







Transmitter for electromagnetic- inductive flow sensors

- Must be equipped with sensor Type S051, S054, S055 or S056
- Continuous measurement or batch control
- High accuracy
- Different housing shapes and materials available
- Compact and remote design selectable

Product variants described in the data sheet may differ from the product presentation and description.

Can be combined with

	Type S051 ▶ Magnetic-inductive flow sensor, low flow rates
	Type S054 ▶ Magnetic inductive sensor with intermediate flange for water treatment and general purpose applications
	Type S055 ▶ Magnetic inductive sensor with flange for water treatment and general purpose applications
	Type S056 ▶ Magnetic inductive sensor with hygienic process connections

Type description

The transmitter Type SE56 (blind in compact version or with display in compact or remote version) connected to the magnetic flow sensor (compact or remote version) Type S051, S054, S055 or S056 is designed for applications with liquids with a minimum conductivity of 5 µS/cm.

The device can be parameterize either with 3 keypads (version with display) or by computer via a serial interface.

As standard, the equipment is supplied with one or two transistor outputs and one digital input. As options, other features are available: such as high frequency output, current output.





Table of contents

1. General Technical Data	3
1.1. Standard compact or remote version with display	3
1.2. Basic compact version with or without display	4
1.3. Compact version without display	5
2. Dimensions	7
2.1. Standard compact or remote version with display	7
2.2. Basic compact version with or without display	8
2.3. Compact version without display	8
3. Product accessories	8
4. Networking and combination with other Bürkert products	9
4.1. Compact version.....	9
4.2. Remote version.....	10
5. Ordering information	11
5.1. Bürkert eShop – Easy ordering and quick delivery.....	11
5.2. Recommendation regarding product selection	11
5.3. Bürkert product filter.....	11
5.4. Ordering chart transmitter Type SE56	12
5.5. Ordering chart accessories.....	12



1. General Technical Data

The SE56 transmitter is available in four versions:

Standard compact version with display	Standard remote version with display	Basic compact version with or without display	Compact version without display
			

It is intended for use with electromagnetic flow sensors Type S051, S054, S055 or S056.

Detailed information can be found in the data sheet of the electromagnetic-inductive flow sensors, see [data sheet Type S051](#) ▶, [data sheet Type S054](#) ▶, [data sheet Type S055](#) ▶, [data sheet Type S056](#) ▶.

1.1. Standard compact or remote version with display



Product properties	
Housing material	Die casting aluminium or stainless steel 304 electro-polish
Dimensions	Detailed information can be found in chapter “2. Dimensions” on page 7 .
Compatibility	Electromagnetic flow sensors Type S051, S054, S055, S056 in compact or remote version Detailed information can be found in data sheets, see data sheet Type S051 ▶, data sheet Type S054 ▶, data sheet Type S055 ▶, data sheet Type S056 ▶.
Display	Graphic display 8 lines x 16 Characters, 128 x 64 pixels with back light
Keyboard	3 membrane keys
Cable length	For remote version: max. 20 m (distance between sensor and transmitter)
Data-logger	An EEPROM stores the measured values (in case of power failure)
Special function	<ul style="list-style-type: none"> • Bidirectional measure • Dual measurement range • Diagnostic functions such as empty pipe detection • Remote configuration (for connection to PC through remote configuration tool kit) • Batch and filling functions
Performance data	
Under reference conditions: water temperature = 20 °C, ambient temperature = 25 °C, constant flow rate during the test, liquid speed > 1 m/s	
Measurement deviation	±0.2 % of reading
Repeatability	±0.1 % of reading
Measurement tolerance	<ul style="list-style-type: none"> • Flow rate (volume) = ±0.05 % of reading • Out 4/20 mA = ±0.08 % of reading • Frequency out = ±0.08 % of reading
Electrical data	
Operating voltage	90...265 V AC, 44 Hz...66 Hz
Power consumption	Max. 25 VA
Input	1 digital, function use is configurable
Outputs	<ul style="list-style-type: none"> • Transistor: 2 outputs, selectable open collector as pulse/frequency (1250 Hz, 100 mA, 40 V DC) or alarm (adjustable usage) • Current: 1 output, 4...20 mA, RL = 1000 W (+ a second output, on request) • Serial interface (on request): RS-232, RS-485 (Modbus protocol available)
Galvanic isolation	All the input/outputs are galvanically isolated from power supply
Medium data	
Velocity range	0.4...10 m/s

