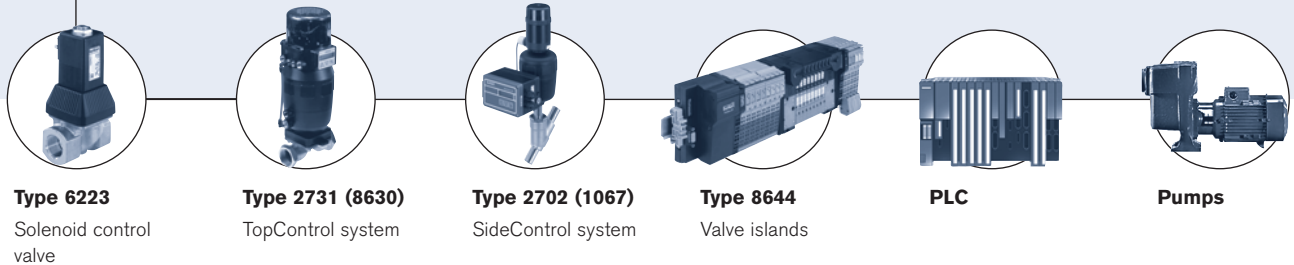


## Full Bore Magflowmeter for Low-flow measurement

- Combination of magflowsensor body S051 and transmitter / batch controller SE56
- Continuous measurement or Batch Control
- Clean in place (CIP)
- Low-flow measurements down to 3 l/h

Type 8051 can be combined with...



### Type 6223

Solenoid control valve

### Type 2731 (8630)

TopControl system

### Type 2702 (1067)

SideControl system

### Type 8644

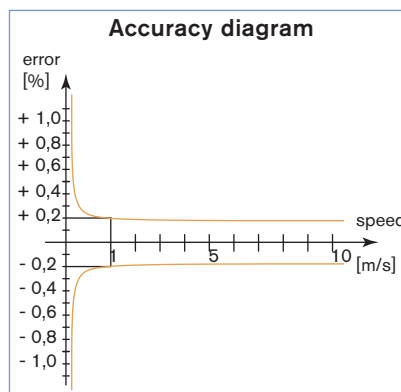
Valve islands

### PLC

### Pumps

The complete full bore magflowmeter Type 8051, which consists of a magnetic sensor body Type S051 connected to a flow transmitter / batch controller Type SE56 (blind in compact version or with display in compact or separate version), is designed for applications with conductivities as low as 5  $\mu\text{S}/\text{cm}$ .

Combined with a valve as the actuating element, the complete full bore magflowmeter Type 8051 can control high-precision dosing and filling operations.



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### Technical data

#### General data - S051 sensor body

<b>Compatibility</b>	SE56 electronics (see corresponding datasheet)
<b>Materials</b>	
Body	Stainless steel 304 (1.4301)
Wetted parts (connection)	Stainless steel 316L (1.4404) or 304 (1.4301) for full lining
Electrode	Stainless steel 316L
Lining / Gasket	[Hastelloy C, Titanium, Tantalum, Platinum-rhodium on request]* PTFE / FKM, EPDM or FFKM
<b>Electrical connection</b>	2 cable glands (PG9)

#### Complete system data 8051 (S051 sensor + SE56 electronics)

<b>Pipe diameter</b>	DN 03 up to DN 20
<b>Measuring range</b>	0 ... 10 l/h up to 0 ... 12 500 l/h
<b>Process connection</b>	Thread ISO 228-1, NPT (DIN 11851, SMS 1145, Tri-Clamp® ISO 2852 or BS 4825, Flanges DIN 2501, ANSI on request)
<b>Medium temperature</b>	
Compact version	-20 up to 100°C (with display version)
Separate version	-20 up to 100°C (with blind version) [up to 130°C for max. 1 hour] -20 up to 150°C
<b>Medium pressure max.</b>	PN 16 (PN40, on request)
<b>Vacuum resistance</b>	200 mbar absolute at 100°C
<b>Accuracy <sup>1)</sup></b>	$\pm 0.2\%$ of reading (see diagram, opposite)
<b>Repeatability</b>	< 0.1%
<b>Minimum conductivity</b>	5 $\mu\text{S}/\text{cm}$ (or 20 $\mu\text{S}/\text{cm}$ with demineralized water)

#### Environment - S051 sensor body

<b>Ambient temperature</b>	-20 up to: 60°C (with display version) or 40°C (with blind version)
----------------------------	---

#### Standard - S051 sensor body

<b>Protection class</b>	IP67 (Compact version); IP68 (Separate version)
<b>Standard</b>	EN55011 (Group 1, Class B)
<b>EMI / Safety</b>	IEC1000-4-2/3/4/5/6/11 / EN61010

<sup>1)</sup> under reference conditions: water temperature = 20°C, ambient temperature = 25°C, test time > 60 s., converter warm-up > 60', constant flow rate during the test, pressure = 500 mbar, liquid speed > 1 m/s  
\* on request

## Ordering information for complete full bore magflowmeter Type 8051

A complete full bore magflowmeter Type 8051 consists of a sensor body S051 and an electronic transmitter / batch controller SE56. The transmitter / batch controller is only delivered in combination with the sensor body as a part of a complete magflowmeter.

The following information is necessary for the selection of a complete full bore magflowmeter:

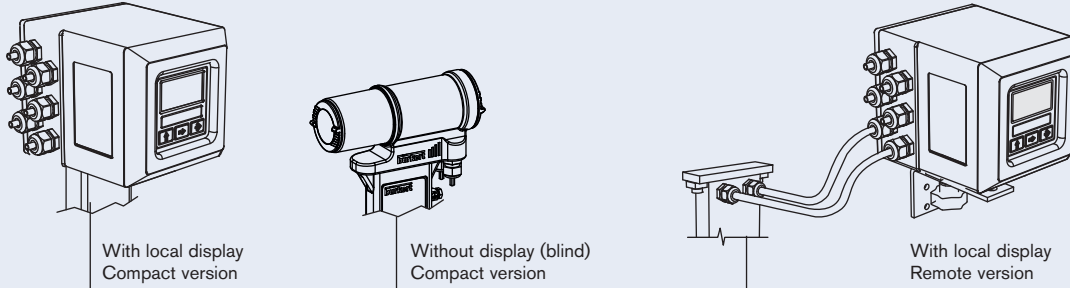
- **item no** of the sensor body **Type S051** (see Ordering Chart)
- **item no** of the transmitter / batch controller **Type SE56** (see separate datasheet or Ordering chart on page 5)

### More info.

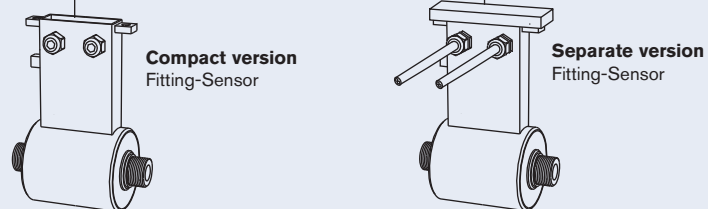
For more technical information about this product, click on this box... you will come to our website for this product where you can download the datasheet.

### Examples for variations of complete full bore magflowmeter

#### Transmitter / batch controller Type SE56



#### Magnetic sensor body Type S051



## Design and operating principle

The sensor body Type S051 consists of a stainless steel pipe section internally lined with insulating material. Two electrodes mounted opposite to each other on the internal surface of the tube generate an electrical signal. The coils generating the magnetic field are placed outside the pipe.

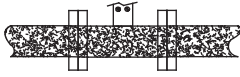
The signal generated by the sensor body S051 must be amplified and processed by an electronic transmitter / batch controller (SE56) which outputs an electrical signal proportional to the fluid flow rate, and powers the coils generating the magnetic field.

Faraday's induction law is the basis for this magnetic flow measurement.

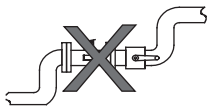
Installation



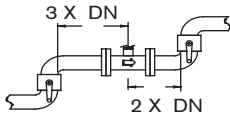
Avoid the functioning with the pipe partially empty.



During the functioning the pipe must be completely full.

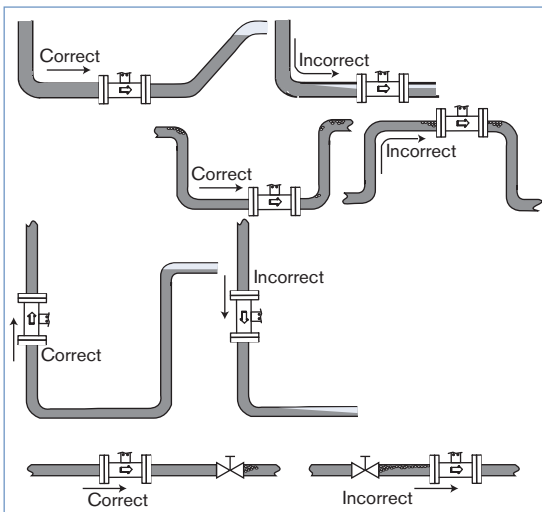


Avoid the installation near curves or hydraulic accessories.



Observe the upstream and downstream distances.

The flow rate sensor body can be installed into either horizontal or vertical pipes. Mount the S051 sensor body in these correct ways to obtain an accurate flow measurement.



