

Type 8025 - 8035 - SE35

Flowmeter
Flow Transmitter



Quickstart

English

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We reserve the right to make technical changes without notice.
Technische Änderungen vorbehalten.
Sous réserve de modifications techniques.

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1. ABOUT THE QUICKSTART

The Quickstart describes the life cycle of the device. Please keep this Quickstart in a safe place, accessible to all users and any new owners.

Important safety information.

Failure to comply with these instructions can lead to hazardous situations. Pay attention in particular to the chapters [3. Basic safety information](#) and [2. Intended use](#).

- ▶ Whatever the version of the device, this Quickstart must be read and understood.

The Quickstart explains how to install, set, and start-up the device.

A detailed description of the device can be found in the related operating instructions available on the internet at country.burkert.com

1.1. Definition of the word "device"

The word "device" used within this Quickstart always refers to the flowmeter type 8025 compact version, the flow transmitter type 8025 panel version or wall-mounted version, the flowmeter type 8035 or the flow transmitter type SE35.

1.2. Symbols used



DANGER

Warns against an imminent danger.

- ▶ Failure to observe this warning results in death or in serious injury.



WARNING

Warns against a potentially dangerous situation.

- ▶ Failure to observe this warning can result in serious injury or even death.



CAUTION

Warns against a possible risk.

- ▶ Failure to observe this warning can result in substantial or minor injuries.

NOTICE

Warns against material damage.



Indicates additional information, advice or important recommendations.



Refers to information contained in this Quickstart or in other documents.

- ▶ Indicates an instruction to be carried out to avoid a danger, a warning or a possible risk.
- Indicates a procedure to be carried out.
- ✔ Indicates the result of a specific instruction.

2. INTENDED USE

Use of the device that does not comply with the instructions could present risks to people, nearby installations and the environment.

The flowmeter type 8025 compact version, the flowmeter type 8035 and the flow transmitter SE35 associated with a sensor-fitting are designed to measure the flow rate of a liquid and to totalise the volume of a liquid.

The flow transmitter type SE35 must be mounted on a sensor-fitting type S030, S070 or S077.

The flow transmitter type 8025 panel version or wall-mounted version is a transmitter that must be connected to:

- an 8020 flow sensor with a sinus or a pulse output, only in "Low Power" version,
 - an 8030 flow sensor with a sinus or a pulse output, only in "Low Power" version.
- ▶ Use this device in compliance with the characteristics and commissioning and use conditions specified in the contractual documents and in the operating instructions.
 - ▶ Never use this device for security applications.
 - ▶ Protect this device against electromagnetic interference, ultraviolet rays and, when installed outdoors, the effects of climatic conditions.
 - ▶ Only operate a device in perfect working order.
 - ▶ Requirements for the safe and proper operation of the device are proper transport, storage and installation, as well as careful operation and maintenance.
 - ▶ Only use the device as intended.

3. BASIC SAFETY INFORMATION

This safety information does not take into account any contingencies or occurrences that may arise during installation, use and maintenance of the product.

The operating company is responsible for the respect of the local safety regulations including for the staff safety.



Danger due to electrical voltage.

- ▶ If a 12...36 V DC powered version is installed either in a wet environment or outdoors, all the electrical voltages must be of max. 35 V DC.
- ▶ Disconnect the electrical power for all the conductors and isolate it before carrying out work on the system.
- ▶ All equipment connected to the wall-mounted or panel version of the flow transmitter 8025 must be double insulated with respect to the mains according to the standard UL/EN 61010-1.
- ▶ Observe all applicable accident protection and safety regulations for electrical equipment.

Risk of injury due to high fluid temperatures.

- ▶ Use safety gloves to handle the device.
- ▶ Stop the circulation of fluid and drain the pipe before loosening the process connections.



Risk of injury due to high pressure in the installation.

- ▶ Stop the circulation of fluid, cut off the pressure and drain the pipe before loosening the process connections.

Risk of injury due to the nature of the fluid.

- ▶ Respect the prevailing regulations on accident prevention and safety relating to the use of hazardous products.



Various dangerous situations

To avoid injury take care:

- ▶ not to use the device in explosive atmospheres.
- ▶ not to use the device in an environment incompatible with the materials it is made of.
- ▶ not to subject the device to mechanical loads.
- ▶ not to make any modifications to the device.
- ▶ to prevent any unintentional power supply switch-on.
- ▶ to carry out the installation and maintenance work by qualified and skilled staff with the appropriate tools.
- ▶ to guarantee a defined or controlled restarting of the process, after a power supply interruption.
- ▶ to use the device only if in perfect working order and in compliance with the instructions provided in the operating instructions.
- ▶ to observe the general technical rules when installing and using the device.

NOTICE

The device may be damaged by the fluid in contact with.

- ▶ Systematically check the chemical compatibility of the component materials of the device and the fluids likely to come into contact with it (for example: alcohols, strong or concentrated acids, aldehydes, alkaline compounds, esters, aliphatic compounds, ketones, halogenated aromatics or hydrocarbons, oxidants and chlorinated agents).

NOTICE

Elements / Components sensitive to electrostatic discharges

This device contains electronic components sensitive to electrostatic discharges. They may be damaged if they are touched by an electrostatically charged person or object. In the worst case scenario, these components are instantly destroyed or go out of order as soon as they are activated.

- ▶ To minimise or even avoid all damage due to an electrostatic discharge, take all the precautions described in standard EN 61340-5-1.
- ▶ Also ensure that you do not touch any of the live electrical components.

4. GENERAL INFORMATION

4.1. Manufacturer's address and international contacts

To contact the manufacturer of the device, use following address:

Bürkert SAS

Rue du Giessen

BP 21

F-67220 TRIEMBACH-AU-VAL

You may also contact your local Bürkert sales office.

The addresses of our international sales offices are available on the internet at: country.burkert.com

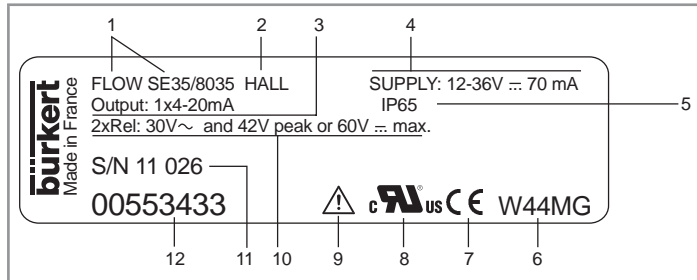
4.2. Warranty conditions

The condition governing the legal warranty is the conforming use of the device in observance of the operating conditions specified in this Quickstart.

4.3. Information on the Internet

You can find the Operating Instructions and Technical Data Sheets regarding the type 8025, 8035 or SE35 at: country.burkert.com.

5. DESCRIPTION OF THE RATING PLATE



1. Measured quantity and type of the device
2. Type of sensor
3. Characteristics of the current output
4. Power supply and maximum of current consumption
5. Protection class of the device
6. Manufacturing code
7. Conformity logo
8. Certification
9. Warning: Before using the device, take into account the technical specifications described in the Operating Instructions.
10. Specification of the relay outputs
11. Serial number
12. Article number

6. TECHNICAL DATA

6.1. Technical data of the 8025 compact version

6.1.1. Conditions of use

Ambient temperature	
• 12...36 V DC version	• -10 °C...+60 °C
• 115/230 V AC version	• -10 °C...+50 °C
Air humidity	< 80 %, non condensated
Height above see level	max. 2000 m
Operating conditions	Continuous operation
Mobility of the device	Fixed device
Use	Indoor and outdoor (Protect the device against electro-magnetic interference, ultraviolet rays and, when installed outdoors, against the effects of climatic conditions)
Installation category	Category I according to UL/EN 61010-1
Degree of pollution	Degree 2 according to UL/EN 61010-1
Protection class according to IEC/EN 60529	IP65 ¹⁾ , device wired, cover lid screwed tight and cable glands tightened or female connector plugged in and secured with screws (depending on the version)

¹⁾ not evaluated by UL

Fig. 1: Rating plate of the device (example)

6.1.2. Conformity to standards and 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).

Conformity to the Pressure Equipment Directive

- Make sure the device materials are compatible with the fluid.
- Make sure the pipe DN and the PN are adapted for the device.

The device conforms to Article 4, Paragraph 1 of the Pressure Equipment Directive 2014/68/EU under the following conditions:



- Device used on a piping (PS = maximum admissible pressure; DN = nominal diameter of the pipe)

Type of fluid	Conditions
Fluid group 1, Article 4, Paragraph 1.c.i	DN ≤ 25
Fluid group 2, Article 4, Paragraph 1.c.i	DN ≤ 32 or PSxDN ≤ 1000
Fluid group 1, Article 4, Paragraph 1.c.ii	DN ≤ 25 or PSxDN ≤ 2000
Fluid group 2, Article 4, Paragraph 1.c.ii	DN ≤ 200 or PS ≤ 10 or PSxDN ≤ 5000

UL-Certification

Finished products with variable key PU01 or PU02 are UL-certified products and comply also with the following standards:

- UL 61010-1
- CAN/CSA-C22.2 n°61010-1

Identification on the device	Certification	Variable key
	UL-recognized	PU01
 Measuring Equipment EXXXXXX	UL-listed	PU02

6.1.3. Fluid data

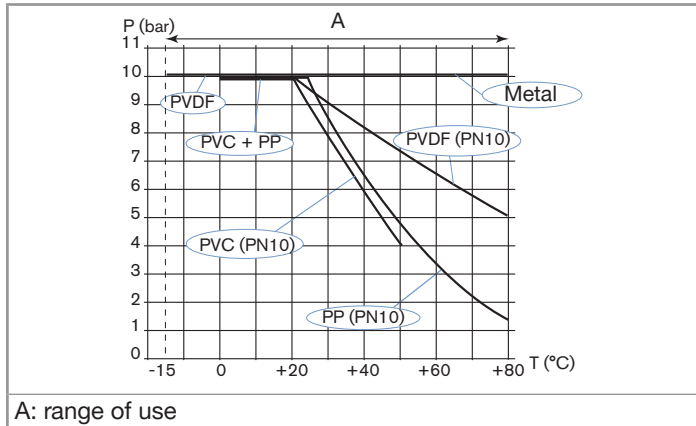


Fig. 2: Fluid temperature/fluid pressure dependency curves for the 8025 compact version, depending on the material the S020 fitting is made of

Type of fluid	neutral or slightly aggressive liquids
Fluid viscosity	max. 300 cSt
Rate of solid particles	max. 1 %
Fluid temperature	The fluid temperature may be restricted by the fluid pressure and the material the S020 fitting used is made of (see Fig. 2)

Fluid pressure	PN10 ¹⁾ max The fluid pressure may be restricted by the fluid temperature and the material the S020 fitting used is made of (see Fig. 2)
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¹⁾ not evaluated by UL

6.1.4. Materials

Part	Material
Housing /cover, lid, nut	PC
Frontfoil	Polyester
Screws	Stainless steel
Male fixed connector or cable glands	PA
Identification label	Polyester
Wetted parts	
Sensor holder / Paddle-wheel	PVDF
Axis and bearings of the paddle-wheel	Ceramics
Seal	FKM (optional EPDM)
Fitting S020	Refer to the Operating Instructions of the fitting

6.1.5. Electrical data

12...36 V DC power supply	<ul style="list-style-type: none"> • filtered and regulated • oscillation rate: $\pm 10\%$ • Connection to main supply: permanent (through external SELV (safety extra-low voltage) and through LPS (limited power source))
Power source (not supplied) for versions supplied with 12...36 V DC	<ul style="list-style-type: none"> • Limited power source according to UL / EN 60950-1 standards • or limited energy circuit according to UL / EN 61010-1, Paragraph 9.4
115/230 V AC power supply	
• frequency	• 50/60 Hz
• supplied voltage	• 27 V DC, regulated
• Maximum current	• 125 mA
• integrated protection	• 125 mA time-delay fuse
• power	• 3 VA
Maximum current consumption version 12...36 V DC without relays	25 mA
Maximum current consumption version 12...36 V DC with relays	70 mA
Max. current consumption version 115/230 V AC	125 mA max. at 27 V DC

Pulse output (transistor)	polarized, potential-free
• type	• NPN/PNP (wiring dependant)
• electrical data	• 5...36 V DC, 100 mA max., voltage drop 2.5 V DC at 100 mA
Relay output	
• operating	• hysteresis, adjustable thresholds, normally open
• electrical data of the load (non UL recognized devices)	• 230 V AC / 3 A or 40 V DC / 3 A (resistive load)
• electrical data of the load (UL recognized devices)	• max. 30 V AC and 42 V peak / 3 A or max. 60 V DC / 1 A
To use the relay outputs in a wet location, observe the following DANGER safety instruction.	
Current output	4...20 mA, sinking or sourcing mode (wiring dependant)



DANGER

Danger due to the operation of the relay outputs of a UL device in a wet location.

- ▶ If a UL device is used in a wet location:
 - energize the relay outputs with an alternating voltage of max. 16 Vrms and 22.6 Vpeak.
 - or energize the relay outputs with a direct voltage of max. 35 V DC.

6.2. Technical data of the flow transmitter 8025, panel version

The following technical data are relevant for the flow transmitter 8025 panel version, connected to a Bürkert flow sensor 8020, 8030 or SE30 in a "Low Power" version only.

6.2.1. Conditions of use

Ambient temperature	-10 °C...+60 °C
Air humidity	< 80 %, non condensated
Height above sea level	max. 2000 m
Operating conditions	Continuous operation
Mobility of the device	Fixed device
Use	Indoor and outdoor (Protect the device against electro-magnetic interference, ultraviolet rays and, when installed outdoors, against the effects of climatic conditions)
Installation category	Category I according to UL/EN 61010-1
Degree of pollution	Degree 2 according to UL/EN 61010-1
Protection class according to IEC/EN 60529	
• front parts	• IP65 ¹⁾ , installation completed and closed cabinet
• non front parts	• IP20 ¹⁾ in the closed cabinet

¹⁾ not evaluated by UL



6.2.2. Conformity to standards and 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).

UL-Certification

Finished products with variable key PU01 or PU02 are UL-certified products and comply also with the following standards:

- UL 61010-1
- CAN/CSA-C22.2 n°61010-1

Identification on the device	Certification	Variable key
	UL-recognized	PU01
 Measuring Equipment EXXXXXX	UL-listed	PU02

6.2.3. Materials

Part	Material
Housing /cover	PC
Frontfoil	Polyester
Screws (4)	Stainless steel
Cable glands	PA
Identification label	Polyester

6.2.4. Electrical data

12...36 V DC power supply	<ul style="list-style-type: none"> • filtered and regulated • oscillation rate: $\pm 10\%$ • Connection to main supply: permanent (through external SELV (safety extra-low voltage) and through LPS (limited power source))
Power source (not supplied)	<ul style="list-style-type: none"> • Limited power source according to UL / EN 60950-1 standards • or limited energy circuit according to UL / EN 61010-1, Paragraph 9.4
Maximum current consumption version 12...36 V DC without relays	25 mA
Maximum current consumption version 12...36 V DC with relays	70 mA
Pulse output (transistor)	polarized, potential-free
<ul style="list-style-type: none"> • type • electrical data 	<ul style="list-style-type: none"> • NPN/PNP (wiring dependant) • 5...36 V DC, 100 mA max., voltage drop 2.5 V DC at 100 mA

Relay output	
<ul style="list-style-type: none"> • operating 	<ul style="list-style-type: none"> • hysteresis, adjustable thresholds, normally open
<ul style="list-style-type: none"> • electrical data of the load (non UL recognized devices) 	<ul style="list-style-type: none"> • 230 V AC / 3 A or 40 V DC / 3 A (resistive load)
<ul style="list-style-type: none"> • electrical data of the load (UL recognized devices) 	<ul style="list-style-type: none"> • max. 30 V AC and 42 V peak / 3 A or max. 60 V DC / 1 A <p>To use the relay outputs in a wet location, observe the following DANGER safety instruction.</p>
Current output	4...20 mA, sinking or sourcing mode (wiring dependant)



DANGER

Danger due to the operation of the relay outputs of a UL device in a wet location.

- ▶ If a UL device is used in a wet location:
 - energize the relay outputs with an alternating voltage of max. 16 Vrms and 22.6 Vpeak.
 - or energize the relay outputs with a direct voltage of max. 35 V DC.

6.2.5. Specifications of a flow sensor connected to a 8025 panel version

Sensor input	
• signal frequency	• 2.5...400 Hz
• pulse signal (Hall)	• NPN, open collector
• sinus signal (coil)	• typical sensitivity of 35 mV peak-peak, at 252 Hz
Sensor output	
• power supply	• 10...34 V DC (V+ minus 2 V DC), 1 mA max.

6.3. Technical data of the 8025 wall-mounted version

The following technical data are relevant for the flow transmitter 8025 wall-mounted version, connected to a Bürkert flow sensor 8020, 8030 or SE30 in a "Low Power" version only.

