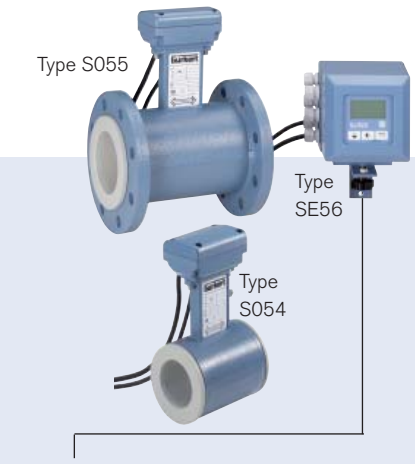
burkert
FLUID CONTROL SYSTEMS



Full Bore Magflowmeter - General purpose version

- Combination of magflowsensor fitting Type 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

Type 8054/8055 can be combined with...

Type 6223
Solenoid control valve

Type 2100 (8692)
Angle seat valve with Control unit

Type 2731 (8692)
TopControl system

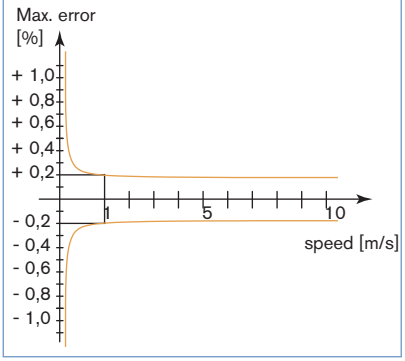
Type 8644
Valve islands

PLC

The complete full bore magflowmeter 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 µS/cm.

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

Accuracy diagram



* on request
[1)] under reference conditions: water temperature = 20°C, ambient temperature = 25°C, constant flow rate during the test, liquid speed > 1 m/s

General data - S054/S055 sensor fitting	
Compatibility	SE56 electronics (see corresponding data sheet)
Materials	
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) [or PTFE]*
Gasket	FKM or EPDM* (with PP lining) [or without gasket (with PTFE lining)]
Electrical connection	2 cable glands (PG9)

Complete magflowmeter 8054/8055 data - (S054/S055 sensor fitting+ SE56 electronics)	
Pipe diameter	DN25 up to DN100 [up to DN2000]*
Measuring range	0 m³/h ... 0.72 m³/h up to 0 m³/h ... 280 m³/h
Process connection	S054: wafer - S055: Flange DIN, ANSI, [JIS]*
Medium temperature	
Compact version	0°C up to 60°C *(32°F to 140°F)* (with PP lining) [-20°C up to 100°C *(-4°F to 212°F)* (with PTFE lining)]
Remote version	0°C up to 60°C *(32°F to 140°F)* (with PP lining) [-20°C up to 130°C *(-4°F to 302°F)* (with PTFE lining)]
Medium pressure max.	PN16 *(232 PSI)* (with PP lining) or [up to PN64 *(928 PSI)* (with Ebonite or PTFE lining)]*
Vacuum resistance	200 mbar *(2.9 PSI)* absolute at 100°C *(212°F)*
Accuracy [1)]	± 0.2% of reading (see diagram, opposite)
Repeatability	< 0.1%
Minimum conductivity	5 µS/cm (or 20 µS/cm with demineralized water)

Environment	
Ambient temperature	-20°C up to 60°C *(-4°F up to 140°F)* (with display version) or -20°C up to 40°C *(-4°F up to 104°F)* (with blind version)

Standard	
Protection class	IP65 and IP67 (compact version), IP68 (remote version)
Standard	
EMC	EN 61326-1,
Emission / Immunity	EN 55011 (Group 1, Class B) / IEC 1000-4-2/3/4/5/6/11
Safety	EN 61010

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Ordering information for complete full bore magflowmeter Type 8054/8055

