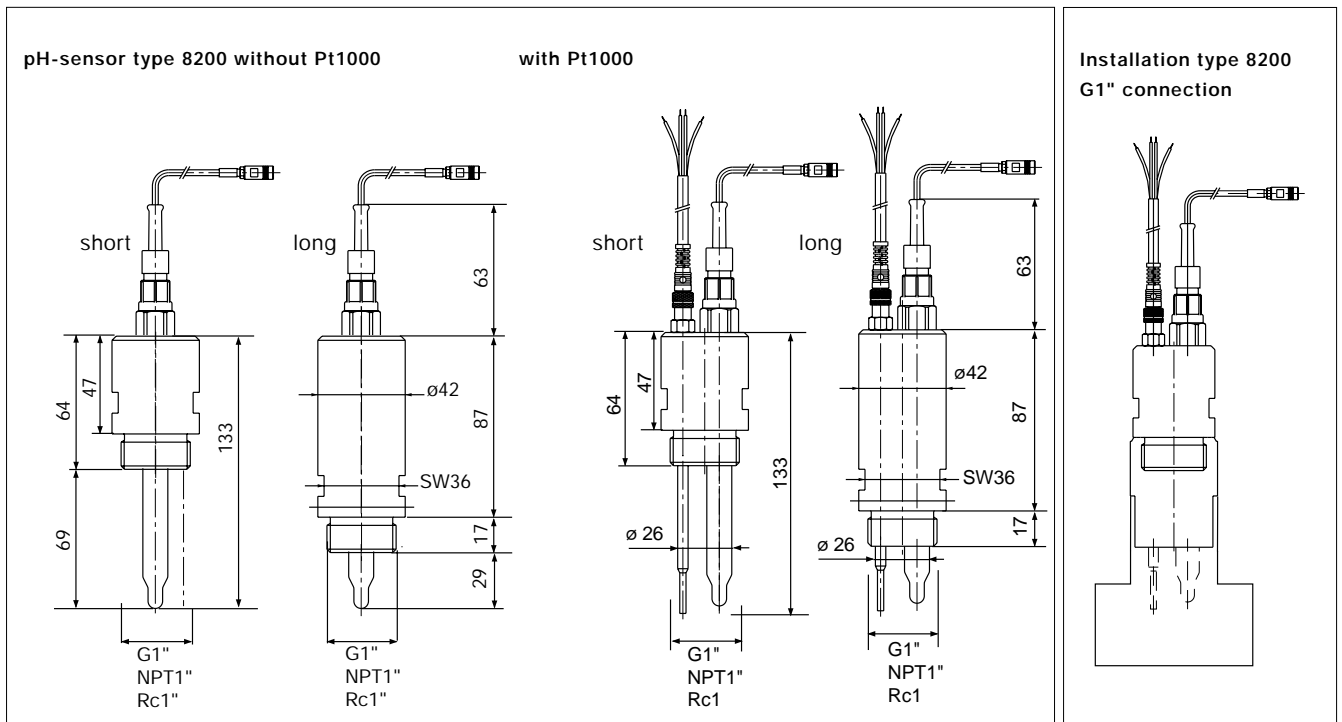


Dimensions [mm (inch)]

pH-sensor type 8200 for Burkert fitting type S020; 1500; 1501
 G2" connection; Material: PVC, PP, PVDF, SS



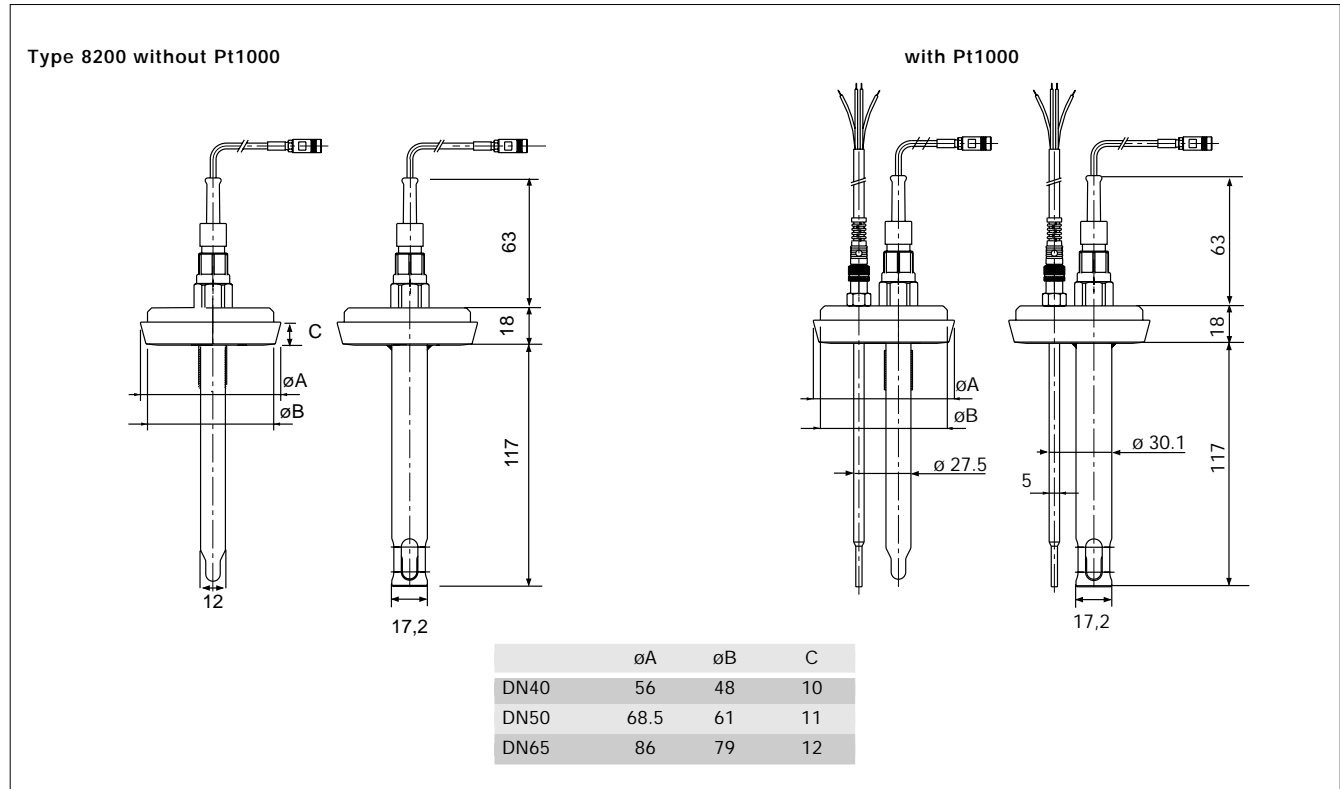
pH-sensor type 8200 G1", NPT1", Rc1 connection in PVC