Visit product website ▶

3 | 13



Process/Port connection & communication	
Electrical connection	6 cable glands PG11
Approvals and certificates	
Standards	
Degree of protection according to IEC/EN 60529	<ul style="list-style-type: none"> In standard compact version: IP67 In standard remote version: <ul style="list-style-type: none"> IP65 IP68 (if the junction box of the sensor is filled with resin)
Protection class	Class I
Directives	
CE directives	The applied standards, which verify conformity with the EU Directives, can be found on the EU Type Examination Certificate and/or the EU Declaration of conformity (if applicable).
Environment and installation	
Ambient temperature	-20...+60 °C (-4...+140 °F) (operation and storage)
Relative air humidity	≤90 %, without condensation
Height above sea level	Max. 2000 m
Operating conditions	Continuous
Equipment mobility	Fixed device
Application range	Indoor and outdoor (protect the device against electromagnetic interference, ultraviolet rays and against the effects of climatic conditions)
Installation category	Category II according to UL/EN 61010-1
Pollution degree	Degree 2 according to UL/EN 61010-1

1.2. Basic compact version with or without display



Product properties	
Housing material	PA6 with glass fibre
Dimensions	Detailed information can be found in chapter "2. Dimensions" on page 7.
Compatibility	Electromagnetic flow sensors Type S051, S054, S055, S056 in compact version. Detailed information can be found in data sheets, see data sheet Type S051 ▶, data sheet Type S054 ▶, data sheet Type S055 ▶, data sheet Type S056 ▶.
Display	Alphanumeric display 2 lines x 16 Characters, without back light
Parametrisation	Through remote configuration tool kit (accessories Article no. 559374) or 3 keys inside. Detailed information can be found in chapters "3. Product accessories" on page 8 and "5.5. Ordering chart accessories" on page 12.
Data-logger	An EEPROM stores the measured values (in case of power failure)
Special function	<ul style="list-style-type: none"> Bidirectional measure Diagnostic functions such as empty pipe detection Plug in (protected plug for connection to PC)
Performance data	
Under reference conditions: water temperature = 20 °C, ambient temperature = 25 °C, constant flow rate during the test, liquid speed > 1 m/s	
Measurement deviation	±0.8 % of reading
Repeatability	±0.2 % of reading
Measurements tolerance	<ul style="list-style-type: none"> Flow rate (volume) = ±0.1 % of reading Out 4/20 mA = ±0.12 % of reading Frequency out = ±0.12 % of reading

Electrical data	
Operating voltage	90...265 V AC or 12...60 V DC
Power consumption	Max. 6 W
Input	1 digital, function use is configurable
Outputs	<ul style="list-style-type: none"> • Transistor: 2 outputs, selectable open collector as pulse/frequency (1250 Hz, 100 mA, 40 V DC) or alarm (adjustable usage) • Current: 1 output, 4...20 mA, RL = 800 W passive • Serial interface (on request): RS-485 (Modbus protocol available)
Galvanic isolation	All the input/outputs are galvanically isolated from power supply
Medium data	
Velocity range	0.4...10 m/s
Process/Port connection & communication	
Electrical connection	3 cable glands PG11
Approvals and certificates	
Standards	
Degree of protection according to IEC/ EN 60529	IP65
Protection class	Class I
Directives	
CE directives	The applied standards, which verify conformity with the EU Directives, can be found on the EU Type Examination Certificate and/or the EU Declaration of conformity (if applicable).
Environment and installation	
Ambient temperature	<ul style="list-style-type: none"> • Operation: -10...+50 °C (+14...+122 °F) • Storage: -20...+50 °C (-4...+122 °F)
Relative air humidity	≤90 %, without condensation
Height above sea level	Max. 2000 m
Operating conditions	Continuous
Equipment mobility	Fixed device
Application range	Indoor and outdoor (protect the device against electromagnetic interference, ultraviolet rays and against the effects of climatic conditions)
Installation category	Category II according to UL/EN 61010-1
Pollution degree	Degree 2 according to UL/EN 61010-1