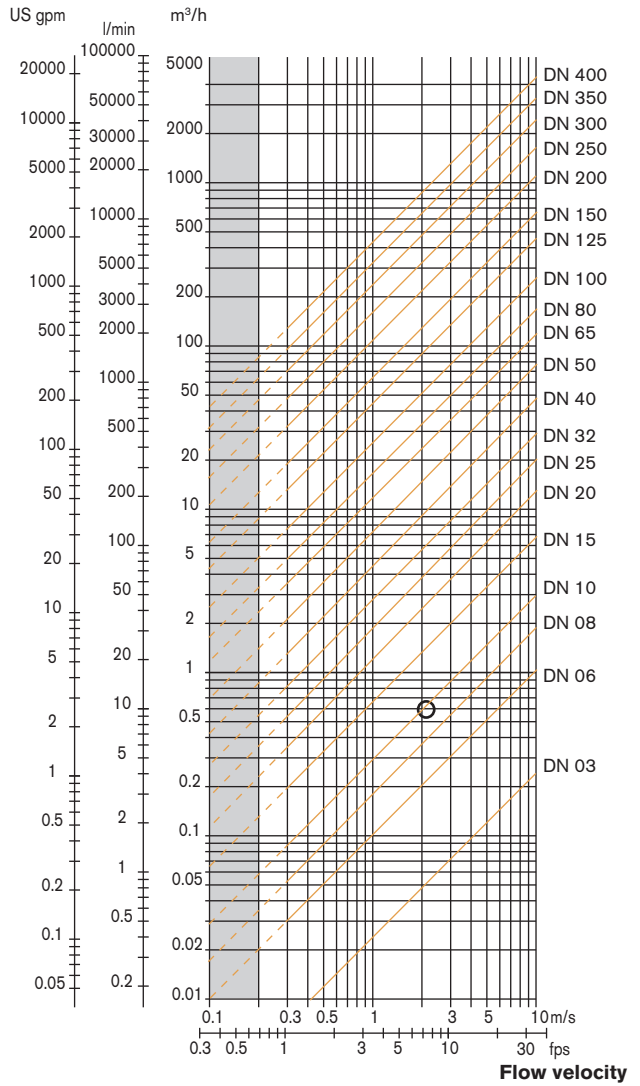
The suitable pipe size is selected using the diagram Flow / Velocity / DN, upside.  
The flow sensor body is not designed for gas flow measurement.

Selection of fitting / pipe size

Example:

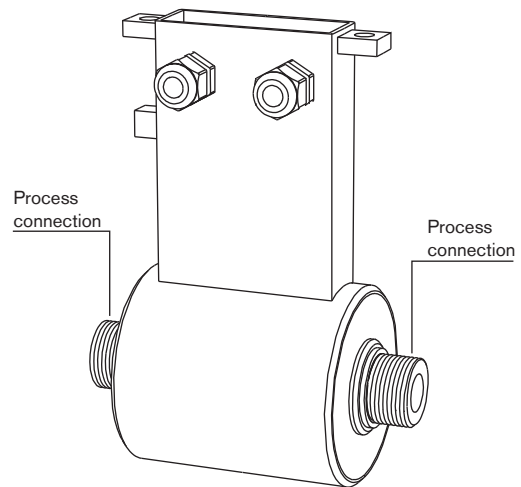
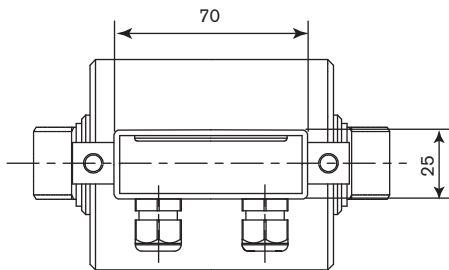
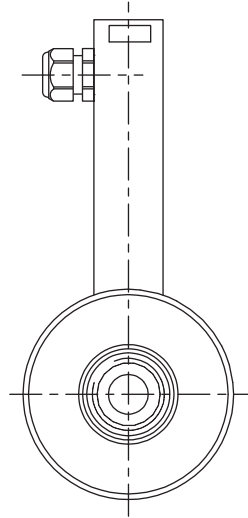
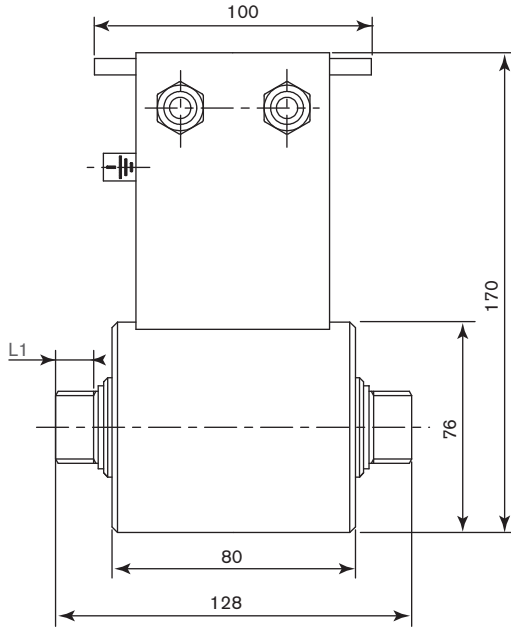
- Specification of nominal flow: 10 l/min
- Ideal flow velocity: 2...3 m/s
- For these specifications, the diagram indicates a pipe size of DN10

Flow rate



### Dimensions [mm] of Type S051 standard sensor body (without full lining)

**NOTE:** Dimensions of SE56 flowtransmitter, see corresponding datasheet.



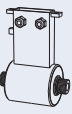
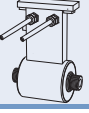
DN [mm]	Thread [inch]	L1 [mm]
03	G or NPT 1/4"	16.4
06	G or NPT 3/8"	16.4
10	G or NPT 1/2"	17.4
15	G or NPT 3/4"	20.0
20	G or NPT 1"	20.0

## Ordering charts for Low-flow magflowmeter 8051

A complete magflowmeter Type 8051 consists of: - a full bore sensor body Type S051  
- a flow transmitter / batch controller Type SE56

Please order the relevant sensor body and the flow transmitter / batch controller separately!

### Full bore Sensor body Type S051

Description	Orifice [mm]	Process connection	Flow rate range [l/h]		Body material	Wetted parts material	Lining material	Item no.
			min. 0...0.4 m/s	max. 0...10 m/s				
 Compact version	03	G1/4" (ISO 228-1)	0 ... 10	0 ... 250	SS 304	SS 316L	PTFE	554 321
		NPT1/4"	0 ... 10	0 ... 250	SS 304	SS 316L	PTFE	554 213
	06	G3/8" (ISO 228-1)	0 ... 40	0 ... 1000	SS 304	SS 316L	PTFE	553 065
		NPT3/8"	0 ... 40	0 ... 1000	SS 304	SS 316L	PTFE	555 892
	10	G1/2" (ISO 228-1)	0 ... 120	0 ... 3000	SS 304	SS 316L	PTFE	553 374
		NPT1/2"	0 ... 120	0 ... 3000	SS 304	SS 316L	PTFE	555 111
	15	G3/4" (ISO 228-1)	0 ... 240	0 ... 6000	SS 304	SS 316L	PTFE	553 481
		NPT3/4"	0 ... 240	0 ... 6000	SS 304	SS 316L	PTFE	557 659
20	G1" (ISO 228-1)	0 ... 500	0 ... 12500	SS 304	SS 316L	PTFE	553 539	
	NPT1"	0 ... 500	0 ... 12500	SS 304	SS 316L	PTFE	553 663	
 Separate version - with 10 m cable (included)	03	G1/4" (ISO 228-1)	0 ... 10	0 ... 250	SS 304	SS 316L	PTFE	448 487
	06	G3/8" (ISO 228-1)	0 ... 40	0 ... 1000	SS 304	SS 316L	PTFE	448 488
	10	G1/2" (ISO 228-1)	0 ... 120	0 ... 3000	SS 304	SS 316L	PTFE	448 489
	15	G3/4" (ISO 228-1)	0 ... 240	0 ... 6000	SS 304	SS 316L	PTFE	448 490
	20	G1" (ISO 228-1)	0 ... 500	0 ... 12500	SS 304	SS 316L	PTFE	448 491

### Flow transmitter Type SE56 (for more data, refer to datasheet Type SE56)

Description	Power supply	Outputs	Body material	Electrical connection	Item no.
With local display compact version	90 - 265 V AC	2 transistors	Aluminium	6 cable glands	558 745
			Stainless steel	6 cable glands	559 780
		2 transistors + 4...20 mA	Aluminium	6 cable glands	558 747
			Stainless steel	6 cable glands	558 306
With local display remote version	90 - 265 V AC	2 transistors	Aluminium	6 cable glands	559 781
			Stainless steel	6 cable glands	558 310
		2 transistors + 4...20 mA	Aluminium	6 cable glands	558 750
			Stainless steel	6 cable glands	558 308
Blind compact version	20 - 30 V DC	Transistor	Stainless steel	2 cable glands	559 132
		Transistor + 4...20 mA	Stainless steel	2 cable glands	559 133
		Transistor + Profibus DP	Stainless steel	2 cable glands	559 134

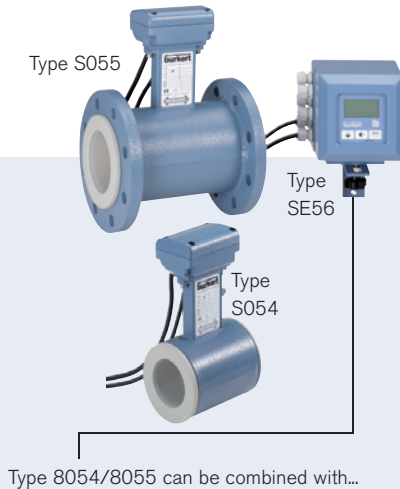
### **i** Further versions on request

Please also use the "request for quotation" form on page 6 for ordering a customized Low-flow sensor body. [go to page](#)

## Ordering chart for spare parts/accessories for sensor body Type S051

Description	Item no.
Electrodes cable for connection between Low-flow sensor body and electronics Type SE56*, Polyolefina insulation, 10 m long	448 518
Coils cable for connection between Low-flow sensor body and electronics Type SE56*, 10 m long	448 519

\* see corresponding datasheet



Type 8054/8055 can be combined with...