Dimensions [mm]

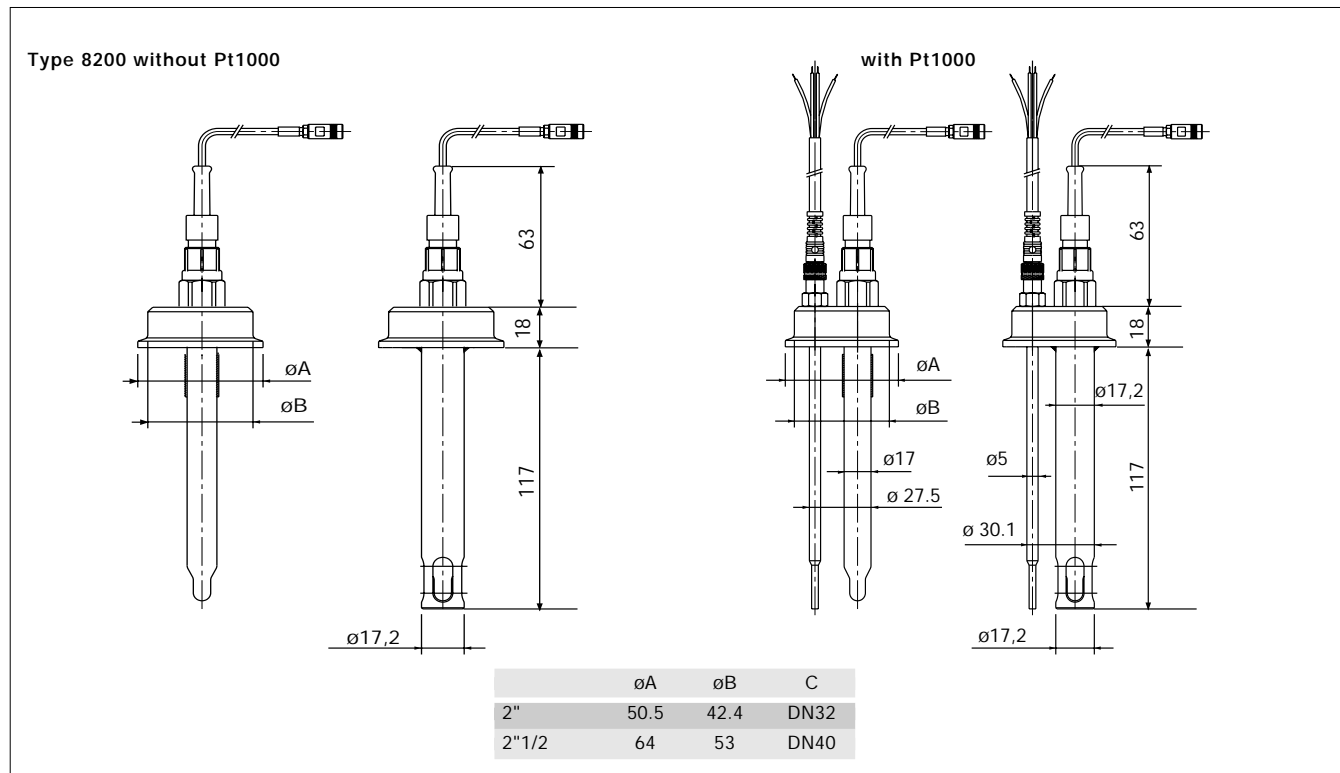
pH-sensor type 8200 sanitary connection according to DIN 11851

Material: SS (304/1.4301 or 316Ti/1.4571)

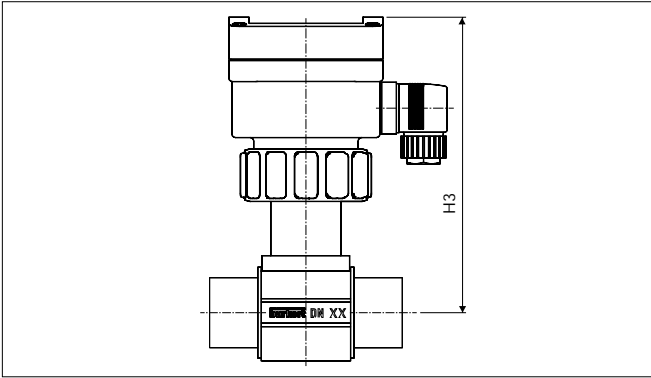


pH-sensor type 8200 Triclamp connection

Material: SS (316L/DIN 1.4404)



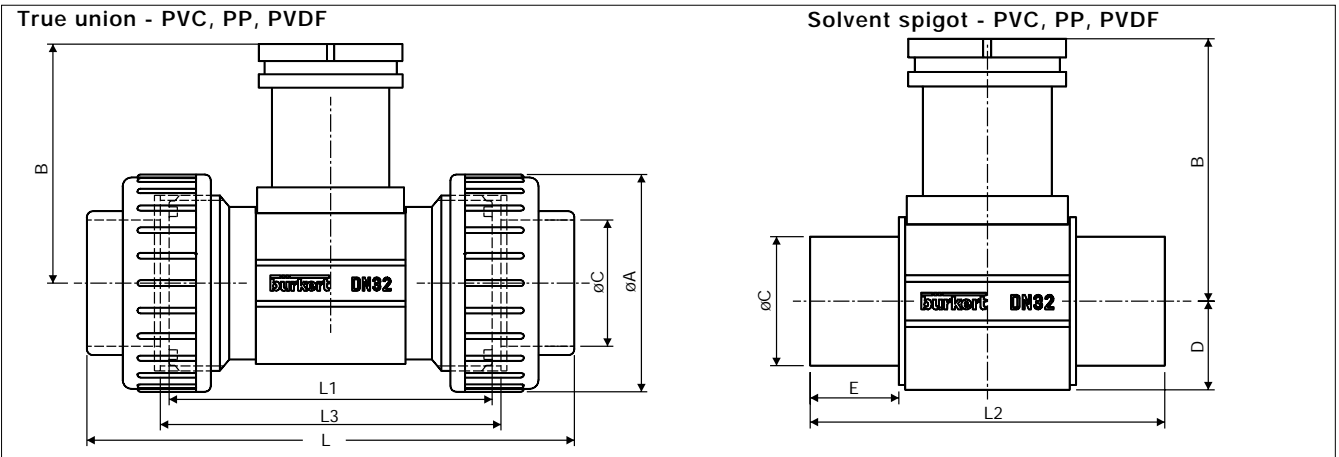
Fittings Type S020 DN15 - 50 for transmitter 8205 or sensor 8200 with G2"-connection



Variable Dimensions [mm]

DN	H 1	H2	H3
15	163	177	177
20	163	177	177
25	163	177	177
32	163	177	177
40	164	178	178
50	170	184	184

Applicable for all fitting materials DN 15 ...50 sizes and process connections.