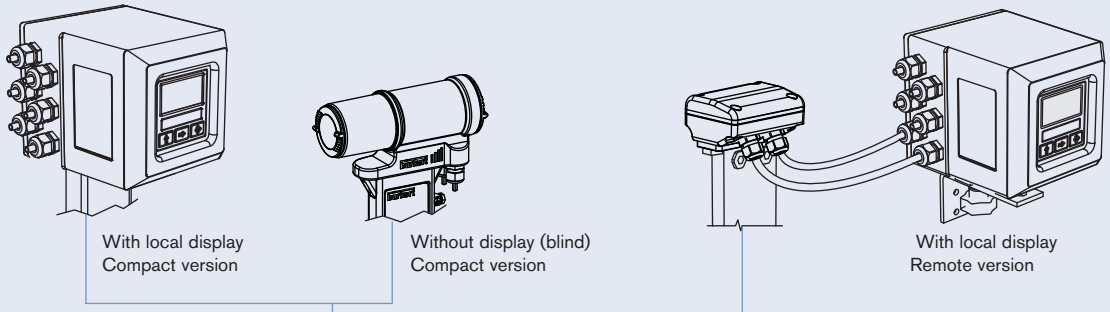
A complete full bore magflowmeter Type 8054 respectively 8055 consists of a sensor fitting S054 or S055 and an electronics SE56. The electronics is only delivered in combination with the sensor fitting as a part of a complete magflowmeter.
The following information is necessary for the selection of a complete full bore magflowmeter:

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

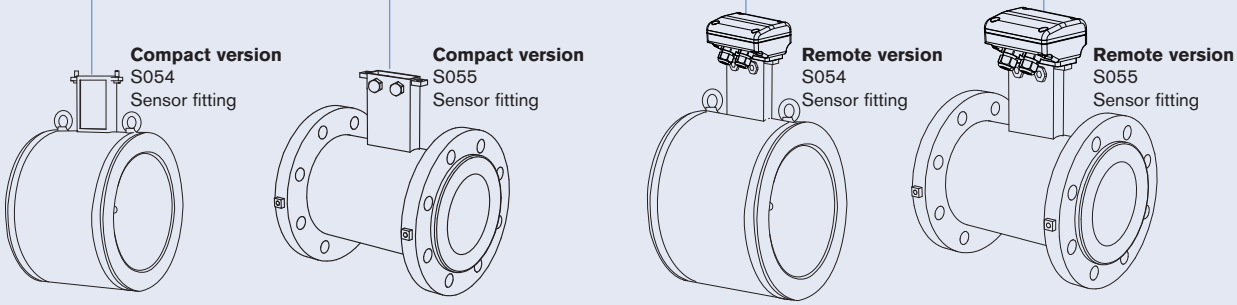
More info.
For more technical information about this product, click on this box... you will come to our website for this product where you can download the datasheet.

Examples for variations of complete full bore magflowmeter

Electronics Type SE56



Sensor fitting
Type S054 or Type 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 rate.
Faraday's induction law is the basis for this magnetic flow measurement.

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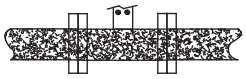
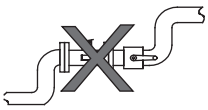
Installation

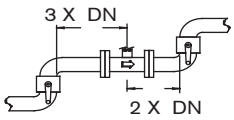
Avoid the functioning with the pipe partially filled.



During flowmeter operation the pipe must be completely full.

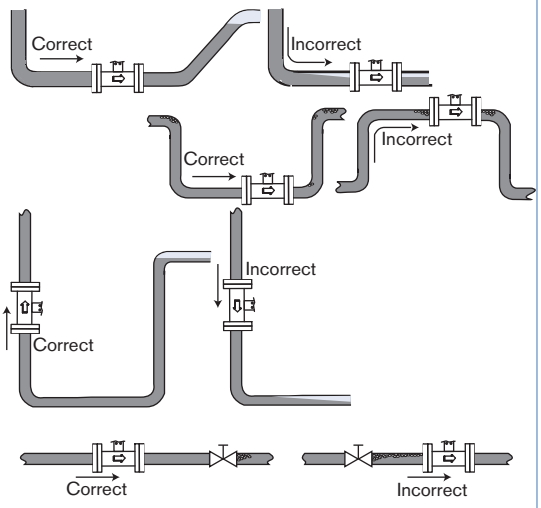


Avoid the installation near curves or hydraulic accessories.



Observe the upstream and downstream distances.

The sensor fitting can be installed into either horizontal or vertical pipes. Mount the S054 or S055 sensor fitting the below as correct indicated ways to obtain an accurate flow measurement.