6.3.1. Conditions of use

Ambient temperature	-10 °C...+60 °C
Air humidity	< 80 %, non condensated
Height above sea level	max. 2000 m
Operating conditions	Continuous operation
Mobility of the device	Fixed device

Use	Indoor and outdoor (Protect the device against electro-magnetic interference, ultraviolet rays and, when installed outdoors, against the effects of climatic conditions)
Installation category	Category I according to UL/EN 61010-1
Degree of pollution	Degree 2 according to UL/EN 61010-1
Protection class according to IEC/EN 60529	IP65 ¹⁾ , device wired, cover lid screwed tight and cable glands tightened

¹⁾ not evaluated by UL

6.3.2. Conformity to standards and 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).

6.3.3. Materials

Part	Material
Housing, cover	ABS
Frontfoil	Polyester
Screws (4)	Stainless steel
Cable glands / Cable clips	PA
Identification label	Polyester

6.3.4. Electrical data

12...36 V DC power supply	<ul style="list-style-type: none"> • filtered and regulated • oscillation rate: $\pm 10\%$ • Connection to main supply: permanent (through external SELV (safety extra-low voltage) and through LPS (limited power source))
Power source (not supplied) for versions supplied with 12...36 V DC	<ul style="list-style-type: none"> • Limited power source according to UL / EN 60950-1 standards • or limited energy circuit according to UL / EN 61010-1, Paragraph 9.4
115/230 V AC power supply	
• frequency	• 50/60 Hz
• supplied voltage	• 27 V DC, regulated
• Maximum current	• 250 mA
• integrated protection	• 250 mA time-delay fuse
• power	• 6 VA
Maximum current consumption version 12...36 V DC without relais	25 mA
Maximum current consumption version 12...36 V DC with relais	70 mA
Maximum current consumption version 115/230 V AC	250 mA max. at 27 V DC

Pulse output (transistor)	polarized, potential-free
• type	• NPN/PNP (wiring dependant)
• electrical data	• 5...36 V DC, 100 mA max., voltage drop 2.5 V DC at 100 mA
Relay output	
• operating	• hysteresis, adjustable thresholds, normally open
• electrical data of the load (non UL recognized devices)	• 230 V AC / 3 A or 40 V DC / 3 A (resistive load)
• electrical data of the load (UL recognized devices)	• max. 30 V AC and 42 V peak / 3 A or max. 60 V DC / 1 A
	To use the relay outputs in a wet location, observe the following DANGER safety instruction.
Current output	4...20 mA, sinking or sourcing mode (wiring dependant)



DANGER

Danger due to the operation of the relay outputs of a UL device in a wet location.

- ▶ If a UL device is used in a wet location:
 - energize the relay outputs with an alternating voltage of max. 16 Vrms and 22.6 Vpeak.
 - or energize the relay outputs with a direct voltage of max. 35 V DC.

6.3.5. Specifications of the flow sensor connected to a 8025 wall-mounted version

Sensor input	
• signal frequency	• 2.5...400 Hz
• pulse signal (Hall)	• NPN, open collector
• sinus signal (coil)	• typical sensitivity of 35 mV peak-peak, at 252 Hz
Sensor output	
• power supply	• 10...34 V DC (V+ minus 2 V DC), 1 mA max.

6.4. Technical data of the flow transmitter SE35

The technical data of the flow transmitter SE35 may be restricted by the sensor-fitting used.



- ▶ Please refer to the Operating Instructions of the related fitting or sensor-fitting.

6.4.1. Conditions of use

Ambient temperature	<ul style="list-style-type: none"> • 12...36 V DC version • 115/230 V AC version 	<ul style="list-style-type: none"> • -10 °C...+60 °C • -10 °C...+50 °C
Air humidity	< 80 %, non condensated	
Height above sea level	max. 2000 m	
Operating conditions	Continuous operation	
Mobility of the device	Fixed device	
Use	Indoor and outdoor (Protect the device against electro-magnetic interference, ultraviolet rays and, when installed outdoors, against the effects of climatic conditions)	
Installation category	Category I according to UL/EN 61010-1	
Degree of pollution	Degree 2 according to UL/EN 61010-1	
Protection class according to IEC/EN 60529	IP65 ¹⁾ , device wired, cover lid screwed tight and cable glands tightened or female connector plugged in and secured with screws (depending on the version)	

¹⁾ not evaluated by UL



6.4.2. Conformity to standards and 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).

UL-Certification

Finished products with variable key PU01 or PU02 are UL-certified products and comply also with the following standards:

- UL 61010-1
- CAN/CSA-C22.2 n°61010-1

Identification on the device	Certification	Variable key
	UL-recognized	PU01
	UL-listed	PU02

6.4.3. Materials

Part	Material
Housing / cover / lid / nut	PC
Frontfoil / screws	Polyester
Screws	Stainless steel
Male fixed connector or cable glands	PA
Identification label	Polyester

6.4.4. Electrical data

12...36 V DC power supply	<ul style="list-style-type: none"> • filtered and regulated • oscillation rate: $\pm 10\%$ • Connection to main supply: permanent (through external SELV (safety extra-low voltage) and through LPS (limited power source))
Power source (not supplied) for versions supplied with 12...36 V DC	<ul style="list-style-type: none"> • Limited power source according to UL / EN 60950-1 standards • or limited energy circuit according to UL / EN 61010-1, Paragraph 9.4
115/230 V AC power supply	
• frequency	• 50/60 Hz
• supplied voltage	• 27 V DC, regulated
• Maximum current	• 125 mA
• integrated protection	• 125 mA time-delay fuse
• power	• 3 VA
Maximum current consumption version 12...36 V DC without relais	25 mA
Maximum current consumption version 12...36 V DC with relais	70 mA
Maximum current consumption version 115/230 V AC	125 mA max. at 27 V DC

Pulse output (transistor)	polarized, potential-free
• type	• NPN/PNP (wiring dependant)
• electrical data	• 5...36 V DC, 100 mA max., voltage drop 2.5 V DC at 100 mA
Relay output	
• operating	• hysteresis, adjustable thresholds, normally open
• electrical data of the load (non UL recognized devices)	• 230 V AC / 3 A or 40 V DC / 3 A (resistive load)
• electrical data of the load (UL recognized devices)	• max. 30 V AC and 42 V peak / 3 A or max. 60 V DC / 1 A To use the relay outputs in a wet location, observe the following DANGER safety instruction.
Current output	4...20 mA, sinking or sourcing mode (wiring dependant)



DANGER

Danger due to the operation of the relay outputs of a UL device in a wet location.

- ▶ If a UL device is used in a wet location:
 - energize the relay outputs with an alternating voltage of max. 16 Vrms and 22.6 Vpeak.
 - or energize the relay outputs with a direct voltage of max. 35 V DC.

6.5. Technical data of the flowmeter 8035

The flowmeter 8035 comprises an S030 sensor-fitting including the paddle-wheel flow sensor and a flow transmitter type SE35.



The technical data of the flowmeter 8035 may be restricted by the S030 sensor-fitting used.

- ▶ Please refer to the Operating Instructions of the related sensor-fitting S030.

6.5.1. Conditions of use

Ambient temperature	
• 12...36 V DC version	• -10 °C...+60 °C
• 115/230 V AC version	• -10 °C...+50 °C
Air humidity	< 80 %, non condensated
Height above see level	max. 2000 m
Operating conditions	Continuous operation
Mobility of the device	Fixed device
Use	Indoor and outdoor (Protect the device against electro-magnetic interference, ultraviolet rays and, when installed outdoors, against the effects of climatic conditions)
Installation category	Category I according to UL/EN 61010-1
Degree of pollution	Degree 2 according to UL/EN 61010-1

Protection class according to IEC/ EN 60529	IP65 ¹⁾ , device wired, cover lid screwed tight and cable glands tightened or female connector plugged in and secured with screws (depending on the version)
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¹⁾ not evaluated by UL

6.5.2. Conformity to standards and 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).

Conformity to the Pressure Equipment Directive

- Make sure the device materials are compatible with the fluid.
- Make sure the pipe DN and the PN are adapted for the device.

The device conforms to Article 4, Paragraph 1 of the Pressure Equipment Directive 2014/68/EU under the following conditions:

- Device used on a piping (PS = maximum admissible pressure; DN = nominal diameter of the pipe)



Type of fluid	Conditions
Fluid group 1, Article 4, Paragraph 1.c.i	DN ≤ 25
Fluid group 2, Article 4, Paragraph 1.c.i	DN ≤ 32 or PSxDN ≤ 1000

Type of fluid	Conditions
Fluid group 1, Article 4, Paragraph 1.c.ii	DN ≤ 25 or PSxDN ≤ 2000
Fluid group 2, Article 4, Paragraph 1.c.ii	DN ≤ 200 or PS ≤ 10 or PSxDN ≤ 5000

UL-Certification

Finished products with variable key PU01 or PU02 are UL-certified products and comply also with the following standards:

- UL 61010-1
- CAN/CSA-C22.2 n°61010-1

Identification on the device	Certification	Variable key
	UL-recognized	PU01
 Measuring Equipment EXXXXXX	UL-listed	PU02

6.5.3. Materials

Part	Material
Housing / cover / lid / nut	PC
Frontfoil	Polyester
Screws	Stainless steel

Part	Material
Male fixed connector or cable glands	PA
Identification label	Polyester
Wetted parts	
Sensor-fitting S030	Refer to the Operating Instructions of the sensor-fitting

6.5.4. Fluid data

Type of fluid	neutral or slightly aggressive liquids
Fluid viscosity	max. 300 cSt
Rate of solid particles	max. 1 %
Fluid temperature	The fluid temperature may be restricted by the fluid pressure and the material the S030 sensor-fitting used is made of (see Fig. 3)
Fluid pressure	The fluid pressure may be restricted by the fluid temperature and the material the S030 sensor-fitting used is made of (see Fig. 3)
<ul style="list-style-type: none"> with sensor-fitting S030 in plastic 	PN10 ¹⁾
<ul style="list-style-type: none"> with sensor-fitting S030 in metal 	PN16 ¹⁾ (PN40 ¹⁾ on request)

¹⁾ not evaluated by UL

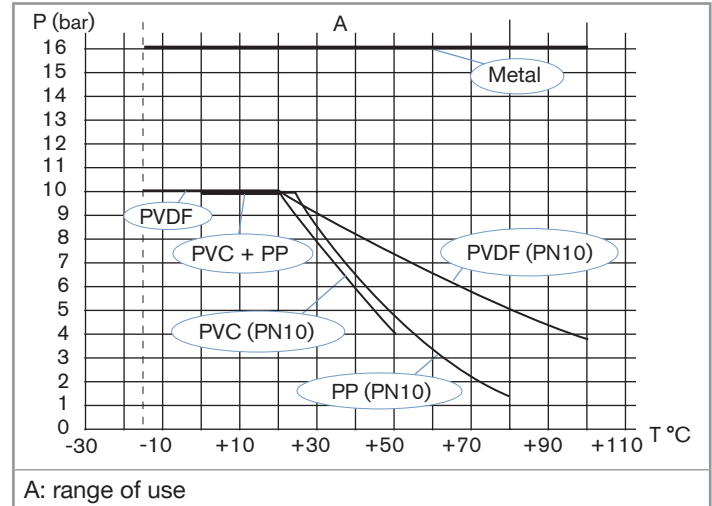


Fig. 3: Fluid temperature/fluid pressure dependency curves for the flowmeter 8035, depending on the material the S030 sensor-fitting is made of

6.5.5. Electrical data

→ Please refer to the electrical data of the flow transmitter SE35, chapter 6.4.4, page 16.

6.6. Technical data of the flow transmitter SE35 associated with a sensor-fitting S070 or S077

The technical data of the flow transmitter SE35 associated with a sensor-fitting S070 or S077 may be restricted by the S070 or S077 sensor-fitting used.



► Refer to the Operating Instructions of the related sensor-fitting S070 or S077.

6.6.1. Conditions of use

Ambient temperature	
• 12...36 V DC version	• -10 °C...+60 °C
• 115/230 V AC version	• -10 °C...+50 °C
Air humidity	< 80 %, non condensated
Height above sea level	max. 2000 m
Operating conditions	Continuous operation
Mobility of the device	Fixed device
Use	Indoor and outdoor (Protect the device against electromagnetic interference, ultraviolet rays and, when installed outdoors, against the effects of climatic conditions)
Installation category	Category I according to UL/EN 61010-1
Degree of pollution	Degree 2 according to UL/EN 61010-1

Protection class
according to IEC/
EN 60529

IP65 ¹⁾, device wired, cover lid screwed tight and cable glands tightened or female connector plugged in and secured with screws (depending on the version)

¹⁾ not evaluated by UL

6.6.2. Conformity to standards and 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).

Conformity to the Pressure Equipment Directive

→ Make sure the device materials are compatible with the fluid.
→ Make sure the pipe DN and the PN are adapted for the device.

The device conforms to Article 4, Paragraph 1 of the Pressure Equipment Directive 2014/68/EU under the following conditions:

- Device used on a piping (PS = maximum admissible pressure; DN = nominal diameter of the pipe)

Type of fluid	Conditions
Fluid group 1, Article 4, Paragraph 1.c.i	DN ≤ 25
Fluid group 2, Article 4, Paragraph 1.c.i	DN ≤ 32 or PSxDN ≤ 1000

Type of fluid	Conditions
Fluid group 1, Article 4, Paragraph 1.c.ii	DN ≤ 25 or PSxDN ≤ 2000
Fluid group 2, Article 4, Paragraph 1.c.ii	DN ≤ 200 or PS ≤ 10 or PSxDN ≤ 5000

6.6.3. Fluid data

→ Refer to the technical data sheet or to the Operating Instructions delivered with the related sensor-fitting S070 or S077.

6.6.4. Materials

Part	Material
Housing / cover / lid / nut	PC
Frontfoil	Polyester
Screws	Stainless steel
Male fixed connector or cable glands	PA
Identification label	Polyester
Wetted parts	
<ul style="list-style-type: none"> • Sensor-fitting S070 	<ul style="list-style-type: none"> • Refer to the Operating Instructions of the related sensor-fitting

6.6.5. Electrical data

→ Please refer to the electrical data of the flow transmitter SE35, chapter [6.4.4](#), [page 16](#).

7. INSTALLATION

7.1. Safety instructions



DANGER

Risk of injury due to electrical voltage.

- ▶ If a 12...36 V DC powered version is installed either in a wet environment or outdoors, all the electrical voltages must be of 35 V DC max.
- ▶ Shut down the electrical power source of all the conductors and isolate it before carrying out work on the system.
- ▶ All equipment connected to the wall-mounted or panel version of the flow transmitter 8025 must be double insulated with respect to the mains according to the standard UL/EN 61010-1.
- ▶ Observe all applicable accident protection and safety regulations for electrical equipment.

Risk of injury due to high pressure in the installation.

- ▶ Stop the circulation of fluid, cut off the pressure and drain the pipe before loosening the process connections.

Risk of injury due to high fluid temperatures.

- ▶ Use safety gloves to handle the device.
- ▶ Stop the circulation of fluid and drain the pipe before loosening the process connections.



DANGER

Risk of injury due to the nature of the fluid.

- ▶ Respect the prevailing regulations on accident prevention and safety relating to the use of aggressive fluids.



WARNING

Risk of injury due to nonconforming installation.

- ▶ The electrical and fluid installation can only be carried out by qualified and skilled staff with the appropriate tools.
- ▶ Observe mounting instructions of the fitting or sensor-fitting.

Risk of injury due to unintentional switch on of power supply or uncontrolled restarting of the installation.

- ▶ Take appropriate measures to avoid unintentional activation of the installation.
- ▶ Guarantee a set or controlled restarting of the process subsequent to any intervention on the device.

Risk of injury if the fluid pressure/temperature dependency is not respected.

- ▶ Take account of fluid temperature-pressure dependency according to the nature of the materials the fitting is made of (see the technical data and the operating instructions of the fitting used).
- ▶ Comply with the Pressure Equipment Directive 2014/68/EU.



Protect the device against electromagnetic interference, ultraviolet rays and, when installed outdoors, the effects of the climatic conditions.

7.2. Fluid installation of the compact version of the flowmeter 8025

The compact version of the flowmeter 8025 is inserted into an S020 fitting mounted on the pipe:

1. Install the S020 fitting on the pipe,
2. Install the compact version of the flowmeter 8025 in the S020 fitting,
3. Finalise the installation of the 8025.

7.2.1. Install the S020 fitting on the pipes

→ Select an S020 fitting suitable for the speed of the fluid in the pipes



To select a fitting, refer to the calculation tables on the technical data sheet for the relevant fitting.

- Choose a position for the fitting according to the design of the pipes, in such a way that:
- the upstream and downstream distances are respected according to the design of the pipes, see Fig. 4 and norm EN ISO 5167-1.
 - the pipes are always filled to the level of the sensor (see Fig. 5).
 - when mounted vertically, the flow direction of the fluid is upwards (see Fig. 5).
 - air bubbles do not form around the sensor (see Fig. 5).
- If necessary, use a flow conditioner to improve measurement precision.
- Install the fitting on the pipes according to the instructions in the relevant user manual.