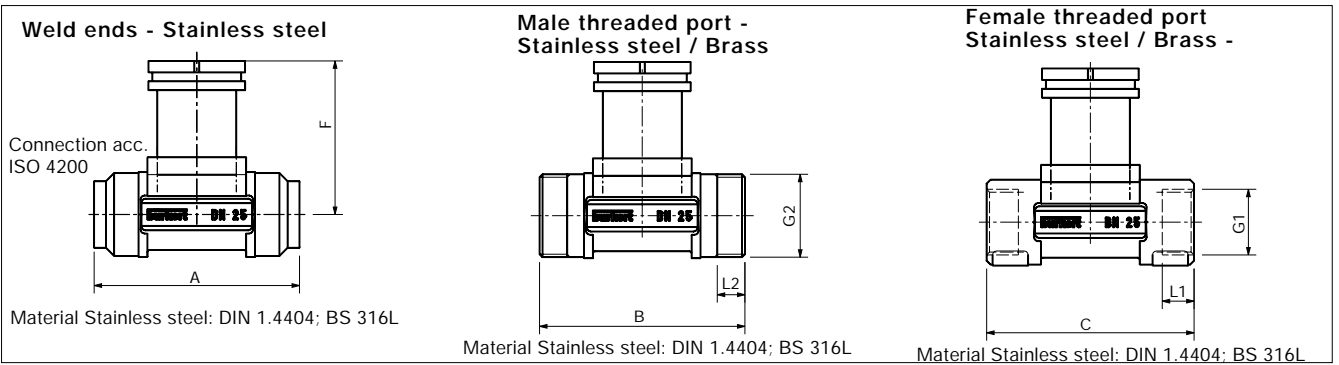


Remote version short distance															
True union										Solvent spigot					
B	øA	L			øC			L1	L3	DN	D	L2		E	
		DIN	ANSI	JIS	(DIN)	(ANSI)*	(JIS)*					PVC	PP/PVDF	PVC	PP/PVDF
81.4	74	148	---	---	20	---	---	110	116	15	---	---	---	---	---
81.4	74	154	---	---	25	---	---	110	116	20	---	---	---	---	---
81.4	74	160	---	---	32	---	---	110	116	25	---	---	---	---	---
81.4	74	168	170.0	169	40	42.2	38.60	110	116	32	27.5	110	100	27.5	20
85.2	83	188	190.2	190	50	48.3	48.70	120	127	40	31.5	120	106	30.0	23
91.5	103	212	213.6	213	63	60.3	60.80	130	136	50	39.5	130	110	37.0	27

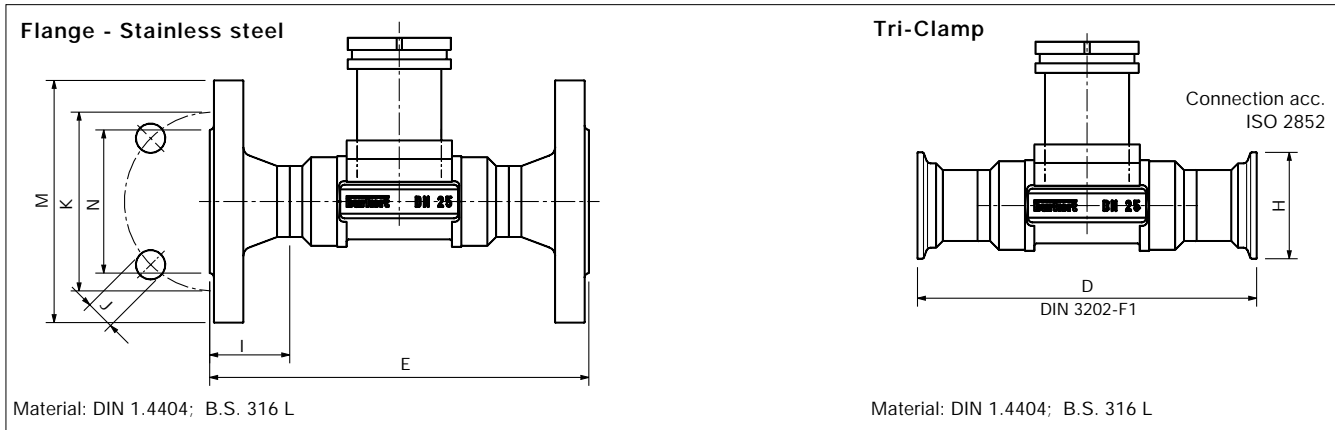
* only for PVC with true union

Compact version and remote long distance version															
True union										Solvent spigot					
B	øA	L			øC			L1	L3	DN	D	L2		E	
		DIN	ANSI	JIS	(DIN)	(ANSI)*	(JIS)*					PVC	PP/PVDF	PVC	PP/PVDF
80.4	43	128	130.0	129	20	21.3	18.40	90	96	15	17.5	90	85	16.5	14
77.8	53	144	145.6	145	25	26.7	26.45	100	106	20	17.5	100	92	20.0	16
78.0	60	160	161.4	161	32	33.4	32.55	110	116	25	21.5	110	95	23.0	18
81.4	74	168	170.0	169	40	42.2	38.60	110	116	32	27.5	110	100	27.5	20
85.2	83	188	190.2	190	50	48.3	48.70	120	127	40	31.5	120	106	30.0	23
91.5	103	212	213.6	213	63	60.3	60.80	130	136	50	39.5	130	110	37.0	27