1.3. Compact version without display



Product properties	
Material	
Housing	Stainless steel
Cover	PPS
Seal	EPDM
Dimensions	Detailed information can be found in chapter "2. Dimensions" on page 7.
Compatibility	Electromagnetic flow sensors Type S051, S054, S055, S056 in compact version. Detailed information can be found in data sheets, see data sheet Type S051 ▶, data sheet Type S054 ▶, data sheet Type S055 ▶, data sheet Type S056 ▶.
Display	None
Parametrisation	Through remote configuration tool kit (accessories Article no. 559374) Detailed information can be found in chapters "3. Product accessories" on page 8 and "5.5. Ordering chart accessories" on page 12.
Data-logger	An EEPROM stores the measured values (in case of power failure)

Special function	<ul style="list-style-type: none"> • Bidirectional measure • Diagnostic functions such as empty pipe detection • Remote configuration (for connection to PC) • Batch and filling functions
------------------	--

Performance data

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

Measurement deviation ±0.2 % of reading

Repeatability ±0.1 % of reading

Electrical data

Operating voltage 20...30 V DC

Power consumption Max. 10 W

Input 1 digital, function use is configurable

Outputs

- Transistor: 2 outputs, selectable open collector as pulse/frequency (1250 Hz, 100 mA, 40 V DC) or alarm (adjustable usage)
- Current: 1 output, 4...20 mA, RL = 800 W passive
- Serial interface (on request): RS-485

Galvanic isolation All the input/outputs are galvanically isolated from power supply

Medium data

Velocity range 0.4...10 m/s

Process/Port connection & communication

Electrical connection 2 cable glands PG9

Approvals and certificates**Standards**

Degree of protection according to IEC/EN 60529 IP65 and IP67

Protection class Class I

Directives

CE directives The applied standards, which verify conformity with the EU Directives, can be found on the EU Type Examination Certificate and/or the EU Declaration of conformity (if applicable).

Environment and installation

Ambient temperature -20...+40 °C (-4...+104 °F) (operation and storage)

Relative air humidity ≤90 %, without condensation

Height above sea level Max. 2000 m

Operating conditions Continuous

Equipment mobility Fixed device

Application range Indoor and outdoor (protect the device against electromagnetic interference, ultraviolet rays and against the effects of climatic conditions)

Installation category Category II according to UL/EN 61010-1

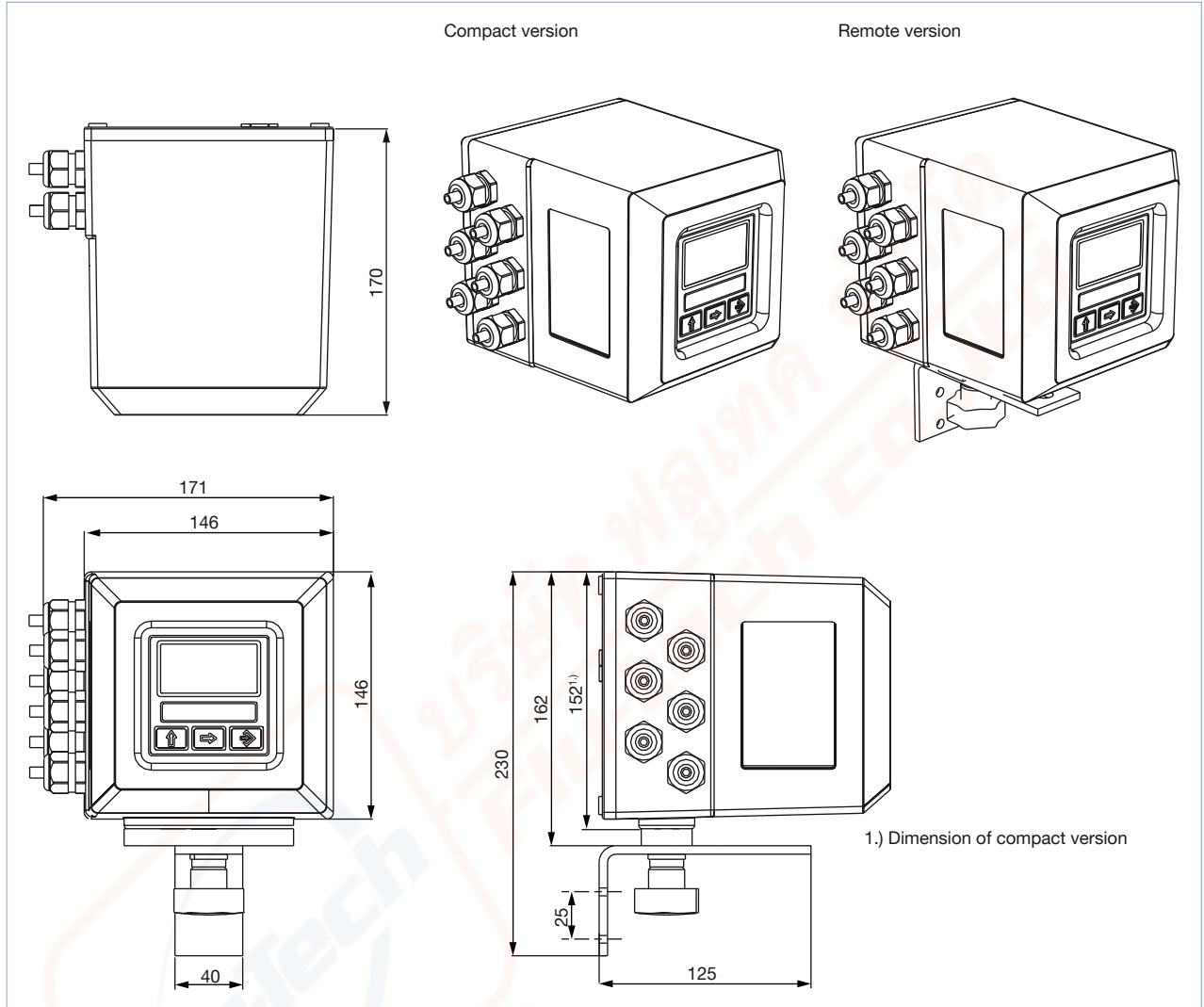
Pollution degree Degree 2 according to UL/EN 61010-1

