

8205 Digital pH-Controller

Digital pH-Controller



- Flat glass probe featuring self cleaning and abrasion-free operation.
- Freely programmable PID controller functions for easy pH-control systems solutions
- Remote version with separated controller away from the sensor
- Commissioning is easy due to multi-language, menu-guided operation
- For use in both pipes and tanks using custom fittings or submersion kits
- CE Approval

The 8205 pH system measures 0–14 pH, $\pm 0.2\%$ accuracy in 1/2" to 4" lines, wet tap assembly or tank submersion fittings. Available in stainless steel, brass, PVDF, PP or PVC.

The 8205 pH controller combines easy control functionality with an integrated or remote sensor probe for an intelligent, low-cost, ON/OFF or continuous process pH control solution. The Type 8205 directly links with a full range of Burkert process valves specifically designed for the control of acids and caustic fluids to create high-accuracy pH control systems. Applications range from wastewater treatment and cooling water monitoring to chemical dosing, food and beverage, pharmaceutical, electroplating, and swimming pool engineering. The new sensor is competitively priced and compatible with most industry standard valves.

Easily integrated into existing and new process systems, the Type 8205 unit features a 4-20 mA output signal of process pH value, two pulses outputs and one alarm output. The output signals control valves or pumps directly by means of standard output impulses that vary in frequency and duration in accordance with the user's parameters and the desired pH value set point for the process.

The controller is easy to program and calibrate via three input keys and menu-driven screens that also enable individual calibrations of all measuring ranges. The unique "SIMULATE" function allows the user to temporarily simulate a set pH while conducting maintenance or sensor calibration. This eliminates nuisance alarms and incorrect pH readings in a networked distributed control system while the pH controller maintenance or calibration is conducted.

The sensor component can also be remotely panel or wall mounted. It has a Pt1000 temperature sensor (if desired) for automatic temperature compensation.

The Type 8205 Controller systems are available in three different remote mounting configurations: in-line, submersion and wet tap.

These kits include all necessary components to use the 8205 series pH controller in a tank pH-monitoring configuration. The system item number includes the probe, fittings, 25' of cable, and a panel or wall mount controller that can be mounted in a variety of locations. The only parts not included are PVC pipe and fittings for your custom mounting application.

Applications

- pH-measurement
- Waste treatment engineering
- Water treatment and process technology
- Cooling water monitoring
- Swimming pool engineering
- Chemical dosing
- Electroplating

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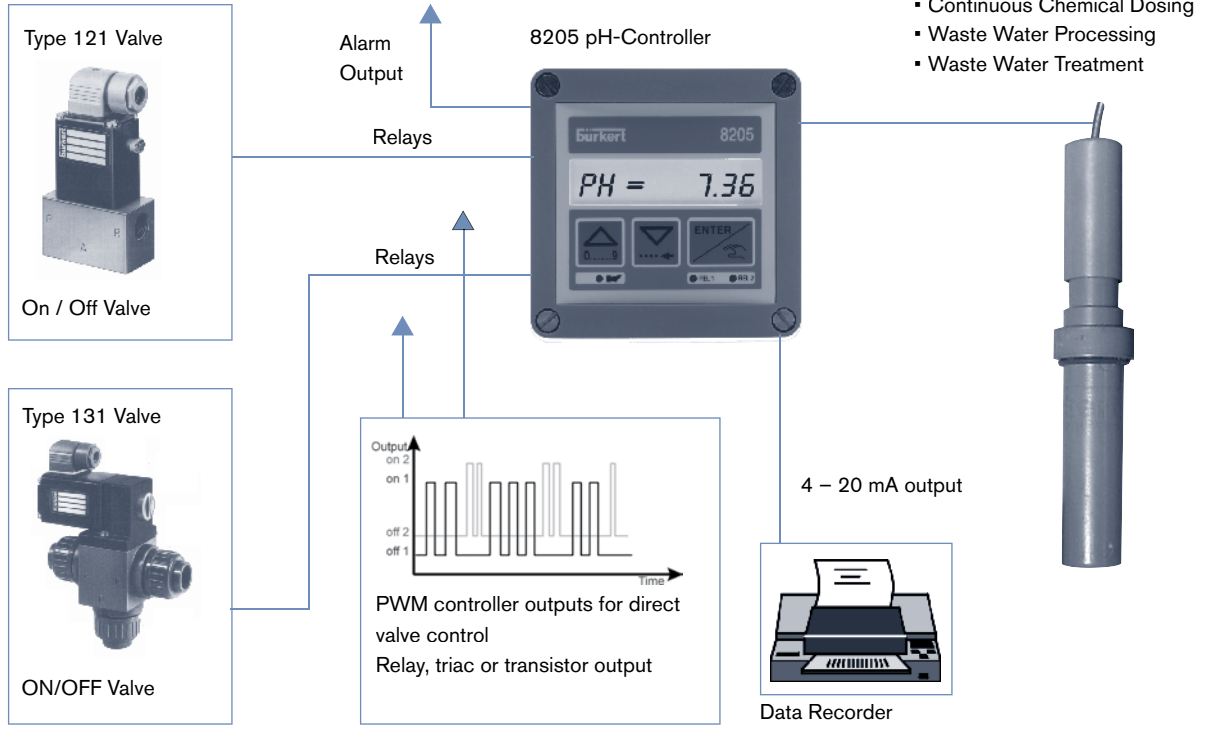
The pH – control system

ON / OFF Process Control

Description

Applications:

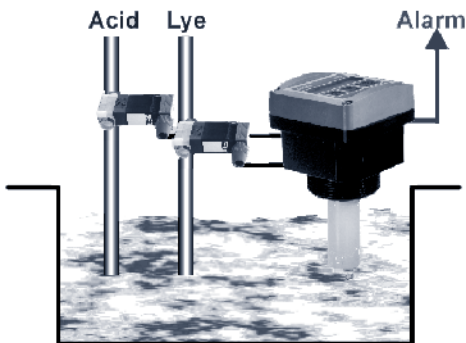
- Neutralization
- Continuous Chemical Dosing
- Waste Water Processing
- Waste Water Treatment



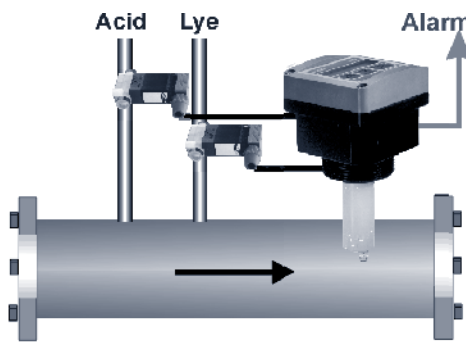
Controlling principle

The pH-controller Type 8205 is designed for use in static or dynamic process pH-control. The output signals control a valve or a pump by means of impulses which vary in time duration or frequency and are computed according to the users' parameters and the set pH-value of the fluid.