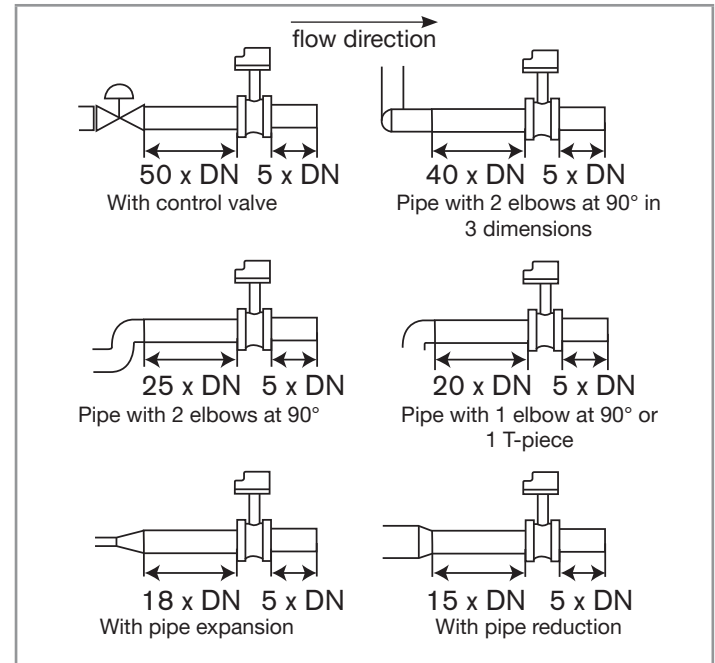


Fig. 4: Upstream and downstream distances depending on the design of the pipes

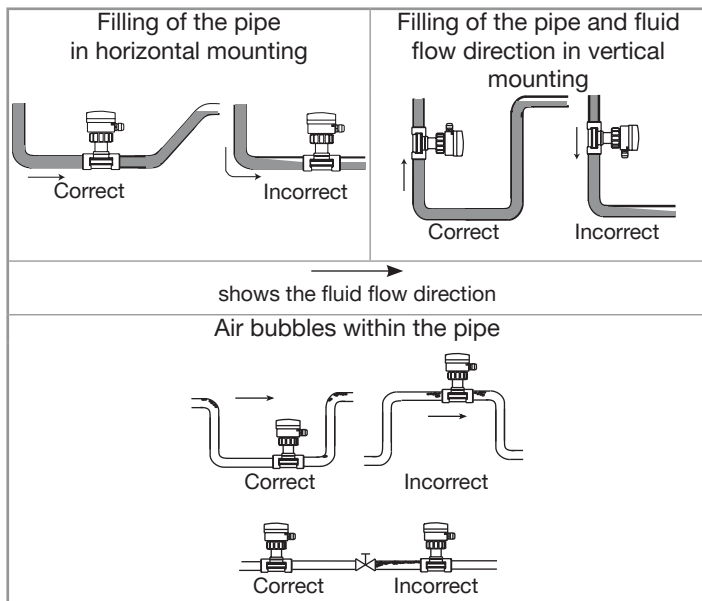


Fig. 5: Filling of the pipe, flow direction of the fluid, vertical mounting and air bubbles within the pipe

7.2.2. Installation of the flowmeter 8025 into the fitting S020

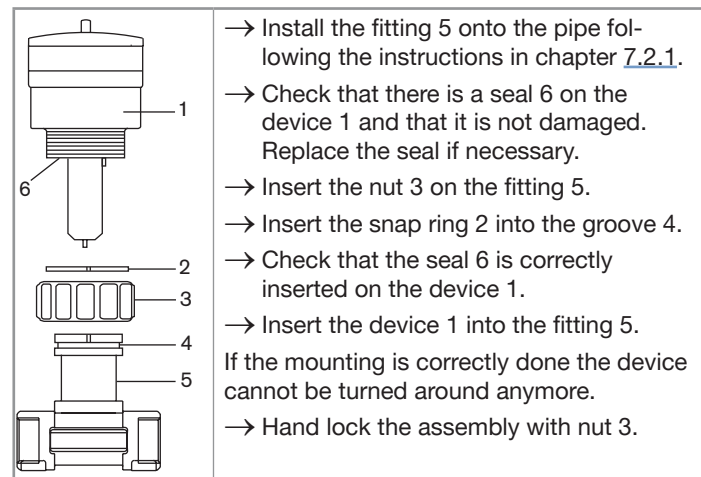


Fig. 6: Installation of the flowmeter 8025 compact version on the S020 fitting

7.2.3. Finalise the installation of the flowmeter 8025

- Wire the device and switch it on (see chapter 8.6).
- Set the K-factor or determine it with Teach-In (see chapter 9.6).

7.3. Installation of the flowmeter 8035

The flowmeter 8035 comprises a flow transmitter SE35 and a sensor-fitting S030. The flow transmitter SE35 is assembled on the sensor-fitting S030 by a quarter-turn rotation system:

1. Install the S030 sensor-fitting on the pipes,
2. Install the flow transmitter SE35 on the sensor-fitting S030,
3. Finalise the installation of the flowmeter 8035.

7.3.1. Install the S030 sensor-fitting on the pipes

→ Select a sensor-fitting S020 suitable for the speed of the fluid in the pipes



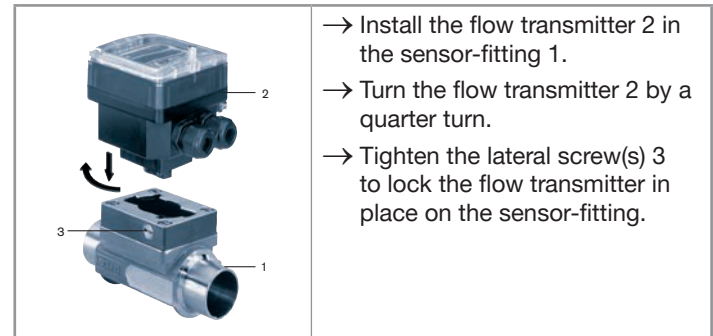
To select a sensor-fitting, refer to the calculation tables on the technical data sheet for the relevant sensor-fitting.

→ Choose a position for the sensor-fitting according to the design of the pipes, in such a way that:

- the upstream and downstream distances are respected according to the design of the pipes, see [Fig. 4](#), chapter [7.2.1](#) and norm EN ISO 5167-1.
- the pipes are always filled to the level of the sensor (see [Fig. 5](#), chapter [7.2.1](#)).
- when mounted vertically, the flow direction of the fluid is upwards (see [Fig. 5](#), chapter [7.2.1](#)).
- air bubbles do not form around the sensor-fitting (see [Fig. 5](#), chapter [7.2.1](#)).

- If necessary, use a flow conditioner to improve measurement precision.
- Install the sensor-fitting on the pipes according to the instructions in the relevant Operating Instructions.

7.3.2. Install the flow transmitter SE35 on the sensor-fitting S030



- Install the flow transmitter 2 in the sensor-fitting 1.
- Turn the flow transmitter 2 by a quarter turn.
- Tighten the lateral screw(s) 3 to lock the flow transmitter in place on the sensor-fitting.

Fig. 7: Installation of the flow transmitter SE35 on the sensor-fitting S030

7.3.3. Finalise the installation of the flowmeter 8035

- Wire the device and switch it on (see chapter [8.6](#)).
- Set the K-factor or determine it with Teach-In (see chapter [9.6](#)).

7.4. Installation of the flow transmitter SE35 on the sensor-fitting S070 or S077

The flow transmitter SE35 is installed on the pipes using the sensor-fitting S070 or S077. The flow transmitter SE35 is assembled on the sensor-fitting S070 or S077 by a quarter-turn system:

1. Install the sensor-fitting S070 or S077 on the pipes
2. Install the flow transmitter SE35 on the sensor-fitting S070 or S077.
3. Finalise installation.

7.4.1. Install the sensor-fitting S070 or S077 on the pipes

→ Select a sensor-fitting S070 or S077 suitable for the viscosity of the fluid.



To select a sensor-fitting, refer to the technical data sheet for the relevant sensor-fitting.



CAUTION

Risk of damage when installing the sensor-fitting.

- ▶ Follow the installation instructions given in the user manual for the sensor-fitting.

→ Install the sensor-fitting S070 or S077 on the pipes in such a way that:

- the axis of the oval gears are set horizontally, as shown in Fig. 8.
- the installation instructions given in the Operating Instructions for the relevant sensor-fitting are respected.

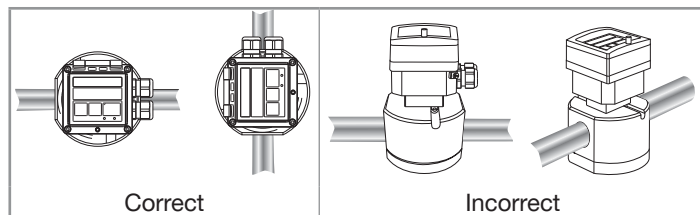


Fig. 8: The axis of the oval gears must be horizontal

7.4.2. Install the flow transmitter SE35 on the sensor-fitting S070 or S077

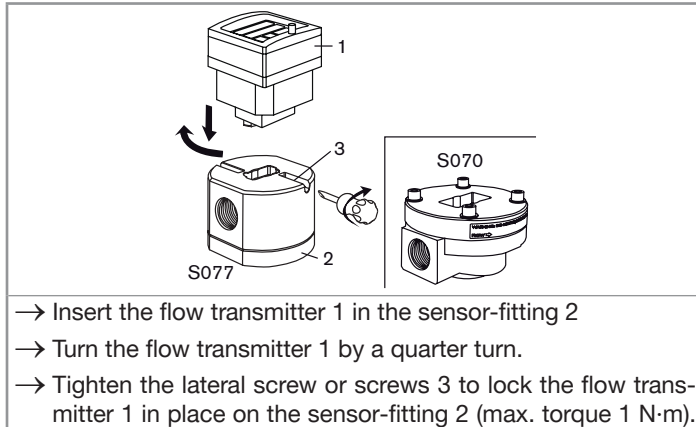


Fig. 9: Installation of the flow transmitter SE35 on the sensor-fitting S070 or S077

7.4.3. Finalise installation of the flow transmitter SE35 with the sensor-fitting S070 or S077

- Wire the device and switch it on (see chapter 8.6).
- Set the K-factor or determine it with Teach-In (see chapter 9.6).

7.5. Installation of a panel version of the 8025 flowmeter



Install the panel version of the device in an electrical cabinet with a protection class at least IP54 to ensure a degree of pollution 2 inside the electrical cabinet.

- Respect the dimensions indicated in Fig. 10 to cut the opening in the electrical cabinet door.

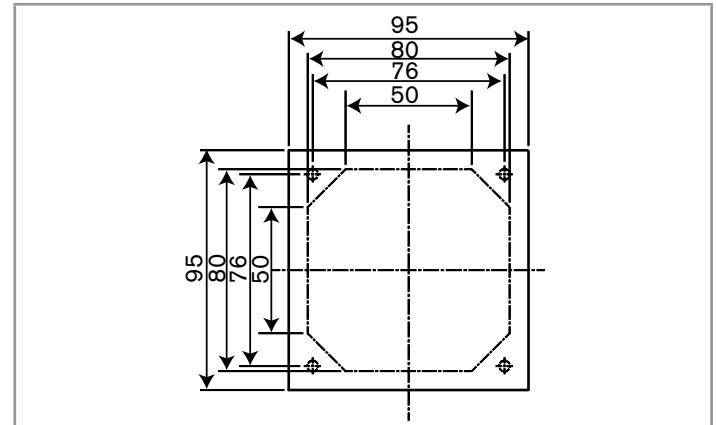


Fig. 10: Dimensions [mm] of the electrical cabinet frontage cutting plan

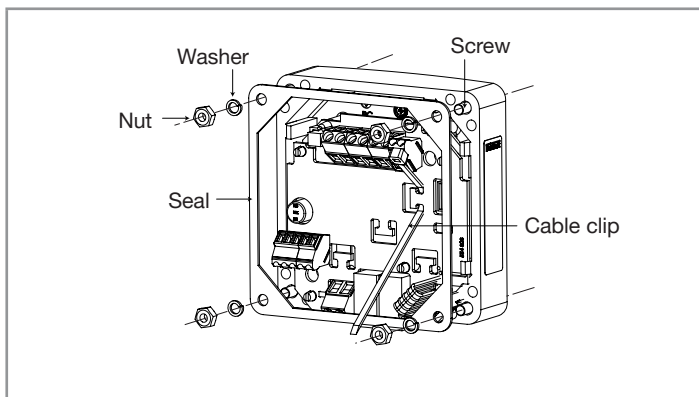


Fig. 11: Installation of a flow transmitter 8025 panel version

- Insert the 4 screws in the housing (from the front). If the cabinet door is too thick, use the 4 supplied M4*25 screws.
- Insert the seal on the external threads of the 4 screws (rear of the housing).
- Put the assembly on the cutout, electronics turned to the inside of the cabinet.
- Put the 4 washers on the 4 screws.
- Put a nut on each of the 4 screws and tighten the nuts to secure the device to the cabinet.
- Wire according to the instructions in chapter 8.7.
- Set the K-factor or determine it with Teach-In (see chapter 9.6).

7.6. Installation of a flow transmitter 8025 wall-mounted version

NOTICE

Risk of material damage if the cable glands are not tightly screwed on the housing

- ▶ Before installing the wall-mounted housing on its support, tighten the nuts of the entry item of the cables glands at a torque of 1.5 N·m.

The flow transmitter in a wall-mounted version has 4 holes in the bottom of the housing.

→ Remove the blanking strips covering the screws (Fig. 12).

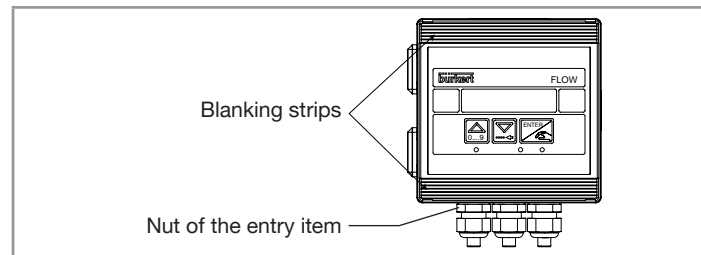


Fig. 12: Location of the fastening nuts and the blanking strips

→ Loosen the 4 screws and open the cover to get access to the holes [1].

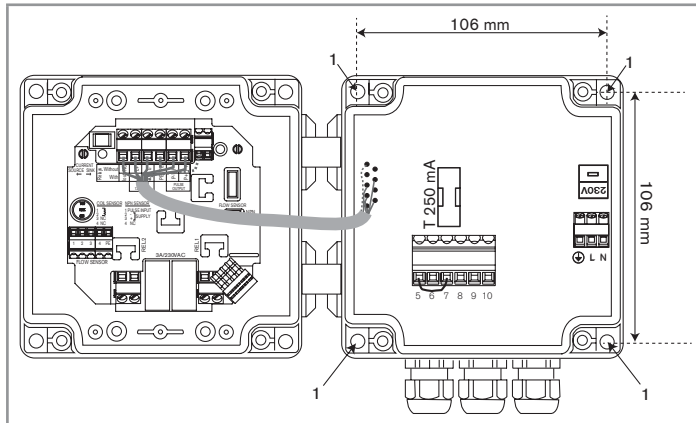


Fig. 13: Installation of a wall-mounted version

- Secure the housing to the support respecting the dimensions indicated in [Fig. 13](#).
- Wire according to the instructions in chapter [8.7](#) or [8.8](#).
- Close the housing and tighten the 4 screws of the cover.
- Set the K-factor or determine it with Teach-In (see chapter [9.6](#)).

8. WIRING

8.1. Safety instructions

DANGER

Risk of injury due to electrical voltage.

- ▶ If a 12...36 V DC powered version is installed either in a wet environment or outdoors, all the electrical voltages must be of 35 V DC max.
- ▶ Shut down the electrical power source of all the conductors and isolate it before carrying out work on the system.
- ▶ All equipment connected to the wall-mounted or panel version of the flow transmitter 8025 must be double insulated with respect to the mains according to the standard UL/EN 61010-1.
- ▶ Observe all applicable accident protection and safety regulations for electrical equipment.

WARNING

Risk of injury due to non-conforming installation.

- ▶ The electrical and fluid installation can only be carried out by qualified and skilled staff with the appropriate tools.
- ▶ Fit a circuit breaker or a switch to the electrical installation in which the device is installed.
- ▶ Install the circuit breaker or switch in a place which is easy to reach.
- ▶ Identify the circuit breaker or switch as the electrical power cut-off system for the device.



WARNING

Risk of injury due to non-conforming installation. (continued)

- ▶ Install appropriate overload safety devices. For the versions fed at 115/230 V AC, insert the device protecting against over-currents in the live conductor (L) and the neutral conductor (N).
- ▶ Do not power a device, version 12...36 V DC, with an alternating voltage or with a direct voltage higher than 36 V DC.
- ▶ Do not power a device, version 115/230 V AC, with an alternating voltage higher than 230 V AC, or with a direct voltage.



WARNING

Risk of injury due to unintentional switch on of power supply or uncontrolled restarting of the installation.

- ▶ Take appropriate measures to avoid unintentional activation of the installation.
- ▶ Guarantee a set or controlled restarting of the process subsequent to any intervention on the device.



Protect the device against electromagnetic interference, ultraviolet rays and, when installed outdoors, the effects of the climatic conditions.



For a correct operation of the device, respect the following recommendations for the electrical installation:

- Make sure the installation is equipotential. See chapter 8.2.
- Do not install the cables near high voltage or high frequency cables; if a combined installation cannot be avoided, a minimum space of 30 cm should be respected.