2. Dimensions

2.1. Standard compact or remote version with display

Note:

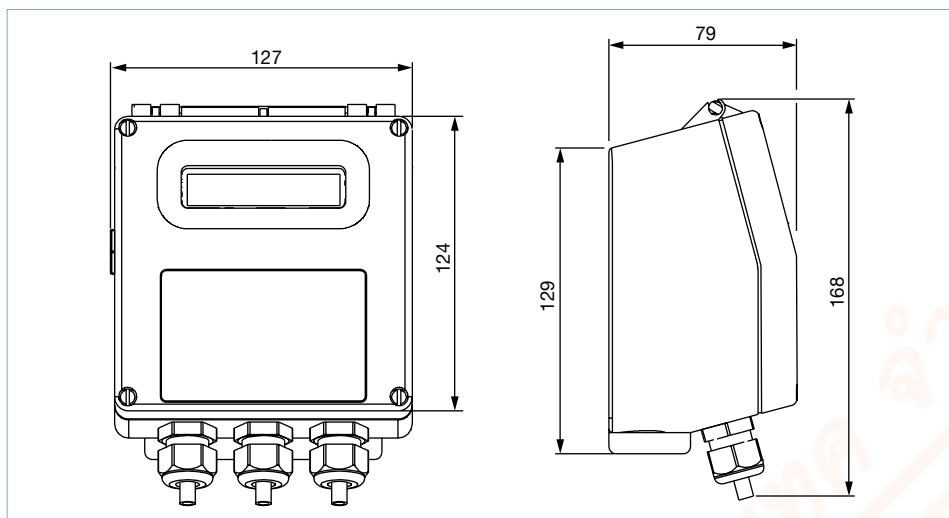
Dimensions in mm (unless specified differently)



2.2. Basic compact version with or without display

Note:

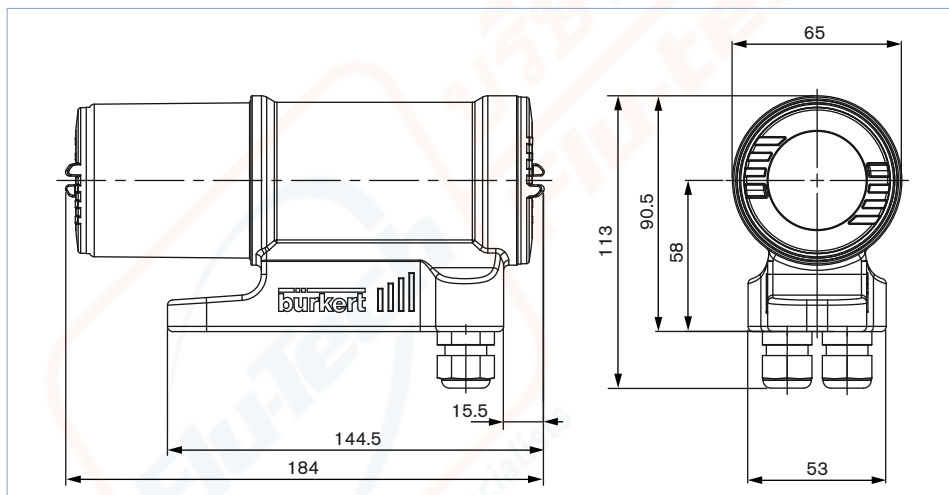
Dimensions in mm (unless specified differently)



2.3. Compact version without display

Note:

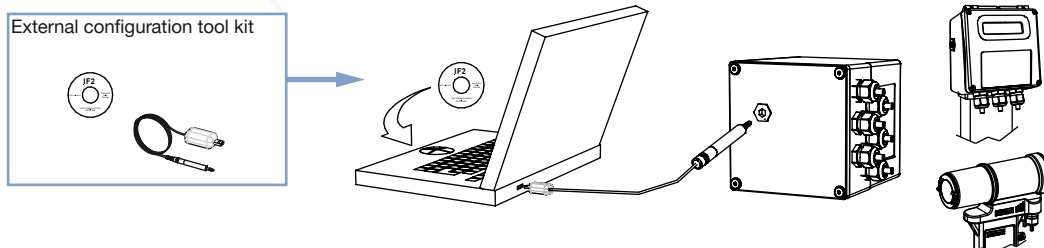
Dimensions in mm (unless specified differently)



3. Product accessories

Note:

To configure a device with or without a display, please use the external configuration toll kit.



