



**Calorimetric flow sensor
for liquids
SW-600-...-IL**

- Analog output 4(0) - 20 mA
- Two switching outputs
- Microprocessor controlled
- Programmable

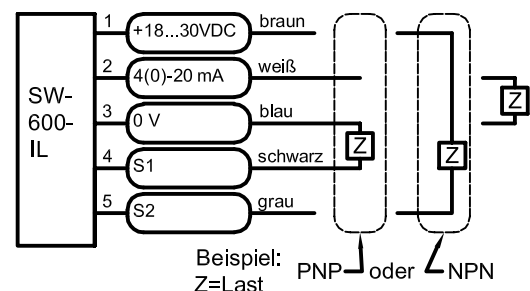
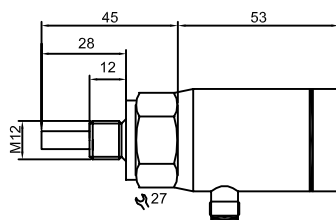
Certificate:



Technical data

Measuring range , dependent on material	1 - 300 cm/s (H ₂ O: 150 cm/s)
Repeat accuracy	1 %
Switching point, Hysteresis	adjustable
Type	SW-600-M12/28-IL
Art.-No.	544 100
Process connection	M12 x 1
Operating voltage (U _B)	18...30 V DC
Permitted residual ripple max.	10 %
Analog output	4(0) - 20mA, 2(0) - 10V with 500 Ohm
Switching outputs	PNP, NPN max 300 mA in total
No-load current (I ₀)	typ. 60 mA
Response- time	typ. 2 s
Temperature gradient	typ. 4 K/s
Operating pressure	100 bar
Permitted ambient temperature	0...+70°C
Display	LCD Display (32 x 16 pixel), LED red
Degree of protection IEC 529	IP 67
Connection	plug-in connector M12 x 1, 5pole
Material in contact with medium	stainless steel no. 1.4571 (VA)
Housing	stainless steel no. 1.4504 (VA)
Glass	mineral glass tempered
Magnet	Cobalt Samarium

All specifications are subject to change without notice. (03/2006)





Calorimetric flow sensor for liquids SW-600-...-IL(-02)

- Analog output 4(0) - 20 mA
- Two switching outputs
- Microprocessor controlled
- Programmable

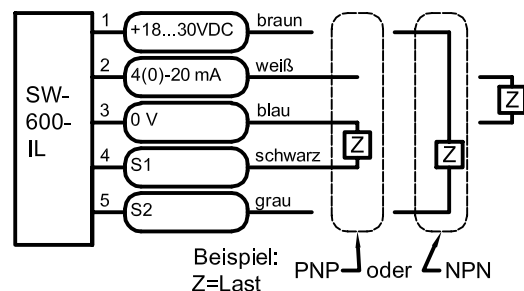
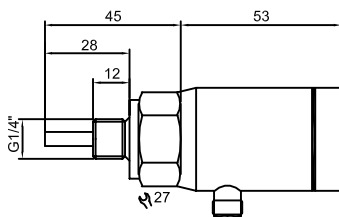
Certificate:



Technical data

Measuring range, dependent on material	1 - 300 cm/s (H ₂ O: 150 cm/s)	1 - 500 cm/s (H ₂ O: 300 cm/s)
Repeat accuracy	1 %	1 %
Switching point, Hysteresis	adjustable	adjustable

Type	SW-600-G1/4"/28-IL	SW-600-G1/4"/28-IL-02
Art.-No.	544 120	544 130
Process connection	G1/4"	G1/4"
Operating voltage (U _B)	18...30 V DC	
Permitted residual ripple max.	10 %	
Analog output	4(0) - 20mA, 2(0) - 10V with 500 Ohm	
Switching outputs	PNP, NPN max 300 mA in total	
No-load current (I ₀)	typ. 60 mA	
Response- time	typ. 2 s	
Temperature gradient	typ. 4 K/s	
Operating pressure	100 bar	
Permitted ambient temperature	0...+70°C	
Display	LCD Display (32 x 16 pixel), LED red	
Degree of protection IEC 529	IP 67	
Connection	plug-in connector M12 x 1, 5pole	
Material in contact with medium	stainless steel no. 1.4571 (VA)	
Housing	stainless steel no. 1.4504 (VA)	
Glass	mineral glass tempered	
Magnet	Cobalt Samarium	