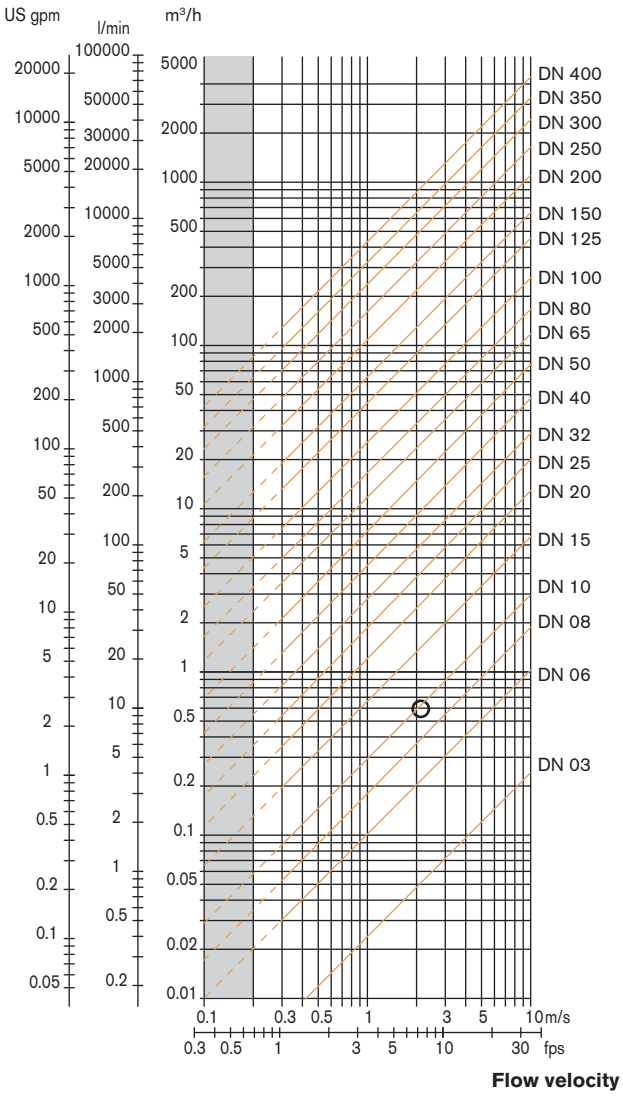
The suitable pipe size is selected using the diagram Flow / Velocity / DN (see diagram to the right).
The flow sensor fitting is not designed for gas flow measurement.

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



Flow velocity

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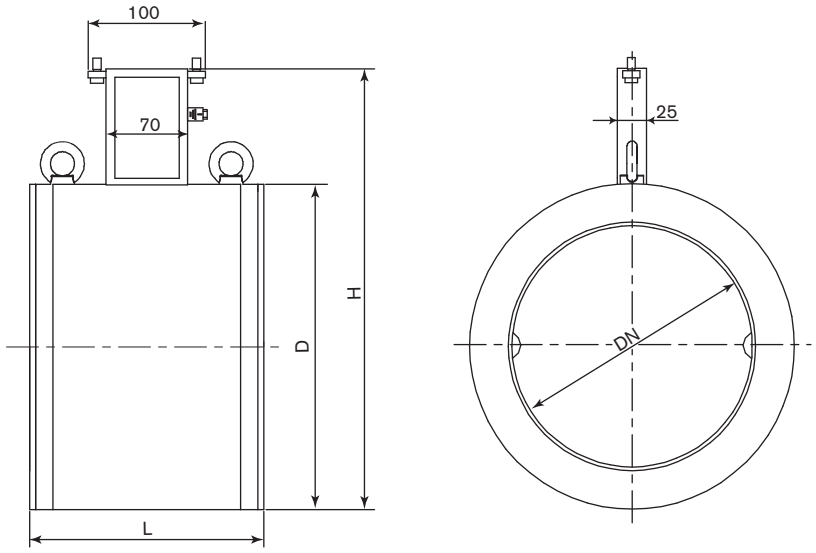
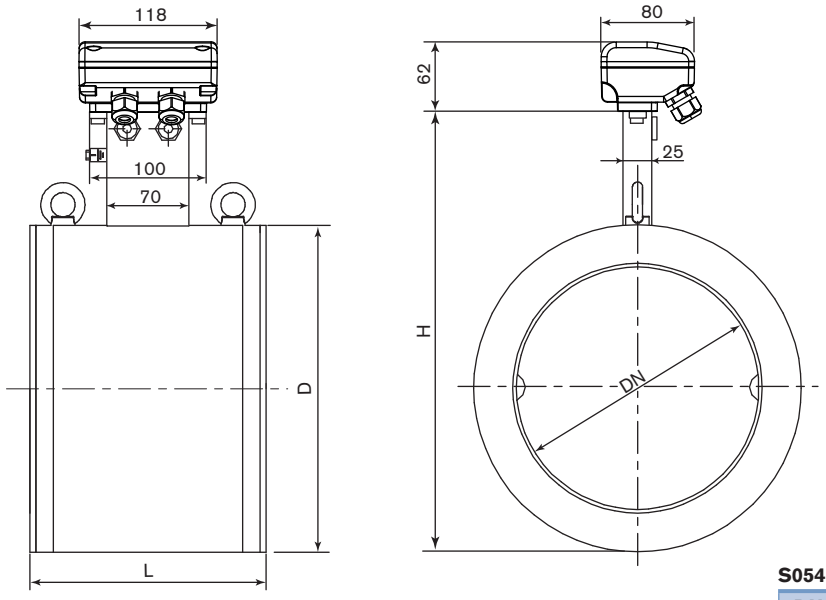
Dimensions [mm] of Type S054 sensor fitting - wafer version