**Type 6223**

Solenoid control valve



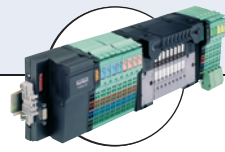
**Type 8801-YE**

Element  
On/Off system



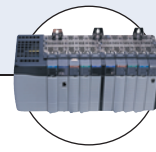
**Type 8802-DD**

Classic  
Continuous system



**Type 8644**

Valve islands



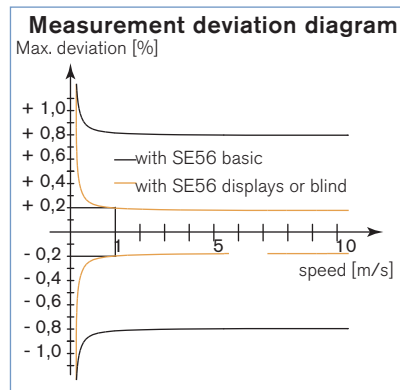
**PLC**

## Full bore magmeter

- Combination of magflowsensor fitting S054 or S055 and electronics SE56
- Continuous measurement or Batch Control
- Version without (S054) or with (S055) flanges
- For water treatment and general purpose applications

The complete full bore magmeter Type 8054/8055, which consists of a magnetic sensor fitting Type S054 or S055 connected to an electronics Type SE56 (blind in compact version or with display in compact or remote version), is designed for applications with liquids with a minimum conductivity of 5  $\mu\text{S}/\text{cm}$ .

Combined with a valve as the actuating element, the complete magflowmeter Type 8054/8055 can control high-precision dosing operations and flow measurements in potable water treatment and waste water treatment.



### General data - S054/S055 sensor fitting

<b>Compatibility</b>	SE56 electronics (see corresponding data sheet)
<b>Materials</b>	
Body	Carbon steel painted [or stainless steel 304 or 316]*
Electrodes (3 in standard)	Stainless steel 316L [or Hastelloy C, Titanium, Tantalum, Platinum-rhodium]*
Lining	PP (max. 16 bar), ebonite [or PTFE]*
Seal	FKM or EPDM* (with PP lining) [or without gasket (with Ebonite or PTFE lining)]
<b>Electrical connection</b>	2 cable glands PG9
<b>Data complete flowmeter 8054/8055 - (S054/S055 sensor fitting + SE56 electronics)</b>	
<b>Pipe diameter</b>	DN25...DN200 [to DN2000]*
<b>Measuring range</b>	0...0.72 m <sup>3</sup> /h to 0...1130 m <sup>3</sup> /h
<b>Process connection</b>	S054: wafer - S055: Flange EN1092-1, ANSI B16-5, [JIS]*
<b>Medium temperature</b>	see medium temperature chart on page 3 <a href="#">go to page</a>
<b>Medium pressure max.</b>	PN16 (232 PSI) (with PP lining) or [up to PN64 (928 PSI) (with Ebonite or PTFE lining)]*
<b>Vacuum resistance</b>	200 mbar (2.9 PSI) absolute at 100°C (212°F)
<b>Measurement deviation<sup>1)</sup></b> see diagram, opposite	± 0.2% of reading (SE56 standard; SE56 blind) ± 0.8% of reading (SE56 basic)
<b>Repeatability</b>	± 0.1% (SE56 standard; SE56 blind) ± 0.2% (SE56 basic)
<b>Minimum conductivity</b>	5 $\mu\text{S}/\text{cm}$ (or 20 $\mu\text{S}/\text{cm}$ with demineralized water)

\* on request

<sup>1)</sup> under reference conditions: water temperature = 20°C, ambient temperature = 25°C, constant flow rate during the test, liquid speed > 1 m/s

Environment	
<b>Ambient temperature with</b>	
SE56 standard	-20...+60°C (-4...+140°F) (operating and storage)
SE56 basic	-10...+50°C (14...+122°F) (operating)
	-20...+50°C (-4...+122°F) (storage)
SE56 blind	-20...+40°C (-4...+104°F) (operating and storage)
Standard	
<b>Protection class</b>	IP65 and IP67 (compact version, SE56 standard or SE56 blind); IP65 (remote version, SE56 standard); IP68 (remote version and junction box filled with resin, SE56 standard); IP65 (compact version, SE56 basic)
<b>Standard</b>	
EMC	EN 61326-1,
Emission / Immunity	EN 55011 (Group 1, Class B) / IEC 1000-4-2/3/4/5/6/11
Safety	EN 61010

### Ordering information for complete flowmeter Type 8054/8055

A complete flowmeter Type 8054 respectively 8055 consists of a sensor fitting S054 or S055 and an electronics SE56.

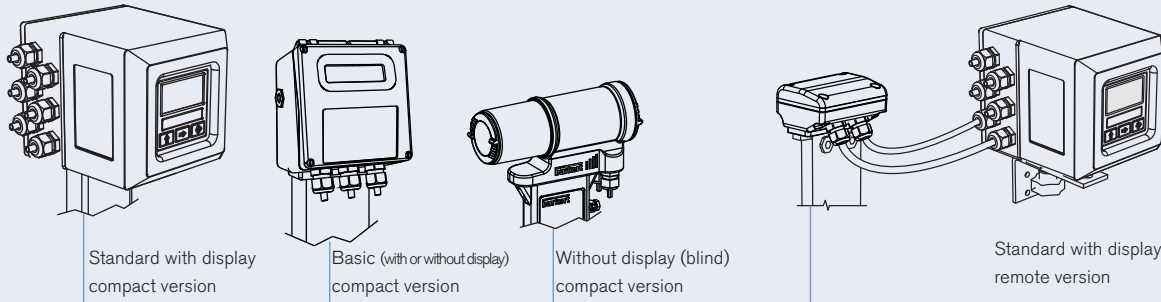
The following information is necessary for the selection of a complete flowmeter:

- **item no.** of the sensor fitting **Type S054 or S055** (see Ordering Chart on page 6)
- **item no.** of the electronics **Type SE56** (see corresponding data sheet or Ordering chart on page 7)

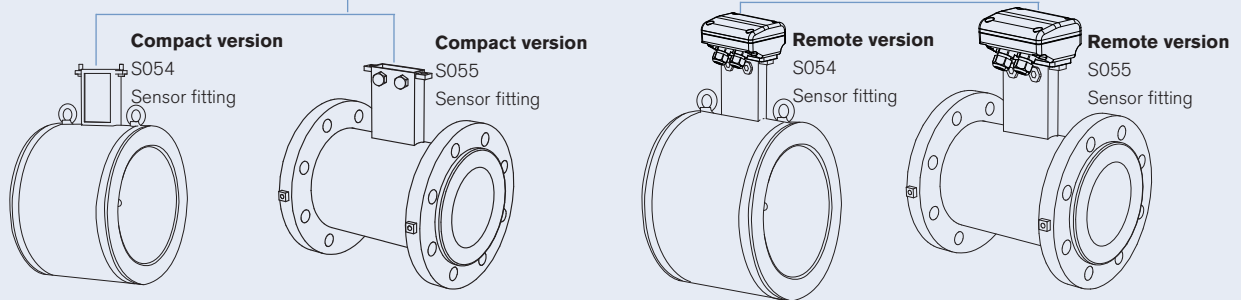
**More info.**  
For more technical information about this product, click on this box... you will come to our website for this product where you can download the datasheet.

#### Examples for variations of complete flowmeter (electronics + sensor fitting)

##### Electronics Type SE56



##### Sensor fitting Type S054 or S055



### Design and operating principle

The sensor fitting Type S054 or S055 consists of a stainless steel pipe section internally lined with insulating material. Two electrodes mounted opposite to each other on the internal surface of the tube generate an electrical signal. The coils generating the magnetic field are placed outside the pipe. The signal generated by the sensor fitting S054 or S055 must be amplified and processed by an electronics (SE56) which outputs an electrical signal proportional to the fluid flow velocity respectively to the flow rate.

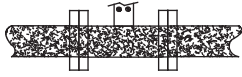
Faraday's induction law is the basis for this magnetic flow measurement.



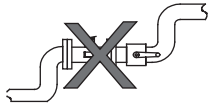
Installation



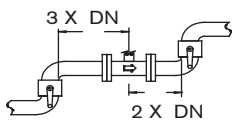
Avoid the functioning with the pipe partially filled.



During flowmeter operation the pipe must be completely full.

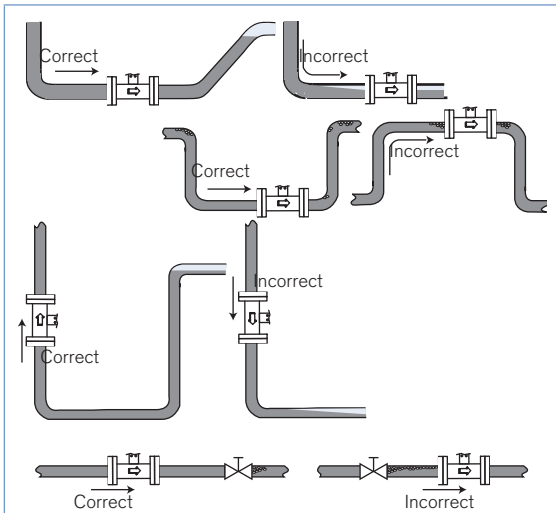


Avoid the installation near curves or hydraulic accessories.



Observe the upstream and downstream distances.

The sensor fitting can be installed into either horizontal or vertical pipes. Mount the sensor fitting in the below as correct indicated ways to obtain an accurate flow measurement.



The suitable pipe size is selected using the diagram Flow/Velocity/DN (see diagram to the right).