For a device fed at 12...36 V DC, respect the following recommendations for the electrical installation:

- Use a filtered and regulated 12...36 V DC power supply. The circuit has to be safety extra low voltage (SELV), with a safe energy level.



The power supply of the device can be damaged if it is not protected.

- Protect the device power supply by means of a 300 mA slow blow fuse and a switch.



The power supply of a transistor output can be damaged if it is not protected.

- Protect the power supply of each transistor output by means of a 125 mA slow blow fuse.



The relays can be damaged if not protected.

- Protect the relays by means of a max. 3 A fuse and a circuit breaker (depending on the process).
- Do not apply both a dangerous voltage and a safety extra-low voltage to the relays.



The device can be damaged if it is not tight.

- Insert the supplied blanking plugs into the unused cable glands to ensure the tightness of the device.

8.2. Making the installation equipotential

To ensure the equipotentiality of the installation (power supply - device - fluid):

- Connect together the various earth spots in the installation to eliminate the potential differences that may occur between different earthes.
- Observe faultless earthing of the shield of the power supply cable, at both ends.
- Connect the negative power supply terminal to the earth to suppress the effects of common mode currents. If this connection cannot be made directly, a 100 nF/50 V capacitor can be fitted between the negative power supply terminal and the earth.
- Special attention has to be paid if the device is installed on plastic pipes because there is no direct earthing possible. Proper earthing is performed by earthing together the metallic instruments such as pumps or valves, that are as

close as possible to the device. If no such instrument is near the device, insert metallic earth rings inside the plastic pipes upstream and downstream from the device and connect these parts to the same earth. The earth rings must be in contact with the fluid.

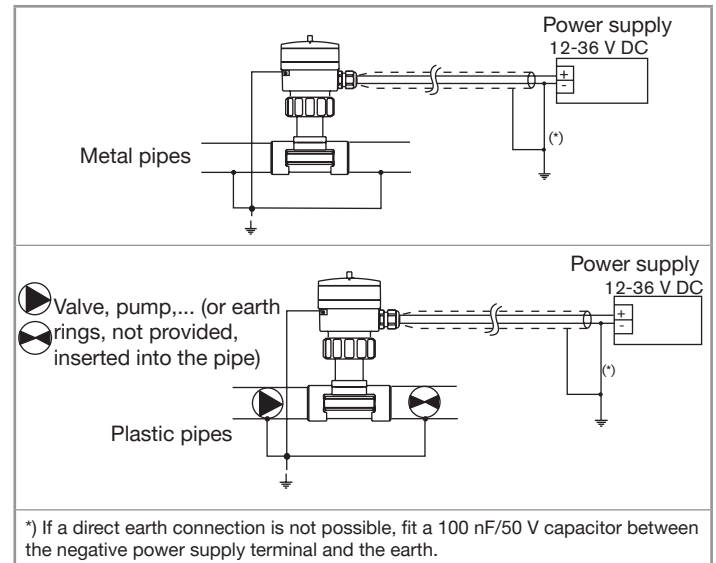


Fig. 14: Flowmeter 8025 compact version, flowmeter 8035 and flow transmitter SE35 equipotentiality skeleton diagram with metal or plastic pipes

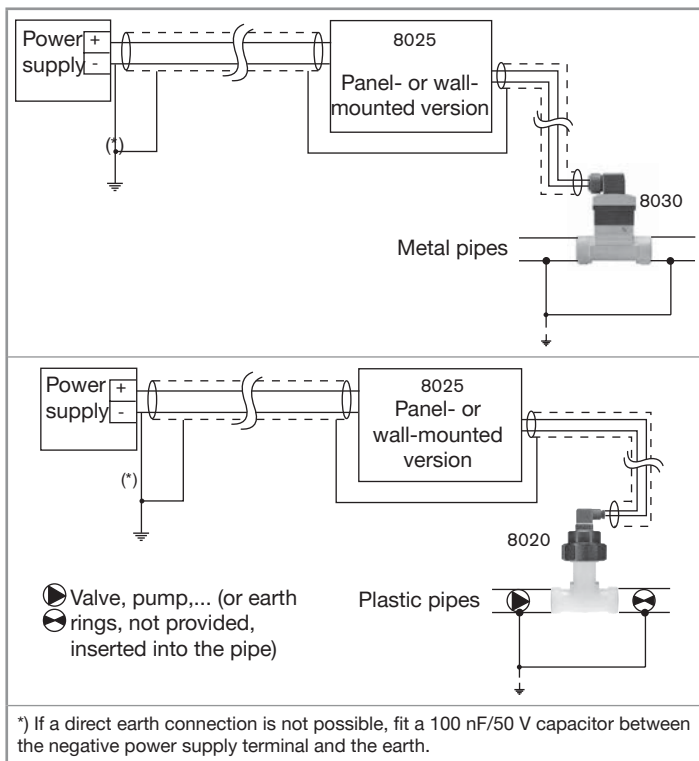


Fig. 15: Flow transmitter 8025 panel version or wall-mounted version equipotentiality skeleton diagram with metal or plastic pipes

8.3. Specifications of the connection cables

8.3.1. 8025 compact version, 8035 and SE35

Specification of the cables and the conductors (not supplied)	Recommended value
Shielded cable	yes
Length of the cable	max. 50 m
External diameter of the cable	5...8 mm
Operating temperature, UL device	min. 90 °C
Operating temperature, non UL device	min. 80 °C
Cross section of the local earth conductor	min. 0.75 mm ²
Cross section of the conductors, except the local earth conductor	0.2...1.5 mm ²

Table 1: Specifications of the cables and wires for the female connector type 2518 with article number 00572264 (supplied), or the female connector type 2509 with article number 00162673 (not supplied)

Specification of the cables and the conductors (not supplied)	Recommended value
Shielded cable	yes
Length of the cable	max. 50 m
External diameter of the cable, if 1 cable per cable gland	6...12 mm

Specification of the cables and the conductors (not supplied)	Recommended value
External diameter of a cable, if 2 cables per cable gland	3...5 mm, using the supplied multi-way seal
Operating temperature, UL device	min. 90 °C
Operating temperature, non UL device	min. 80 °C
Cross section of the local earth conductor	min. 0.75 mm ²
Cross section of the conductors, except the local earth conductor	0.2...1.5 mm ²

Table 2: Specifications of the cables and wires for the wiring through the M20x1.5 cable glands

8.3.2. 8025 in panel version

Specification of the cables and the conductors (not supplied)	Recommended value
Shielded cable	yes
Length of the cable	max. 50 m
Operating temperature, UL device	min. 90 °C
Operating temperature, non UL device	min. 80 °C
Cross section of the conductors	0.2...1.5 mm ²

Table 3: Specifications of the cables and wires for the direct wiring to the terminal blocks of a panel-mounted version

8.3.3. 8025 in wall-mounting version

Specification of the cables and the conductors (not supplied)	Recommended value
Shielded cable	yes
Length of the cable	max. 50 m
External diameter of the cable, if 1 cable per cable gland	4...8 mm
Operating temperature, UL device	min. 90 °C
Operating temperature, non UL device	min. 80 °C
Cross section of the conductors	0.2...1.5 mm ²

Table 4: Specifications of the cables and wires for the wiring through the M16x1.5 cable glands

8.4. Wiring of devices with a 4 pin male fixed connector

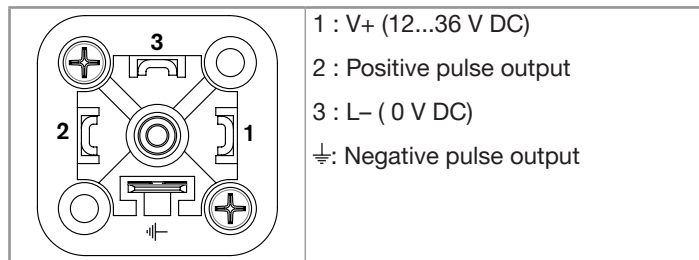


Fig. 16: Pin assignment of the 4 pin male fixed connector

→ Assemble and wire the female connector type 2518 (supplied) according to Fig. 17.

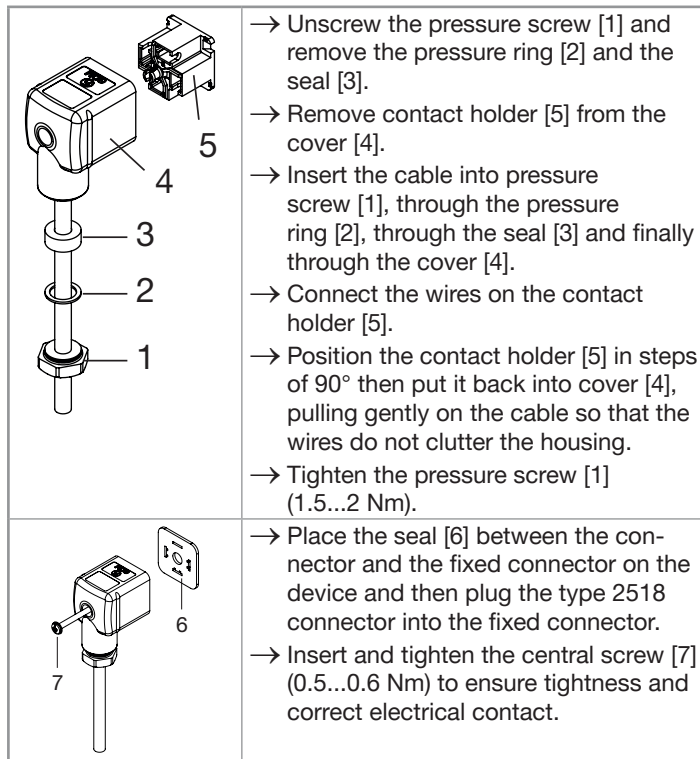


Fig. 17: Assembling the female connector type 2518 (supplied)

→ Wire the electrical supply and the current output using one of the wiring plans of Fig. 18.

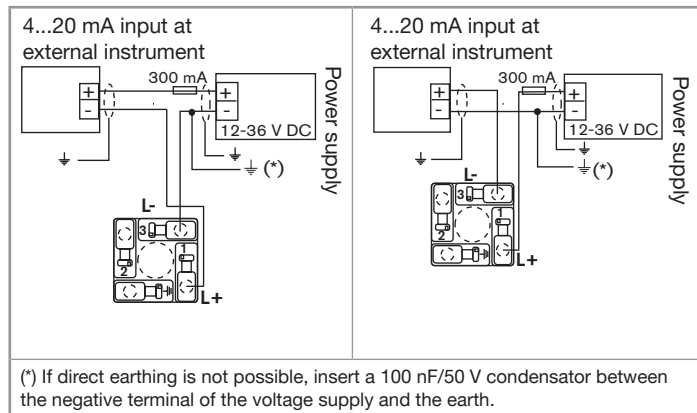


Fig. 18: Possible wiring of the current output of a compact version with 4 pin male fixed connector

→ Wire the transistor output using one of the wiring plans of Fig. 19.

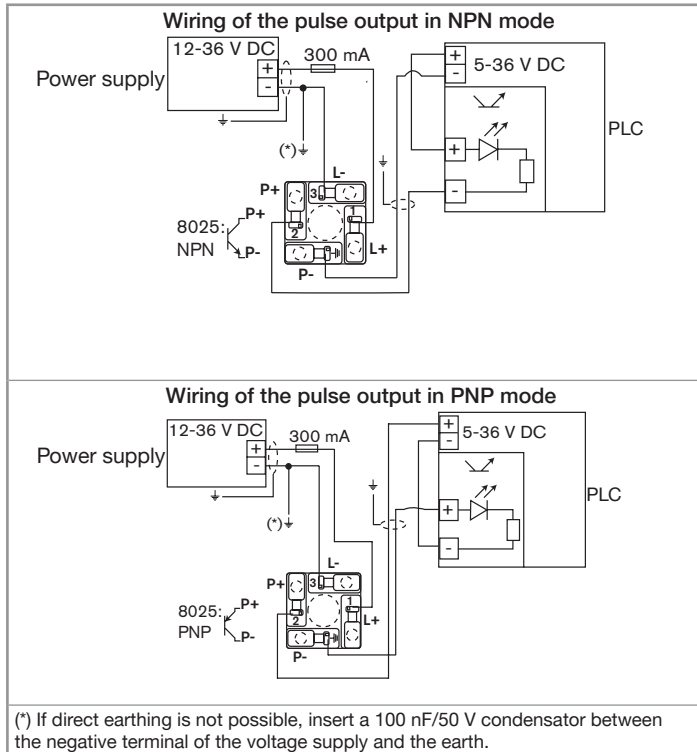


Fig. 19: Wiring of the pulse output in NPN or PNP mode, of a compact version with 4 pin male fixed connector

8.5. Configuring the selectors

! Only move the selectors when the power supply is off.

→ Before wiring the device, configure the selectors on the electronic board. See chapter [8.5.1](#) to [8.5.3](#).

8.5.1. FLOW SENSOR selector

The FLOW SENSOR selector makes it possible to configure the type of flow sensor: coil or Hall.

! For the version with 4 pin male fixed connector, the selector is factory-set depending on the output signal of the flow sensor mounted on the device.

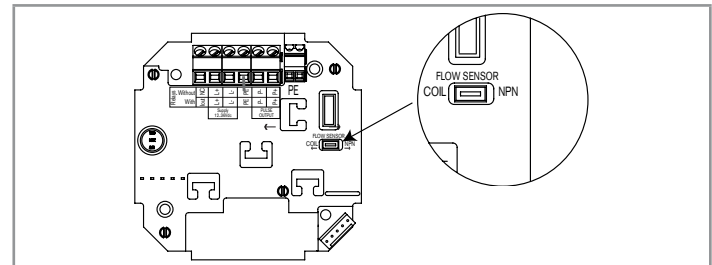


Fig. 20: Position of the FLOW SENSOR connector on the electronic board

Table 5: Positioning of the FLOW SENSOR selector depending on the output signal of the flow sensor

Output signal of sensor	Position of the FLOW SENSOR selector
Pulse, NPN (hall)	NPN
Sinus (coil)	COIL

8.5.2. SOURCE/SINK selector

The SOURCE/SINK selector makes it possible to set the 4...20 mA current output of the versions with relays, in sourcing or in sinking mode. Set the selector depending on the type of wiring.

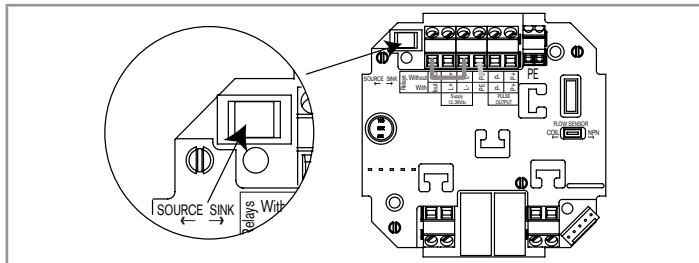


Fig. 21: Position of the SOURCE/SINK selector

Table 6: Positioning of the Source / Sink selector depending on the wiring of the current output of a version with relays

Wiring the 4...20 mA output	Position of the SOURCE/SINK selector on a version with relays
Not wired (jumper wire in place)	SOURCE
Sourcing mode	SOURCE
Sinking mode	SINK

8.5.3. 115/230 V AC selector

The 115/230 V AC selector makes it possible to configure the supply voltage of the device in a 115/230 V AC version.

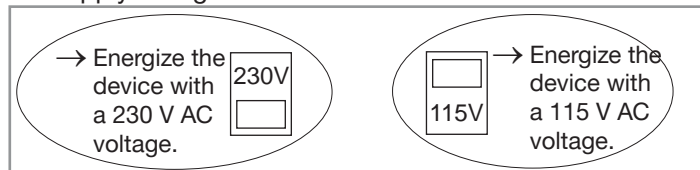


Fig. 22: Selector of the supply voltage on a 115/230 V AC version

8.6. Wiring the 8025 compact version, the 8035 and the SE35 with or without relays, with cable glands

8.6.1. Wiring instructions



Seal the unused cable gland using the blanking plug supplied to make sure the device is tight.

- Unscrew the nut of the cable gland.
- Remove the transparent disc inside the cable gland.
- Insert the blanking plug.
- Screw the nut back.

- Unfasten the screw and lift the transparent lid
- Untighten the 4 screws and remove the cover from the device.
- For the versions with relays, insert the cable clip as shown in [Fig. 23](#).

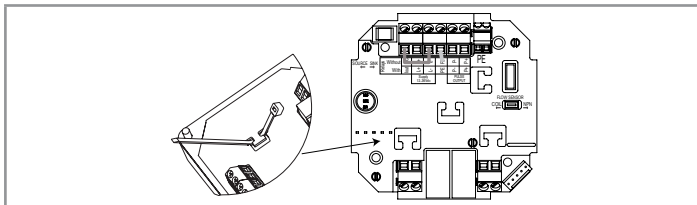


Fig. 23: Inserting the cable clips

- Before wiring the device insert the supplied cable clips into the slots of
 - the electronic board
 - the 115/230 V AC power supply board if the device has such a board.
- Unscrew the nuts of the cable glands.
- Pass the cables through a nut and through a cable gland.
- Set the selectors according to chapter [8.5](#).
- Connect the terminal block according to the indications of chapter [8.6.3](#) to [8.6.6](#).