* only for PVC with true union



Dimensions [mm] - Fittings S020, DN 15 - 50



Variable dimensions [mm] for Weld ends, Male threaded port, Female threaded port, Flange, Tri-Clamp

Remote version short distance																				
DN	Weld ends		Length dimensions						Thread				Tri-Clamp	Flange dimensions						
	ø outside	Wall-thickness	A	B	C	D	E (DIN) (ANSI)	E (JIS)	F	G1	L1	G2		L2	H	Norm*	I	J	K	M
32	42.4	2.0	119	119	120	180	180	178	81.6	G 11/4	23.5	G 1/2	18.0	50.5	DIN	31.0	4x18.0	100.0	140	78.0
										NPT 11/4	21.0				ANSI	31.0	4x15.8	88.9	117	63.5
										Rc	21.0				JIS	31.0	4x19.0	100.0	135	76.0
40	48.3	2.0	129	129	130	200	200	190	85.4	G 11/2	23.5	M55x2	19.0	64.0	DIN	36.0	4x18.0	110.0	150	88.0
										NPT 11/2	20.0				ANSI	36.0	4x15.8	98.4	127	73.0
										Rc 11/2	19.0				JIS	36.0	4x19.0	105.0	140	81.0
50	60.3	2.6	149	149	150	230	230	216	91.5	G 2	27.5	M64x2	20.0	77.5	DIN	41.0	4x18.0	125.0	165	102.0
										NPT 2	24.0				ANSI	41.0	4x19.0	120.6	152	92.1
										Rc 2	24.0				JIS	41.0	4x19.0	120.0	155	96.0

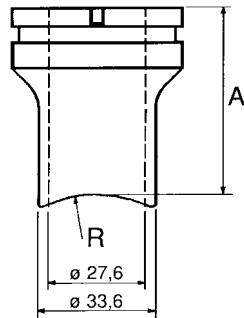
Compact version and remote long distance version																				
DN	Weld ends		Length dimensions						Thread				Tri-Clamp	Flange dimensions						
	ø outside	Wall-thickness	A	B	C	D	E (DIN) (ANSI)	E (JIS)	F	G1	L1	G2		L2	H	Norm*	I	J	K	M
15	21.3	1.6	84	84	85	130	130	140	80.3	G 1/2	16.0	G3/4	11.5	34.0	DIN	23.5	4x14.0	65.0	95	45.0
										NPT 1/2	17.0				ANSI	23.5	4x15.8	60.3	89	34.9
										Rc 1/2	15.0				JIS	23.5	4x15.0	70.0	95	51.0
20	26.9	1.6	94	94	95	150	150	152	77.8	G 3/4	17.0	G 1	13.5	50.5	DIN	28.5	4x14.0	75.0	105	58.0
										NPT 3/4	18.3				ANSI	28.5	4x15.8	69.8	99	42.9
										Rc 3/4	16.3				JIS	28.5	4x15.0	75.0	100	56.0
25	33.7	2.0	104	104	105	160	160	165	78.0	G 1	23.5	G 1/14	14.0	50.5	DIN	28.5	4x14.0	85.0	115	68.0
										NPT 1	18.0				ANSI	28.5	4x15.8	79.4	108	50.8
										Rc 1	18.0				JIS	28.5	4x19.0	90.0	125	67.0
32	42.4	2.0	119	119	120	180	180	178	81.6	G 11/4	23.5	G 1/2	18.0	50.5	DIN	31.0	4x18.0	100.0	140	78.0
										NPT 11/4	21.0				ANSI	31.0	4x15.8	88.9	117	63.5
										Rc	21.0				JIS	31.0	4x19.0	100.0	135	76.0
40	48.3	2.0	129	129	130	200	200	190	85.4	G 11/2	23.5	M55x2	19.0	64.0	DIN	36.0	4x18.0	110.0	150	88.0
										NPT 11/2	20.0				ANSI	36.0	4x15.8	98.4	127	73.0
										Rc 11/2	19.0				JIS	36.0	4x19.0	105.0	140	81.0
50	60.3	2.6	149	149	150	230	230	216	91.5	G 2	27.5	M64x2	20.0	77.5	DIN	41.0	4x18.0	125.0	165	102.0
										NPT 2	24.0				ANSI	41.0	4x19.0	120.6	152	92.1
										Rc 2	24.0				JIS	41.0	4x19.0	120.0	155	96.0

* Flange: DIN 2501/2633, length according to DIN 3201-F1;
 ANSI B16-5-1988, length according to DIN 3201-F1
 JIS 10K, length according to ANSI B16-10

Dimensions [mm] - Fittings DN 65 - 100

Weld-o-let fittings with radius - Stainless steel

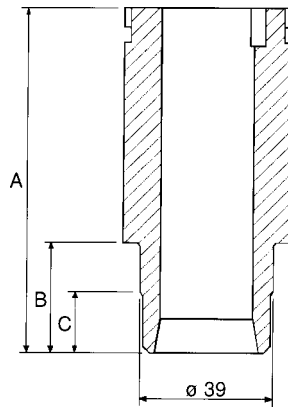
Material: 1.4404 (DIN),
316L (B.S.)



Variable Dimensions [mm]

DN	A	R
65	54.52	36.65
80	53.07	44.45
100	50.71	57.15

Weld-o-let fittings - PE, PP, PVDF

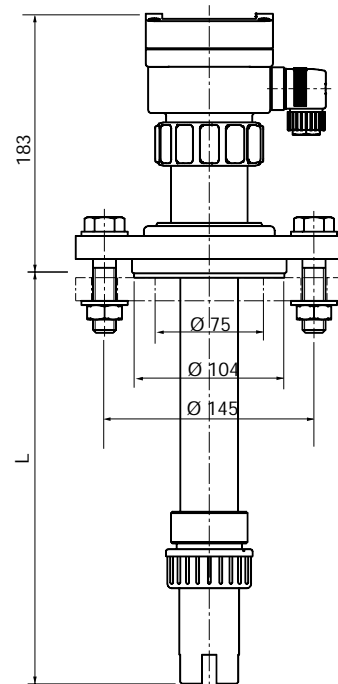
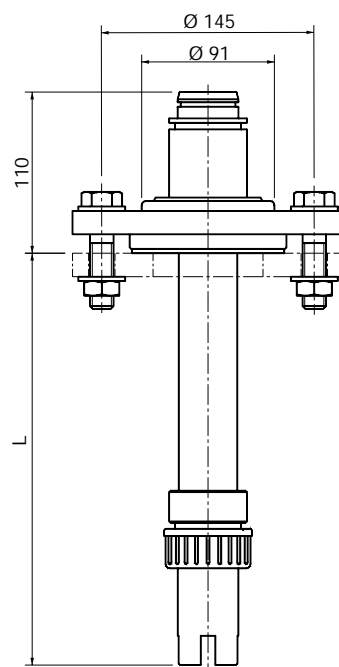