Static Process Control



Dynamic Process Control



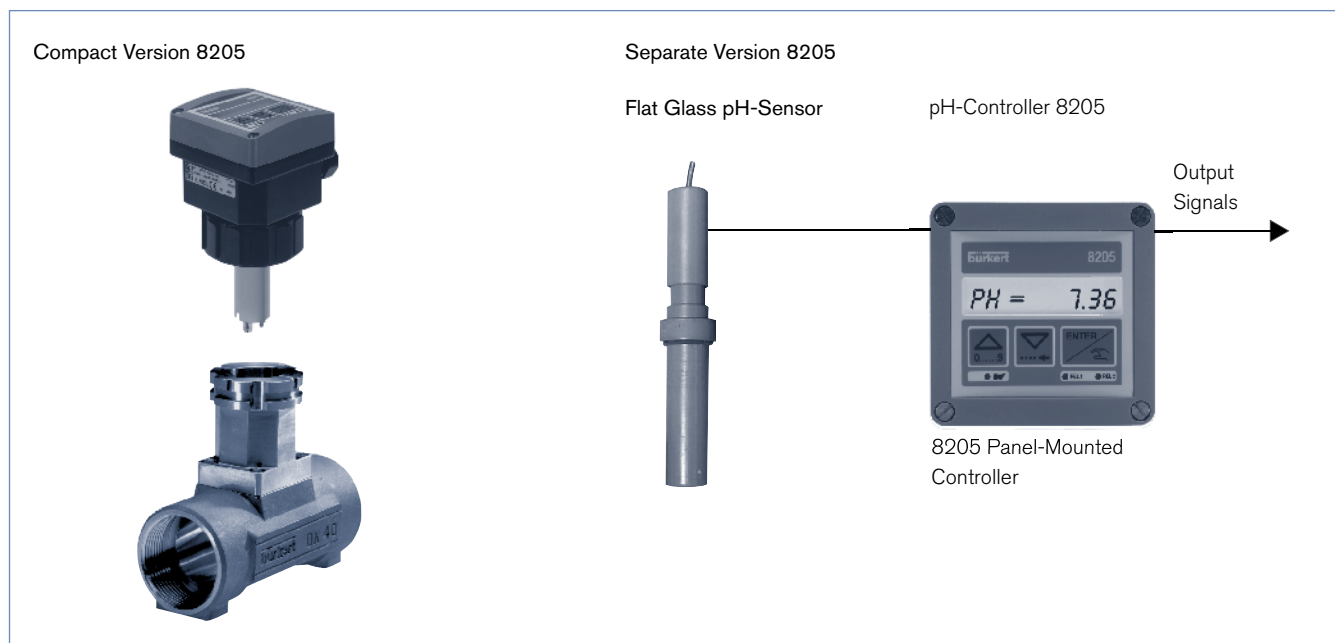
DTS 1000082473 EN Version:-- Status: RL (released | freigegeben | valide) printed: 13.08.2008

Principle of operation

The most important part of a pH-electrode is the glass membrane of the pH-selective glass. When the electrode is immersed into the solution, an electrical charge caused by H-ions (H+) generates a cell voltage between the glass membrane and the solution. This electric 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 controller functions in a 3-wire circuit and requires a power supply of 12 – 30 VDC. The wall-mounted version is also available with a 115 – 230 VAC power supply. A relay alarm contact, and a 4 – 20 mA standard signal proportional to the pH-signal or to the temperature (°F), are available output signals. The pulse output signals are provided by relays (standard), triacs, or transistors.

Installation

The compact pH-controller can easily be installed into any Burkert insertion fitting system, S020 or 1500 / 1501, by connecting the main nut. The controller Type 8205 is available in a panel-mounted version or in a wall-mounted plastic NEMA 4 enclosure.



Operation / commissioning

Customized adjustments, such as measuring ranges, engineering units, and alarm setpoints can be performed on site via a multi-lingual display. Please refer to the operating instructions prior to commissioning the devices.

Technical data – pH electrode

The pH-controller is available with flat glass type electrode as standard. This design provides an extra barrier against reference side contaminations. Also, it allows the electrodes to be used in applications where sulfides, mercaptans, heavy metal ions and similar materials are present. In the remote versions, the top of the electrode body has the quarter turn, quick disconnect BNC connector and the leak-tight O-ring seals. All replacement electrodes are supplied complete with O-rings. The service life of the pH-electrode depends on the application. Electrode in the Type 8205 can easily be replaced.