All specifications are subject to change without notice. (03/2006)



**Calorimetric flow sensor
for liquids
SW-600-...-IL with PTFE-coated sensor tip**

- Nonstick PTFE coating
- Analog output 4(0) - 20 mA
- Two switching outputs
- Microprocessor controlled
- Programmable

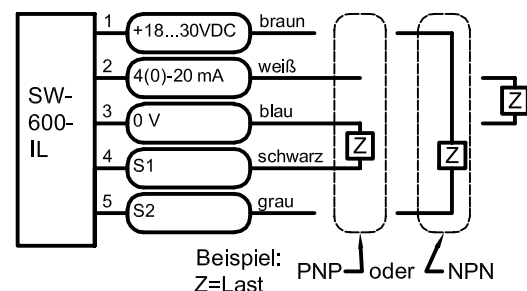
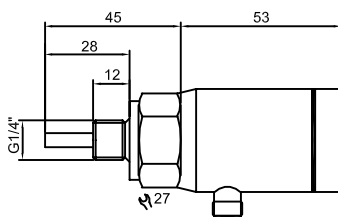


Certificate:

Technical data

Measuring range , dependent on material	1 - 300 cm/s (H ₂ O: 150 cm/s)
Repeat accuracy	1 %
Switching point, Hysteresis	adjustable
Type	SW-600-G1/4"/28-IL with PTFE-coated sensor tip
Art.-No.	544 121
Process connection	G1/4"
Operating voltage (U _B)	18...30 V DC
Permitted residual ripple max.	10 %
Analog output	4(0) - 20mA, 2(0) - 10V with 500 Ohm
Switching outputs	PNP, NPN max 300 mA in total
No-load current (I ₀)	typ. 60 mA
Response- time	typ. 2 s
Temperature gradient	typ. 4 K/s
Operating pressure	100 bar
Permitted ambient temperature	0...+70°C
Display	LCD Display (32 x 16 pixel), LED red
Degree of protection IEC 529	IP 67
Connection	plug-in connector M12 x 1, 5pole
Material in contact with medium	stainless steel no. 1.4571 (VA), PTFE covered
Housing	stainless steel no. 1.4504 (VA)
Glass	mineral glass tempered
Magnet	Cobalt Samarium

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Calorimetric flow sensor for liquids SW-600-...-IL(-02)

- Analog output 4(0) - 20 mA
- Two switching outputs
- Microprocessor controlled
- Programmable

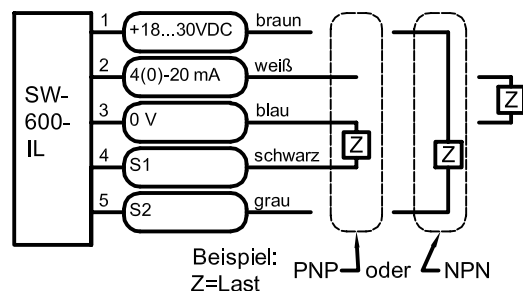
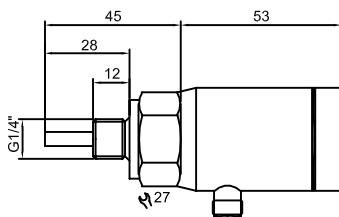
Certificate:



Technical data

Measuring range, dependent on material	1 - 300 cm/s (H ₂ O: 150 cm/s)	1 - 500 cm/s (H ₂ O: 300 cm/s)
Repeat accuracy	1 %	1 %
Switching point, Hysteresis	adjustable	adjustable

Type	SW-600-G1/4"/28-IL	SW-600-G1/4"/28-IL-02
Art.-No.	544 120	544 130
Process connection	G1/4"	G1/4"
Operating voltage (U _B)	18...30 V DC	
Permitted residual ripple max.	10 %	
Analog output	4(0) - 20mA, 2(0) - 10V with 500 Ohm	
Switching outputs	PNP, NPN max 300 mA in total	
No-load current (I ₀)	typ. 60 mA	
Response- time	typ. 2 s	
Temperature gradient	typ. 4 K/s	
Operating pressure	100 bar	
Permitted ambient temperature	0...+70°C	
Display	LCD Display (32 x 16 pixel), LED red	
Degree of protection IEC 529	IP 67	
Connection	plug-in connector M12 x 1, 5pole	
Material in contact with medium	stainless steel no. 1.4571 (VA)	
Housing	stainless steel no. 1.4504 (VA)	
Glass	mineral glass tempered	
Magnet	Cobalt Samarium	