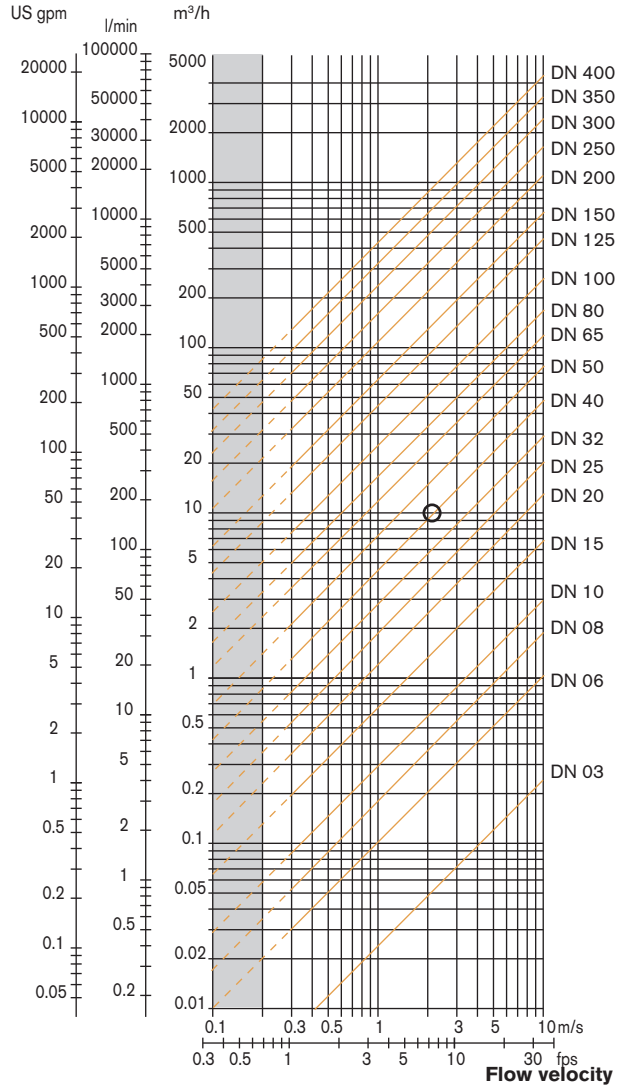
The flow sensor fitting is not designed for gas flow measurement.

Flow/Velocity/DN diagram







Example:

- Flow: 10 m<sup>3</sup>/h
- Ideal flow velocity: 2...3 m/s
- For these specifications, the diagram indicates a pipe size of DN40

Flow rate



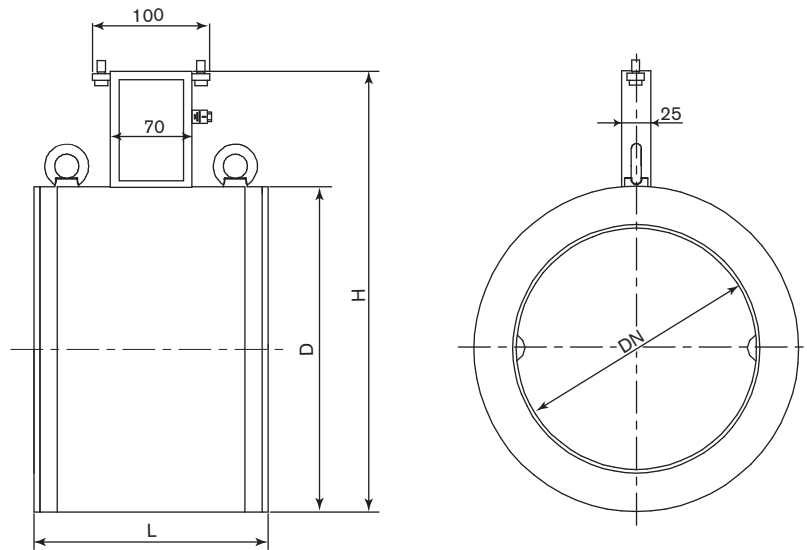
Medium temperature chart

	SE56 standard compact 	SE56 standard remote 	SE56 basic compact 	SE56 blind compact 
	S054 or S055 Sensor fitting (with PP lining) 0...+60°C (32...+140°F)	S054 or S055 Sensor fitting (with PP lining) 0...+60°C (32...+140°F)	S054 or S055 Sensor fitting (with PP lining) 0...+60°C (32...+140°F)	S054 or S055 Sensor fitting (with PP lining) 0...+60°C (32...+140°F)
	S054 or S055 Sensor fitting (with PTFE lining) -20...+100°C (-4...+212°F)	S054 or S055 Sensor fitting (with PTFE lining) -20...+130°C (-4...+266°F)	S054 or S055 Sensor fitting (with PTFE lining) -10...+100°C (14...+212°F)	S054 or S055 Sensor fitting (with PTFE lining) -20...+100°C (-4...+212°F)

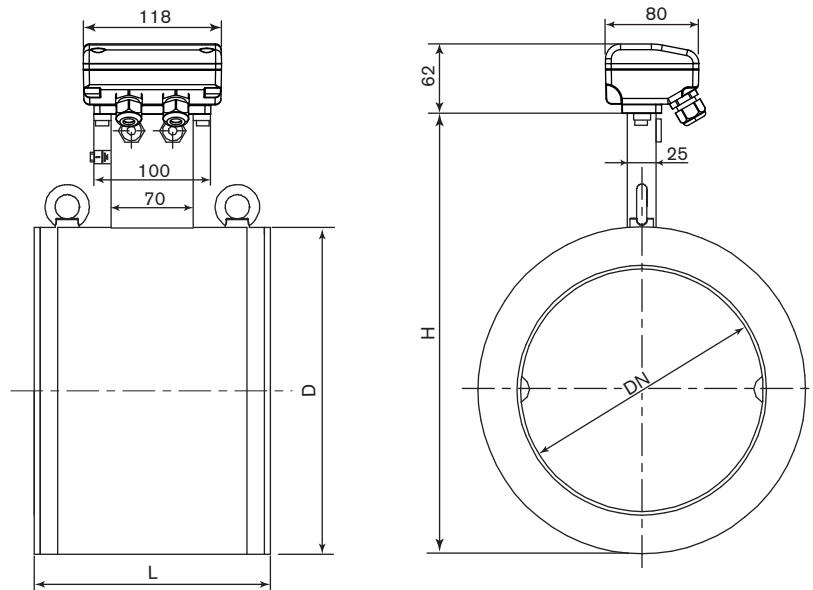
## Dimensions [mm] of Type S054 sensor fitting - wafer version

**NOTE:** Dimensions of SE56 electronics, see corresponding data sheet.

**Compact version**



**Remote version, with junction box**



**S054 compact or remote**

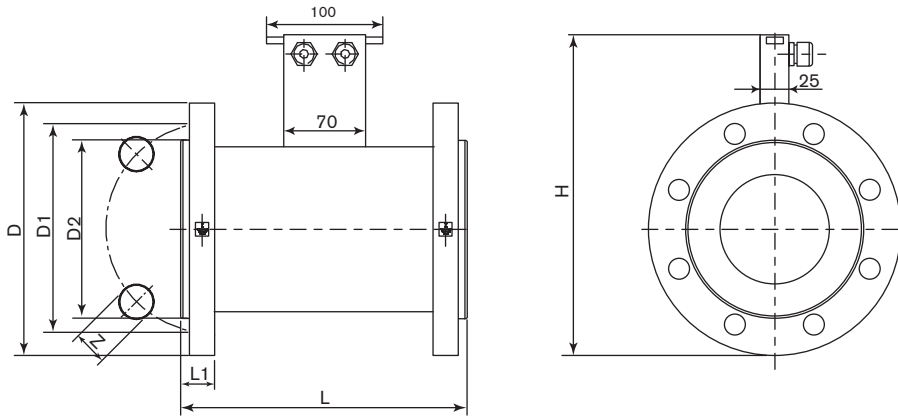
DN	L*	H	D
25	100	147	56
32	100	153	62
40	100	161	70
50	100	177	86
65	150	199	108
80	150	209	118
100	150	235	144
125	180	263	172
150	180	291	200
200	200	362	271

\* tolerance  $+0$  mm  
 $-3$  mm

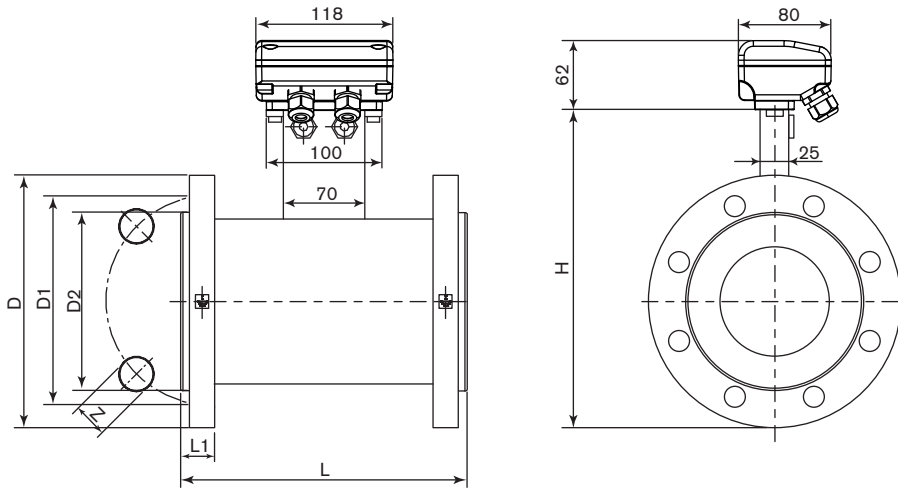
## Dimensions [mm] of Type S055 sensor fitting - flanges version

**NOTE:** Dimensions of SE56 electronics, see corresponding data sheet.

**Compact version**



**Remote version, with junction box**



**S055 compact or remote, with flanges PN16**

DN	H	L	Standard	L1	Z	D2	D1	D
25	185	200	EN1092-1	18	4 x 14	68	85	115
	182		ANSI 150 RF	16.3	4 x 15.9	50.8	79.4	107.9
32	203	200	EN1092-1	18	4 x 18	78	100	140
	192		ANSI 150 RF	17.9	4 x 15.9	63.5	88.9	117.5
40	213	200	EN1092-1	18	4 x 18	88	110	150
	202		ANSI 150 RF	19.5	4 x 15.9	73	98.4	127
50	228	200	EN1092-1	18	4 x 18	102	125	165
	222		ANSI 150 RF	21.1	4 x 19	92.1	120.7	152.4
65	248	200	EN1092-1	18	4 x 18	122	145	185
	245		ANSI 150 RF	24.3	4 x 19	104.8	139.7	177.8
80	263	200	EN1092-1	20	8 x 18	138	160	200
	258		ANSI 150 RF	25.9	4 x 19	127	152.4	190.5
100	283	250	EN1092-1	20	8 x 18	158	180	220
	287		ANSI 150 RF	25.9	8 x 19	157.2	190.5	228.6
125	313	250	EN1092-1	22	8 x 18	188	210	250
	315		ANSI 150 RF	25.9	8 x 22.2	185.7	215.9	254
150	344	300	EN1092-1	22	8 x 22	212	240	285
	341		ANSI 150 RF	27.4	8 x 22.2	215.9	241.3	279.4
200	399	350	EN1092-1	24	12 x 22	268	295	340
	401		ANSI 150 RF	30.6	8 x 22.2	269.9	298.5	342.9

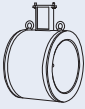
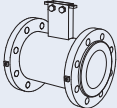
## Ordering chart for sanitary flowmeter 8054/8055

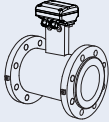
A complete flowmeter Type 8054/8055 consists of:

- a sensor fitting, wafer version Type S054 or flanges version Type S055
- an electronics Type SE56

Please order the relevant sensor fitting and the electronics separately!