Operation and display

The operation of the pH-controller is divided into the following 3 different menus:

Main Menu

- pH; setpoints; working rates
- Temperature
- Output current
- HOLD function
- pH-electrode calibration

Calibration Menu

- Language
- Temperature units
- Measuring range 4 – 20 mA
- Pulse output
- Impulse duration
- pH-setpoint adjustment
- Regulation principle (P; PI; PID)
- Alarm threshold
- Manual display selection
- Temperature selection mode
- Filter selection

Test Menu

- Offset
- Span
- Temperature adjustment
- Simulation of pH or temperature value
- Display of instantaneous electrode voltage

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Controller 8205 Operating Elements

Direction upwards
in menu

Display selection and
increasing key (numeric
values) impulses or
automatic. Choice of
digit value.
Steps from 0 to 9

Relay Alarm: contact
closed

Direction downwards in menu or
sideways for digit selection

Relay 1: contact closed (base)

Relay 2: contact closed (acid)

Acceptance of chosen parameter or adjusted value

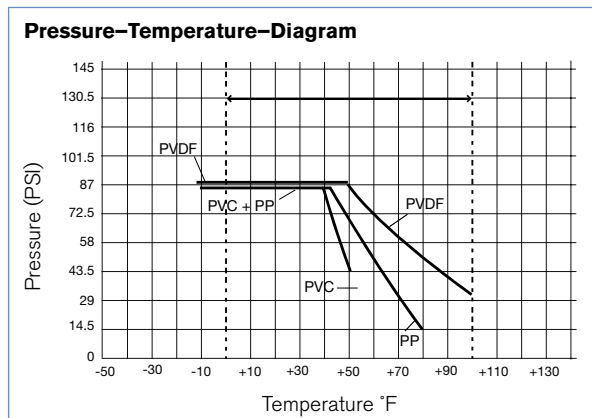


Technical data

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

Compact version	
Pipe diameter	Stainless steel 1/2" to 2" (DN 15 to DN 50) fitting Type S020 2 1/2" to 4" (DN 65 to DN 100) weld-o-let fitting Type 1500 Brass 1/2" to 2" (DN 15 to DN 50) fitting Type S020 PVC, PP, PVDF 1/2" to 2" (DN 15 to DN 50) fitting Type S020 PE, PP, PVDF 2 1/2" to 4" (DN 65 to DN 100) weld-o-let fitting Type 1501
Enclosure	NEMA 4 (IP 65) Relative humidity max. 80%
Electronic housing	Polycarbonate
Front plate	Polyester
Sensor housing	PVDF; O-rings FKM / EPDM
Voltage supply	12–30 VDC
Consumption	80 mA (with relays), 20 mA (with triac or transistor)
Display	.6 x 2.4 in. LCD 8 digits, alphanumeric 15 segments, .35 in. high
Analog output signal	4 – 20 mA programmable, proportional to the pH or to the temperature
Load	<1300 Ω at 30 V; <1000 Ω at 24 V; <550 Ω at 15 V
Relay output (alarm)	1 relays 3 A / 230 V; freely adjustable
Temperature Sensor Pt1000	Stainless Steel 316 Ti
Pulse outputs	Relay 3A / 250 V max.; F <1 Hz Transistor 300 mA / 30 V max.; F <17 Hz Triac 1 A / 250 V max.; F <17 Hz
Control mode	P; PI; PID programmable

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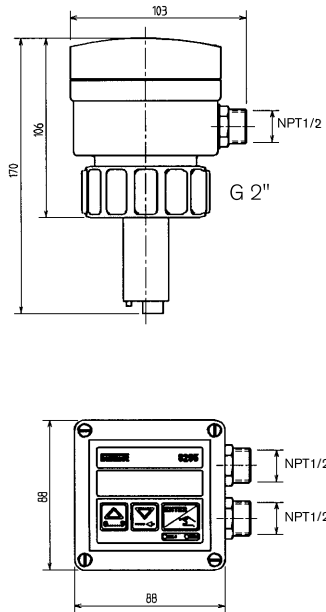
Electrode for compact version Type 8205	FLAT
Housing	glass shaft
Max.pressure at max. temperature	*100 PSI @ 170°F 85 PSI @ 180°F 50 PSI @ 212°F
Diaphragm	polyethylene
Reference electrolyte	methyl cellulose

* For metallic S020 only.

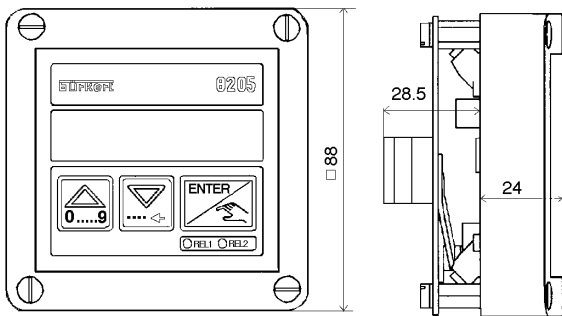
8205
Digital pH-Controller

pH-Controller Type 8205 compact dimensions [mm]

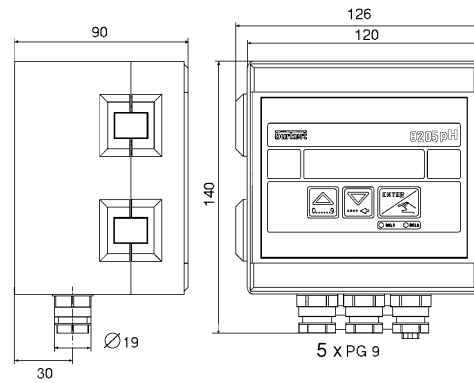
Compact Version Standard



Dimensions pH-Controller Type 8205 Panel Version

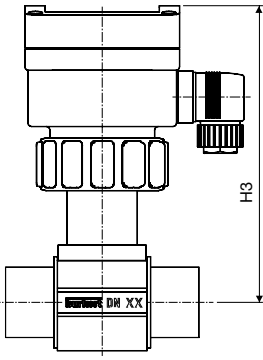


Dimensions pH-Controller Type 8205 Wall-Mounted Version



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Fittings Type S020 1/2" – 2" (DN 15–50) for controller 8205



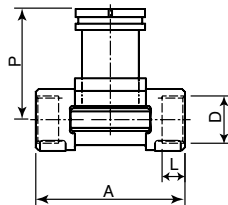
Variable Dimensions [mm]				
Port (DN)	H1	H2	H3	H8
1/2" (15)	163	177	177	
3/4" (20)	163	177	177	
1" (25)	163	177	177	
1 1/4" (32)	163	177	177	
1 1/2" (40)	164	178	178	
2" (50)	170	184	184	

Applicable for all Fitting Materials
1/2"-2" (DN 15 – 50) Process Connections.