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Calorimetric flow sensor for liquids SW-600-...-IL(-02)

- Analog output 4(0) - 20 mA
- Two switching outputs
- Microprocessor controlled
- Programmable

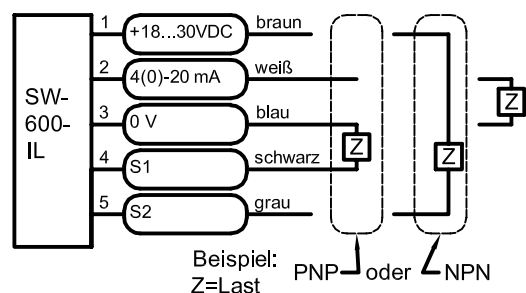
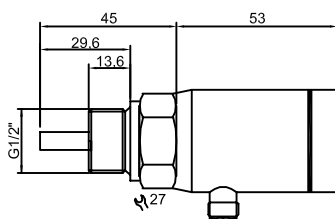
Certificate:



Technical data

Measuring range , dependent on material	1 - 300 cm/s (H ₂ O: 150 cm/s)	1 - 500 cm/s (H ₂ O: 300 cm/s)
Repeat accuracy	1 %	1 %
Switching point, Hysteresis	adjustable	adjustable

Type	SW-600-G1/2"/28-IL	SW-600-G1/2"/28-IL-02
Art.-No.	544 140	544 150
Process connection	G1/2"	G1/2"
Operating voltage (U _b)	18...30 V DC	
Permitted residual ripple max.	10 %	
Analog output	4(0) - 20mA, 2(0) - 10V with 500 Ohm	
Switching outputs	PNP, NPN max 300 mA in total	
No-load current (I ₀)	typ. 60 mA	
Response- time	typ. 2 s	
Temperature gradient	typ. 4 K/s	
Operating pressure	100 bar	
Permitted ambient temperature	0...+70°C	
Display	LCD Display (32 x 16 pixel), LED red	
Degree of protection IEC 529	IP 67	
Connection	plug-in connector M12 x 1, 5pole	
Material in contact with medium	stainless steel no. 1.4571 (VA)	
Housing	stainless steel no. 1.4504 (VA)	
Glass	mineral glass tempered	
Magnet	Cobalt Samarium	



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Calorimetric flow sensor for liquids SW-600-...-IL(-02)

- Analog output 4(0) - 20 mA
- Two switching outputs
- Microprocessor controlled
- Programmable

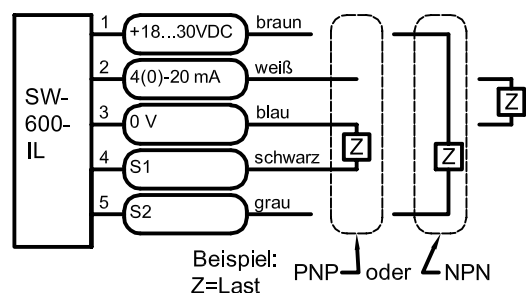
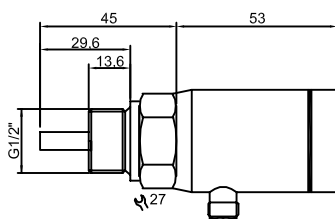
Certificate:



Technical data

Measuring range , dependent on material	1 - 300 cm/s (H ₂ O: 150 cm/s)	1 - 500 cm/s (H ₂ O: 300 cm/s)
Repeat accuracy	1 %	1 %
Switching point, Hysteresis	adjustable	adjustable

Type	SW-600-G1/2"/28-IL	SW-600-G1/2"/28-IL-02
Art.-No.	544 140	544 150
Process connection	G1/2"	G1/2"
Operating voltage (U _b)	18...30 V DC	
Permitted residual ripple max.	10 %	
Analog output	4(0) - 20mA, 2(0) - 10V with 500 Ohm	
Switching outputs	PNP, NPN max 300 mA in total	
No-load current (I ₀)	typ. 60 mA	
Response- time	typ. 2 s	
Temperature gradient	typ. 4 K/s	
Operating pressure	100 bar	
Permitted ambient temperature	0...+70°C	
Display	LCD Display (32 x 16 pixel), LED red	
Degree of protection IEC 529	IP 67	
Connection	plug-in connector M12 x 1, 5pole	
Material in contact with medium	stainless steel no. 1.4571 (VA)	
Housing	stainless steel no. 1.4504 (VA)	
Glass	mineral glass tempered	
Magnet	Cobalt Samarium	