## Sensor fitting Type S054 or S055

Description	DN [mm]	Process connection	Flow rate range [m <sup>3</sup> /h]		Body material	Number of electrodes	Electrode material	Material: Lining/Seal	Item no.
			min. 0..0.4 m/s	max. 0..10 m/s					
<b>Type S054</b> Compact version 	25	Wafer type	0...0.72	0...18	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	554 532
	32	Wafer type	0...1.16	0...29	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	559 435
	40	Wafer type	0...1.80	0...45	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	554 101
	50	Wafer type	0...2.88	0...72	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	554 700
	65	Wafer type	0...4.80	0...120	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	559 436
	80	Wafer type	0...7.20	0...180	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	554 142
	100	Wafer type	0...11.20	0...280	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	554 342
	125	Wafer type	0...18.00	0...450	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	562 953
	150	Wafer type	0...25.60	0...640	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	562 954
	200	Wafer type	0...45.20	0...1130	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	Ebonite/-	561 912
<b>Type S055</b> Compact version 	25	EN1092-1	0...0.72	0...18	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	553 540
		ANSI 150 RF	0...0.72	0...18	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	554 353
	32	EN1092-1	0...1.16	0...29	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	553 541
		ANSI 150 RF	0...1.16	0...29	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	560 047
	40	EN1092-1	0...1.80	0...45	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	553 542
		ANSI 150 RF	0...1.80	0...45	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	560 048
	50	EN1092-1	0...2.88	0...72	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	553 485
		ANSI 150 RF	0...2.88	0...72	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	554 354
	65	EN1092-1	0...4.80	0...120	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	553 393
		ANSI 150 RF	0...4.80	0...120	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	558 785
	80	EN1092-1	0...7.20	0...180	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	553 394
		ANSI 150 RF	0...7.20	0...180	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	554 351
	100	EN1092-1	0...11.20	0...280	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	553 489
		ANSI 150 RF	0...11.20	0...280	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	554 352
	125	EN1092-1	0...18.00	0...450	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	559 318
		ANSI 150 RF	0...18.00	0...450	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	562 955
	150	EN1092-1	0...25.60	0...640	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	557 512
		ANSI 150 RF	0...25.60	0...640	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	561 426
200	EN1092-1	0...45.20	0...1130	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	Ebonite/-	554 217	
	ANSI 150 RF	0...45.20	0...1130	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	Ebonite/-	560 568	

Description	DN [mm]	Process connection	Flow rate range [m <sup>3</sup> /h]		Body material	Number of electrodes	Electrode material	Material: Lining/Seal	Item no.
			min. 0..0.4 m/s	max. 0..10 m/s					
<b>Type S055</b> Remote version with 10 m cable (included) 	25	EN1092-1	0...0.72	0...18	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	448 492
		ANSI 150 RF	0...0.72	0...18	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	559 598
	32	EN1092-1	0...1.16	0...29	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	448 493
		ANSI 150 RF	0...1.16	0...29	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	562 958
	40	EN1092-1	0...1.80	0...45	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	448 494
		ANSI 150 RF	0...1.80	0...45	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	559 599
	50	EN1092-1	0...2.88	0...72	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	448 495
		ANSI 150 RF	0...2.88	0...72	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	562 128
	65	EN1092-1	0...4.80	0...120	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	448 496
		ANSI 150 RF	0...4.80	0...120	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	562 959
	80	EN1092-1	0...7.20	0...180	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	448 497
		ANSI 150 RF	0...7.20	0...180	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	562 129
	100	EN1092-1	0...11.20	0...280	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	448 498
		ANSI 150 RF	0...11.20	0...280	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	555 666
	125	EN1092-1	0...18.00	0...450	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	560 144
		ANSI 150 RF	0...18.00	0...450	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	562 956
	150	EN1092-1	0...25.60	0...640	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	554 141
		ANSI 150 RF	0...25.60	0...640	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP/FKM	561 952
200	EN1092-1	0...45.20	0...1130	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	Ebonite/-	559 753	
	ANSI 150 RF	0...45.20	0...1130	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	Ebonite/-	562 135	

### **i** Further versions on request

#### Remote sensor fitting version Type S054

Please also use the "request for quotation" form on page 9 for ordering a customized sensor fitting [go to page](#) .

#### Electronics Type SE56 (for more data, refer to data sheet Type SE56)

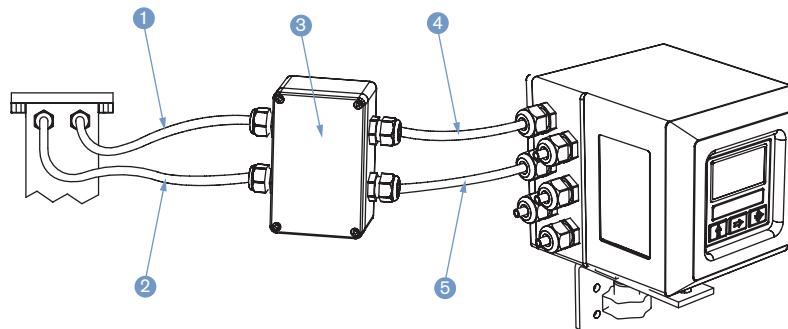
Description	Power supply	Outputs	Body material	Electrical connection	Item no.
Standard compact version with display	90...265 V AC	2 transistors	Aluminium	6 cable glands	558 745
			Stainless steel	6 cable glands	559 780
		2 transistors + 4...20 mA	Aluminium	6 cable glands	558 747
			Stainless steel	6 cable glands	558 306
Standard wall-mounting version with display	90...265 V AC	2 transistors	Aluminium	6 cable glands	559 781
			Stainless steel	6 cable glands	558 310
		2 transistors + 4...20 mA	Aluminium	6 cable glands	558 750
			Stainless steel	6 cable glands	558 308
Basic compact version with display	90...265 V AC	2 transistors	Nylon	3 cable glands	562 439
			2 transistors + 4...20 mA	Nylon	3 cable glands
	18...63 V DC	2 transistors		Nylon	3 cable glands
			2 transistors + 4...20 mA	Nylon	3 cable glands
Basic compact version without display	90...265 V AC	2 transistors		Nylon	3 cable glands
			2 transistors + 4...20 mA	Nylon	3 cable glands
	18...63 V DC	2 transistors		Nylon	3 cable glands
			2 transistors + 4...20 mA	Nylon	3 cable glands
Blind compact version	20...30 V DC	up to 4 transistors		Stainless steel	2 cable glands
		up to 4 transistors + 4...20 mA	Stainless steel	2 cable glands	559 133
		up to 4 transistors + PROFIBUS DP	Stainless steel	2 cable glands	559 134

## Ordering chart for spare parts/accessories for sensor fitting Type S054 or S055

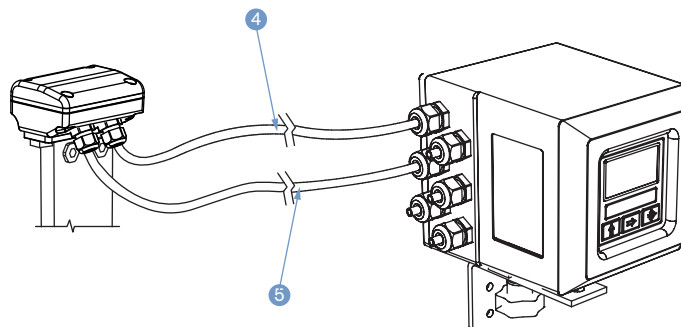
Description	Purpose	No. on drawing	Item no.
Electrode cable, 10 m long	for connection between sensor fitting Type S054/S055, S051 or S056 <b>without junction box</b> and electronics Type SE56*	1	448 518
	for connection between sensor fitting Type S054/S055, S051 or S056 <b>with junction box</b> and electronics Type SE56* or for connection between extension cable kit and electronics Type SE56*	4	562 851
Coil cable, 10 m long	for connection between sensor fitting Type S054/S055, S051 or S056 <b>without junction box</b> and electronics Type SE56*	2	448 519
	for connection between sensor fitting Type S054/S055, S051 or S056 <b>with junction box</b> and electronics Type SE56* or for connection between extension cable kit and electronics Type SE56*	5	562 852
Extension cable kit	including a connecting box and resin	3	562 853

\* (see corresponding data sheet)

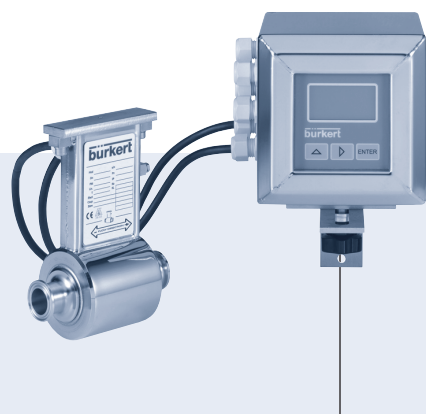
## Sensor fitting Type S054/S055 without junction box