Insertion fitting dimensions (for compact 8205)

Internal thread
Stainless steel (316L - 1.4404)
or brass (CuZn39Pb2)

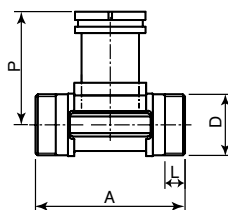
NPT
G
Rc



Orifice [DN]	P [mm]	A [mm]	D	L [mm]
1/2" (15)	80.3	85.0	NPT 1/2	17.0
			G 1/2	16.0
			Rc 1/2	15.0
3/4" (20)	77.8	95.0	NPT 3/4	18.3
			G 3/4	17.0
			Rc 3/4	16.3
1" (25)	78.0	105.0	NPT 1	18.0
			G 1	23.5
			Rc 1	18.0
1 1/4" (32)	81.6	120.0	NPT 1 1/4	21.0
			G 1 1/4	23.5
			Rc 1 1/4	21.0
1 1/2" (40)	85.4	130.0	NPT 1 1/2	20.0
			G 1 1/2	23.5
			Rc 1 1/2	19.0
2" (50)	91.5	150.0	NPT 2	24.0
			G 2	27.5
			Rc 2	24.0

External thread
Stainless steel (316L - 1.4404)
or Brass (CuZn39Pb2)
or PVC (only DN 6 and 8)

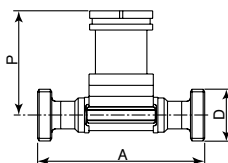
G



Orifice [DN]	P [mm]	A [mm]	D	L [mm]
1/4" (6)	75.3	90.0	G 1/2	14.0
5/16" (8)	75.3	90.0	G 1/2	14.0
1/2" (15)	80.3	84.0	G 3/4	11.5
3/4" (20)	77.8	94.0	G 1	13.5
1" (25)	78.0	104.0	G 1 1/4	14.0
1 1/4" (32)	81.6	119.0	G 1 1/2	18.0
1 1/2" (40)	85.4	129.0	M 55 x 2	19.0
2" (50)	91.5	149.0	M 64 x 2	20.0

External thread
Stainless steel (316L - 1.4404)

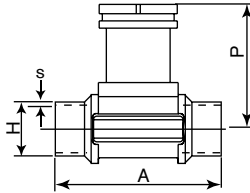
SMS1145



Orifice [DN]	P [mm]	A [mm]	D
1" (25)	77.8	130	Rd40 x 1/6"
1 1/2" (40)	81.6	164	Rd60 x 1/6"
2" (50)	85.4	173	Rd70 x 1/6"

Insertion fitting dimensions (for compact 8205)

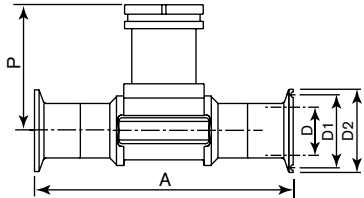
Welding ends **BS 4825/ASME BPE**
Stainless steel (316L - 1.4404) **EN ISO 1127 / ISO 4200**
SMS 3008



Orifice [DN]	P [mm]	A [mm]	Standard	D [mm]	s [mm]
1/2" (15)	80.3	84.0	ASME BPE	-	-
	-	-	ISO 4200 SMS 3008	21.30 -	1.60 -
3/4" (20)	83.3	84.0	ASME BPE	19.05	1.65
	77.8	94.0	ISO 4200	26.90	1.60
	83.3	84.0	SMS 3008	20.00	1.00
1" (25)	77.8	94.0	BS4825/ASME BPE	25.40	1.65
	78.0	104.0	ISO 4200	33.70	2.00
	77.8	94.0	SMS 3008	25.00	1.20
1 1/4" (32)	78.0	104.0	BS4825/ASME BPE	32.00	1.60
	81.6	119.0	ISO 4200	42.40	2.00
	78.0	104.0	SMS 3008	-	-
1 1/2" (40)	81.6	119.0	BS 4825	38.10	1.65
	85.4	129.0	ISO 4200	48.30	2.00
	81.6	119.0	SMS 3008	38.00	1.20
2" (50)	85.4	128.0	BS4825/ASME BPE	50.80	1.65
	91.5	149.0	ISO 4200	60.30	2.00
	85.4	128.0	SMS 3008	51.00	1.20
2 1/2" (65)	91.5	147.0	BS4825/ASME BPE	63.50	1.65
	-	-	ISO 4200	-	-
	91.5	147.0	SMS 3008	63.50	1.60

Tri-Clamp® **BS 4825/ASME BPE***
Stainless steel **ISO (for pipe EN ISO 1127 / ISO 4200)**
(316L - 1.4404) **SMS 3017 / ISO 2852***

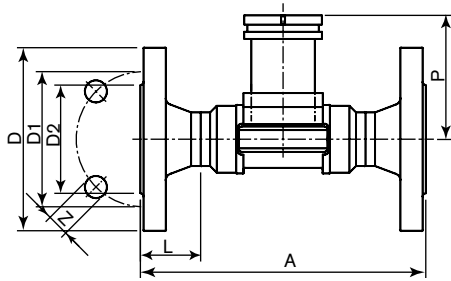
*Available with internal surface finish Ra=0.8µm