Visit product website ▶

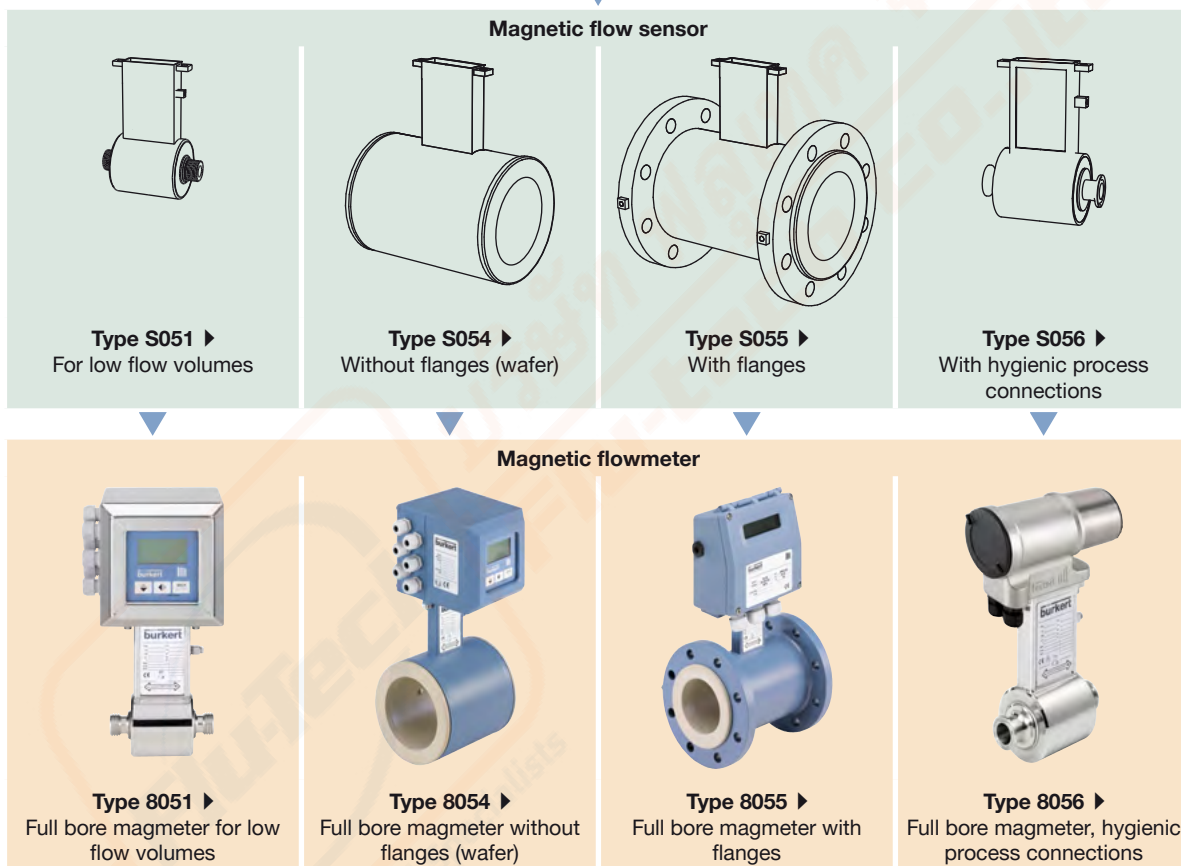
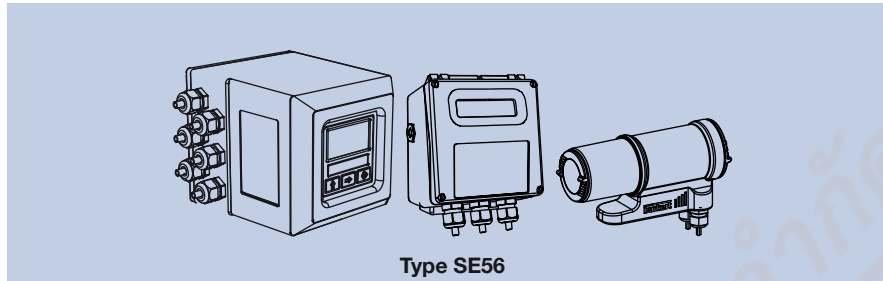
4. Networking and combination with other Bürkert products

4.1. Compact version

Note:

The compact SE56 transmitter is intended for use with S051, S045, S055 or S056 compact flow sensors.

Example:



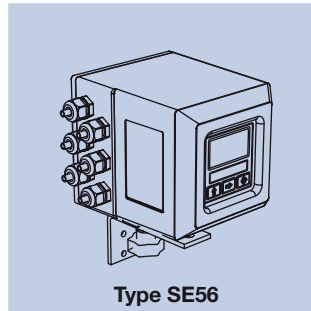
DTS 1000101308 EN Version: S Status: RL (released | freigegeben | valide) printed: 16.09.2021

4.2. Remote version

Note:

The remote SE56 transmitter is intended for use with S051, S045, S055 or S056 remote flow sensors.

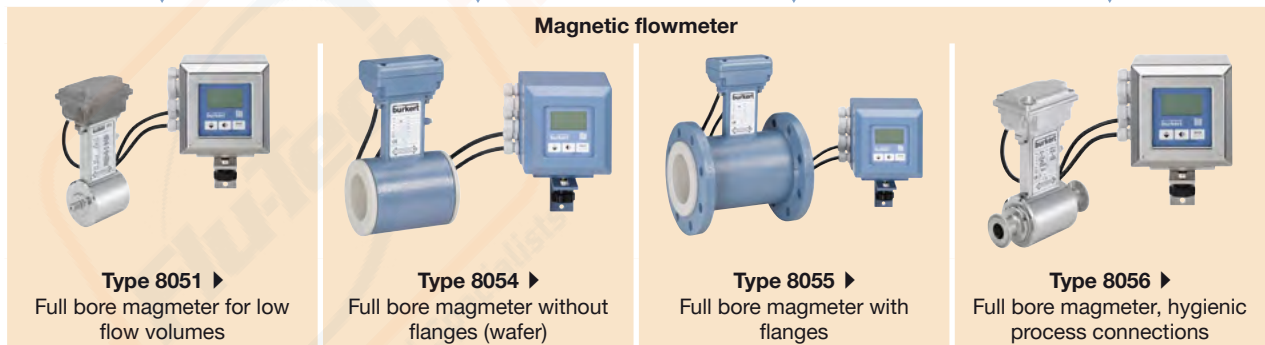
Example:



Magnetic flow sensor



Magnetic flowmeter



DTS 1000101308 EN Version: S Status: RL (released | freigegeben | valide) printed: 16.09.2021

5. Ordering information

5.1. Bürkert eShop – Easy ordering and quick delivery



Bürkert eShop – Easy ordering and fast delivery

You want to find your desired Bürkert product or spare part quickly and order directly? Our online shop is available for you 24/7. Sign up and enjoy all the benefits.