## Sensor fitting Type S054/S055 with junction box


**i** Further versions on request

**E** Electrical connection  
 Electrode and coil cables length



## Электромагнитный расходомер – исполнение для повышенных гигиенических требований

- Комбинация фитинга S056 и преобразователя SE56
- Непрерывное измерение или дозирование
- Исполнение в соответствии со стандартом 
- Для пищевой промышленности, производства напитков и фармацевтики

Тип 8056 - возможные комбинации



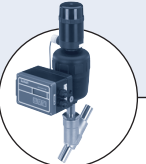
Тип 6223

Пропорциональный  
клапан



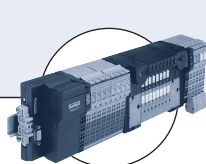
Тип 2731 (8630)

Система регулирования  
TopControl



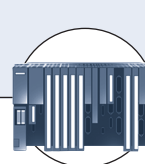
Тип 2702 (1067)

Система регулирования  
SideControl



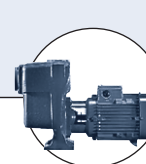
Тип 8644

Пневмоостров



SPS

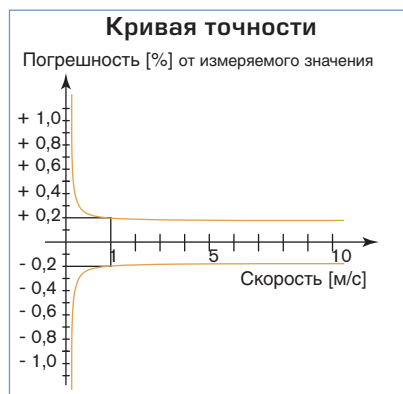
Контроллер



Насос

Расходомер типа 8056, состоящий из фитинга типа S056 и преобразователя типа SE56 (в компактном исполнении без дисплея или в раздельном исполнении с дисплеем), предназначен для жидкостей с электропроводностью не менее 5 мкСм/см.

В комбинации с клапаном расходомер типа 8056 может использоваться для высокоточных процессов розлива или дозирования.



Tri-Clamp® - зарегистрированный товарный знак  
компании Alfa Laval Inc.

### Технические характеристики

#### Общие характеристики - фитинг S056

<b>Совместимость</b>	с преобразователем SE56 (см. соотв. техпаспорт)
<b>Материалы</b>	
Корпус	Нержавеющая сталь 304
Электроды	Нержавеющая сталь 316L (2 - в стандартном исполнении)
Футеровка	PTFE
Уплотнение	FKM или EPDM* (FDA - разрешено к применению)
<b>Электроподключение</b>	2 кабельных ввода (PG9)

#### Характеристики системы 8056 в сборе (фитинг S056 + преобразователь SE56)

<b>Сечение трубопровода</b>	Ду 3 - Ду 100
<b>Диапазон измерений</b>	0 ... 10 л/ч - 0 ... 280 м³/ч
<b>Присоединение</b>	по DIN11851, Tri-Clamp® ISO2852 или Tri-Clamp® BS4825 [SMS (начиная с Ду 10)]*
<b>Температура среды</b>	
Компактное исполнение	-20 - +100°C ( до макс. 130°C в течение 1 ч с электронным модулем SE56 без дисплея)
Раздельное исполнение	-20 - +150°C
<b>Давление жидкости макс.</b>	P <sub>y</sub> 16
<b>Вакуум</b>	200 мбар абсолютный при 100°C
<b>Дискретность <sup>1)</sup></b>	±0,2% от измеряемого значения (см. диаграмму слева)
<b>Воспроизводимость</b>	< ±0,1%
<b>Мин. электропроводность</b>	5 мкСм/см (или 20 мкСм/см в полностью обессоленной воде)
<b>Окружающая среда</b>	
<b>Температура окр. среды</b>	-20 - +60°C (с дисплеем) или 40°C (без дисплея)
<b>Нормы</b>	
<b>Класс защиты</b>	IP67 (компактное исп.); IP68 (раздельное исп.)
<b>Нормы</b>	
Эл.-маг. совместимость	EN55011 (группа 1, класс В)
Безопасность	IEC1000-4-2/3/4/5/6/11 EN61010

\* По запросу

<sup>1)</sup> В эталонных условиях, т.е. при температуре воды = 20°C, температуре окр. среды = 25°C, длительности испытания > 60 с, пусковом преобразователе > 60', постоянной скорости потока во время испытаний, давлении = 500 мбар, скорости потока > 1 м/с.

## Указания по заказу электромагнитного расходомера типа 8056 в сборе

Расходомер типа 8056 в сборе включает в себя фитинг типа S056 и преобразователь типа SE56. Электронный преобразователь поставляется только в комбинации с фитингом в качестве составной части расходомера.

Для выбора расходомера в сборе необходимо указать следующие данные:

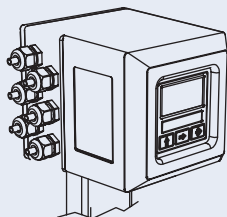
- № заказа фитинга типа S056 (см. таблицу для заказа),
- № заказа преобразователя типа SE56 (см. соответствующий техпаспорт или таблицу для заказа на стр. 7)

### Еще

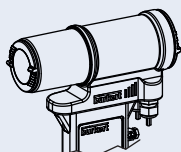
Для получения более подробной технической информации нажмите сюда...  
Вы попадете на наш сайт, где сможете скачать техпаспорт для этого продукта.

### Примеры электромагнитных расходомеров в сборе

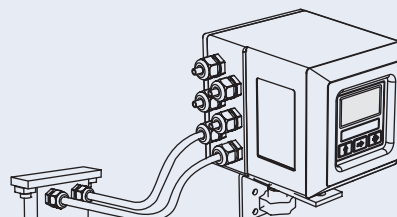
#### Электронный модуль преобразователя типа SE56



С дисплеем -  
компактное исполнение

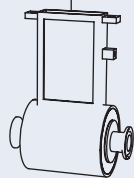


Без дисплея -  
компактное исполнение

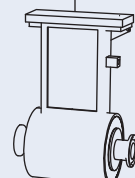


С дисплеем -  
раздельное исполнение

#### Фитинг типа S056



Компактное исполнение  
Фитинг



Раздельное исполнение  
Фитинг

## Монтаж и принцип работы

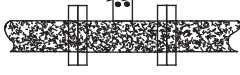
Фитинг типа S056 состоит из трубки с пластиковым покрытием внутри, являющейся электрической изоляцией от воздействия среды. Два расположенных друг напротив друга металлических электрода имеют контакт со средой и служат для измерения электрического переменного напряжения. Для создания электромагнитного поля на трубопроводе монтируются магнитные катушки. В зависимости от скорости потока между электродами возникает пропорциональный электрический сигнал. В основе измерения расхода лежит закон Фарадея.



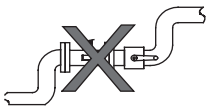
## Монтаж / установка



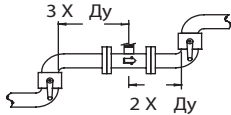
Не работайте с частично заполненным трубопроводом.



Во время работы трубопровод должен быть заполнен целиком.

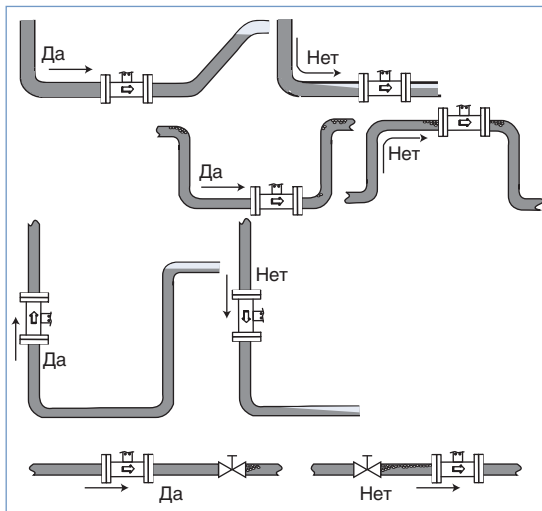


Не устанавливайте расходомер рядом с отводами или иными встроенными элементами.



Соблюдайте необходимые расстояния на входе и выходе.

Фитинг может монтироваться в горизонтальных или вертикальных трубопроводах.



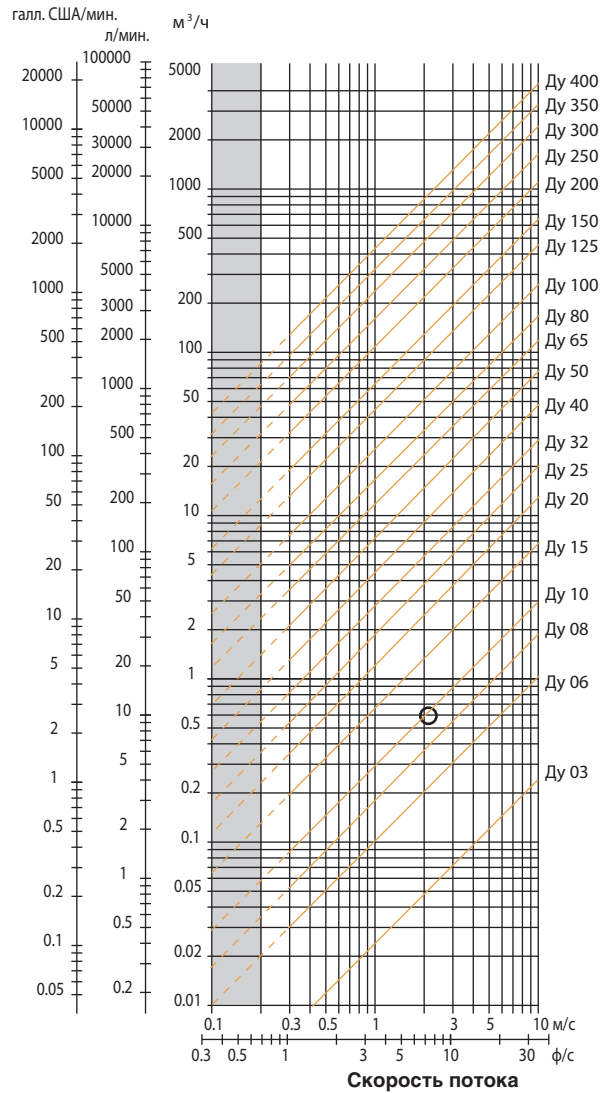
Для достижения максимальной точности измерения соблюдайте инструкции по монтажу фитинга типа S056. Подходящее сечение трубопровода выбирается с учетом диаграммы соотношения фитингов и сечения трубопроводов. Фитинг не предназначен для измерения расхода газов.