Orifice [DN]	P [mm]	A [mm]	Standard	D2 [mm]	D1 [mm]	D [mm]
1/2" (15)	80.3	130	ASME BPE	-	-	-
	-	-	ISO (for pipe ISO 4200) SMS 3017/ISO 2852	18.1 -	27.5 -	34.0 -
3/4" (20)	77.8	150	ASME BPE	15.75	-	25.0
	80.3	-	ISO (for pipe ISO 4200) SMS 3017/ISO 2852	23.7 -	43.5 -	50.5 -
	77.8	129.0	SMS 3017/ISO 2852	-	-	-
1" (25)	78.0	160	BS 4825/ASME BPE	22.1	43.5	50.5
	77.8	129.0	ISO (for pipe ISO 4200) SMS 3017/ISO 2852	29.7 22.6	43.5 43.5	50.5 50.5
	77.8	129.0	SMS 3017/ISO 2852	-	-	-
1 1/4" (32)	81.6	180	BS 4825/ASME BPE	-	-	-
	-	-	ISO (for pipe ISO 4200) SMS 3017/ISO 2852	38.4 -	43.5 -	50.5 -
	-	-	SMS 3017/ISO 2852	-	-	-
1 1/2" (40)	85.4	200	BS 4825/ASME BPE	34.8	43.5	50.5
	81.6	161.0	ISO (for pipe ISO 4200) SMS 3017/ISO 2852	44.3 35.6	56.5 43.5	64.0 50.5
	81.6	161.0	SMS 3017/ISO 2852	-	-	-
2" (50)	91.5	230	BS 4825/ASME BPE	47.5	56.5	64.0
	85.4	192.0	ISO (for pipe ISO 4200) SMS 3017/ISO 2852	55.1 48.6	70.5 56.5	77.5 64.0
	85.4	192.0	SMS 3017/ISO 2852	-	-	-
2 1/2" (65)	-	-	BS 4825/ASME BPE	60.2	70.5	77.5
	-	-	ISO (for pipe ISO 4200)	-	-	-
	91.5	216.0	SMS 3017/ISO 2852	60.3	70.5	77.5

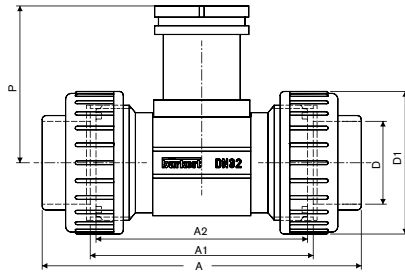
Insertion fitting dimensions (for compact 8205)

Flange
Stainless steel (316L - 1.4404) **DIN 2633**
ANSI B16-5-1988
JIS 10K



Orifice	P	A		NORM	L	Z	D2	D1	D		
[DN]	[mm]	DIN/ANSI [mm]	JIS [mm]		[mm]	[mm]	[mm]	[mm]	[mm]		
1/2" (15)	80.3	130.0	152.0	ANSI	23.5	4x15.8	34.9	60.3	89.0		
				DIN		4x14.0				45.0	95.0
				JIS		4x15.0				51.0	95.0
3/4" (20)	77.8	150.0	178.0	ANSI	28.5	4x15.8	42.9	69.8	99.0		
				DIN		4x14.0				58.0	105.0
				JIS		4x15.0				56.0	100.0
1" (25)	78.0	160.0	216.0	ANSI	28.5	4x15.8	50.8	79.4	108.0		
				DIN		4x14.0				68.0	115.0
				JIS		4x19.0				67.0	125.0
1 1/4" (32)	81.6	180.0	229.0	ANSI	31.0	4x15.8	63.5	88.9	117.0		
				DIN		4x18.0				78.0	140.0
				JIS		4x19.0				76.0	135.0
1 1/2" (40)	85.4	200.0	241.0	ANSI	36.0	4x15.8	73.0	98.4	127.0		
				DIN		4x18.0				88.0	150.0
				JIS		4x19.0				81.0	140.0
2" (50)	91.5	230.0	267.0	ANSI	41.0	4x19.0	92.1	120.6	152.0		
				DIN		4x18.0				102.0	165.0
				JIS		4x19.0				96.0	155.0

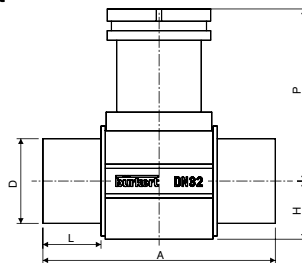
True union nut with solvent or fusion spigot
PVC, PP, PVDF



Orifice	P	D1	A			D			A2	A1
			DIN	ANSI	JIS	(DIN)	(ANSI)	(JIS)		
1/2" (15)	80.4	43	128	130.0	129	20	21.3	18.40	90	96
1/2" (15)*	81.4	74	148	-	-	20	-	-	110	116
3/4" (20)	77.8	53	144	145.6	145	25	26.7	26.45	100	106
3/4" (20)*	81.4	74	154	-	-	25	-	-	110	116
1" (25)	78.0	60	160	161.4	161	32	33.4	32.55	110	116
1" (25)*	81.4	74	160	-	-	32	-	-	110	116
1 1/4" (32)	81.4	74	168	170.0	169	40	42.2	38.60	110	116
1 1/2" (40)	85.2	83	188	190.2	190	50	48.3	48.70	120	127
2" (50)	91.5	103	212	213.6	213	63	60.3	60.80	130	136

* Analysis version fitting

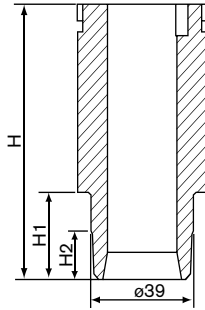
Solvent or fusion spigot
PVC, PP, PVDF



Orifice	P	H	A		D			L	
			PVC	PP/PVDF	(DIN)	(ANSI)	(JIS)	PVC	PP/PVDF
1/2" (15)	80.4	17.5	90	85	20	21.3	18.40	16.5	14
3/4" (20)	77.8	17.5	100	92	25	26.7	26.45	20.0	16
1" (25)	78.0	21.5	110	95	32	33.4	32.55	23.0	18
1 1/4" (32)	81.4	27.5	110	100	40	42.2	38.60	27.5	20
1 1/2" (40)	85.2	31.5	120	106	50	48.3	48.70	30.0	23
2" (50)	91.5	39.5	130	110	63	60.3	60.80	37.0	27

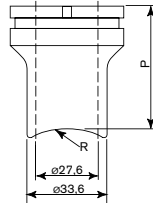
Dimensions [mm] – fittings 2 1/2" – 4" (DN 65 – 100) (for compact 8205)