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Calorimetric flow sensor for liquids SW-600-...-S

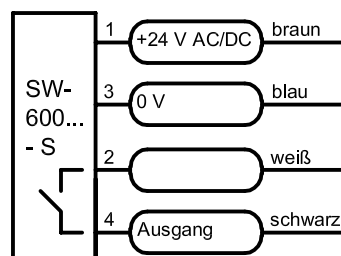
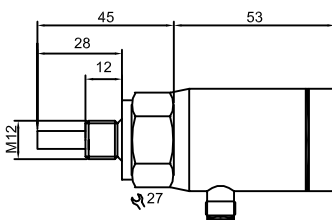
- Digital output
- Microprocessor controlled

Certificate:



Technical data

Measuring range, dependent on material	1 - 300 cm/s (H ₂ O: 150 cm/s)
Repeat accuracy	1 %
Switching point	adjustable
Type	SW-600-M12/28-S
Art.-No.	544 200
Process connection	M12 x 1
Operating voltage (U _B)	24 V AC/DC ±10%
Switching output	galvanic separated, relay contact (NO), max. 200 mA
No-load current (I ₀)	typ. 60 mA
Response-time	typ. 2 s
Temperature gradient	typ. 4 K/s
Operating pressure max.	100 bar
Permitted ambient temperature	0...+70°C
Display	LED red/green (red < limit value, green > limit value)
Degree of protection IEC 529	IP 67
Connection	plug-in connector M12 x 1, 4pole
Material in contact with medium	stainless steel no. 1.4571 (VA)
Housing	stainless steel no. 1.4504 (VA)
Lid	PA 6.6
Shortcircuit protection	yes
Reverse polarity protection	yes



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**Calorimetric flow sensor
for liquids
SW-600-...-S(-02)**

- Digital output
- Microprocessor controlled

Certificate:

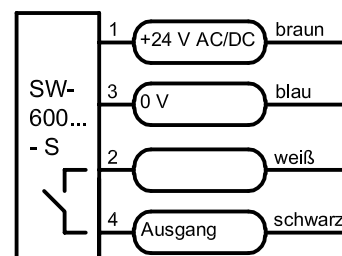
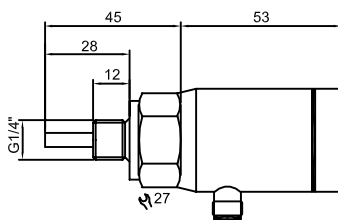


Technical data

Measuring range, dependent on material	1 - 300 cm/s (H ₂ O: 150 cm/s)	1 - 500 cm/s (H ₂ O: 300 cm/s)
Repeat accuracy	1 %	1 %
Switching point	adjustable	adjustable

Type	SW-600-G1/4"/28-S	SW-600-G1/4"/28-S-02
Art.-No.	544 220	SW0004
Process connection	G1/4"	G1/4"
Operating voltage (U _B)	24 V AC/DC ±10%	
Switching output	galvanic separated, relay contact (NO), max. 200 mA	
No-load current (I ₀)	typ. 60 mA	
Response-time	typ. 2 s	
Temperature gradient	typ. 4 K/s	
Operating pressure max.	100 bar	
Permitted ambient temperature	0...+70°C	
Display	LED red/green (red < limit value, green > limit value)	
Degree of protection IEC 529	IP 67	
Connection	plug-in connector M12 x 1, 4pole	
Material in contact with medium	stainless steel no. 1.4571 (VA)	
Housing	stainless steel no. 1.4504 (VA)	
Lid	PA 6.6	
Shortcircuit protection	yes	
Reverse polarity protection	yes	

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Calorimetric flow sensor for liquids SW-600-...-S with PTFE coated sensor tip

- Nonstick PTFE coating
- Digital output
- Microprocessor controlled

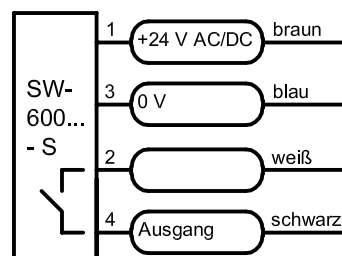
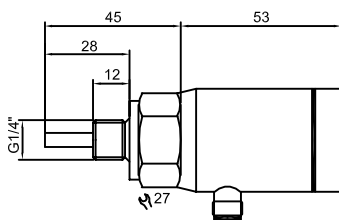
Certificate:



Technical data

Measuring range, dependent on material	1 - 300 cm/s (H ₂ O: 150 cm/s)
Repeat accuracy	1 %
Switching point	adjustable

Type	SW-600-G1/4"/28-S with PTFE-coated sensor tip
Art.-No.	544 221
Process connection	G1/4"
Operating voltage (U _B)	24 V AC/DC ±10%
Switching output	galvanic separated, relay contact (NO), max. 200 mA
No-load current (I ₀)	typ. 60 mA
Response-time	typ. 2 s
Temperature gradient	typ. 4 K/s
Operating pressure max.	100 bar
Permitted ambient temperature	0...+70°C
Display	LED red/green (red < limit value, green > limit value)
Degree of protection IEC 529	IP 67
Connection	plug-in connector M12 x 1, 4pole
Material in contact with medium	stainless steel no. 1.4571 (VA), PTFE-covered
Housing	stainless steel no. 1.4504 (VA)
Lid	PA 6.6
Shortcircuit protection	yes
Reverse polarity protection	yes



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**Calorimetric flow sensor
for liquids
SW-600-...-S(-02)**

- Digital output
- Microprocessor controlled

Certificate:

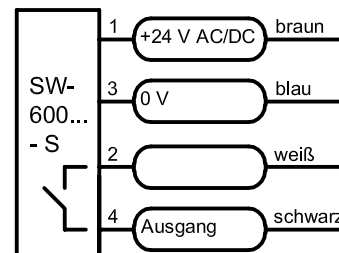
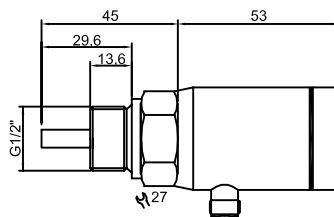


Technical data

Measuring range, dependent on material	1 - 300 cm/s (H ₂ O: 150 cm/s)	1 - 500 cm/s (H ₂ O: 300 cm/s)
Repeat accuracy	1 %	1 %
Switching point	adjustable	adjustable

Type	SW-600-G1/2"/28-S	SW-600-G1/2"/28-S-02
Art.-No.	544 240	SW0005
Process connection	G1/2"	G1/2"
Operating voltage (U _B)	24 V AC/DC ±10%	
Switching output	galvanic separated, relay contact (NO), max. 200 mA	
No-load current (I ₀)	typ. 60 mA	
Response-time	typ. 2 s	
Temperature gradient	typ. 4 K/s	
Operating pressure max.	100 bar	
Permitted ambient temperature	0...+70°C	
Display	LED red/green (red < limit value, green >limit value)	
Degree of protection IEC 529	IP 67	
Connection	plug-in connector M12 x 1, 4pole	
Material in contact with medium	stainless steel no. 1.4571 (VA)	
Housing	stainless steel no. 1.4504 (VA)	
Lid	PA 6.6	
Shortcircuit protection	yes	
Reverse polarity protection	yes	

All specifications are subject to change without notice. (03/2006)





**Calorimetric flow sensor
for liquids
SW-600-TRI-...-IL**

- Triclamp for food industry
- Analog output 4(0) - 20 mA
- Two switching outputs
- Microprocessor controlled
- Programmable

Certificate:

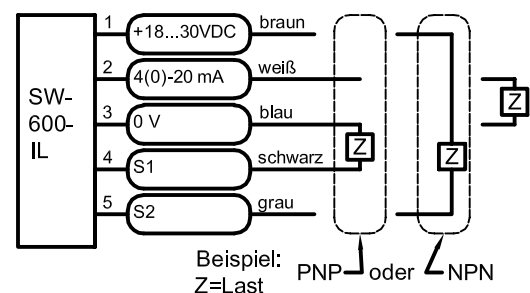
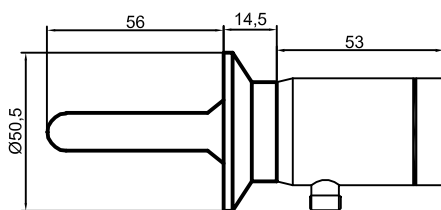