8.6.2. Wiring of the relays (versions with relay output)



DANGER

Danger due to the operation of the relay outputs of a UL device in a wet location.

- ▶ If a UL device is used in a wet location:
 - energize the relay outputs with an alternating voltage of max. 16 Vrms and 22.6 Vpeak.
 - or energize the relay outputs with a direct voltage of max. 35 V DC.

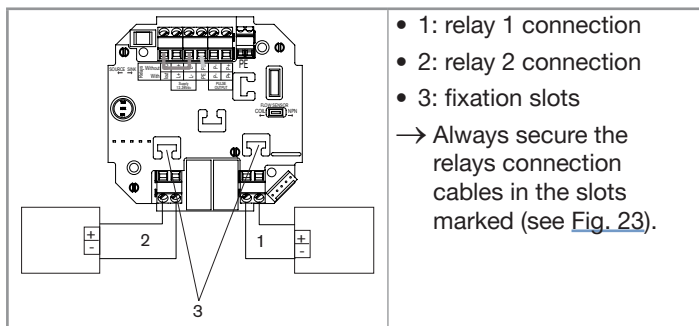


Fig. 24: Wiring of the relays

8.6.3. Wiring the power supply, the current output and the pulse output, version 12...36 V DC, without relays

- Before wiring the device, configure the selectors on the electronic board (see chapter [8.5](#)).
- Obey the wiring instructions given in chapter [8.6.1](#).

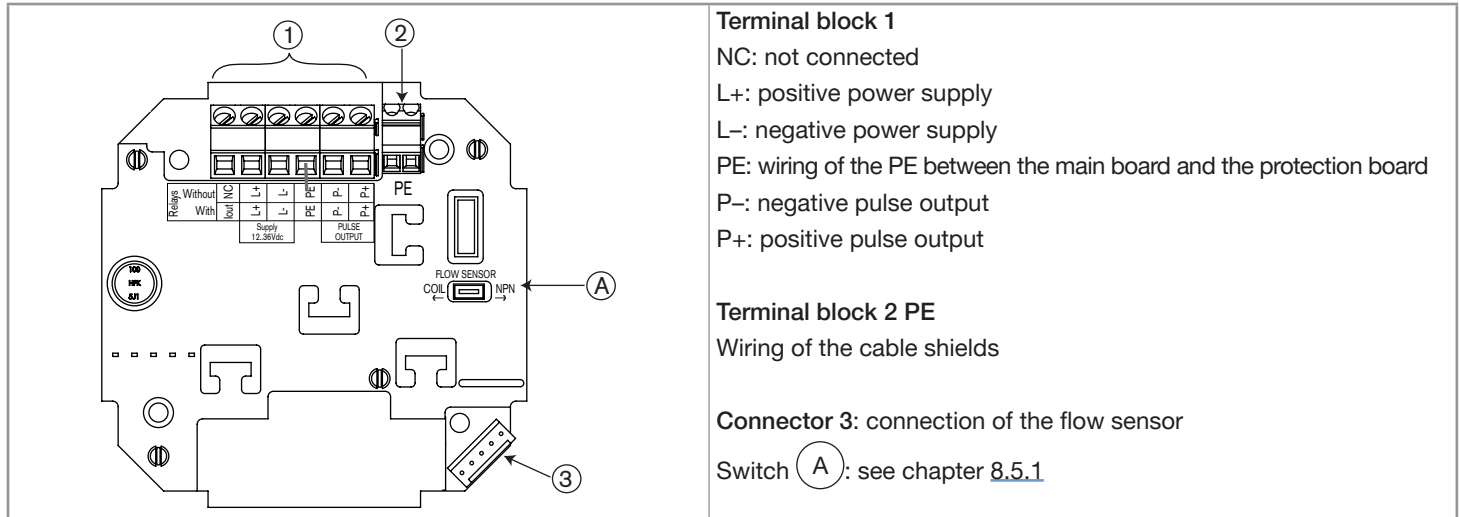


Fig. 25: Terminal assignment of a 12...36 V DC compact version without relays, with cable glands

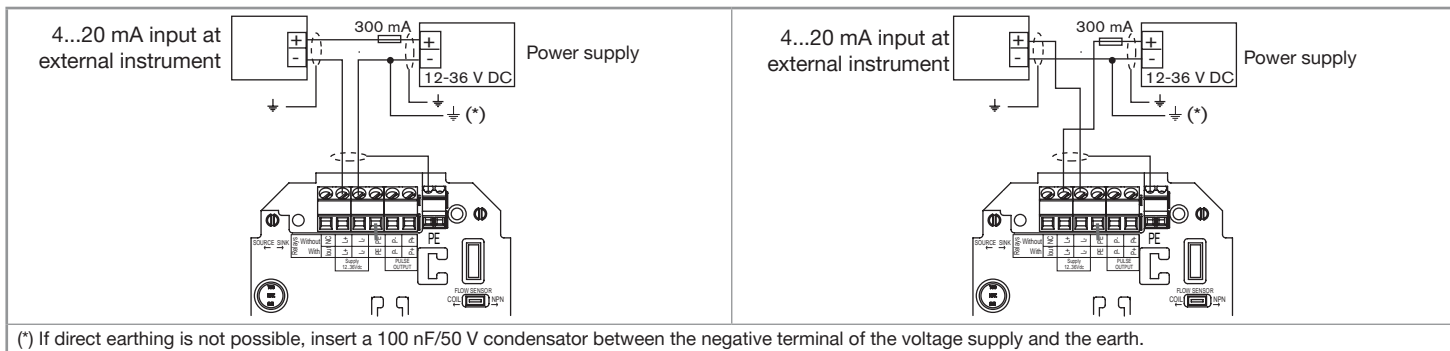


Fig. 26: Possible wiring of the current output of a compact version, 12...36 V DC, without relays, with cable glands

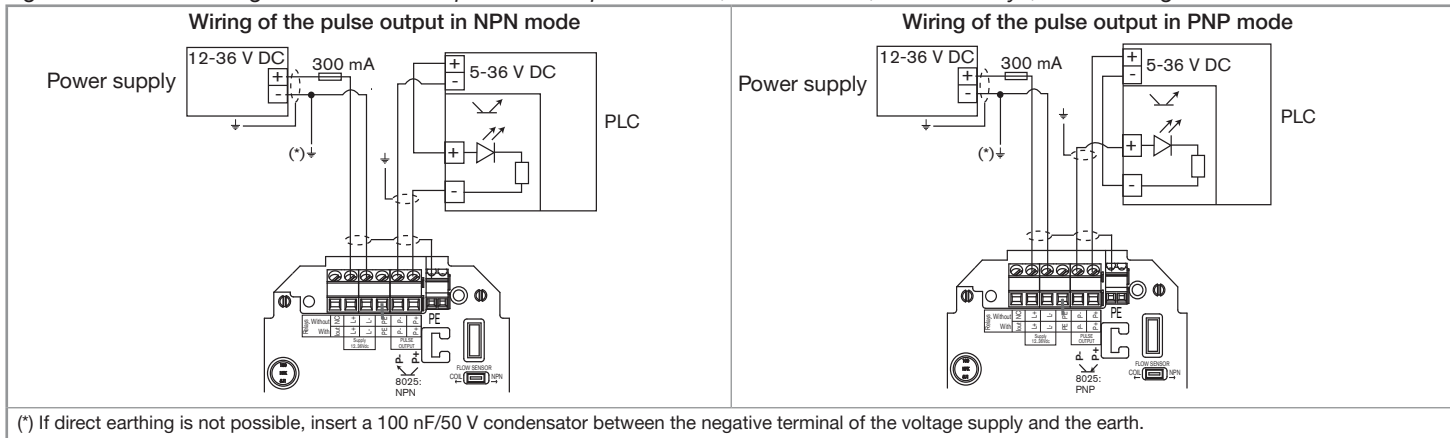


Fig. 27: Wiring, in NPN or PNP mode, of the pulse output of a compact version, 12...36 V DC, without relays, with cable glands

8.6.4. Wiring the power supply, the current output and the pulse output, version 12...36 V DC, with relays

- Before wiring the device, configure the selectors on the electronic board (see chapter [8.5](#)).
- Obey the wiring instructions given in chapter [8.6.1](#).

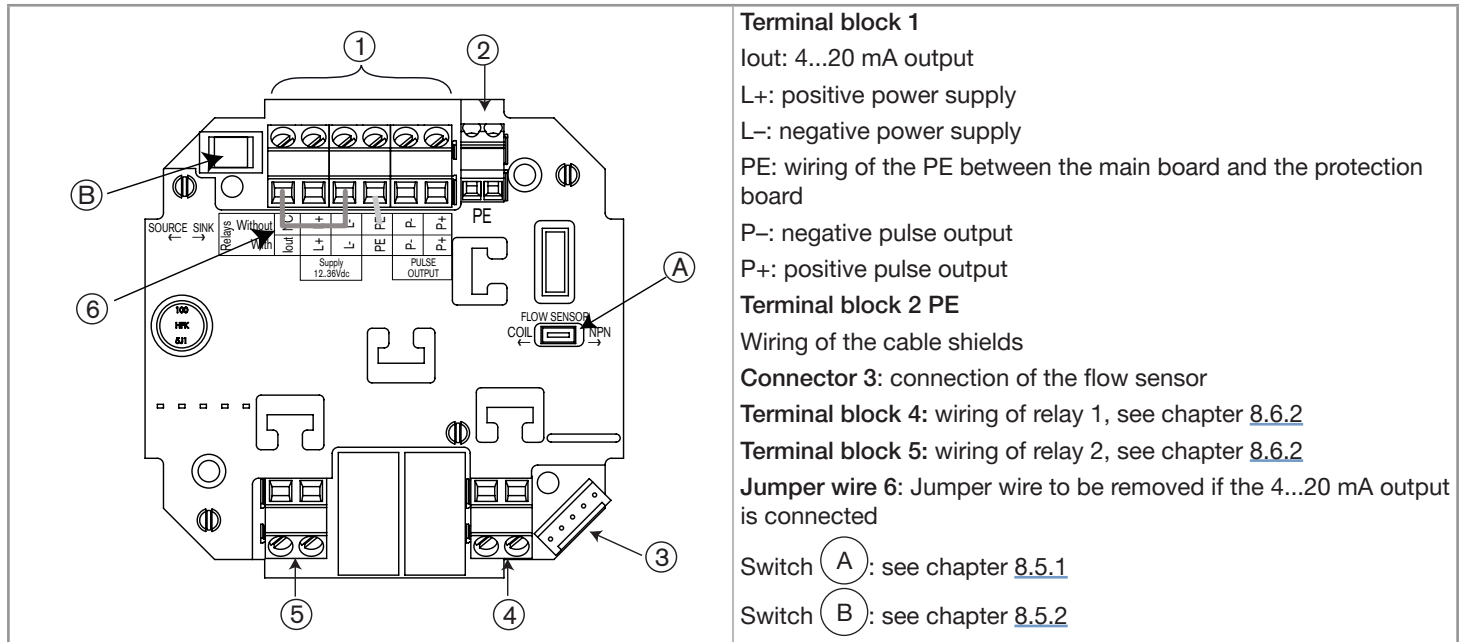
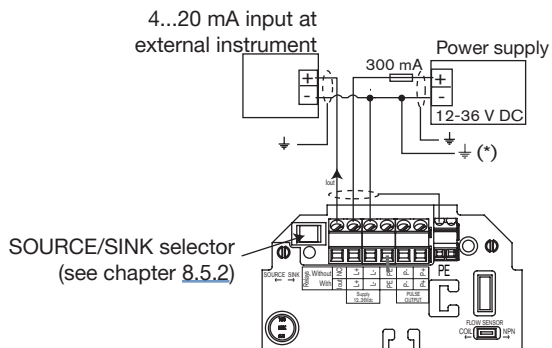
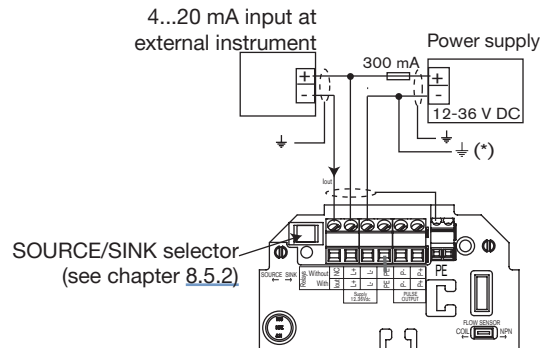


Fig. 28: Terminal assignment of a 12...36 V DC compact version with relays, with cable glands

Wiring of the current output in sourcing mode



Wiring of the current output in sinking mode



(*) If direct earthing is not possible, insert a 100 nF/50 V condensator between the negative terminal of the voltage supply and the earth.



If the current output is wired, remove the jumper wire between the terminals Iout and L-.

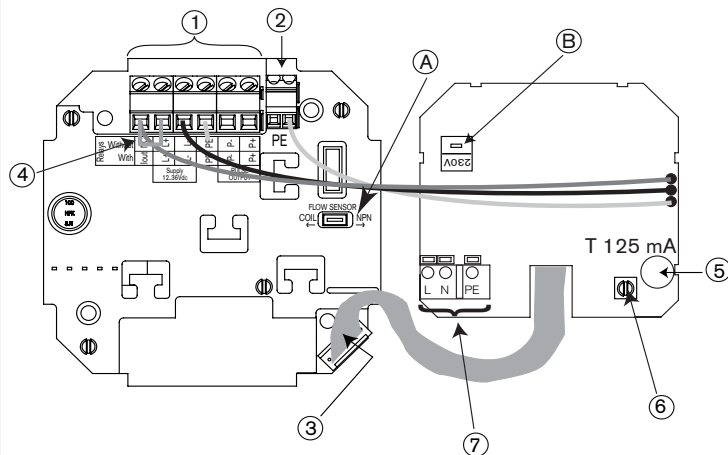
Fig. 29: Wiring, in sourcing or sinking mode, the current output of a compact version, 12...36 V DC, with relays, with cable glands

8.6.5. Wiring the power supply, the current output and the pulse output, version 115/230 V AC, without relays

- Before wiring the device, configure the selectors on the electronic board (see chapter 8.5).
- Obey the wiring instructions given in chapter 8.6.1.



The red wire is wired on the NC terminal to make the wiring of the 4...20 mA output easier (see Fig. 32). The jumper wire 4 between L+ and NC energizes the NC terminal.



Switch **A**: see chapter 8.5.1

Switch **B**: see chapter 8.5.3

Terminal block 1

NC: not connected (terminal for the wiring of the 4...20 mA output)

L+ (red wire, factory wired)

PE: wiring of the PE between the main board and the protection board

L- (black wire, factory wired)

P-: negative pulse output

P+: positive pulse output

Terminal block 2 PE

Shield connection (green/yellow wire, factory wired)

Connector 3: connection of the flow sensor

Jumper wire 4: jumper wire to be removed if the 4...20 mA output is connected

Time-delay fuse 5: fuse to protect the 115 V AC or 230 V AC power supply

Earth terminal 6 of the housing: internally connected to the earth plug

Terminal block 7: wiring of the 115/230 V AC power supply

Fig. 31: Terminal assignment of a 115/230 V AC compact version without relays, with cable glands

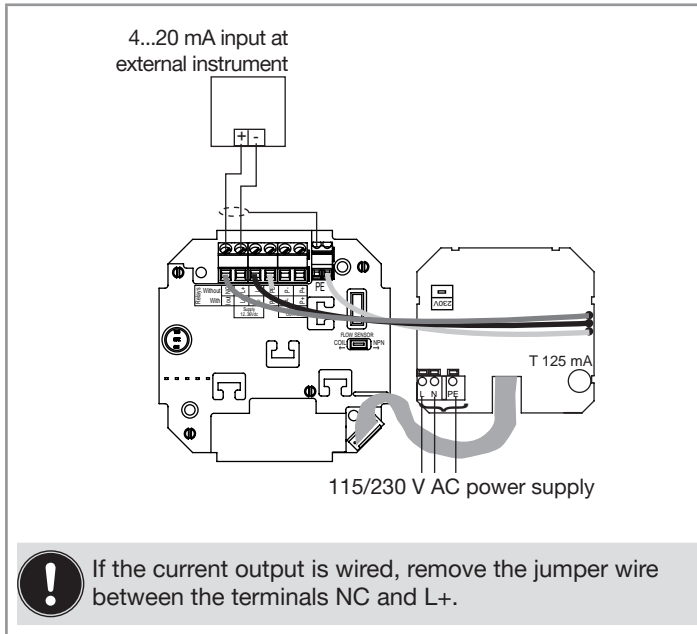
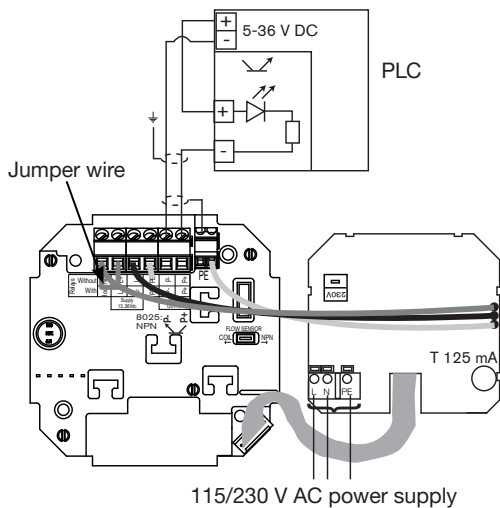
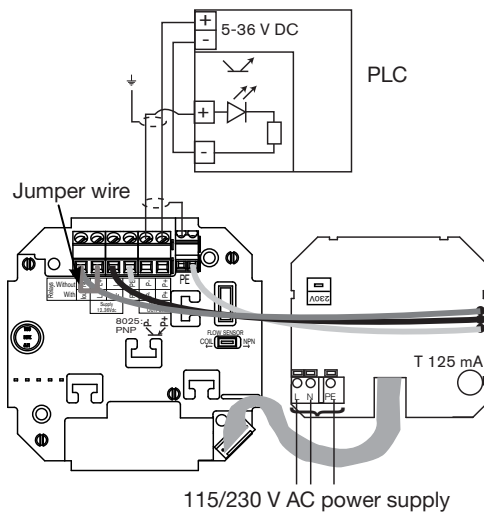


Fig. 32: Wiring of the current output of a compact version, 115/230 V AC, without relays, with cable glands

Wiring of the pulse output in NPN mode



Wiring of the pulse output in PNP mode



(*) If direct earthing is not possible, insert a 100 nF/50 V condensator between the negative terminal of the voltage supply and the earth.