Fusion spigot
PE, PP, PVDF



DIA. [DN]	H [mm]	PE		PP		PVDF	
		H1 [mm]	H2 [mm]	H1 [mm]	H2 [mm]	H1 [mm]	H2 [mm]
2 1/2" (65)	72.5	13.0	---	13.0	---	10.4	---
3" (80)	72.5	15.6	---	15.6	---	12.5	---
4" (100)	72.5	19.0	5.0	19.0	5	15.2	6

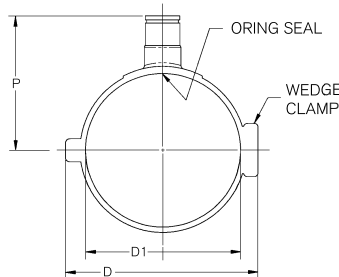
Welding tab with radius
Stainless steel (316L - 1.4404)



Orifice (DN)	P [mm]	R [mm]
2" (50)	56.55	30.15
2 1/2" (65)	54.52	36.65
3" (80)	53.07	44.45
4" (100)	50.71	57.15

Saddle- PVC

Body material: PVC, Seal material: BUNA



DIA.	D[mm]	P[mm]	D1[mm]
2 1/2" (65)	129	115.0	75.0
3" (80)	144	119.0	90.0
4" (100)	163	107.0	114.0

Operation and display

A Compact Version of pH-Controller Type 8205 Consists of Two Basic Units as Follows:

- Fitting Type S020 1/2" to 2" (DN15 to DN50) or 1500/1501 2-1/2" to 4" (DN 65 to DN 100)
- Compact pH-Controller

pH-Controller Compact 4-20 mA Output, with 2 Pulse Relays, 1 Relay Alarm, 12 – 30 VDC; 2 x NPT 1/2" Conduit Entry with Pt1000

Description	Electrode	Gasket	ITEM-No
Compact pH-controller 8205	Flat Glass	FKM	US05350

pH-Controller Compact 4-20 mA Output, with 2 Transistor Pulse Outputs, 1 Relay Alarm, 12 – 30 VDC; 2 x NPT 1/2" Conduit Entry with Pt1000

Description	Electrode	Gasket	ITEM-No
Compact pH-controller 8205	Flat Glass	FKM	US05351

Ordering chart for Insertion fitting S020 (for compact 8205)

Brass – T-fitting

Port connection	Specification		Item no. / Orifice						
	Seal	Standards	1/2" (DN 15)	3/4" (DN 20)	1" (DN 25)	1 1/4" (DN 32)	1 1/2" (DN 40)	2" (DN 50)	2 1/2" (DN 65)
Internal thread	FKM	NPT	428 718	428 719	428 720	428 721	428 722	428 723	---
		G	428 712	428 713	428 714	428 715	428 716	428 717	---
		Rc (ISO7)	428 724	428 725	428 726	428 727	428 728	428 729	---
External thread	FKM	G	428 730	428 731	428 732	428 733	428 734	428 735	---

Stainless steel – T-fitting

Port connection	Specification		Item no. / Orifice						
	Seal	Standards	1/2" (DN 15)	3/4" (DN 20)	1" (DN 25)	1 1/4" (DN 32)	1 1/2" (DN 40)	2" (DN 50)	2 1/2" (DN 65)
Internal thread	FKM	NPT	428 742	428 743	428 744	428 745	428 746	428 747	---
		G	428 736	428 737	428 738	428 739	428 740	428 741	---
		Rc (ISO7)	428 748	428 749	428 750	428 751	428 753	428 754	---
External thread	FKM	G	428 754	428 755	428 756	428 757	428 758	428 759	---
	EPDM	SMS 1145	---	---	443 317	---	443 318	443 319	---
Weld ends	FKM	EN ISO 1127/ISO 4200	---	428 760	428 761	428 762	428 763	428 764	428 765
	EPDM	BS4825 / ASME BPE	---	443 734	443 735	443 736	443 942	443 943	443 944
		SMS 3008	---	---	443 309	---	443 310	443 311	443 312
Tri-Clamp®	FKM	EN ISO 1127/ISO 4200	---	428 766	428 767	428 768	428 769	428 770	428 771
	EPDM	BS4825/ASME BPE	---	443 965	443 966	---	443 967	443 968	443 969
		SMS3017/ISO2852	---	---	443 313	---	443 314	443 315	443 316
		BS4825/ASME BPE*	---	443 970	443 971	---	443 972	443 973	443 974
Flange	FKM	SMS3017/ISO2852*	---	---	443 957	---	443 958	443 959	443 960
		ANSI B16-5-1988	428 778	428 779	428 780	428 781	428 782	428 783	---
		DIN 2633	428 772	428 773	428 774	428 775	428 776	428 777	---
		JIS 10K	431 053	431 054	431 055	431 056	431 057	431 058	---

* internal surface finish Ra = 0.8 µm

Stainless steel – welding tab with radius

Specification	2" (DN 50)	2 1/2" (DN 65)	3" (DN 80)	4" (DN 100)	5" (DN 125)	6" (DN 150)	8" (DN 200)	10" (DN 250)	12" (DN 300)	14" (DN 350)
Weld tabs	418 111	418 112	418 113	418 114	418 115	418 116	418 117	418 756	720 070	416 637

Carbon steel saddles – (requires long finger sensor)

Specification	2" (DN 50)	3" (DN 80)	4" (DN 100)	5" (DN 125)	6" (DN 150)	8" (DN 200)	10" (DN 250)	12" (DN 300)	14" (DN 350)
	US50B49	US50B32	US50B33	US50B34	US50B35	US50B36	US50B37	US50B38	TBD

Carbon steel weldolet – (requires long finger sensor)

Specification	2" (DN 50)	2 1/2" (DN 65)	3" (DN 80)	4" (DN 100)	5" (DN 125)	6" (DN 150)	8" (DN 200)	10" (DN 250)	12" (DN 300)
	US50B61	US50C34	US50C35	US50B27	US50B28	US50B29	US50B30	US50B31	US50C55