Variable Dimensions [mm]

DN	A	PE		PP		PVDF	
		B	C	B	C	B	C
65-100	72.5	13	---	13	---	10.4	---

Immersion fitting - PP

Lengths L: 500, 1000,
1500, 2000



Ordering Data

A compact version of pH-transmitter Type 8205 consists of two basic units as follows:

- Fitting type S020 (DN15 to DN50) or 1500/1501 (DN 65 to DN 100)
- Compact pH-transmitter

TYPE DESCRIPTION	Electrode	Gasket	ITEM-No Worldwide Standard Plug, PG 9	ITEM-No Worldwide Standard 1 x PG 13.5	ITEM-No North America Standard Plug x G 1/2"
pH-transmitter compact 4-20 mA output , no relay , 12 – 30 VDC ; with Pt1000					
Compact pH-transmitter 8205	GLS	FPM	418 834 R	418 843 S	418 858 H
Compact pH-transmitter 8205	STE	FPM	418 839 W	418 845 U	418 863 W
Compact pH-transmitter 8205	LEI	FPM	419 266 G	419 272 E	419 284 T
Compact pH-transmitter 8205	SCH	FPM	419 267 H	419 273 F	419 285 U
Compact pH-transmitter 8205	HOL	FPM	419 268 J	419 274 G	419 286 V
Compact pH-transmitter 8205	GLS	EPDM	418 840 B	418 846 V	418 864 X
Compact pH-transmitter 8205	STE	EPDM	418 842 Z	418 848 F	418 866 Z
Compact pH-transmitter 8205	LEI	EPDM	419 269 K	419 275 H	419 287 W
Compact pH-transmitter 8205	SCH	EPDM	419 270 Q	419 276 A	419 288 F
Compact pH-transmitter 8205	HOL	EPDM	419 271 D	419 277 B	418 289 F

TYPE DESCRIPTION	Electrode	Gasket	ITEM-No Worldwide Standard 2 X PG 13.5	ITEM-No North America Standard 2 x G 1/2"
pH-transmitter compact 4-20 mA output; 2 relay outputs; 12 – 30 VDC; with Pt1000				
Compact pH -transmitter 8205	GLS	FPM	418 835 J	418 859 A
Compact pH-transmitter 8205	STE	FPM	418 853 U	418 869 C
Compact pH-transmitter 8205	LEI	FPM	419 278 L	419 290 D
Compact pH-transmitter 8205	SCH	FPM	419 279 M	419 291 S
Compact pH-transmitter 8205	HOL	FPM	419 280 B	419 292 T
Compact pH-transmitter 8205	GLS	EPDM	418 854 V	418 870 H
Compact pH-transmitter 8205	STE	EPDM	418 856 X	418 872 X
Compact pH-transmitter 8205	LEI	EPDM	419 281 Y	419 293 U
Compact pH-transmitter 8205	SCH	EPDM	419 282 Z	419 294 V
Compact pH-transmitter 8205	HOL	EPDM	419 283 S	419 295 W

A compact version of pH-transmitter Type 8205 for tank installation consists of four basic units as follows:

- Compact pH-transmitter
- Immersion fitting
- Extension cable for immersion fitting
- Fixing Kit - Flange DN 65 with stainless steel screws

Ordering Data

A separate version of pH-transmitter consists of 6 (short dist.) or 3 (long dist.) basic units as follows:

Short distance version

- Fitting type S020 or 1500/1501
- pH-holder 8200 for short distance
- pH-electrode
- Pt1000 temperature sensor
- Cable for pH-electrode and Pt1000
- pH-transmitter 8205 wall- or panel mounted <5m

Long distance version

- Fitting type S020 or 1500/1501
- pH sensor 8200 with A/D converter compl. with pH-electrode and temperature sensor
- pH-transmitter 8205 wall- or panel mounted <500m

TYPE DESCRIPTION	Relay output	Cable connection	Power supply	ITEM-No
pH-transmitter panel mounted version for separate sensor type 8200; 4-20 mA output				
Panel mounted transmitter 8205 max. 5 m to sensor	no	clamps	12 - 30 VDC	427 937 H
Panel mounted transmitter 8205 max. 5 m to sensor	2 x relay	clamps	12 - 30 VDC	427 938 J
Panel mounted transmitter 8205 >5 m cable length	no	clamps	12 - 30 VDC	427 942 N
Panel mounted transmitter 8205 >5 m cable length	2 x relay	clamps	12 - 30 VDC	427 943 P
pH-transmitter wall mounted version for separate sensor type 8200; 4-20 mA output				
Wall mounted transmitter 8205 max. 5 m to sensor	no	5 x PG 9	12 - 30 VDC	427 944 Q
Wall mounted transmitter 8205 max. 5 m to sensor	2 x relay	5 x PG 9	12 - 30 VDC	427 945 R
Wall mounted transmitter 8205 >5 m cable length	no	5 x PG 9	12 - 30 VDC	427 954 J
Wall mounted transmitter 8205 >5 m cable length	2 x relay	5 x PG 9	12 - 30 VDC	427 955 K
Wall mounted transmitter 8205 max. 5 m to sensor	no	5 x PG 9	115 - 230 VAC	427 949 V
Wall mounted transmitter 8205 max. 5 m to sensor	2 x relay	5 x PG 9	115 - 230 VAC	427 950 S
Wall mounted transmitter 8205 >5 m cable length	no	5 x PG 9	115 - 230 VAC	427 956 L
Wall mounted transmitter 8205 >5 m cable length	2 x relay	5 x PG 9	115 - 230 VAC	427 957 M