## Выбор фитинга / сечения трубопровода

## Пример:

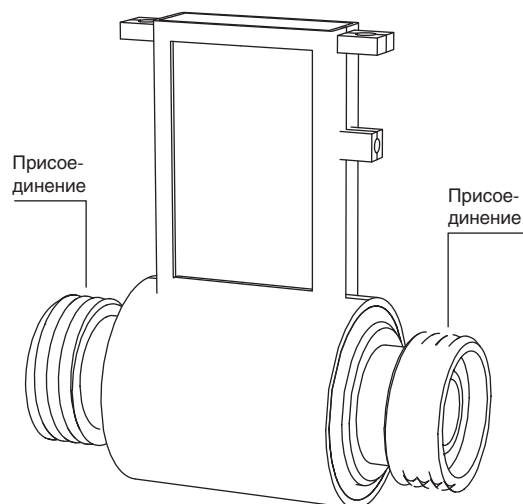
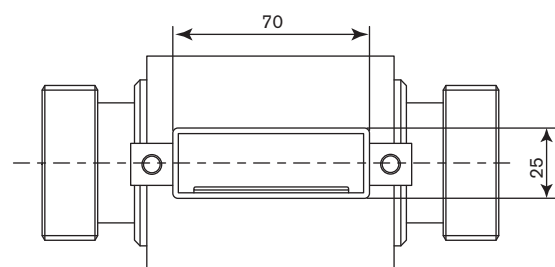
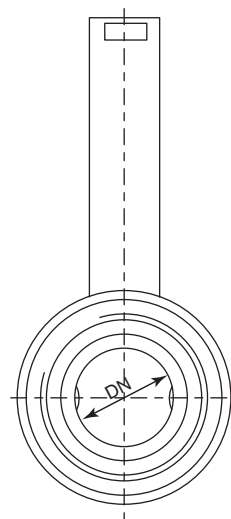
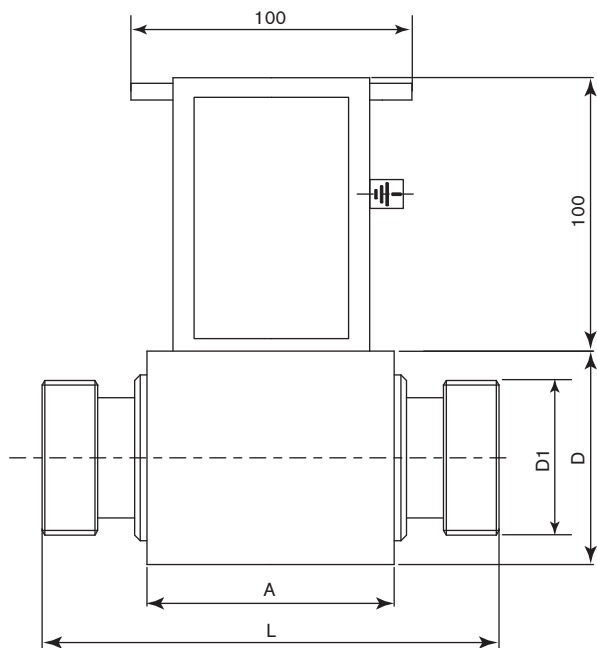
- Номинальный расход:  $0,6 \text{ м}^3/\text{ч}$
- Желаемая скорость среды:  $2...3 \text{ м/с}$
- Выберите трубопровод сечением Ду 10

## Расход среды



## Размеры [мм] фитинга типа S056, присоединение по DIN 11851

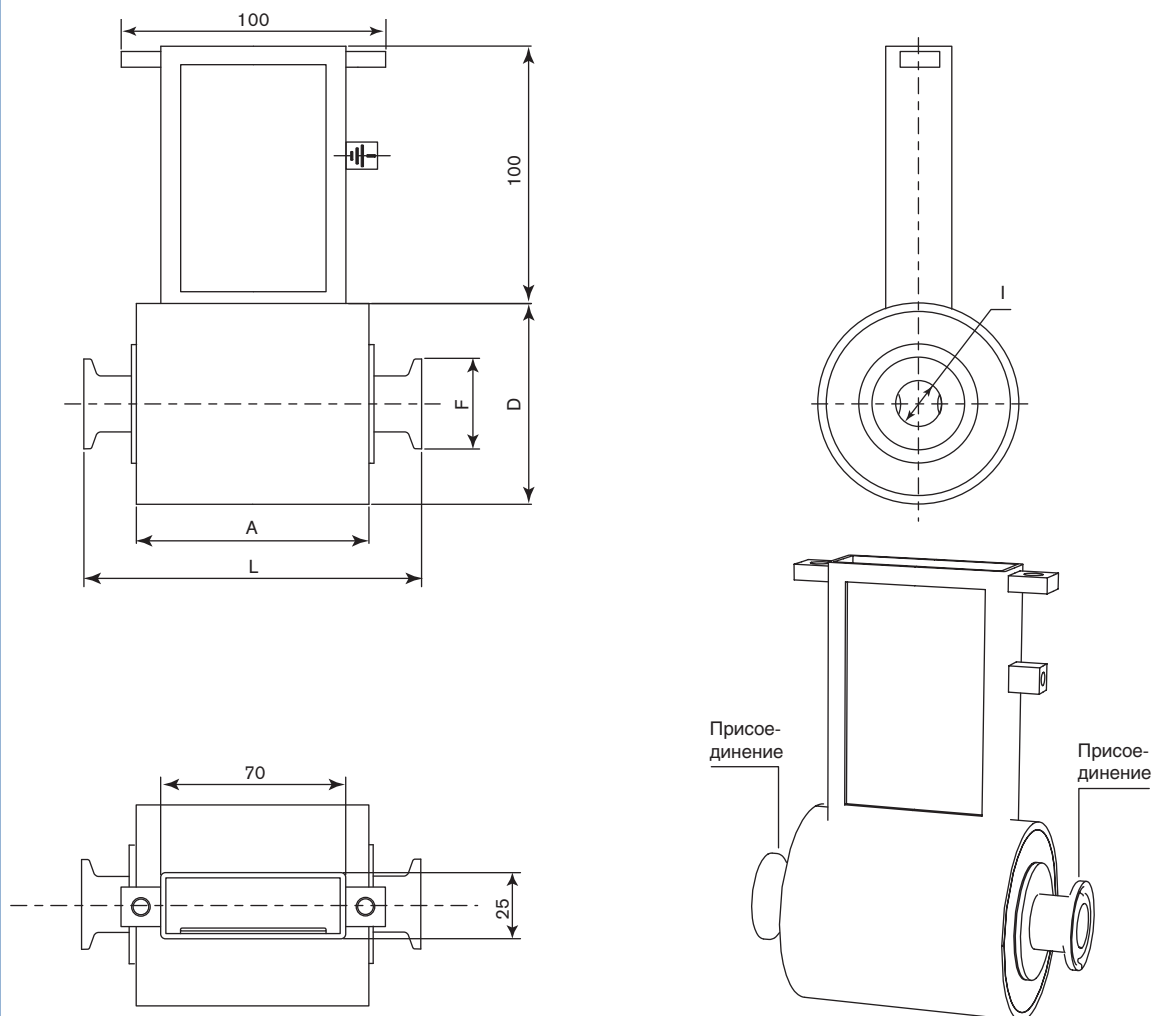
Указание: Размеры преобразователя типа SE56 см. в соответствующем техпаспорте.



Ду	A	L	D	Присоединение	D1
03	77	128	76	Ду 10	радиус 28 x 1/8
06	77	128	76	Ду 10	радиус 28 x 1/8
10	77	128	76	Ду 10	радиус 28 x 1/8
15	77	128	76	Ду 15	радиус 34 x 1/8
20	77	128	76	Ду 20	радиус 44 x 1/6
25	100	180	76	Ду 25	радиус 52 x 1/6
32	100	180	89	Ду 32	радиус 58 x 1/6
40	100	180	89	Ду 40	радиус 65 x 1/6
50	100	180	114	Ду 50	радиус 78 x 1/6
65	100	180	140	Ду 65	радиус 95 x 1/6
80	100	200	140	Ду 80	радиус 110 x 1/4
100	100	200	168	Ду 100	радиус 130 x 1/4

## Размеры [мм] фитинга с соединением Tri-Clamp® ISO2852 или BS4825

Указание: Размеры преобразователя типа SE56 см. в соответствующем техпаспорте.



Ду	A	L	D	Стандарты	F	I
03	77	128	76	Tri-Clamp® ISO2852 Tri-Clamp® BS4825	34 25,4	12,7 9,5
06	77	128	76	Tri-Clamp® ISO2852 Tri-Clamp® BS4825	34 25,4	12,7 9,5
10	77	128	76	Tri-Clamp® ISO2852 Tri-Clamp® BS4825	34 25,4	12,7 9,5
15	77	128	76	Tri-Clamp® ISO2852 Tri-Clamp® BS4825	34 25,4	17,2 15,85
20	77	128	76	Tri-Clamp® ISO2852 Tri-Clamp® BS4825	34 50,5	21,3 22,2
25	100	180	76	Tri-Clamp® ISO2852 Tri-Clamp® BS4825	50,5 50,5	22,6 22,2
40	100	180	89	Tri-Clamp® ISO2852 Tri-Clamp® BS4825	50,5 50,5	35,6 34,9
50	100	180	114	Tri-Clamp® ISO2852 Tri-Clamp® BS4825	64 64	48,6 47,6
65	100	180	140	Tri-Clamp® ISO2852 Tri-Clamp® BS4825	77,5 77,5	60,3 60,3
80	100	200	140	Tri-Clamp® ISO2852 Tri-Clamp® BS4825	91 91	72,9 72,9
100	100	200	180	Tri-Clamp® ISO2852 Tri-Clamp® BS4825	119 119	97,6 97,6

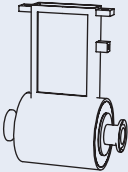
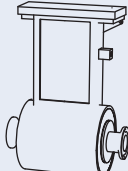
## Таблица для заказа расходомера типа 8056

Расходомер типа 8056 в сборе состоит из:

- фитинга типа S056,
- преобразователя типа SE56.