PVC – T-fitting

Port connection	Specification		Item no. / Orifice					
	Seal	Standards	1/2" (DN 15)	3/4" (DN 20)	1" (DN 25)	1 1/4" (DN 32)	1 1/2" (DN 40)	2" (DN 50)
True union - solvent spigot	FKM	ASTM	428 682	428 683	428 684	428 685	428 686	428 687
		ISO	428 670	428 671	428 672	428 673	428 674	428 675
		JIS	429 078	429 079	429 080	429 081	429 082	429 083
Solvent ends	FKM	ISO	428 676	428 677	428 678	428 679	428 680	428 681
For Analysis: True union- solvent spigot	FKM	ISO	430 837	430 838	460 839	428 673	428 674	4428 675

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Ordering chart for insertion fitting S020 (for compact 8205)

PVC saddle – (long finger required for 6" & 8" saddle)

Specification	Item no. / Orifice				
	2" (DN 50)	3" (DN 80)	4" (DN 100)	6" (DN 150)	8" (DN 200)
	413 469 W	413 470 T	US50B20	US50B17	US50B42

PVC – Screw-on fitting

Specification	Item no. / Orifice									
	2 1/2" (DN 65)	3" (DN 80)	4" (DN 100)	5" (DN 125)	6" (DN 150)	8" (DN 200)	10" (DN 250)	12" (DN 300)	14" (DN 350)	16" (DN 400)
	--	--	418 170	418 170	418 170	418 170	418 170	418 170	418 170	418 170

PP – T-fitting

Port connection	Specification			Item no. / Orifice					
	Seal	Standards		9/16" (DN 6)	3/4" (DN 20)	1" (DN 25)	1 1/4" (DN 32)	1 1/2" (DN 40)	2" (DN 50)
True union - solvent spigot	FKM	ISO		428 688	428 689	428 690	428 691	428 692	428 693
Solvent ends	FKM	ISO		428 694	428 695	428 696	428 697	428 698	428 699
For Analysis: True union- solvent spigot	FKM	ISO		430 840	430 841	460 842	428 691	428 692	428 693

PP – Fusion spigot or Screw-on fitting

Specification	Item no. / Orifice									
	2 1/2" (DN 65)	3" (DN 80)	4" (DN 100)	5" (DN 125)	6" (DN 150)	8" (DN 200)	10" (DN 250)	12" (DN 300)	14" (DN 350)	16" (DN 400)
Fusion spigot	418 650	418 651	418 652	--	418 653	418 654	418 655	418 656	418 657	--
Screw-on	--	--	436 488	436 488	436 488	436 488	436 488	436 488	436 488	436 488

PVDF – T-fitting

Port connection	Specification			Item no. / Orifice					
	Seal	Standards		3/4" (DN 20)	1" (DN 25)	1 1/4" (DN 32)	1 1/2" (DN 40)	2" (DN 50)	2 1/2" (DN 65)
True union - solvent spigot	FKM	ISO		428 700	428 701	428 702	428 703	428 704	428 705
Solvent ends	FKM	ISO		428 706	428 707	428 708	428 709	428 710	428 711
For Analysis: True union- solvent spigot	FKM	ISO		430 843	430 844	460 845	428 703	428 704	428 705

PVDF – Fusion spigot or Screw-on fitting

Specification	Item no. / Orifice									
	2 1/2" (DN 65)	3" (DN 80)	4" (DN 100)	5" (DN 125)	6" (DN 150)	8" (DN 200)	10" (DN 250)	12" (DN 300)	14" (DN 350)	16" (DN 400)
Fusion spigot	418 658	418 659	418 660	--	--	--	--	--	--	--

PE – Fusion spigot or Screw-on fitting

Specification	Item no. / Orifice									
	2 1/2" (DN 65)	3" (DN 80)	4" (DN 100)	5" (DN 125)	6" (DN 150)	8" (DN 200)	10" (DN 250)	12" (DN 300)	14" (DN 350)	16" (DN 400)
Fusion spigot	418 642	418 643	418 644	--	418 645	418 646	418 647	418 648	418 649	418 598
Screw-on	--	--	436 489	436 489	436 489	436 489	436 489	436 489	436 489	436 489

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Ordering chart for remote pH systems (includes 25 ft. cable for pH electrode)

The pH-Controller systems as shown on first page, include 4–20mA output, choice of relay, transistor, or triac pulse outputs, 25´ of cable from pH sensor to transmitter, flat self flushing pH probe designed for longer life expectancy housed in a CPVC body. pH Probe connects to cable via quick BNC connector for easy maintenance and/or replacement. Nema 4 wall mounted or panel mounted transmitter, pH Simulation Mode, easy 2 point calibration with hold function thus locking in existing plant conditions during calibration. All systems shown are 24VDC. 115–230 AC versions available for wall mount electronics only

Type 8205 In Line pH-Controller System with Wall or Panel Mount Electronics and 2 Relay Pulse Outputs

Description	Item no.
Wall Mount System	
3/4" NPT PVC fitting, Temperature Compensated	US07471
3/4" NPT PVC fitting, No Temperature Compensation	US07472
1" NPT PVC fitting, Temperature Compensated	US07473
1" NPT PVC fitting, No Temperature Compensation	US07474
2" NPT PVC fitting, Temperature Compensated	US51B30
2" NPT PVC fitting, No Temperature Compensation	US07475
Panel Mount System	
3/4" NPT PVC fitting, Temperature Compensated	US50U51
3/4" NPT PVC fitting, No Temperature Compensation	US07476
1" NPT PVC fitting, Temperature Compensated	US07477
1" NPT PVC fitting, No Temperature Compensation	US07478
2" NPT PVC fitting, Temperature Compensated	US07479
2" NPT PVC fitting, No Temperature Compensation	US07480

Type 8205 Submersion Controller System with Wall or Panel Mount Electronics and 2 Relay Pulse Outputs

Description	Item no.
Wall Mount System	
pH Submersion Kit, Temperature Compensated	US50X62
pH Submersion Kit, No Temperature Compensation	US07481
Panel Mount System	
pH Submersion Kit, Temperature Compensated	US07482
pH Submersion Kit, No Temperature Compensation	US07483