► If the current output is not wired, make sure the jumper wire between the terminals NC and L+ is in place.

Fig. 33: Wiring, in NPN or PNP mode, of the pulse output of a 115/230 V AC compact version, without relays, with cable glands

8.6.6. Wiring the power supply, the current output and the pulse output, 115/230 V AC, with relays

→ Before wiring the device, configure the selectors on the electronic board (see chapter [8.5](#)).

→ Obey the wiring instructions given in chapter [8.6.1](#).

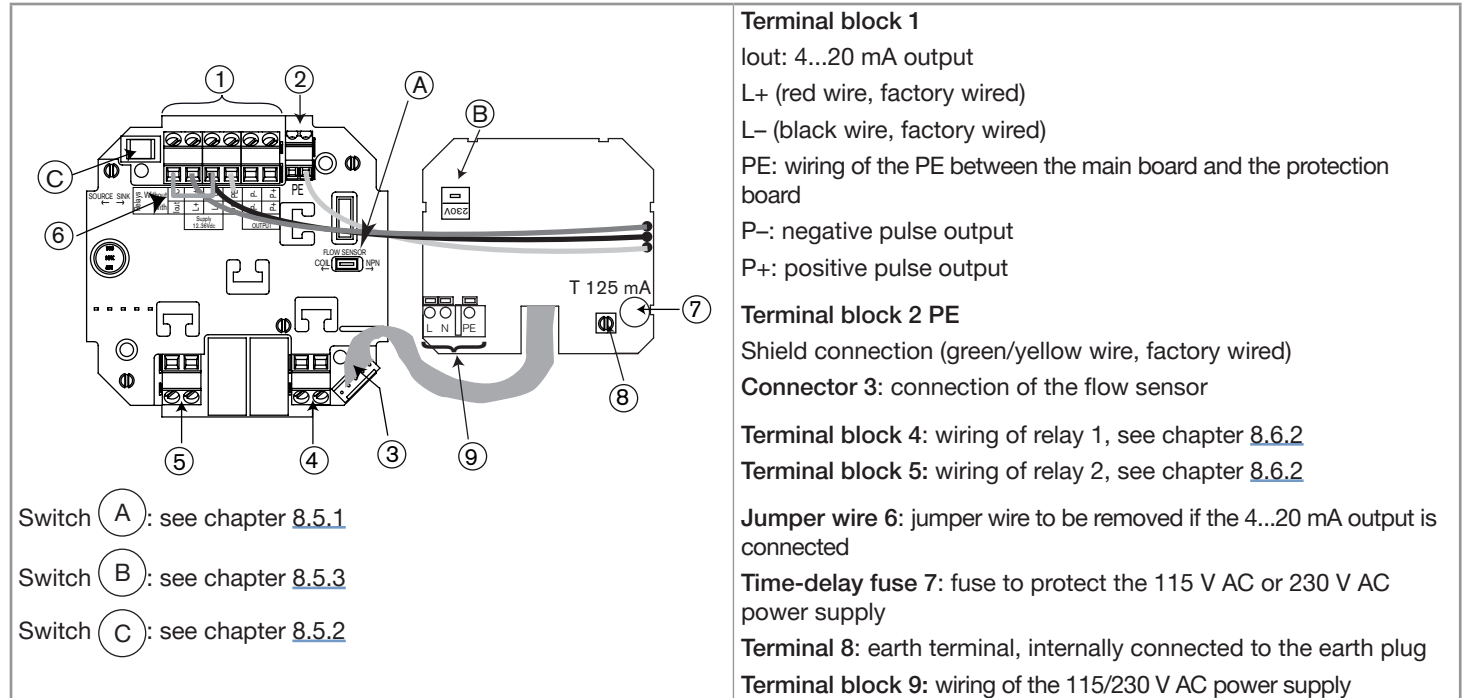


Fig. 34: Terminal assignment of a 115/230 V AC compact version, with relays, with cable glands

→ Connect the relays according to chapter 8.6.2.

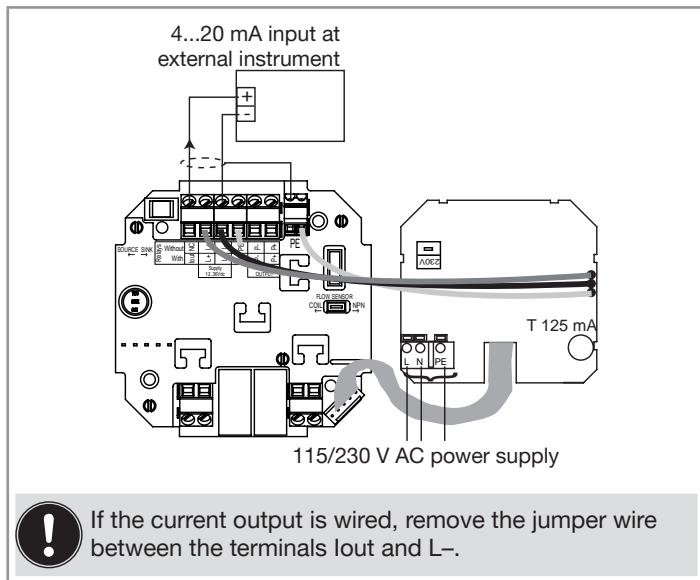


Fig. 35: Wiring in sourcing mode of the current output of a compact version, 115/230 V AC, with relays, with cable glands

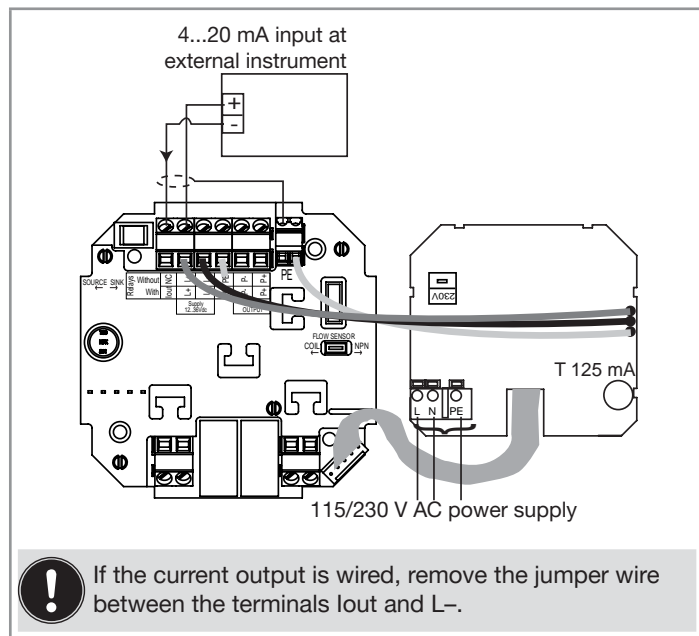


Fig. 36: Wiring in sinking mode of the current output of a compact version, 115/230 V AC, with relays, with cable glands

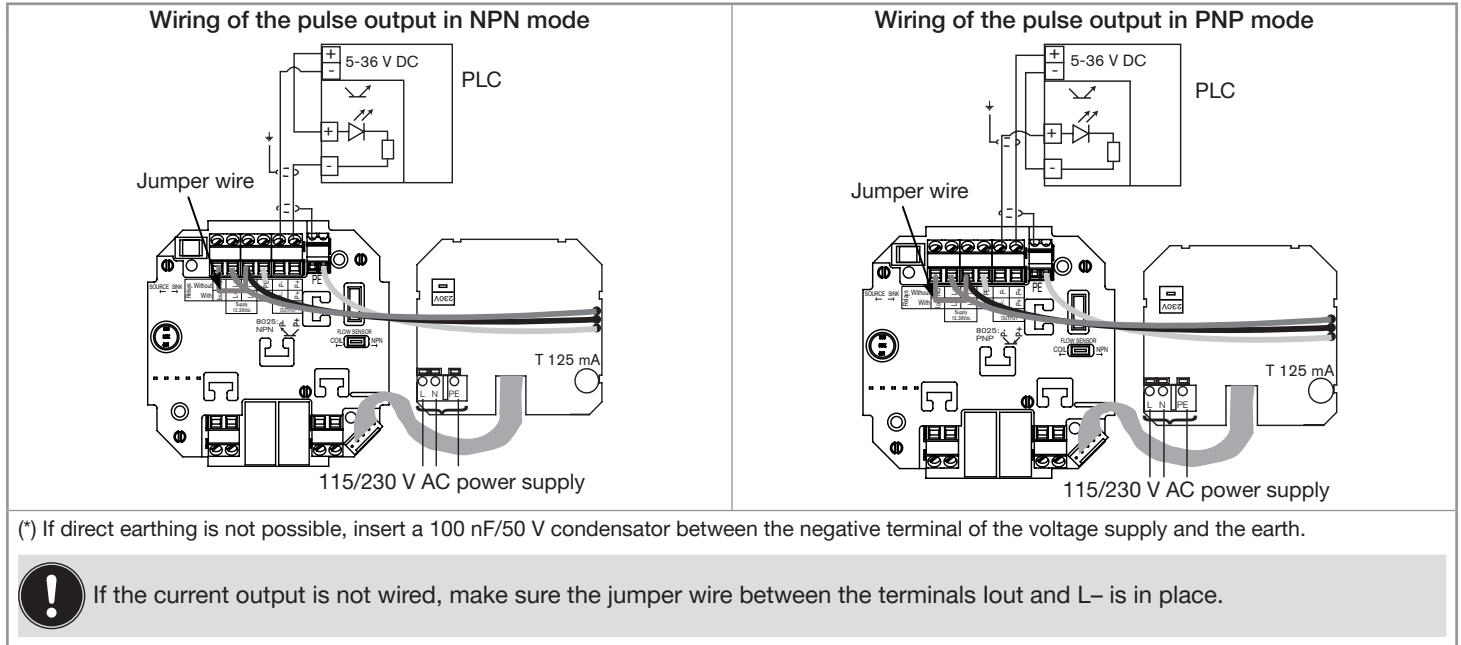


Fig. 37: Wiring, in NPN or PNP mode, of the pulse output of a 115/230 V AC compact version, with relays, with cable glands

→ Connect the relays according to chapter [8.6.2](#).

8.7. Wiring the 8025 panel version or wall-mounted version, 12...36 V DC, with or without relays

8.7.1. Wiring the power supply, the current output and the pulse output, 12...36 V DC, without relays

- For a wall-mounted version, obey the wiring instructions of chapter [8.8.1](#).
- Configure the FLOW SENSOR selector on the electronic board (see chapter [8.5](#)).
- Connect the flow sensor to the transmitter according to chapter [8.7.3](#).

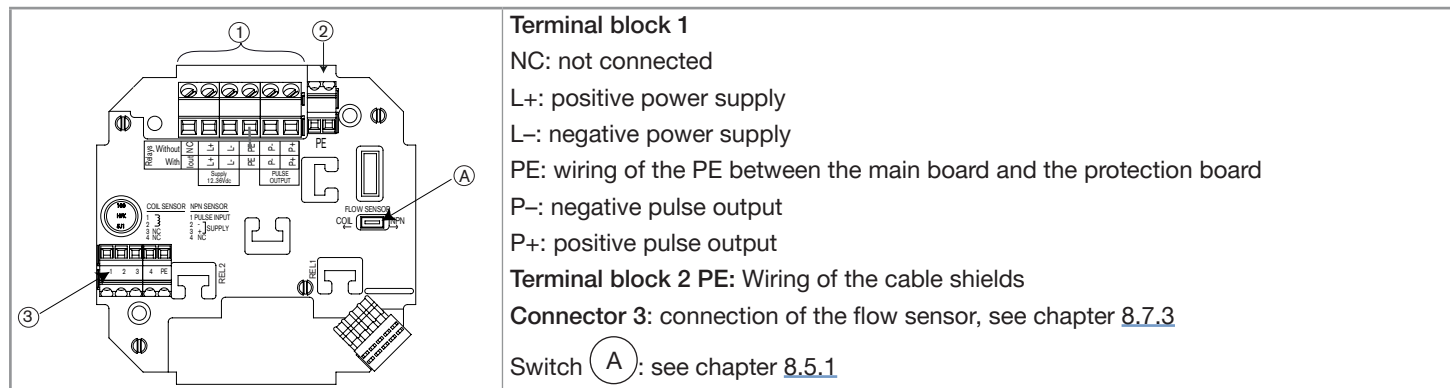


Fig. 38: Terminal assignment of a panel-mounted or wall-mounted version, 12...36 V DC, without relays

The wiring of the current output and the wiring of the pulse output of a flow transmitter 8025 panel version or wall-mounted version, 12...36 V DC, without relays, are the same as for a flowmeter 8025 compact version, 12...36 V DC, without relays, with cable glands.

- Wire the current output according to [Fig. 26](#) of chapter [8.6.3](#).
- Wire the pulse output according to [Fig. 27](#) of chapter [8.6.3](#).

8.7.2. Wiring the power supply, the current output and the pulse output, 12...36 V DC, with relays

- For a wall-mounted version, obey the wiring instructions of chapter [8.8.1](#).
- Before wiring the device, configure the selectors on the electronic board (see chapter [8.5](#)).
- Connect the flow sensor to the transmitter according to chapter [8.7.3](#).

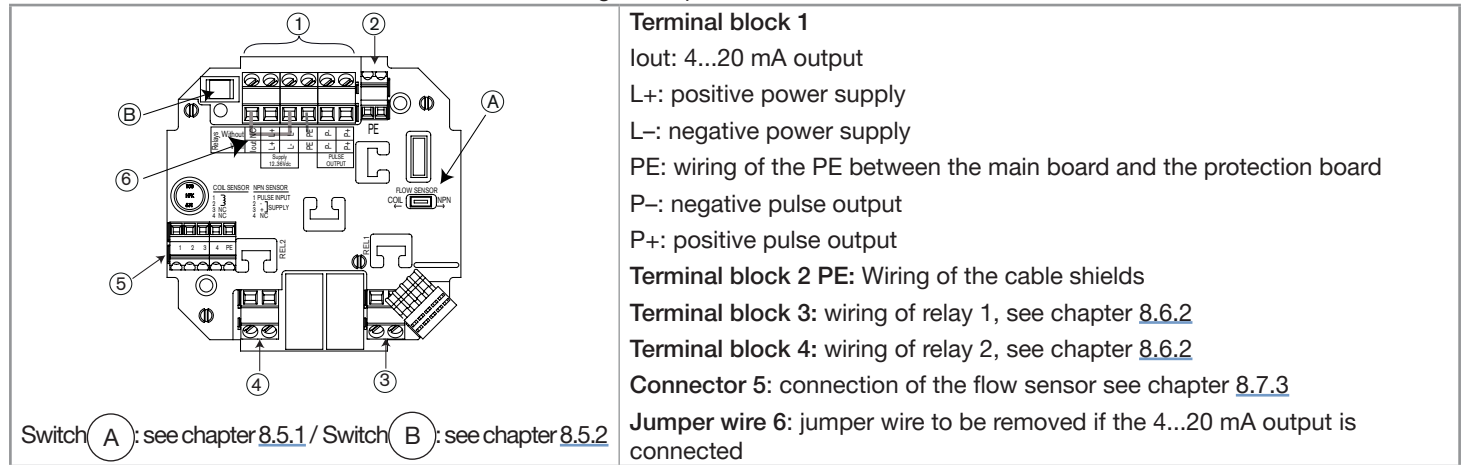


Fig. 39: Terminal assignment of a panel-mounted or wall-mounted version, 12...36 V DC, with relays

- Insert the cable clips: See [Fig. 23](#), page [37](#)
- Connect the relays according to chapter [8.6.2](#).

The wiring of the current output and the pulse output of a flow transmitter 8025 panel version or wall-mounted version 12...36 V DC, with relays, are the same as for a flowmeter 8025 compact version, 12...36 V DC, with relays, with cable glands.

- Wire the current output according to [Fig. 29](#) of chapter [8.6.4](#).
- Wire the pulse output according to [Fig. 30](#) of chapter [8.6.4](#).