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

* tolerance +0 mm -3 mm

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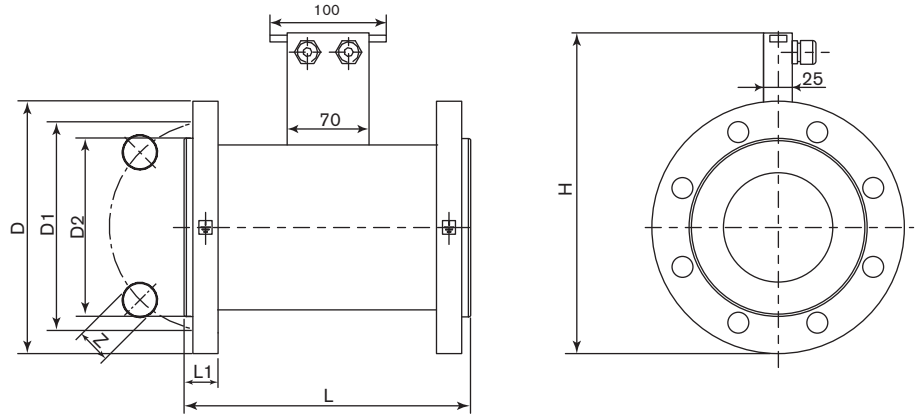
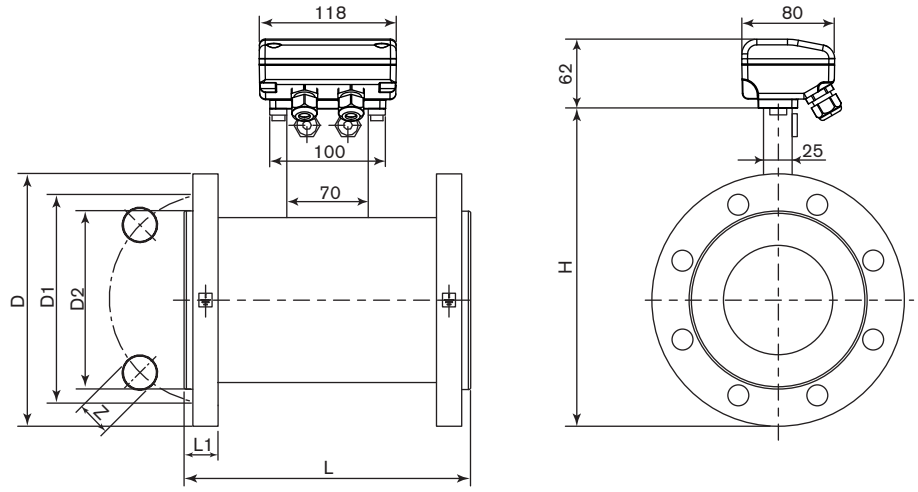
Dimensions [mm] of Type S055 sensor fitting - flanged version