Type 8205 Wet Tap pH System with Wall or Panel Mount Electronics and 2 Relay Pulse Outputs

Description	Item no.
Wall Mount System	
12" Insertion Wet Tap pH Wall Transmitter, Temperature Compensated	US07484
12" Insertion Wet Tap pH Wall Transmitter, No Temperature Compensation	US07485
Panel Mount System	
12" Insertion Wet Tap pH Wall Transmitter, Temperature Compensated	US07486
12" Insertion Wet Tap pH Wall Transmitter, No Temperature Compensation	US07487

Type 8205 In Line pH-Controller System with Wall or Panel Mount Electronics and 2 Triac Pulse Outputs

Description	Item no.
Wall Mount System	
3/4" NPT PVC fitting, Temperature Compensated	US07488
3/4" NPT PVC fitting, No Temperature Compensation	US07489
1" NPT PVC fitting, Temperature Compensated	US07490
1" NPT PVC fitting, No Temperature Compensation	US07491
2" NPT PVC fitting, Temperature Compensated	US07492
2" NPT PVC fitting, No Temperature Compensation	US07493
Panel Mount System	
3/4" NPT PVC fitting, Temperature Compensated	US07494
3/4" NPT PVC fitting, No Temperature Compensation	US07495
1" NPT PVC fitting, Temperature Compensated	US07496
1" NPT PVC fitting, No Temperature Compensation	US07497
2" NPT PVC fitting, Temperature Compensated	US07498
2" NPT PVC fitting, No Temperature Compensation	US07499

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8205
Digital pH-Controller

Ordering data for pH systems (includes 25ft. of cable for pH electrode) continued

Type 8205 Submersion Controller System with Wall or Panel Mount Electronics and 2 Triac Pulse Outputs

Description	Item no.
Wall Mount System	
pH Submersion Kit, Temperature Compensated	US07500
pH Submersion Kit, No Temperature Compensation	US07501
Panel Mount System	
pH Submersion Kit, Temperature Compensated	US07502
pH Submersion Kit, No Temperature Compensation	US07503

Type 8205 Wet Tap pH System with Wall or Panel Mount Electronics and 2 Triac Pulse Outputs

Description	Item no.
Wall Mount System	
12" Insertion Wet Tap pH Wall Transmitter, Temperature Compensated	US07504
12" Insertion Wet Tap pH Wall Transmitter, No Temperature Compensation	US07505
Panel Mount System	
12" Insertion Wet Tap pH Wall Transmitter, Temperature Compensated	US07506
12" Insertion Wet Tap pH Wall Transmitter, No Temperature Compensation	US07507

Type 8205 In Line pH-Controller System with Wall or Panel Mount Electronics and 2 Transistor Pulse Outputs

Description	Item no.
Wall Mount System	
3/4" NPT PVC fitting, Temperature Compensated	US07508
3/4" NPT PVC fitting, No Temperature Compensation	US07509
1" NPT PVC fitting, Temperature Compensated	US07510
1" NPT PVC fitting, No Temperature Compensation	US07511
2" NPT PVC fitting, Temperature Compensated	US07512
2" NPT PVC fitting, No Temperature Compensation	US07513
Panel Mount System	
3/4" NPT PVC fitting, Temperature Compensated	US07514
3/4" NPT PVC fitting, No Temperature Compensation	US07515
1" NPT PVC fitting, Temperature Compensated	US07516
1" NPT PVC fitting, No Temperature Compensation	US07517
2" NPT PVC fitting, Temperature Compensated	US07518
2" NPT PVC fitting, No Temperature Compensation	US07519

Type 8205 Submersion Controller System with Wall or Panel Mount Electronics and 2 Transistor Pulse Outputs

Description	Item no.
Wall Mount System	
pH Submersion Kit, Temperature Compensated	US07520
pH Submersion Kit, No Temperature Compensation	US07521
Panel Mount System	
pH Submersion Kit, Temperature Compensated	US07522
pH Submersion Kit, No Temperature Compensation	US07523

Type 8205 Wet Tap pH System with Wall or Panel Mount Electronics and 2 Transistor Pulse Outputs

Description	Item no.
Wall Mount System	
12" Insertion Wet Tap pH Wall Transmitter, Temperature Compensated	US07524
12" Insertion Wet Tap pH Wall Transmitter, No Temperature Compensation	US07525
Panel Mount System	
12" Insertion Wet Tap pH Wall Transmitter, Temperature Compensated	US07526
12" Insertion Wet Tap pH Wall Transmitter, No Temperature Compensation	US07527

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Remote pH electronics only

pH-Controller Panel-Mounted Version; 4-20 mA Output

Description	Pulse Output	Alarm Relay	Power Supply	Item no.
Panel-mounted Controller 8205	2 x relay	yes	12 – 30 VDC	427 939 K
Panel-mounted Controller 8205	2 x Triac	yes	12 – 30 VDC	427 940 Y
Panel-mounted Controller 8205	2 x Transistor	yes	12 – 30 VDC	427 941 M

pH-Controller Wall-Mounted Version; 4-20 mA Output

Wall-mounted Controller 8205	2 x relay	yes	12 – 30 VDC	427 946 J
Wall-mounted Controller 8205	2 x Triac	yes	12 – 30 VDC	427 947 K
Wall-mounted Controller 8205	2 x Transistor	yes	12 – 30 VDC	427 948 U
Wall-mounted Controller 8205	2 x relay	yes	115 – 230 VAC	427 951 P
Wall-mounted Controller 8205	2 x Triac	yes	115 – 230 VAC	427 952 Q
Wall-mounted Controller 8205	2 x Transistor	yes	115 – 230 VAC	427 953 R

Ordering chart for pH electrodes

Replacement pH electrodes	Item no.
Compact mount	US61245
INLINE ststem	
3/4" INLINE	US61623
1" INLINE	US07956
2" INLINE	US07813
Submersion system	US61628
Wet tap system	US61979

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