8.7.3. Connecting the flow sensor to the flow transmitter 8025 panel version or wall-mounted version

- Configure the FLOW SENSOR selector on the electronic board (see chapter 8.5).
- Connect the remote flow sensor to the FLOW SENSOR terminal block of the electronic board by respecting the pin assignment depending on the output type of the remote sensor, either sinus (COIL) or pulse output (NPN).

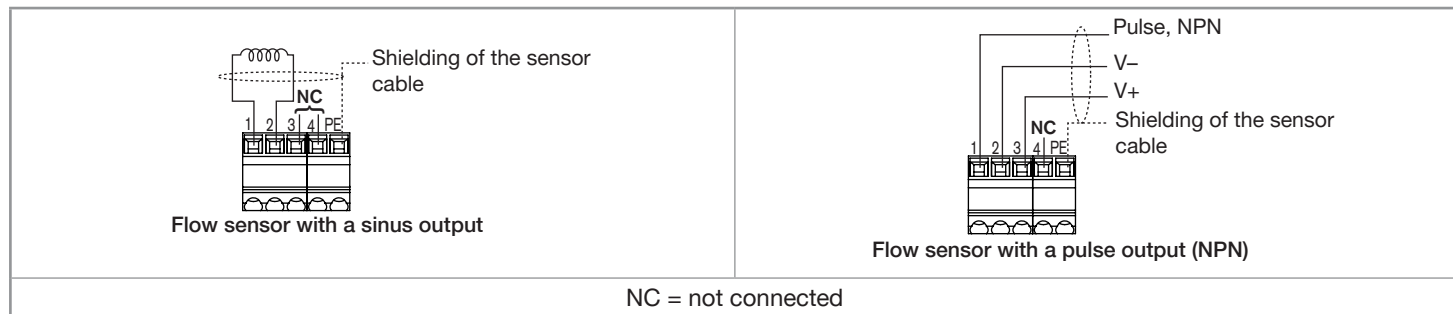


Fig. 40: Wiring of the remote flow sensor to the flow transmitter 8025

8.8. Wiring the 8025 wall-mounted version, 115/230 V AC, with or without relays

8.8.1. Wiring instructions



Seal the unused cable gland using the blanking plug supplied to make sure the device is tight.

- Unscrew the nut of the cable gland.
- Remove the transparent disc inside the cable gland.
- Insert the blanking plug.
- Screw the nut back.

- Connect the flow sensor to the flow transmitter 8025 according to chapter [8.8.4](#).
- Configure the selectors on the electronic board: see chapter [8.5](#).
- Loosen the nuts of the cable glands.
- Insert each cable through a nut then through a cable gland, using the cable glands as shown in [Fig. 41](#).

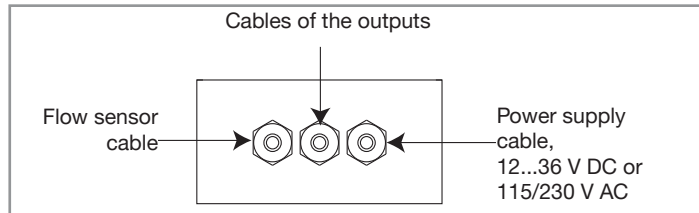


Fig. 41: Using the cable glands

- Remove the two terminal blocks (marked 4 and 6 in [Fig. 42](#), chapter [8.8.2](#) and [Fig. 46](#), chapter [8.8.3](#)) from the housing.

For versions without relays:

- Wire the device according to chapter [8.8.2](#).

For versions with relays:

- Insert the cable clips: see [Fig. 23](#), chapter [8.6.1](#).

- Wire the device according to chapter [8.8.3](#).

- Insert the two terminal blocks (marked 4 and 6 in [Fig. 42](#), chapter [8.8.2](#) and [Fig. 46](#), chapter [8.8.3](#)) into their original position.

- Let the housing completely open.

- Secure:

- the power supply cable with a cable clip,
- the flow sensor connection cable with a cable clip
- and (depending on the version) the relay connection cables with a cable clip.

- Tighten the cable glands making sure the cable in the housing is long enough to allow complete opening of the housing.

- Close the cover.

- Tighten the 4 screws.

- Put the blanking strips on the housing.

8.8.2. Wiring the power supply, the current output and the pulse output, 115/230 V AC, without relays

→ Before wiring the device, obey the instructions of chapter 8.8.1.

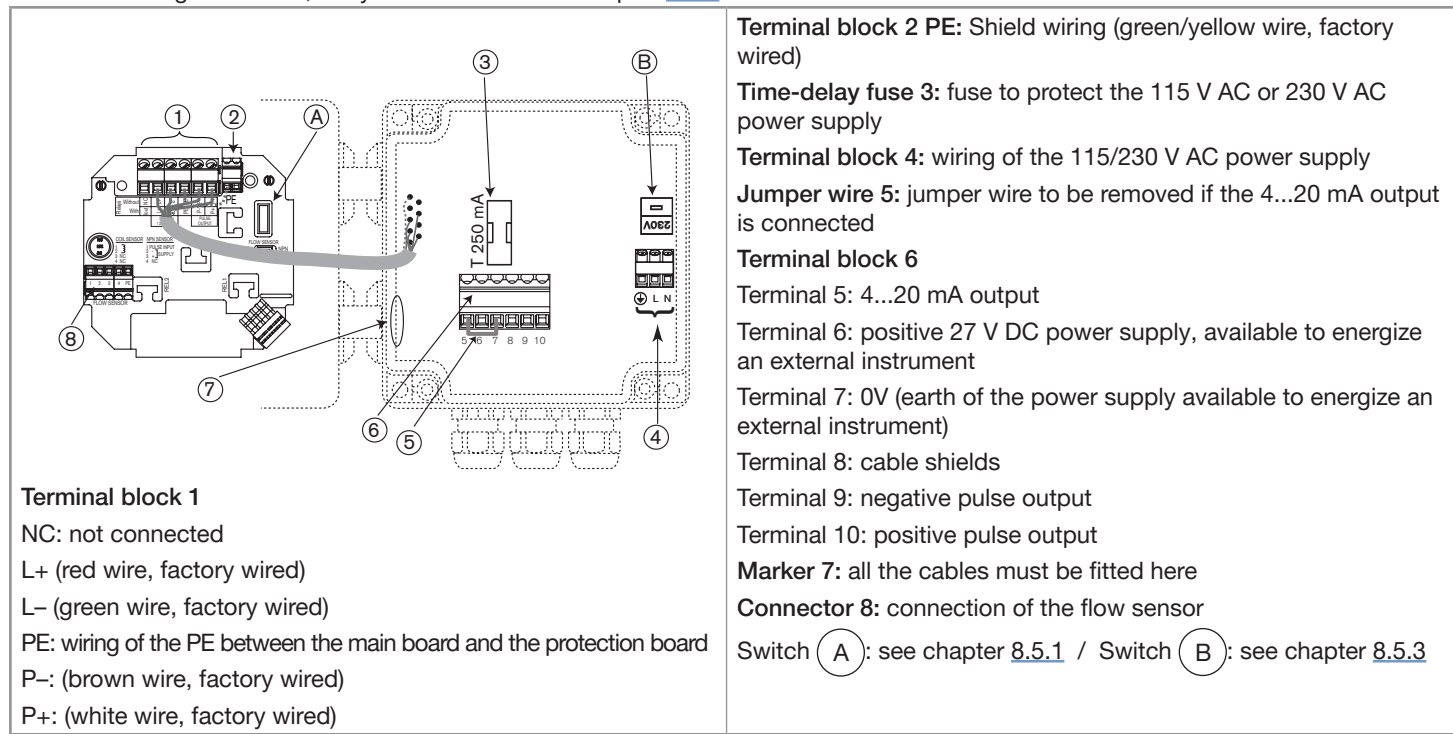


Fig. 42: Terminal assignment of a wall-mounted version, 115/230 V AC, without relays

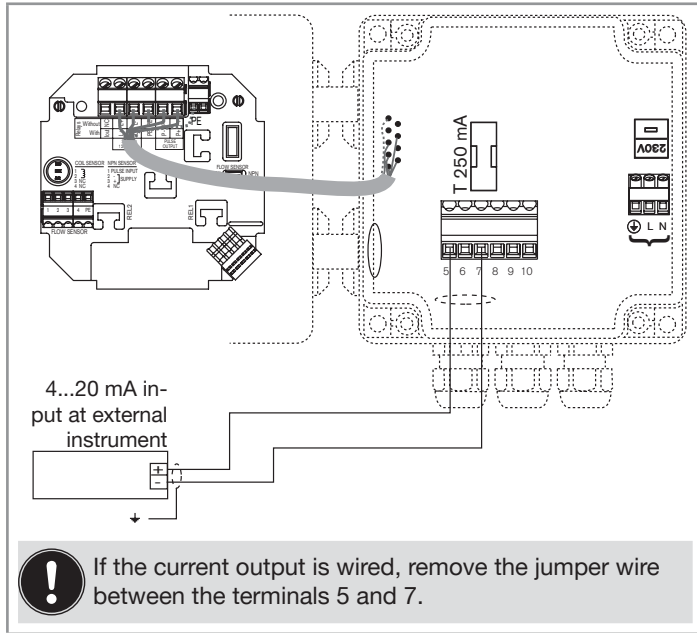


Fig. 43: Wiring of the current output of a wall-mounted version without relays

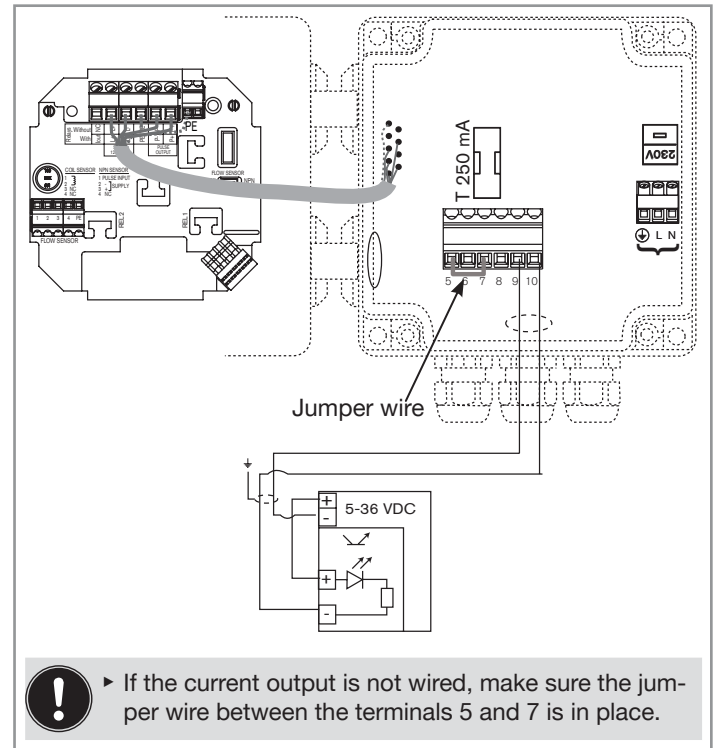


Fig. 44: Wiring in NPN mode of the pulse output of a wall-mounted version without relays

8.8.3. Wiring the power supply, the current output and the pulse output, 115/230 V AC, with relays

→ Before wiring the device, obey the instructions of chapter [8.8.1](#).

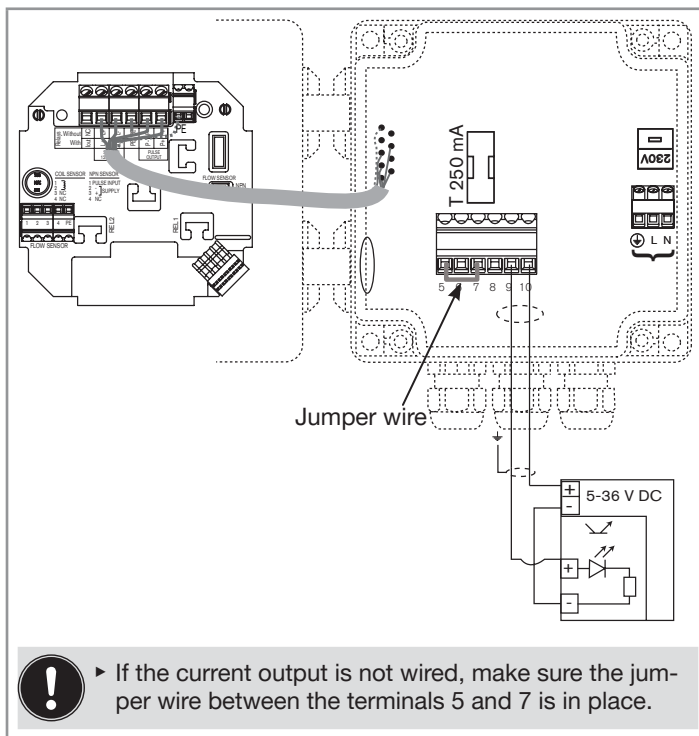


Fig. 45: Wiring in PNP mode of the pulse output of a wall-mounted version without relays

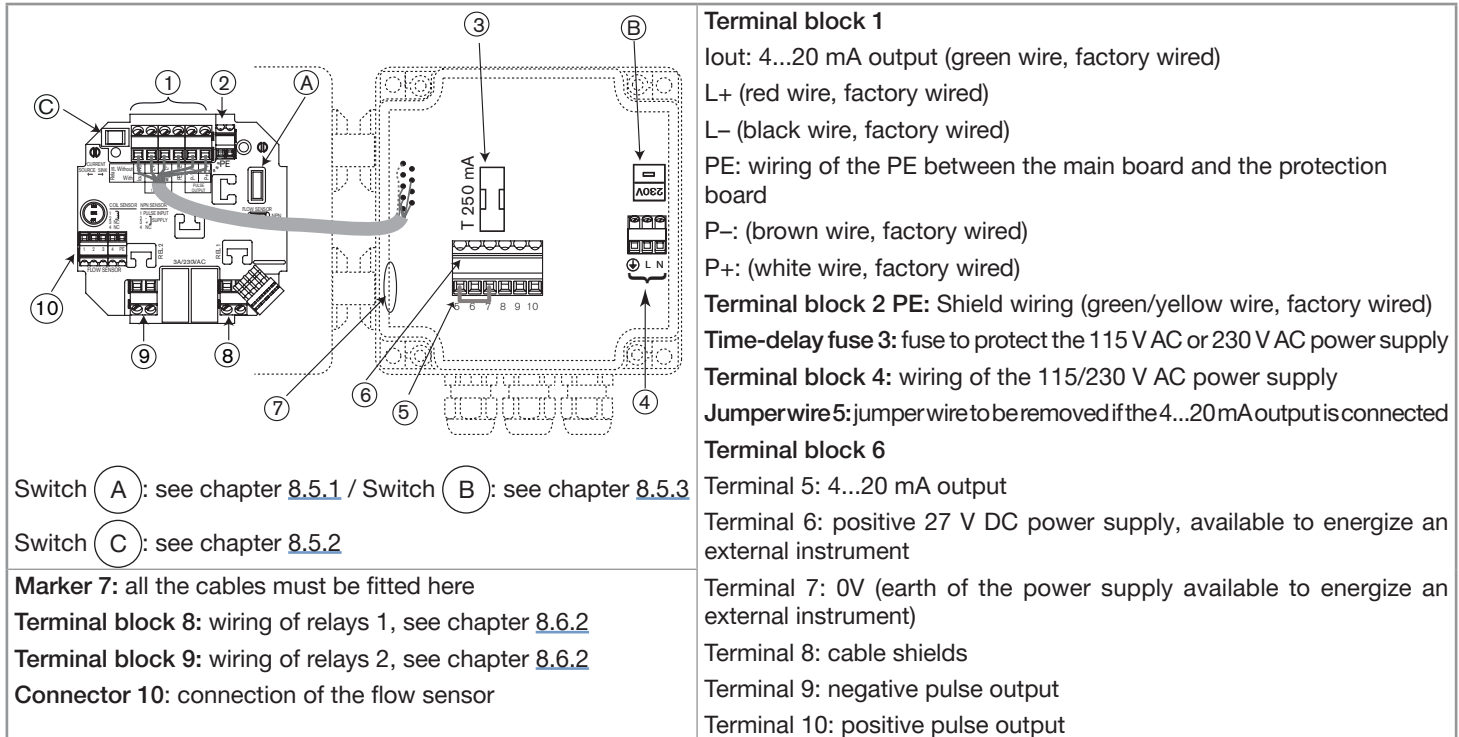


Fig. 46: Terminal assignment of a wall-mounted version, 115/230 V AC, with relays

The wiring of the pulse output of a wall-mounted version with relays is the same as the wiring of a version without relays.

→ Refer to [Fig. 44](#) and [Fig. 45](#), chapter [8.8.2](#).