TYPE DESCRIPTION	Material	Boring for temperature sensor	Protection Tube	ITEM-No
pH-holder type 8200 without pH-electrode; short distance max. 5 m cable length				
8200 short version G1" connection thread	PVC	no	no	429 220 G
8200 long version G1" connection thread	PVC	no	no	429 222 W
8200 short version G1" connection thread	PVC	yes	no	429 221 V
8200 long version G1" connection thread	PVC	yes	no	429 223 X
8200 short version 1"NPT connection thread	PVC	no	no	430 165 S
8200 long version 1"NPT connection thread	PVC	no	no	430 167 U
8200 short version 1"NPT connection thread	PVC	yes	no	430 166 T
8200 long version 1"NPT connection thread	PVC	yes	no	430 168 D
8200 short version RC 1" connection thread	PVC	no	no	430 169 E
8200 long version RC 1" connection thread	PVC	no	no	430 171 Y
8200 short version RC 1" connection thread	PVC	yes	no	430 170 B
8200 long version RC 1" connection thread	PVC	yes	no	430 172 Z
8200 with G 2" connection for fitting type S020; 1500; 1501	PVC	no	no	429 224 Y
8200 with G 2" connection for fitting type S020; 1500; 1501	PP	no	no	429 225 Z
8200 with G 2" connection for fitting type S020; 1500; 1501	PVDF	no	no	429 226 S
8200 with G 2" connection for fitting type S020; 1500; 1501	SS	no	no	429 227 T
8200 with G 2" connection for fitting type S020; 1500; 1501	PVC	yes	no	429 228 C
8200 with G 2" connection for fitting type S020; 1500; 1501	PP	yes	no	429 229 D
8200 with G 2" connection for fitting type S020; 1500; 1501	PVDF	yes	no	429 230 A
8200 with G 2" connection for fitting type S020; 1500; 1501	SS	yes	no	429 231 X
8200 with Triclamp connection DN 32 (dia 50.5 mm)	SS 316 L	no	no	429 232 Y
8200 with Triclamp connection DN 32 (dia 50.5 mm)	SS 316 L	no	yes	429 233 Z
8200 with Triclamp connection DN 32 (dia 50.5 mm)	SS 316 L	yes	no	429 234 S
8200 with Triclamp connection DN 32 (dia 50.5 mm)	SS 316 L	yes	yes	429 235 T
8200 with Triclamp connection DN 40 (dia 64 mm)	SS 316 L	no	no	429 236 U
8200 with Triclamp connection DN 40 (dia 64 mm)	SS 316 L	no	yes	429 237 V
8200 with Triclamp connection DN 40 (dia 64 mm)	SS 316 L	yes	no	429 238 E
8200 with Triclamp connection DN 40 (dia 64 mm)	SS 316 L	yes	yes	429 239 F

Ordering Data

TYPE DESCRIPTION	Material	Temperatur sensor Pt1000	Protection tube	ITEM-No
pH-holder type 8200 without pH-electrode; short distance max. 5 m cable length				
8200 with sanitary connection DN 40 DIN 11851	SS 304	no	no	429 240 L
8200 with sanitary connection DN 40 DIN 11851	SS 304	no	yes	429 242 A
8200 with sanitary connection DN 40 DIN 11851	SS 304	yes	no	429 244 C
8200 with sanitary connection DN 40 DIN 11851	SS 304	yes	yes	429 246 E
8200 with sanitary connection DN 40 DIN 11851	SS 316 Ti	no	no	429 241 H
8200 with sanitary connection DN 40 DIN 11851	SS 316 Ti	no	yes	429 243 B
8200 with sanitary connection DN 40 DIN 11851	SS 316 Ti	yes	no	429 245 D
8200 with sanitary connection DN 40 DIN 11851	SS 316 Ti	yes	yes	429 247 F
8200 with sanitary connection DN 50 DIN 11851	SS 304	no	no	429 248 Q
8200 with sanitary connection DN 50 DIN 11851	SS 304	no	yes	429 250 N
8200 with sanitary connection DN 50 DIN 11851	SS 304	yes	no	429 252 C
8200 with sanitary connection DN 50 DIN 11851	SS 304	yes	yes	429 254 E
8200 with sanitary connection DN 50 DIN 11851	SS 316 Ti	no	no	429 249 R
8200 with sanitary connection DN 50 DIN 11851	SS 316 Ti	no	yes	429 253 D
8200 with sanitary connection DN 50 DIN 11851	SS 316 Ti	yes	no	429 251 B
8200 with sanitary connection DN 50 DIN 11851	SS 316 Ti	yes	yes	429 255 F
8200 with sanitary connection DN 65 DIN 11851	SS 304	no	no	429 256 G
8200 with sanitary connection DN 65 DIN 11851	SS 304	no	yes	429 260 Q
8200 with sanitary connection DN 65 DIN 11851	SS 304	yes	no	429 258 J
8200 with sanitary connection DN 65 DIN 11851	SS 304	yes	yes	429 262 E
8200 with sanitary connection DN 65 DIN 11851	SS 316 Ti	no	no	429 257 H
8200 with sanitary connection DN 65 DIN 11851	SS 316 Ti	no	yes	429 261 D
8200 with sanitary connection DN 65 DIN 11851	SS 316 Ti	yes	no	429 259 K
8200 with sanitary connection DN 65 DIN 11851	SS 316 Ti	yes	yes	429 263 F

TYPE DESCRIPTION	Material	Material Gasket mat	Cable connection	ITEM-No
pH-sensor type 8200 with A/D-converter; long distance max. 500 m cable length; with Pt1000				
8200 pH-sensor with A/D converter for long distance	GLS	PVDF/FPM	Plug PG 9	430 173 S
8200 pH-sensor with A/D converter for long distance	STE	PVDF/FPM	Plug PG 9	430 174 T
8200 pH-sensor with A/D converter for long distance	LEI	PVDF/FPM	Plug PG 9	430 175 U
8200 pH-sensor with A/D converter for long distance	SCH	PVDF/FPM	Plug PG 9	430 176 V
8200 pH-sensor with A/D converter for long distance	HOL	PVDF/FPM	Plug G 9	430 177 W
8200 pH-sensor with A/D converter for long distance	GLS	PVDF/FPM	1 x PG13.5	430 178 F
8200 pH-sensor with A/D converter for long distance	STE	PVDF/FPM	1xPG13.5	430 179 G
8200 pH-sensor with A/D converter for long distance	LEI	PVDF/FPM	1xPG13.5	430 180 W
8200 pH-sensor with A/D converter for long distance	SCH	PVDF/FPM	1xPG13.5	430 181 K
8200 pH-sensor with A/D converter for long distance	HOL	PVDF/FPM	1xPG13.5	430 182 L
8200 pH-sensor with A/D converter for long distance	GLS	PVDF/FPM	Plug G1/2"	430 183 M
8200 pH-sensor with A/D converter for long distance	STE	PVDF/FPM	Plug G1/2"	430 184 N
8200 pH-sensor with A/D converter for long distance	LEI	PVDF/FPM	Plug G1/2"	430 185 P
8200 pH-sensor with A/D converter for long distance	SCH	PVDF/FPM	Plug G1/2"	430 186 Q
8200 pH-sensor with A/D converter for long distance	HOL	PVDF/FPM	Plug G1/2"	430 187 R
8200 pH-sensor with A/D converter for long distance	GLS	PVDF/FPM	1xG1/2"	430 188 S
8200 pH-sensor with A/D converter for long distance	STE	PVDF/FPM	1xG1/2"	430 189 T
8200 pH-sensor with A/D converter for long distance	LEI	PVDF/FPM	1xG1/2"	430 190 Y
8200 pH-sensor with A/D converter for long distance	SCH	PVDF/FPM	1xG1/2"	430 191 M
8200 pH-sensor with A/D converter for long distance	HOL	PVDF/FPM	1xG1/2"	430 192 N