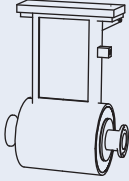
Фитинги и преобразователи заказываются отдельно!

## Фитинг типа S056

Описание	Ду [мм]	Скорость потока		Материал корпуса	Кол-во электродов	Материал электродов	Материал футеровки	Присоединение	№ заказа	
		мин. 0...0,4 м/с 0...10 [л/ч]	макс. 0...10 м/с 0...250 [л/ч]							
Компактное исполнение 	03	0...10 [л/ч]	0...250 [л/ч]	Нерж. сталь 304	2	Нерж. сталь 316L	PTFE	DIN 11851	555 732	
								Tri-Clamp® ISO2852	554 004	
								Tri-Clamp® BS4825	559 786	
	06	0...40 [л/ч]	0...1000 [л/ч]	Нерж. сталь 304	2	Нерж. сталь 316L	PTFE	DIN 11851	559 430	
								Tri-Clamp® ISO2852	559 431	
								Tri-Clamp® BS4825	553 325	
	10	0...120 [л/ч]	0...3000 [л/ч]	Нерж. сталь 304	2	Нерж. сталь 316L	PTFE	DIN 11851	559 432	
								Tri-Clamp® ISO2852	554 904	
								Tri-Clamp® BS4825	554 350	
	15	0...240 [л/ч]	0...6000 [л/ч]	Нерж. сталь 304	2	Нерж. сталь 316L	PTFE	DIN 11851	553 527	
								Tri-Clamp® ISO2852	553 555	
								Tri-Clamp® BS4825	553 533	
	20	0...500 [л/ч]	0...12500 [л/ч]	Нерж. сталь 304	2	Нерж. сталь 316L	PTFE	DIN 11851	553 528	
								Tri-Clamp® ISO2852	559 433	
								Tri-Clamp® BS4825	553 534	
	25	0...0,72 [м³/ч]	0...18 [м³/ч]	Нерж. сталь 304	2	Нерж. сталь 316L	PTFE	DIN 11851	553 486	
								Tri-Clamp® ISO2852	554 151	
								Tri-Clamp® BS4825	553 535	
	32	0...1,16 [м³/ч]	0...29 [м³/ч]	Нерж. сталь 304	2	Нерж. сталь 316L	PTFE	DIN 11851	553 529	
								Tri-Clamp® ISO2852	553 741	
								Tri-Clamp® BS4825	553 536	
	40	0...1,80 [м³/ч]	0...45 [м³/ч]	Нерж. сталь 304	2	Нерж. сталь 316L	PTFE	DIN 11851	553 530	
								Tri-Clamp® ISO2852	553 741	
								Tri-Clamp® BS4825	553 536	
50	0...2,88 [м³/ч]	0...72 [м³/ч]	Нерж. сталь 304	2	Нерж. сталь 316L	PTFE	DIN 11851	553 531		
							Tri-Clamp® ISO2852	555 120		
							Tri-Clamp® BS4825	553 537		
65	0...4,80 [м³/ч]	0...120 [м³/ч]	Нерж. сталь 304	2	Нерж. сталь 316L	PTFE	DIN 11851	553 532		
							Tri-Clamp® ISO2852	554 116		
							Tri-Clamp® BS4825	553 538		
80	0...7,20 [м³/ч]	0...180 [м³/ч]	Нерж. сталь 304	2	Нерж. сталь 316L	PTFE	DIN 11851	555 089		
							Tri-Clamp® ISO2852	559 434		
							Tri-Clamp® BS4825	559 791		
100	0...11,20 [м³/ч]	0...280 [м³/ч]	Нерж. сталь 304	2	Нерж. сталь 316L	PTFE	DIN 11851	по запросу		
							Tri-Clamp® ISO2852	по запросу		
							Tri-Clamp® BS4825	по запросу		
Раздельное исполнение, вкл. 10 м кабеля 	03	0...10 [л/ч]	0...250 [л/ч]	Нерж. сталь 304	2	Нерж. сталь 316L	PTFE	DIN 11851	551 506	
								Tri-Clamp® ISO2852	551 501	
								Tri-Clamp® BS4825	559 787	
	06	0...40 [л/ч]	0...1000 [л/ч]	Нерж. сталь 304	2	Нерж. сталь 316L	PTFE	PTFE	DIN 11851	551 507
									Tri-Clamp® ISO2852	551 502
									Tri-Clamp® BS4825	559 788
	10	0...120 [л/ч]	0...3000 [л/ч]	Нерж. сталь 304	2	Нерж. сталь 316L	PTFE	PTFE	DIN 11851	551 508
									Tri-Clamp® ISO2852	551 503
									Tri-Clamp® BS4825	559 759
	15	0...240 [л/ч]	0...6000 [л/ч]	Нерж. сталь 304	2	Нерж. сталь 316L	PTFE	PTFE	DIN 11851	551 509
									Tri-Clamp® ISO2852	551 504
									Tri-Clamp® BS4825	554 082

## Таблица для заказа расходомера типа 8056 (продолжение)

## Фитинг типа S056

Описание	Ду [мм]	Скорость потока		Материал корпуса	Кол-во электродов	Материал электродов	Материал фугеровки	Присоединение	№ заказа
		мин. 0...0,4 м/с	макс. 0...10 м/с						
 Раздельное исполнение, вкл. 10 м кабеля	20	0...500 [л/ч]	0...12500 [л/ч]	Нерж. сталь 304	2	Нерж. сталь 316L	PTFE	DIN 11851	551 510
								Tri-Clamp® ISO2852	551 505
								Tri-Clamp® BS4825	553 925
	25	0...0,72 [м³/ч]	0...18 [м³/ч]	Нерж. сталь 304	2	Нерж. сталь 316L	PTFE	DIN 11851	448 480
								Tri-Clamp® ISO2852	448 499
								Tri-Clamp® BS4825	559 789
	32	0...1,16 [м³/ч]	0...29 [м³/ч]	Нерж. сталь 304	2	Нерж. сталь 316L	PTFE	DIN 11851	448 481
								Tri-Clamp® ISO2852	448 501
								Tri-Clamp® BS4825	554 147
	40	0...1,80 [м³/ч]	0...45 [м³/ч]	Нерж. сталь 304	2	Нерж. сталь 316L	PTFE	DIN 11851	448 482
								Tri-Clamp® ISO2852	448 501
								Tri-Clamp® BS4825	554 147
	50	0...2,88 [м³/ч]	0...72 [м³/ч]	Нерж. сталь 304	2	Нерж. сталь 316L	PTFE	DIN 11851	448 483
								Tri-Clamp® ISO2852	448 502
								Tri-Clamp® BS4825	554 138
	65	0...4,80 [м³/ч]	0...120 [м³/ч]	Нерж. сталь 304	2	Нерж. сталь 316L	PTFE	DIN 11851	448 484
								Tri-Clamp® ISO2852	448 503
								Tri-Clamp® BS4825	559 790
80	0...7,20 [м³/ч]	0...180 [м³/ч]	Нерж. сталь 304	2	Нерж. сталь 316L	PTFE	DIN 11851	448 485	
							Tri-Clamp® ISO2852	448 504	
							Tri-Clamp® BS4825	558 854	
100	0...11,20 [м³/ч]	0...280 [м³/ч]	Нерж. сталь 304	2	Нерж. сталь 316L	PTFE	DIN 11851	448 486	
							Tri-Clamp® ISO2852	448 505	
							Tri-Clamp® BS4825	по запросу	

## Преобразователь типа SE56 (остальные характеристики см. в техпаспорте для типа SE56)

Описание	Питающее напряжение	Выходы	Материал корпуса	Электроподключения	№ заказа
С дисплеем - компактное исполнение	90 - 265 В AC	2 транзистора	Алюминий	6 кабельных вводов	558 745
			Нерж. сталь	6 кабельных вводов	559 780
		2 транзистора + 4...20 мА	Алюминий	6 кабельных вводов	558 747
			Нерж. сталь	6 кабельных вводов	558 306
С дисплеем - раздельное исполнение	90 - 265 В AC	2 транзистора	Алюминий	6 кабельных вводов	559 781
			Нерж. сталь	6 кабельных вводов	558 310
		2 транзистора + 4...20 мА	Алюминий	6 кабельных вводов	558 750
			Нерж. сталь	6 кабельных вводов	558 308
Без дисплея - компактное исполнение	20 - 30 В DC	Транзистор	Нерж. сталь	2 кабельных ввода	559 132
		Транзистор + 4...20 мА	Нерж. сталь	2 кабельных ввода	559 133
		Транзистор + Profibus DP	Нерж. сталь	2 кабельных ввода	559 134

 Другие исполнения по запросу

Для заказа фитингов в индивидуальном исполнении воспользуйтесь, пожалуйста, формуляром на стр. 8. [на стр. 8](#)

## Таблица для заказа запчастей / комплектующих для фитинга типа S056

Описание	№ заказа
Кабель для электродов - подключение между расходомером и преобразователем типа SE56*, длина 10 м	448 518
Кабель катушки - подключение между расходомером и преобразователем типа SE56*, длина 10 м	448 519

\* см. соответствующий техпаспорт