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	185 182	200	DIN 2501 ANSI 150 RF	16.5 16.8	4 x 14 4 x 15.9	51 43.5	85 79.4	115 107.9
32	203 192	200	DIN 2501 ANSI 150 RF	18.5 18.4	4 x 18 4 x 15.9	62 53	100 88.9	140 117.5
40	213 202	200	DIN 2501 ANSI 150 RF	19.0 20.5	4 x 18 4 x 15.9	72 62.5	110 98.4	150 127
50	228 222	200	DIN 2501 ANSI 150 RF	21.5 22.5	4 x 18 4 x 19	87 81.6	125 120.6	165 152.4
65	248 245	200	DIN 2501 ANSI 150 RF	21.5 25.2	4 x 18 4 x 19	107 100.7	145 139.7	185 177.8
80	263 258	200	DIN 2501 ANSI 150 RF	24.0 27.8	8 x 18 4 x 19	122 113.4	160 152.4	200 190.5
100	283 287	250	DIN 2501 ANSI 150 RF	27.0 28.8	8 x 18 8 x 19	142 151.5	180 190.5	220 228.6

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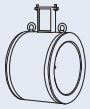
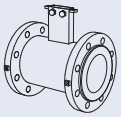
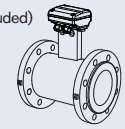
Ordering chart for universal magflowmeter 8054/8055

A complete magflowmeter Type 8054/8055 consists of:

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

Please order the relevant sensor fitting and the electronics remotely!

Full bore Sensor fitting Type S054 or S055

Description	DN [mm]	Process connection	Flow rate range [m³/h] min. 0...0.4 m/s	Flow rate range [m³/h] max. 0...10 m/s	Body material	Number of electrodes	Electrode material	Lining material	Item no.
Type S054 Compact version 	25	Wafer type	0 ... 0.72	0 ... 18	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP	554 532
	32	Wafer type	0 ... 1.16	0 ... 29	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP	559 435
	40	Wafer type	0 ... 1.80	0 ... 45	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP	554 101
	50	Wafer type	0 ... 2.88	0 ... 72	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP	554 700
	65	Wafer type	0 ... 4.80	0 ... 120	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP	559 436
	80	Wafer type	0 ... 7.20	0 ... 180	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP	554 142
	100	Wafer type	0 ... 11.20	0 ... 280	Carbon steel	3 (2 measure + 1 for ground)	SS 316L	PP	554 342
Type S055 Compact version 	25	DIN 2501	0 ... 0.72	0 ... 18	Carbon steel	2 (2 measure)	SS 316L	PP	553 540
		ANSI 150 RF	0 ... 0.72	0 ... 18	Carbon steel	2 (2 measure)	SS 316L	PP	554 353
	32	DIN 2501	0 ... 1.16	0 ... 29	Carbon steel	2 (2 measure)	SS 316L	PP	553 541
		ANSI 150 RF	0 ... 1.16	0 ... 29	Carbon steel	2 (2 measure)	SS 316L	PP	560 047
	40	DIN 2501	0 ... 1.80	0 ... 45	Carbon steel	2 (2 measure)	SS 316L	PP	553 542
		ANSI 150 RF	0 ... 1.80	0 ... 45	Carbon steel	2 (2 measure)	SS 316L	PP	560 048
	50	DIN 2501	0 ... 2.88	0 ... 72	Carbon steel	2 (2 measure)	SS 316L	PP	553 485
		ANSI 150 RF	0 ... 2.88	0 ... 72	Carbon steel	2 (2 measure)	SS 316L	PP	554 354
	65	DIN 2501	0 ... 4.80	0 ... 120	Carbon steel	2 (2 measure)	SS 316L	PP	553 393
		ANSI 150 RF	0 ... 4.80	0 ... 120	Carbon steel	2 (2 measure)	SS 316L	PP	558 785
	80	DIN 2501	0 ... 7.20	0 ... 180	Carbon steel	2 (2 measure)	SS 316L	PP	553 394
		ANSI 150 RF	0 ... 7.20	0 ... 180	Carbon steel	2 (2 measure)	SS 316L	PP	554 351
	100	DIN 2501	0 ... 11.20	0 ... 280	Carbon steel	2 (2 measure)	SS 316L	PP	553 489
		ANSI 150 RF	0 ... 11.20	0 ... 280	Carbon steel	2 (2 measure)	SS 316L	PP	554 352
Type S055 Remote version with 10 m cable (included) 	25	DIN 2501	0 ... 0.72	0 ... 18	Carbon steel	2 (2 measure)	SS 316L	PP	448 492
	32	DIN 2501	0 ... 1.16	0 ... 29	Carbon steel	2 (2 measure)	SS 316L	PP	448 493
	40	DIN 2501	0 ... 1.80	0 ... 45	Carbon steel	2 (2 measure)	SS 316L	PP	448 494
	50	DIN 2501	0 ... 2.88	0 ... 72	Carbon steel	2 (2 measure)	SS 316L	PP	448 495
	65	DIN 2501	0 ... 4.80	0 ... 120	Carbon steel	2 (2 measure)	SS 316L	PP	448 496
	80	DIN 2501	0 ... 7.20	0 ... 180	Carbon steel	2 (2 measure)	SS 316L	PP	448 497
	100	DIN 2501	0 ... 11.20	0 ... 280	Carbon steel	2 (2 measure)	SS 316L	PP	448 498