Ordering Data

TYPE DESCRIPTION		Material	Temperatur Range	Pressure	ITEM-No
ACCESSORIES					
pH-electrodes 120 mm for sensor type 8200					
EASYCONTROL	pH 0... 14	Glass	0... 60 °C	2 bar	427 114 G
METROCODE	pH 0... 14	Glass	0... 130 °C	16 bar	418 319 C
POLILYTE Standard	pH 2... 14	Glass	0... 40 °C	2 bar	427 132 A
POLILYTE HP	pH 2... 14	Glass	0... 90 °C	6 bar	427 133 B
Temperature probe Pt 1000					
Pt 1000 temperature sensor for pH-instruments		SS 316 Ti			427 023 G
Connection cables between 8205 transmitter and 8200 sensor; short distance					
pH coaxial cable with standard electrode plug			2 m		427 024 H
pH coaxial cable with standard electrode plug			5 m		427 025 A
Pt 1000 4-wire cable with Lumberg connector			2 m		427 110 Q
Pt 1000 4-wire cable with Lumberg connector			5 m		427 113 F
Gaskets					
Gasket for all fitting type 8200		FPM			429 264 G
Gasket for all fitting type 8200		EPDM			429 265 H
Accessories for tank installation (compact version and long distance remote version)					
Immersion fitting		PP	0.5 m		419 567 W
Immersion fitting		PP	1.0 m		419 568 F
Immersion fitting		PP	1.5 m		419 569 G
Immersion fitting		PP	2.0 m		419 570 D
Extension cable for immersion fitting			0.5 m		416 632 L
Extension cable for immersion fitting			1.0 m		416 633 M
Extension cable for immersion fitting			1.5 m		416 634 N
Extension cable for immersion fitting			2.0 m		416 635 P
Fixing Kit - Flange DN 65 with SS screws					413 615 Q

Ordering Data of Stainless Steel Fittings Type S020

Diameters	Materials	I T E M - No.	
		Compact vers./ Rem. long dist.	Remote short dist.
SS - Female G-Threaded Ports			
DN 15	SS, FPM	428 736 Y	--- ---
DN 20	SS, FPM	428 737 Z	--- ---
DN 25	SS, FPM	428 738 A	--- ---
DN 32	SS, FPM	428 739 B	428 739 B
DN 40	SS, FPM	428 740 Q	428 740 Q
DN 50	SS, FPM	428 741 D	428 741 D
SS - Female NPT-Threaded Ports			
DN 15	SS, FPM	428 742 E	--- ---
DN 20	SS, FPM	428 743 F	--- ---
DN 25	SS, FPM	428 744 G	--- ---
DN 32	SS, FPM	428 745 H	428 745 H
DN 40	SS, FPM	428 746 A	428 746 A
DN 50	SS, FPM	428 747 B	428 747 B
SS - Female ISO7 (JIS) Threaded Ports			
DN 15	SS, FPM	428 748 L	--- ---
DN 20	SS, FPM	428 749 M	--- ---
DN 25	SS, FPM	428 750 J	--- ---
DN 32	SS, FPM	428 751 F	428 751 F
DN 40	SS, FPM	428 752 G	428 752 G
DN 50	SS, FPM	428 753 H	428 753 H
SS- Male G Threaded Ports			
DN 15	SS, FPM	428 754 A	--- ---
DN 20	SS, FPM	428 755 B	--- ---
DN 25	SS, FPM	428 756 C	--- ---
DN 32	SS, FPM	428 757 D	428 757 D
DN 40	SS, FPM	428 758 N	428 758 N
DN 50	SS, FPM	428 759 P	428 759 P
SS - Weld Ends			
DN 15	SS, FPM	428 760 L	--- ---
DN 20	SS, FPM	428 761 H	--- ---
DN 25	SS, FPM	428 762 A	--- ---
DN 32	SS, FPM	428 763 B	428 763 B
DN 40	SS, FPM	428 764 C	428 764 C
DN 50	SS, FPM	428 765 D	428 765 D
SS - Tri-Clamp (ISO 2852)			
DN 15	SS, FPM	428 766 E	--- ---
DN 20	SS, FPM	428 767 F	--- ---
DN 25	SS, FPM	428 768 Q	--- ---
DN 32	SS, FPM	428 769 R	428 769 R
DN 40	SS, FPM	428 770 N	428 770 N
DN 50	SS, FPM	428 771 B	428 771 B
SS - DIN Flanges (DIN 2501)			
DN 15	SS, FPM	428 772 C	--- ---
DN 20	SS, FPM	428 773 D	--- ---
DN 25	SS, FPM	428 774 E	--- ---
DN 32	SS, FPM	428 775 F	428 775 F
DN 40	SS, FPM	428 776 G	428 776 G
DN 50	SS, FPM	428 777 H	428 777 H
SS - Flanges (JIS 10K)			
DN 15	SS, FPM	431 053 J	--- ---
DN 20	SS, FPM	431 054 K	--- ---
DN 25	SS, FPM	431 055 L	--- ---
DN 32	SS, FPM	431 056 M	431 056 M
DN 40	SS, FPM	431 057 N	431 057 N
DN 50	SS, FPM	431 058 X	431 058 X

