

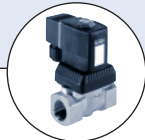
- Compact or remote version for DN 6 to 65,
- Shows both flow rate and volume (with two totalizers)
- Automatic-calibration: TEACH-IN
- Simulation: all output signals provided without the need for real flow

Type 8035 can be combined with...



**Type S030**

Fitting



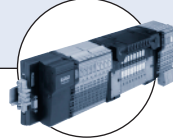
**Type 6213**

Solenoid valve



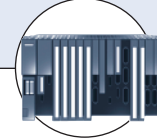
**Type 2712 (8630)**

Continuous  
TopControl



**Type 8644**

Valve  
islands



**PLC**

The paddle-wheel transmitter is especially designed for use in neutral, slightly aggressive, solid free liquids. The transmitter is made up of a compact fitting (S030) and an electronic module (SE35) quickly and easily connected together by a Quarter-Turn.

The Bürkert designed fitting system ensures simple installation of the sensors into all pipes from DN 6 to 65. The compact INLINE flow transmitter is available in different versions:
 

- Flow transmitter with standard output signal
- Battery powered

General data	
<b>Compatibility</b>	with all fittings S030 (see corresp. datasheet)
<b>Materials</b>	
Housing, cover, lid, nut	PC
Front panel foil	Polyester
Screws	Stainless steel
Cable plug / gland	PA
Materials wetted parts	
Fitting, sensor armature	Brass, stainless steel 1.4404/316L PVC, PP or PVDF
Paddle-wheel	PVDF
Axis and bearing / Seal	Ceramics / FPM
<b>Display</b>	15 x 60 mm, 8-digit LCD, alphanumeric, 15 segments, 9 mm high
<b>Electrical connections</b>	Cable plug EN 175301-803 or cable gland M 20 x 1.5 or none (battery version)
<b>Voltage supply cable</b>	max. 50 m, shielded 1.5 mm <sup>2</sup> max. cross-section

Complete device data (fitting + electronic module)	
<b>Pipe diameter</b>	DN 6 to 65
<b>Measuring range</b>	0.5 m/s to 10 m/s (battery version- coil transducer) 0.3 m/s to 10 m/s
<b>Medium temperature max.</b>	50 °C (with PVC fitting) - 80 °C (with PP fitting) 100 °C (with St.St., brass or PVDF fitting)
<b>Fluid pressure max.</b>	PN10 (with plastic fitting) PN16 (with metal fitting) (PN40 on request, see S030 datasheet)
<b>Viscosity</b>	300 cSt. max.
<b>Accuracy</b>	
Teach-In	≤ ±0.5% of F.S.* (at 10 m/s) <sup>1)</sup>
Standard K-factor	≤ ±(0.5% of F.S.* + 2.5% of Reading) <sup>1)</sup>
<b>Linearity</b>	≤ ±0.5% of F.S.* (at 10 m/s) <sup>1)</sup>
<b>Repeatability</b>	≤ 0.4% of Reading <sup>1)</sup>

Electrical data	
<b>Power supply</b>	
Standard signal	12-30 V DC (V+) ± 10 %, filtered and regulated or 115/230 V AC, 50/60 Hz (see technical specifications 115/203 V AC)
Battery indicator/totalizer	2 x 9 V DC batteries autonomy min. 2 years at 20 °C
<b>Reversed polarity of DC</b>	Protected
<b>Current consumption</b> with sensor (without consumption of pulse output)	≤ 70 mA (transmitter with relays) ≤ 20 mA (transmitter without relay)
<b>Output</b>	
Standard signal	
Signal current	4-20 mA (3-wire with relays; 2-wire without relays) max. loop impedance: 900 Ω at 30 V DC; 600 Ω at 24 V DC; 50 Ω at 15 V DC; 800 Ω with a 115/230 V AC voltage supply polarized, potential free, 5...30 V DC; 100 mA, protected, line drop at 100 mA: 1.5 V DC
Pulse	2 relays, freely programmable, 3A, 230 V AC
Relay	
Battery indicator / totalizer	None

Technical specifications 115/230 VAC	
<b>Voltage supply</b>	27 V DC regulated, max. current: 125 mA integrated protection: fuse 125 mA tempo- rised, power: 3 VA