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

Description	Power supply	Outputs	Housing 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

Further versions on request

Remote sensor fitting version Type S054. Please also use the "request for quotation" form on page 8 for ordering a customized sensor fitting go to page .

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

Description	Item no.
Electrode cable, 10 m long (for connection between sensor fitting Type S054/S055 without junction box, S051 or S056 and electronics Type SE56*)	448 518
Coil cable, 10 m long (for connection between sensor fitting Type S054/S055 without junction box, S051 or S056 and electronics Type SE56*)	448 519

* (see corresponding data sheet)

Further versions on request

Electrical connection
Electrode cable 10 m long for connection between sensor fitting Type S054 or S055 with junction box and electronics Type SE56

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Universal sensor fitting Type S054 or S055 - request for quotation

Note
You can fill out the fields directly in the PDF file before printing out the form.

Please fill out and send to your nearest Bürkert facility* with your inquiry or order.

NOTE :
Please take into account that the sensor fitting Type S054 and S055 must be associated with the electronics Type SE56.

Company:	Contact person:
Customer No.:	Department:
Address:	Tel. / Fax.:
Postcode / Town:	E-mail:

Full Bore Magflow sensor body

Wafer version S054: ☐ **Flanged version S055:** ☐

Quantity: _____ **Desired delivery date:** _____

- **Pipe diameter:** ☐ DN25 ☐ DN32 ☐ DN40 ☐ DN50 ☐ DN65 ☐ DN80 ☐ DN100 ☐ DN >100 _____ DN value*
- **Process connection:** ☐ DIN ☐ ANSI 150 ☐ ANSI 300 ☐ JIS 10 K
- **Pressure:** ☐ PN10 ☐ PN16 ☐ PN25 ☐ PN40 ☐ PN64
- **Number of electrodes[1] and Lining material:** ☐ 2 and PP (PN16) ☐ 2 and PTFE (PN40) ☐ 3 and PP (PN16) ☐ 3 and PTFE (PN40)
- **Materials:**
  - **Body** ☐ Carbon steel ☐ Stainless steel 304 ☐ Stainless steel 316L
  - **Seal** ☐ FKM ☐ EPDM
  - **Electrodes** ☐ 316L ☐ Hastelloy ☐ Tantalum ☐ Titanium ☐ Platinum
- **Flowmeter version:** ☐ Compact ☐ Remote (10 m cable included)

reset form

* from DN200 up to DN2000: Ebonite or PTFE Lining material (if PTFE not selected then Ebonite in standard)
[1] **If the pipe is in plastic then it is advised to choose 3, if it is in metal then 2 electrodes are enough.**

Electronics SE56 More info. When you click on the orange box "More info.", you will come to our website for the resp. product where you can download the data sheet, and then you can fill out the SE56 request for quotation form.

To find the nearest Bürkert, click on the orange box → **www.burkert.com**

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