Diameters	Materials	I T E M - No.	
		Compact vers./ Rem. long dist.	Remote short dist.
SS - ANSI Flanges (ANSI B16-5-1988)			
DN 15	SS, FPM	428 778 J	--- ---
DN 20	SS, FPM	428 779 K	--- ---
DN 25	SS, FPM	428 780 H	--- ---
DN 32	SS, FPM	428 781 W	428 781 W
DN 40	SS, FPM	428 782 X	428 782 X
DN 50	SS, FPM	428 783 Y	428 783 Y
SS - Weld-o-let			
DN 65	SS	418 112 M	418 112 M
DN 80	SS	418 113 N	418 113 N
DN 100	SS	418 114 P	418 114 P

Ordering Data of Brass Fittings Type S020

Diameters	Materials	I T E M - No.	
		Compact vers./ Rem. long dist.	Remote short dist.
Brass - Female G-Threaded Ports			
DN 15	Brass, FPM	428 712 Y	--- ---
DN 20	Brass, FPM	428 713 Z	--- ---
DN 25	Brass, FPM	428 714 S	--- ---
DN 32	Brass, FPM	428 715 T	428 715 T
DN 40	Brass, FPM	428 716 U	428 716 U
DN 50	Brass, FPM	428 717 V	428 717 V
Brass - Female NPT-Threaded Ports			
DN 15	Brass, FPM	428 718 E	--- ---
DN 20	Brass, FPM	428 719 F	--- ---
DN 25	Brass, FPM	428 720 C	--- ---
DN 32	Brass, FPM	428 721 Z	428 721 Z
DN 40	Brass, FPM	428 722 S	428 722 S
DN 50	Brass, FPM	428 723 T	428 723 T
Brass - Female ISO7 (JIS) Threaded Ports			
DN 15	Brass, FPM	428 724 U	--- ---
DN 20	Brass, FPM	428 725 V	--- ---
DN 25	Brass, FPM	428 726 W	--- ---
DN 32	Brass, FPM	428 727 X	428 727 X
DN 40	Brass, FPM	428 728 G	428 728 G
DN 50	Brass, FPM	428 729 H	428 729 H
Brass - Male G/metric Threaded Ports			
DN 15	Brass, FPM	428 730 E	--- ---
DN 20	Brass, FPM	428 731 T	--- ---
DN 25	Brass, FPM	428 732 U	--- ---
DN 32	Brass, FPM	428 733 V	428 733 V
DN 40	Brass, FPM	428 734 W	428 733 V
DN 50	Brass, FPM	428 735 X	428 735 X

Ordering Data of Plastic Fittings Type S020

Diameters	Materials	I T E M - No.	
		Compact vers./ Rem. long dist.	Remote short dist.
PVC - True union DIN			
DN 15	PVC, FPM	428 670 J	430 837 L
DN 20	PVC, FPM	428 671 F	430 838 V
DN 25	PVC, FPM	428 672 G	430 839 W
DN 32	PVC, FPM	428 673 H	428 673 H
DN 40	PVC, FPM	428 674 A	428 674 A
DN 50	PVC, FPM	428 675 B	428 675 B
PVC - True union ASTM			
1/2"	PVC, FPM	428 682 T	--- ---
3/4"	PVC, FPM	428 683 U	--- ---
1"	PVC, FPM	428 684 V	--- ---
1" 1/4"	PVC, FPM	428 685 W	428 685 W
1" 3/4"	PVC, FPM	428 686 X	428 686 X
2"	PVC, FPM	428 687 Y	428 687 Y
PVC - True union JIS			
DN 15	PVC, FPM	429 078 H	--- ---
DN 20	PVC, FPM	429 079 A	--- ---
DN 25	PVC, FPM	429 080 Y	--- ---
DN 32	PVC, FPM	429 081 M	429 081 M
DN 40	PVC, FPM	429 082 N	429 082 N
DN 50	PVC, FPM	429 083 P	429 083 P
PVC - Solvent Spigot			
DN 15	PVC, FPM	428 676 C	--- ---
DN 20	PVC, FPM	428 677 D	--- ---
DN 25	PVC, FPM	428 678 N	--- ---
DN 32	PVC, FPM	428 679 P	428 679 P
DN 40	PVC, FPM	428 680 D	428 680 D
DN 50	PVC, FPM	428 681 S	428 681 S
PE - Weld-o-let			
DN 65-100	PE	418 642 G	418 642 G

Diameters	Materials	I T E M - No.	
		Compact vers./ Rem. long dist.	Remote short dist.
PP - True Union with Threaded Port			
DN 15	PP, FPM	428 688 H	430 840 B
DN 20	PP, FPM	428 689 A	430 841 Y
DN 25	PP, FPM	428 690 F	430 842 Z
DN 32	PP, FPM	428 691 U	428 691 U
DN 40	PP, FPM	428 692 V	428 692 V
DN 50	PP, FPM	428 693 W	428 693 W
PP - Weld Ends			
DN 15	PP, FPM	428 694 X	--- ---
DN 20	PP, FPM	428 695 Y	--- ---
DN 25	PP, FPM	428 696 Z	--- ---
DN 32	PP, FPM	428 697 S	428 697 S
DN 40	PP, FPM	428 698 B	428 698 B
DN 50	PP, FPM	428 699 C	428 699 C
PP - Weld-o-let			
DN 65-100	PP	418 650 L	418 650 L
PVDF - True Union with Threaded Port			
DN 15	PVDF, FPM	428 700 R	430 843 S
DN 20	PVDF, FPM	428 701 E	430 844 T
DN 25	PVDF, FPM	428 702 F	430 845 U
DN 32	PVDF, FPM	428 703 G	428 703 G
DN 40	PVDF, FPM	428 704 H	428 704 H
DN 50	PVDF, FPM	428 705 A	428 705 A
PVDF - Weld Ends			
DN 15	PVDF, FPM	428 706 B	--- ---
DN 20	PVDF, FPM	428 707 C	--- ---
DN 25	PVDF, FPM	428 708 M	--- ---
DN 32	PVDF, FPM	428 709 N	428 709 N
DN 40	PVDF, FPM	428 710 A	428 710 A
DN 50	PVDF, FPM	428 711 X	428 711 X
PVDF - Weld-o-let			
DN 65-100	PVDF	418 658 Q	

Easy pH-Control

Easy ON/OFF Control

COST OF OWNERSHIP -50%

Easy ON/OFF Control

COST OF OWNERSHIP -40%