Technical data

Measuring range , dependent on material	1 - 300 cm/s (H ₂ O: 150 cm/s)
Repeat accuracy	1 %
Switching point, Hysteresis	adjustable

Type	SW-600-TRI-56-IL
Art.-No.	544 250
Process connection	TRICLAMP Ø 50,5 mm
Operating voltage (U _B)	18...30 V DC
Permitted residual ripple max.	10 %
Analog output	4(0) - 20mA, 2(0) - 10V with 500 Ohm
Switching outputs	PNP, NPN max 300 mA in total
No-load current (I ₀)	typ. 60 mA
Response- time	typ. 2 s
Temperature gradient	typ. 4 K/s
Operating pressure	100 bar
Permitted ambient temperature	0...+70°C
Display	LCD Display (32 x 16 pixel), LED red
Degree of protection IEC 529	IP 67
Connection	plug-in connector M12 x 1, 5pole
Material in contact with medium	stainless steel no. 1.4571 (VA)
Housing	stainless steel no. 1.4504 (VA)
Glass	mineral glass tempered
Magnet	Cobalt Samarium

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**Calorimetric flow sensor
for liquids
SW-600-...-S(-02)**

- Digital output
- Microprocessor controlled

Certificate:

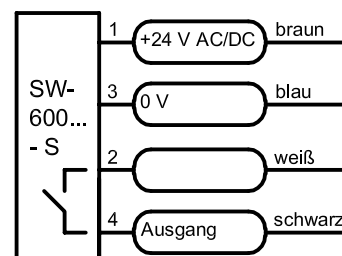
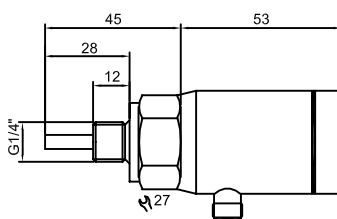


Technical data

Measuring range, dependent on material	1 - 300 cm/s (H ₂ O: 150 cm/s)	1 - 500 cm/s (H ₂ O: 300 cm/s)
Repeat accuracy	1 %	1 %
Switching point	adjustable	adjustable

Type	SW-600-G1/4"/28-S	SW-600-G1/4"/28-S-02
Art.-No.	544 220	SW0004
Process connection	G1/4"	G1/4"
Operating voltage (U _B)	24 V AC/DC ±10%	
Switching output	galvanic separated, relay contact (NO), max. 200 mA	
No-load current (I ₀)	typ. 60 mA	
Response-time	typ. 2 s	
Temperature gradient	typ. 4 K/s	
Operating pressure max.	100 bar	
Permitted ambient temperature	0...+70°C	
Display	LED red/green (red < limit value, green > limit value)	
Degree of protection IEC 529	IP 67	
Connection	plug-in connector M12 x 1, 4pole	
Material in contact with medium	stainless steel no. 1.4571 (VA)	
Housing	stainless steel no. 1.4504 (VA)	
Lid	PA 6.6	
Shortcircuit protection	yes	
Reverse polarity protection	yes	

All specifications are subject to change without notice. (03/2006)





**Calorimetric flow sensor
for liquids
SW-600-...-S(-02)**

- Digital output
- Microprocessor controlled

Certificate:



Technical data

Measuring range, dependent on material	1 - 300 cm/s (H ₂ O: 150 cm/s)	1 - 500 cm/s (H ₂ O: 300 cm/s)
Repeat accuracy	1 %	1 %
Switching point	adjustable	adjustable

Type	SW-600-G1/2"/28-S	SW-600-G1/2"/28-S-02
Art.-No.	544 240	SW0005
Process connection	G1/2"	G1/2"
Operating voltage (U _B)	24 V AC/DC ±10%	
Switching output	galvanic separated, relay contact (NO), max. 200 mA	
No-load current (I ₀)	typ. 60 mA	
Response-time	typ. 2 s	
Temperature gradient	typ. 4 K/s	
Operating pressure max.	100 bar	
Permitted ambient temperature	0...+70°C	
Display	LED red/green (red < limit value, green >limit value)	
Degree of protection IEC 529	IP 67	
Connection	plug-in connector M12 x 1, 4pole	
Material in contact with medium	stainless steel no. 1.4571 (VA)	
Housing	stainless steel no. 1.4504 (VA)	
Lid	PA 6.6	
Shortcircuit protection	yes	
Reverse polarity protection	yes	

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