[Order online now](#)

5.2. Recommendation regarding product selection

A complete full bore flowmeter consists of a flow sensor (compact or remote version) Type S051, S054, S055 or S056 and a flow transmitter (compact or remote version) Type SE56.

See [Data sheet Type S051](#) ▶, [Data sheet Type S054](#) ▶, [Data sheet Type S055](#) ▶, [Data sheet Type S056](#) ▶ for more information.

Two different components must be ordered in order to select a complete device. The following information is required:

- **Article no.** of the sensor **Type S051, S054, S055 or S056** (see [Data sheet Type S051](#) ▶, [Data sheet Type S054](#) ▶, [Data sheet Type S055](#) ▶, [Data sheet Type S056](#) ▶ for more information)
- **Article no.** of the transmitter **Type SE56** (see following ordering chart)

5.3. Bürkert product filter



Bürkert product filter – Get quickly to the right product

You want to select products comfortably based on your technical requirements? Use the Bürkert product filter and find suitable articles for your application quickly and easily.

[Try out our product filter](#)

5.4. Ordering chart transmitter Type SE56

Operating voltage	Outputs	Housing material	Electrical connection	Article no.
Standard compact version with display				
90...265 V AC	2 transistors	Aluminium	6 cable glands	558745
		Stainless steel	6 cable glands	559780
	2 transistors + 4...20 mA	Aluminium	6 cable glands	558747
		Stainless steel	6 cable glands	558306
Standard remote version (wall-mounting) with display				
90...265 V AC	2 transistors	Aluminium	6 cable glands	559781
		Stainless steel	6 cable glands	558310
	2 transistors + 4...20 mA	Aluminium	6 cable glands	558750
		Stainless steel	6 cable glands	558308
Basic compact version with display				
90...265 V AC	2 transistors	Nylon	3 cable glands	562439
	2 transistors + 4...20 mA	Nylon	3 cable glands	562440
12...60 V DC/18...45 V AC	2 transistors	Nylon	3 cable glands	562443
	2 transistors + 4...20 mA	Nylon	3 cable glands	562444
Basic compact version without display				
90...265 V AC	2 transistors	Nylon	3 cable glands	562441
	2 transistors + 4...20 mA	Nylon	3 cable glands	562442
12...60 V DC/18...45 V AC	2 transistors	Nylon	3 cable glands	562445
	2 transistors + 4...20 mA	Nylon	3 cable glands	562446
Compact version without display				
20...30 V DC	Up to 4 transistors	Stainless steel	2 cable glands	559132
	Up to 4 transistors + 4...20 mA	Stainless steel	2 cable glands	559133

Further versions on request

>	Additional	⚡	Voltage
	<ul style="list-style-type: none"> • For standard remote version with display: <ul style="list-style-type: none"> – Panel-mounting version (housing only in plastic) – Outputs: 4...20 mA <ul style="list-style-type: none"> RS 485 (Modbus protocol available) 2 transistors (one of them: 10 KHz) 2 transistors + 1 x RS-232 2 transistors + 4...20 mA + 1 x RS-232 HART protocol 2 relays 60 V AC 2 relays 250 V AC • For Basic compact version with or without display: <ul style="list-style-type: none"> – Outputs: 4...20 mA <ul style="list-style-type: none"> RS 485 • For compact version without display: <ul style="list-style-type: none"> – Outputs: 4...20 mA <ul style="list-style-type: none"> RS 485 		<ul style="list-style-type: none"> • For standard remote version with display: <ul style="list-style-type: none"> – 15...45 V DC/ V AC – 12...35 V DC

5.5. Ordering chart accessories

Description	Article no.
Remote configuration tool kit	559374