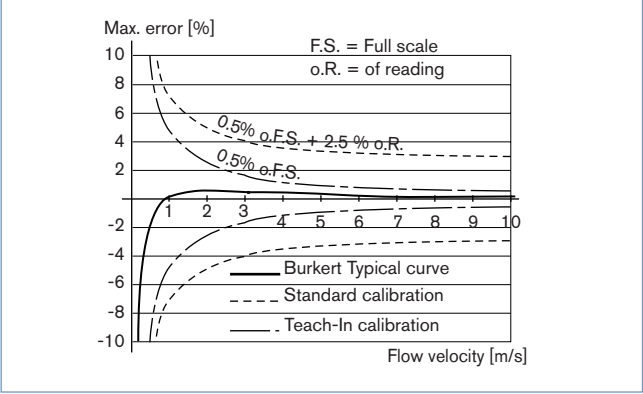
Environment	
<b>Ambient temperature</b>	0 °C up to +60 °C (operating and storage)
<b>Relative humidity</b>	≤ 80%, non condensated

<sup>1)</sup> Under reference conditions i.e. measuring fluid=water, ambient and water temperature=20 °C, applying the minimum inlet and outlet pipe straights, matched inside pipe dimensions.

\* F.S.=Full scale (10 m/s)

Standards and approvals	
<b>Protection class</b>	IP65 with cable or screws plug mounted and tightened
<b>Standard</b>	
EMC	EN 610006-2, EN 610006-3
Security	EN 61010-1
Vibration / Shock	EN 60068-2-6 / EN 60068-2-27
Specific technical data of UR and CSA recognized products	
<b>Relay output</b>	30 V AC and 42 V <sub>peak</sub> max. or 60 V DC max.
<b>Ambient temperature</b>	max. 40 °C
<b>Relative humidity</b>	max. 80 %
<b>Intended for an inner pollution</b>	degree 2 environment
<b>Installation category</b>	I
<b>Altitude</b>	max. 2000 m

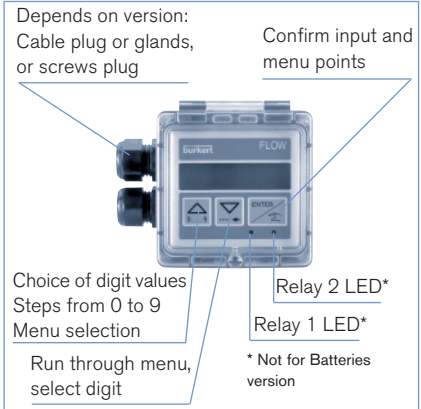
**Accuracy diagram**



**Operation and display**

The device can be calibrated by means of the K-factor, or via the TEACH-IN function. Customized adjustments, such as measuring range, engineering units, pulse output and filter are carried out on site. The operation is specified according to two or three levels, depending on the transmitter version:

	Indication in operating mode / Display	Parameter definition	Test
<b>Flow transmitter</b>	<ul style="list-style-type: none"> <li>- flow</li> <li>- output current</li> <li>- main totalizer</li> <li>- daily totalizer with reset function</li> </ul>	<ul style="list-style-type: none"> <li>- language</li> <li>- engineering units</li> <li>- K-factor / TEACH-IN function</li> <li>- measuring range 4-20 mA</li> <li>- pulse output</li> <li>- relay (option)</li> <li>- filter</li> <li>- reset main totalizer</li> </ul>	<ul style="list-style-type: none"> <li>- alteration of basic adjustment (offset, span)</li> <li>- frequency test of sensor</li> <li>- flow simulation (dry-run test operation)</li> </ul>
<b>Battery indicator / totalizer</b>	<ul style="list-style-type: none"> <li>- flow</li> <li>- main totalizer</li> <li>- daily totalizer with reset function</li> </ul>	<ul style="list-style-type: none"> <li>- language</li> <li>- engineering units</li> <li>- K-factor / TEACH-IN function</li> <li>- filter</li> <li>- reset main totalizer</li> </ul>	



**Design and principle of operation**

The electronic housing of the 8035 integrates the electronic board with display, programming keys and also a transducer (coil for Battery indicator version or Hall for other versions). The paddle-wheel is mounted in the fitting. The output signals are provided via a cable plug or two cable gland (according to the transmitter version). Bürkert designed fitting (S030) ensures simple installation of the Bürkert transmitter into pipes from DN 06 to DN 65.

