

# FLOW DIRECTION SWITCH FOR COMPRESSED AIR/GASES S409



# Detect your flow direction — Easy and efficient



## S409 FEATURES



**NO MECHANICAL  
WEAR PARTS**



**EASY  
INSTALLATION**  
Under pressure

## S409 BENEFITS

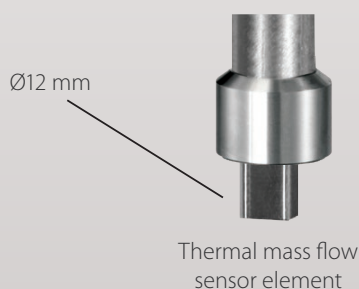
- Detects smallest changes < 0.1 m/s referred to 20°C and 1000 hpa
- No mechanical wear parts
- Easy installation under pressure

## S409 OPERATION PRINCIPLE

The thermal mass flow direction switch S409 allows the detection of direction of the flow. It can be used in compressed air and non-corrosive gases.

The sensor element is very robust and completely of stainless steel. Through a 1/2"G-type ball valve the switch can be inserted into the pipe under pressure.

The flow and direction information is output through 2 normally open relay switches. The signals can be transferred to the SUTO flow sensor to activate and deactivate the flow measurement depending on the flow direction.

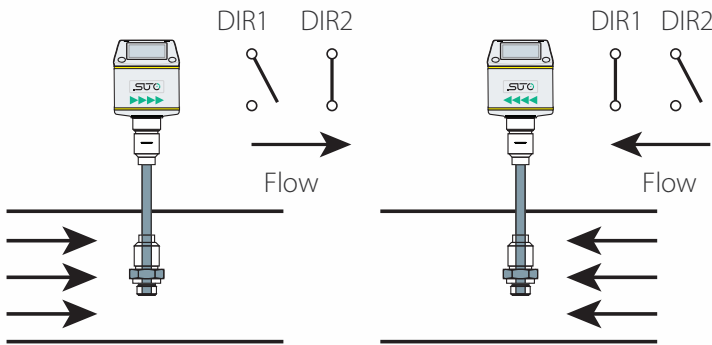


## S409 TECHNICAL DATA

General Specifications	
Detection range	0.02 ... 25 m/s @ 7barg, 20°C
Sensor	2 x Pt 1000
Medium	air, gases
Medium humidity	< 100% (no condensation)
Medium temp.	-20 ... +80°C
Ambient temp.	-20 ... +70°C
Operating pressure	0 ... 1.6 MPa
Power supply	24 VDC, 60 mA
Output	2 x Relay, 60V, 1A
Process connection	1/2" G type (ISO 228-1)
Sensor material	Stainless steel 1.4404 (SUS 316L)

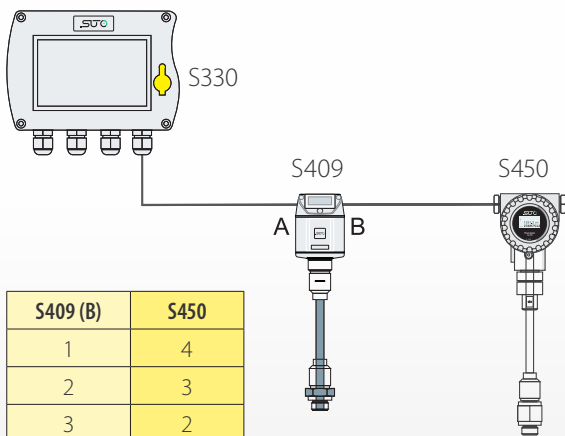
# S409 FLOW DIRECTION SWITCH

## Relay output at switch



Pin arrangement of flow switch					
	Pin1	Pin2	Pin3	Pin4	Pin5
A	SDI	-VB	+VB	DIR1	DIR1
B	SDI	-VB	+VB	DIR2	DIR2

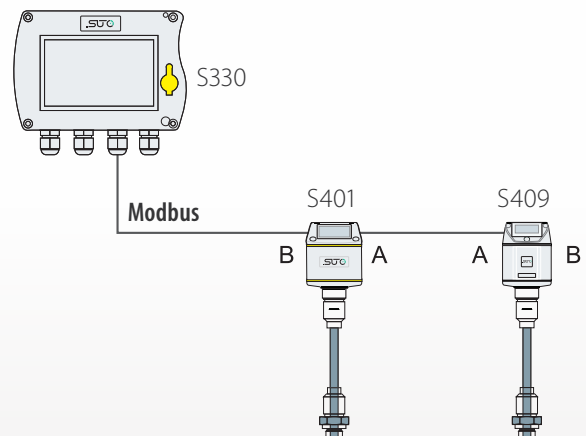
## Connection of S330 to S450 via flow switch



S409 (B)	S450
1	4
2	3
3	2
4	5
5	6

Connection between S409 and S450 / S452

## Connection of S330 to S401 via flow switch



**Attention:** Flow sensors S450 / S401 need to have the bi-directional calibration option to operate in both directions

## S409 ORDERING

Please use the following table to assist in placing your order with our sales staff.

Visit our website or e-mail us:  
[www.suto-itec.com](http://www.suto-itec.com)  
[sales@suto-itec.com](mailto:sales@suto-itec.com)

S409 FLOW DIRECTION SWITCH	
Order No.	Description
S695 0409	S409, flow direction switch, insertion type
A553 0104	Sensor cable 5 m, with M12 connector, open wires, AWG24 (0.2 mm <sup>2</sup> )
A553 0105	Sensor cable 10 m, with M12 connector, open wires, AWG24 (0.2 mm <sup>2</sup> )

EUROPEAN OFFICE	CHINA OFFICE	ASIA / PACIFIC OFFICE
<p>SUTO iTEC GmbH Werkstr. 2 79426 Buggingen Germany Fon: +49(0) 7631 936 889 0 Fax: +49 (0) 7631 936 889 19 Mail: sales@suto-itec.com</p>	<p>SUTO iTEC (China) Co. Ltd D3 Building, Unit A, 11/F, TCL International E City 1001 Zhongshanyuan Road, Nanshan Shenzhen, China Tel: +86 (0) 755 8619 3164 Fax: +86 (0) 755 8619 3165 Email: sales.cn@suto-itec.asia</p>	<p>SUTO iTEC (ASIA) Co. Limited Room 10, 6/F, Block B, Cambridge Plaza 188 San Wan Road, Sheung Shui, N.T. Hong Kong Tel: +852 2328 9782 Fax: +852 2671 3863 Email: sales@suto-itec.asia</p>