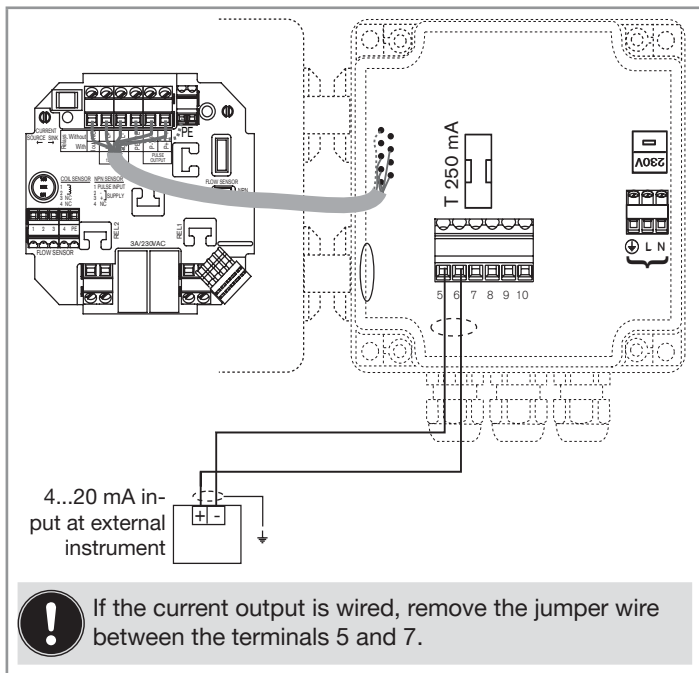


Fig. 47: Wiring in sinking mode of the current output of a wall-mounted version, 115/230 V AC, with relays

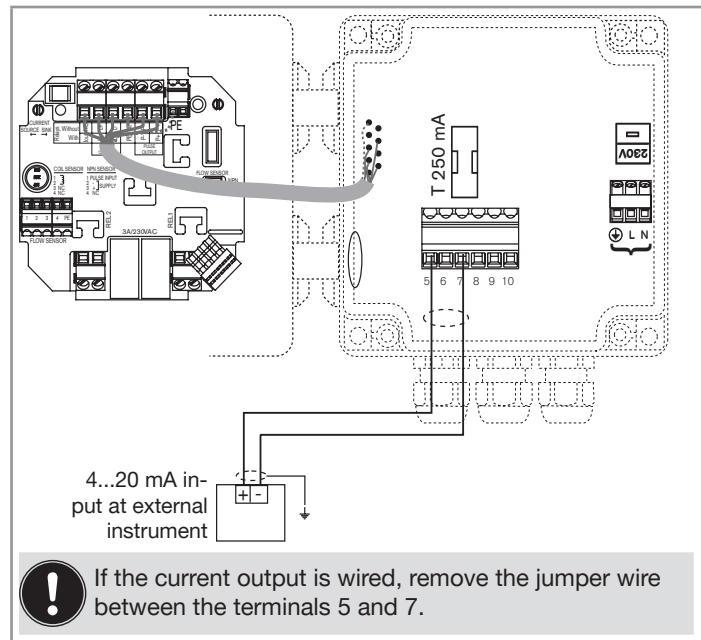


Fig. 48: Wiring in sourcing mode of the current output of a wall-mounted version, 115/230 V AC, with relays

8.8.4. Connecting the flow sensor to the flow transmitter 8025

→ Refer to chapter [8.7.3](#).

9. INSTALLATION AND COMMISSIONING

9.1. Safety instructions



WARNING

Risk of injury due to nonconforming operating.

Non-conforming operating could lead to injuries and damage the device and its surroundings.

- ▶ The operators in charge of operating must have read and understood the contents of this Quickstart.
- ▶ In particular, observe the safety recommendations and intended use.
- ▶ The device/installation must only be operated by suitably trained staff.



WARNING

Danger due to non-conforming commissioning.

Non-conforming commissioning could lead to injuries and damage the device and its surroundings.

- ▶ Before commissioning, make sure that the staff in charge have read and fully understood the contents of this Quickstart.
- ▶ In particular, observe the safety recommendations and intended use.
- ▶ The device / the installation must only be commissioned by suitably trained staff.
- ▶ Before commissioning, set the K-factor of the fitting used. See chapter 9.6.

9.2. Operating levels of the device

The device has two operating levels: the Process level and the Configuration level.

Table 7: Default settings of the device

Function	Default value
LANGUAGE	English
UNIT of the flow rate	L/min, 1 decimal
UNIT of the totalizers	L
Number of decimal positions	1
4 mA current output	0.000
20 mA current output	100.0
K-FACTOR	51.20
FILTER	5
Value of a pulse (PU)	00.05
Unit of the pulse output	L
Relay 1-	40.0
Relay 1+	50.0
Relay 1 inverted	no
Relay 2-	80.0
Relay 2+	90.0
Relay 2 inverted	no

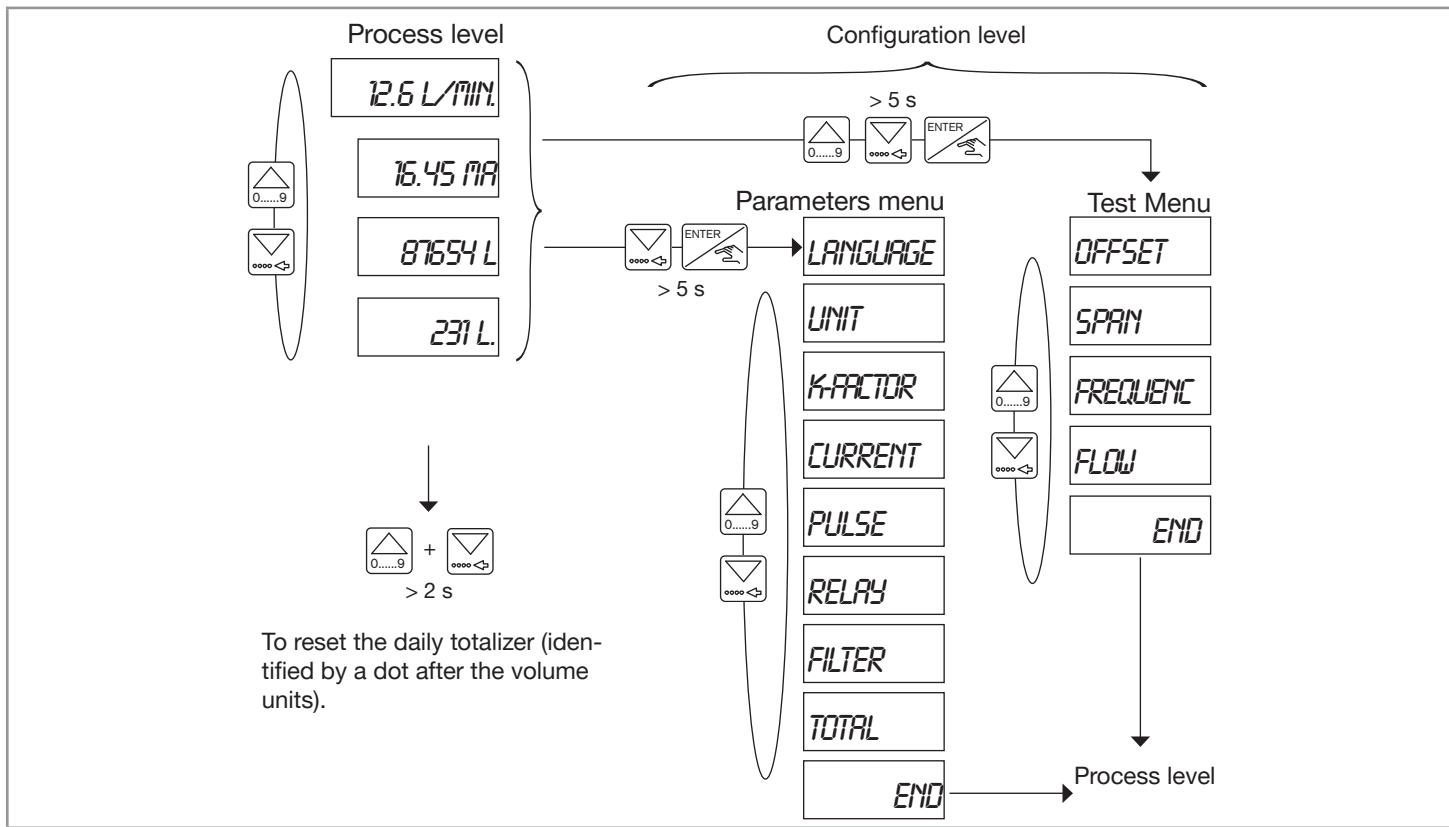


Fig. 49: Diagram of the levels of the device

9.3. Description of the navigation keys and the status LEDs

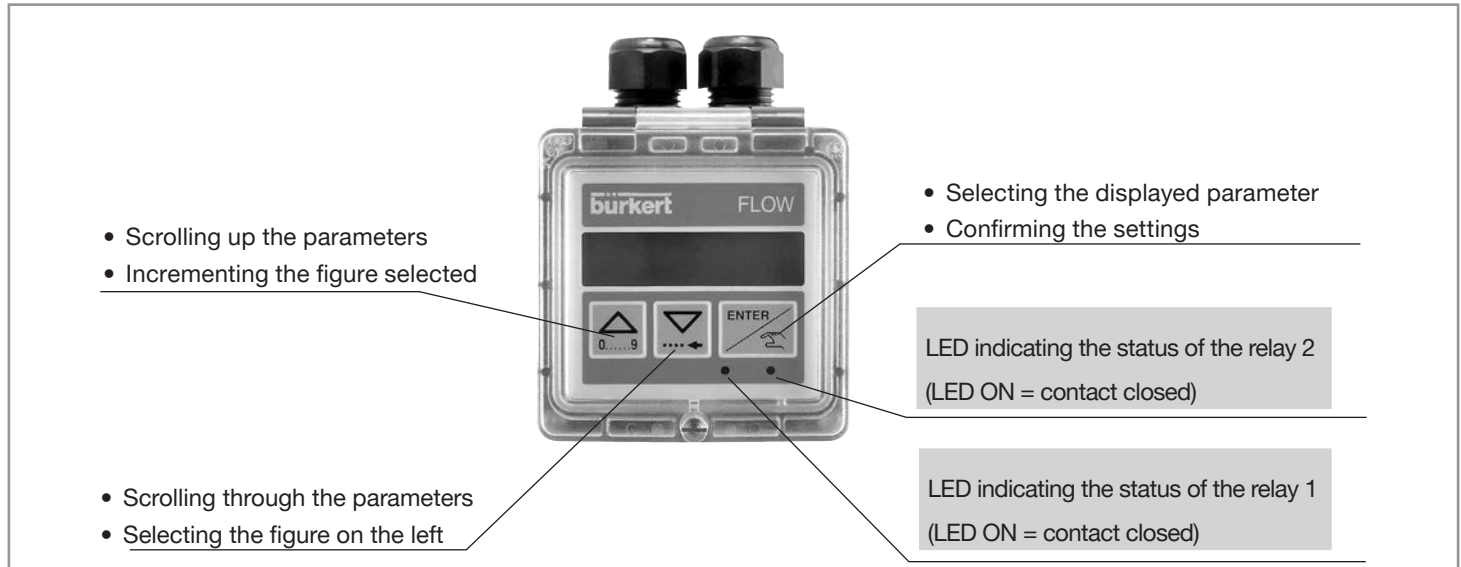

















Fig. 50: Description of the display

9.4. Using the navigation keys

You want to...	Press...
move between parameters within a level or a menu.	<ul style="list-style-type: none">  to go the next parameter.  to go to the previous parameter.
access the Parameters menu	 +  simultaneously for 5 s, in the Process level
access the Test menu.	 +  +  simultaneously for 5 s, in the Process level
reset the daily totalizer, from the Process level.	 +  simultaneously for 2 s, when the daily totalizer is displayed in the Process level
select the displayed parameter	
confirm the displayed value.	
modify a numerical value.	<ul style="list-style-type: none">  to increase the blinking digit.  to select the digit at the left of the blinking digit.  +  to move the decimal point.

9.5. Choosing the display language

When the device is energized for the first time, the display language is English.

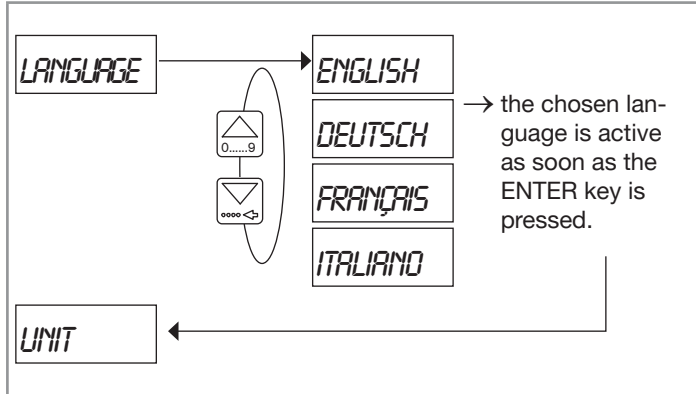



Fig. 51: Diagram of the "LANGUAGE" parameter of the Parameters menu

→ If you do not want to adjust another parameter, go to the "END" parameter of the Parameters menu and press  to save the settings and go back to the Process level.

9.6. Entering the K-factor of the fitting used

The device determines the flow rate in the pipe using the fitting K-factor.

The K-factor of the fitting used can be entered here.



The K-factor of the fitting used is in the operating instructions of the fitting.

The operating instructions of the Bürkert fittings can be found on the internet at: country.burkert.com.

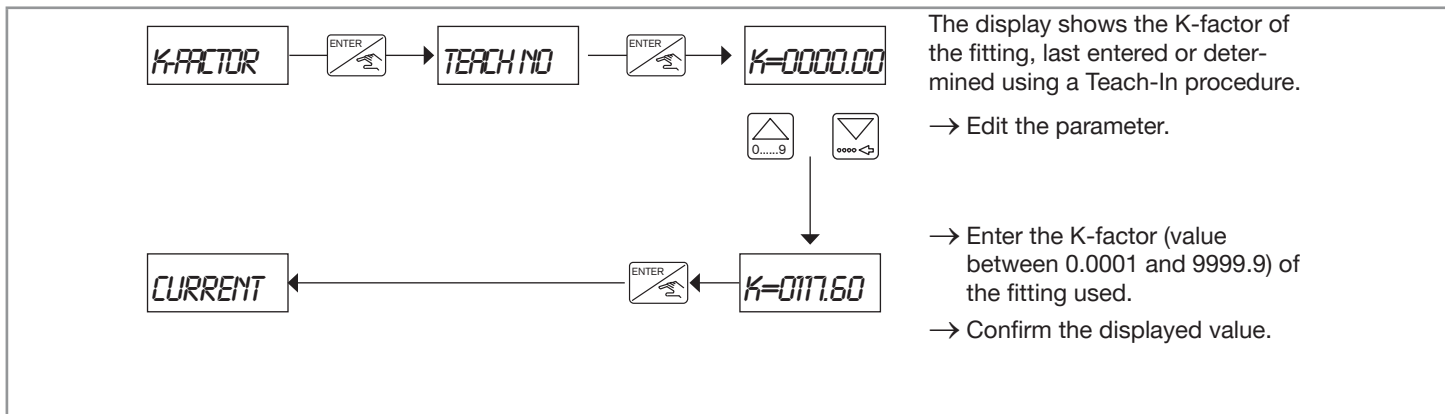


Fig. 52: Entering the K-factor of the fitting used

10. MAINTENANCE AND TROUBLESHOOTING

10.1. Safety instructions



DANGER

Danger due to electrical voltage.

Risk of injury due to high pressure in the installation.

Risk of injury due to high fluid temperatures.

Risk of injury due to the nature of the fluid.



WARNING

Risk of injury due to nonconforming maintenance.

- ▶ Maintenance must only be carried out by qualified and skilled staff with the appropriate tools.
- ▶ Guarantee a defined or controlled restarting of the process after a power supply interruption.

→ If any problem occurs, refer to the complete operating instructions available on the internet at: country.burkert.com

11. PACKAGING, TRANSPORT

NOTICE

Damage due to transport

Transport may damage an insufficiently protected device.

- ▶ Transport the device in shock-resistant packaging and away from humidity and dirt.
- ▶ Do not expose the device to temperatures outside the admissible storage temperature range.
- ▶ Protect the electrical interfaces using protective plugs.

12. STORAGE

NOTICE

Poor storage can damage the device.

- ▶ Store the device in a dry place away from dust.
- ▶ Storage temperature of the device: see [Table 8](#).
- ▶ Storage temperature of the fitting or sensor-fitting: refer to the Operating Instructions of the corresponding fitting or sensor-fitting.

Table 8: Storage temperature of the devices depending on the version

Device	Power supply	Storage temperature
Flowmeter 8025 compact version	12...36 V DC	-10 °C...+60 °C
	115/230 V AC	-10 °C...+50 °C
Flow transmitter 8025 panel version	12...36 V DC	-10 °C...+60 °C
Flow transmitter 8025 wall-mounted version	12...36 V DC	-10 °C...+60 °C
	115/230 V AC	-10 °C...+60 °C
Flowmeter 8035 / Flow transmitter SE35	12...36 V DC	-10 °C...+60 °C
	115/230 V AC	-10 °C...+50 °C

13. DISPOSAL OF THE DEVICE

→ Dispose of the device and its packaging in an environmentally-friendly way.

NOTICE

Damage to the environment caused by parts contaminated by the fluid.

- ▶ Comply with the national and/or local regulations which concern the area of waste disposal.

www.burkert.com