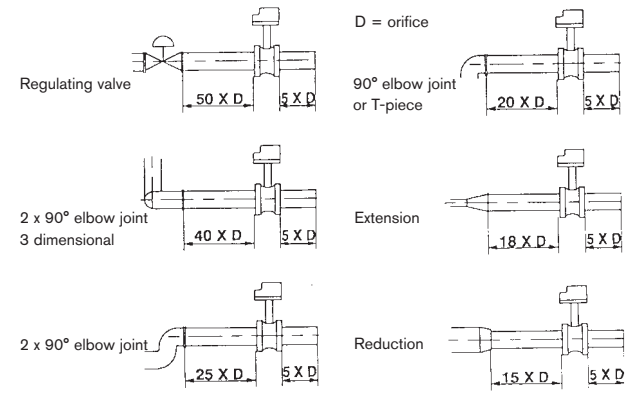
When liquid flows through the pipe, the 4 magnets, inserted in the paddle-wheel set in rotation, produce a measuring signal in the transducer (coil sensor for Battery indicator version or Hall sensor for other versions). The frequency modulated induced voltage is proportional to the flow velocity of the fluid. A conversion coefficient (K factor, available in the S030 instruction manual of the fitting), specific to each pipe (size and material) enables the conversion of this frequency into flowrate. The electronic component converts the measured signal into several outputs (according to the transmitter version) and displays the actual value.

**Installation**



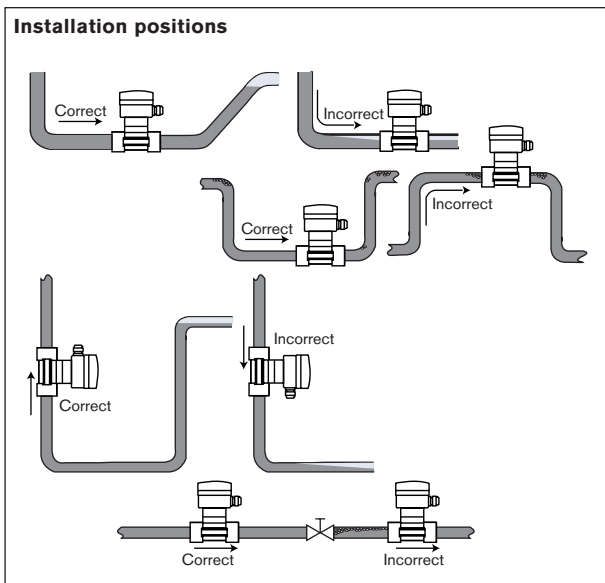
The electronic SE35 can easily be installed onto any Bürkert INLINE fitting system Type S030, by means of a Quarter-Turn. A minimum straight upstream and downstream distances must be observed. According to pipe's design, necessary distances can be bigger or use a flow conditioner to obtain the best accuracy.

For more information, please refer to EN ISO 5167-1. EN ISO 5167-1 prescribes the straight inlet and outlet distances that must be complied with when installing fittings in pipe lines in order to achieve calm flow conditions. The most important layouts that could lead to turbulence in the flow are shown below, together with the associated prescribed minimum inlet and outlet distances. These ensure calm, problem-free measurement conditions at the measurement point.



**Installation**

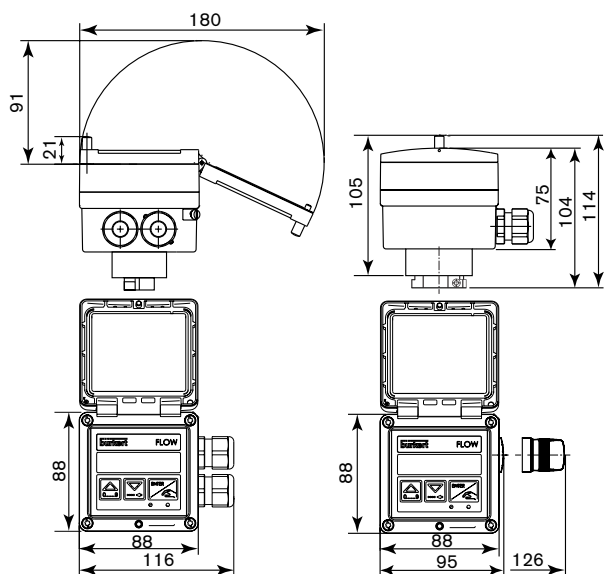
The flow rate sensor can be installed into either horizontal or vertical pipes.



The suitable pipe size is selected using the diagram Flow/Velocity/DN. Pressure and temperature ratings must be respected according to the selected fitting material.

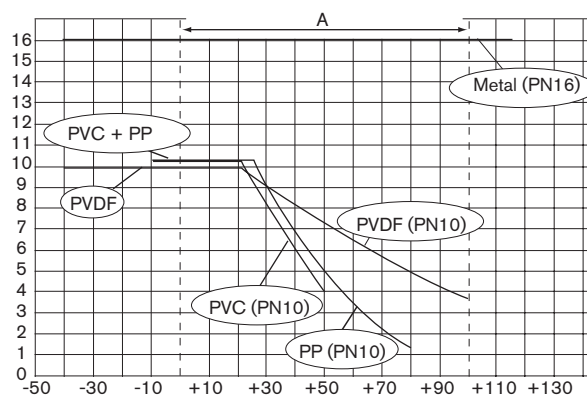
The flow sensor is not designed for gas flow measurement.

**Dimensions [mm]**



DN [mm]	H [mm]
06	134
08	134
15	139
20	137
25	137
32	140
40	144
50	151
65	151

**Pressure / temperature chart**



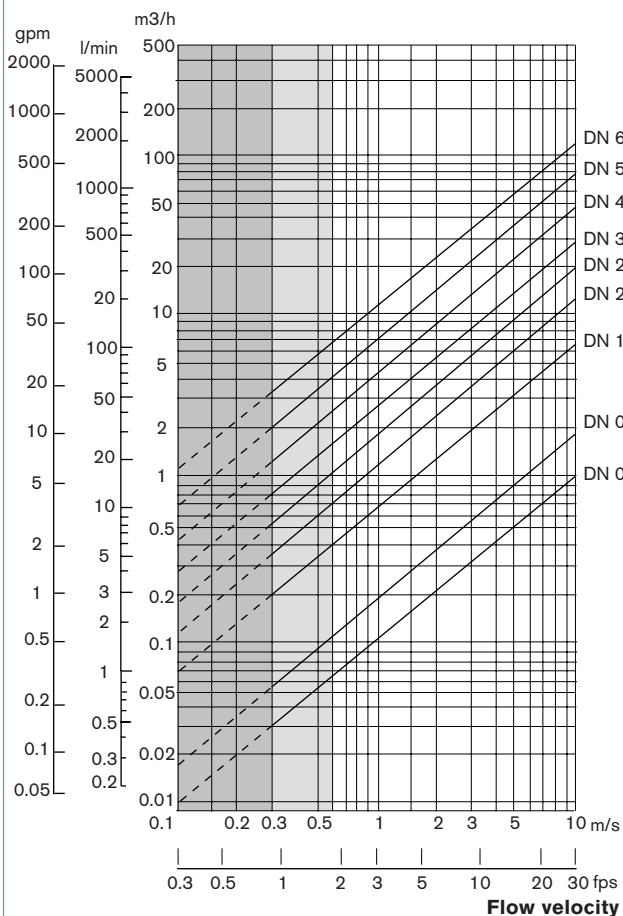
A: Application range for complete device (fitting + transmitter)

**Selection of fitting / pipe size**

**Example:**

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

**Flow rate**



## Ordering chart for compact transmitter Type 8035

### Compact flow transmitter, indicator / totalizer with integrated paddle-wheel sensor

A compact flow transmitter, indicator / totalizer Type 8035 consists of:

- an INLINE flow transmitter, indicator / totalizer
- an INLINE fitting S030 (DN06 - DN65) (Refer to corresponding datasheet - has to be ordered separately)

Version	Specifications	Voltage supply	Output	Relays	Sensor version	Agreements	Electrical connection	Item no.
Compact	Standard output signal transmitter 2 totalizers	12-30 V DC	4-20 mA (2 wires) + pulse	None	Hall	-	EN 175301-803	444 005
						-	2 cable glands	444 006
			UR	2 cable glands	553 432			
		4-20 mA (3 wires) + pulse	-	2 cable glands	444 007			
			UR	2 cable glands	553 433			
	115-230 V AC	4-20 mA (2 wires) + pulse	None	Hall	-	2 cable glands	423 922	
4-20 mA (3 wires) + pulse		2	Hall	-	2 cable glands	423 924		
Indicator, 2 totalizers	2 x 9 V DC Batteries	---	None	Coil	-	None	423 921	

## Ordering chart for accessories for transmitter Type 8035 (has to be ordered separately)

Specifications	Item no.
Set with 2 cable glands M 20 x 1.5 + 2 neoprene flat seals for cable gland or plug + 2 screw-plugs M 20 x 1.5 + 2 multiway seals 2 x 6 mm	449 755
Set with 2 reductions M 20 x 1.5 /NPT1/2" + 2 neoprene flat seals for cable gland or plug + 2 screw-plugs M 20 x 1.5	551 782
Set with 1 stopper for unused cable gland M 20 x 1.5 + 1 multiway seal 2 x 6 mm for cable gland + 1 black EPDM gasket for the sensor + 1 mounting instruction sheet	551 775
Cable plug Type 2509 - UR and UL approval	162 673

## Interconnection with other Bürkert products

