

Sensors and Switches



The continuous monitoring of critical hydraulic systems has become normal in today's market. The automatic and timely detection of problems in hydraulic systems can predict component failure and thereby eliminate catastrophic system failures. The advent of automated processes systems have made continuous monitoring and control components indispensable.

With the STAUFF line of industrial and mobile sensor, it is possible to continuously monitor and control your machine and process.

The wide range of STAUFF transmitters and switches available, enables proper fit to any application need.

The STAUFF line of simple pressure and temperature switches are factory set, or adjustable via a screw. The switches can be ordered normally open, normally closed, or SPDT.

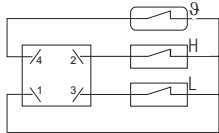
The STAUFF transmitters are available in many pressure and temperature ranges. Output signals are available in 4 ... 20 mA and 0 ... 10 V. Other signals are available on many items. The process connections are available in NPT, SAE, BSP for international use.

All sensors can be ordered with flying leads, DIN connectors or other options to fit the environment.

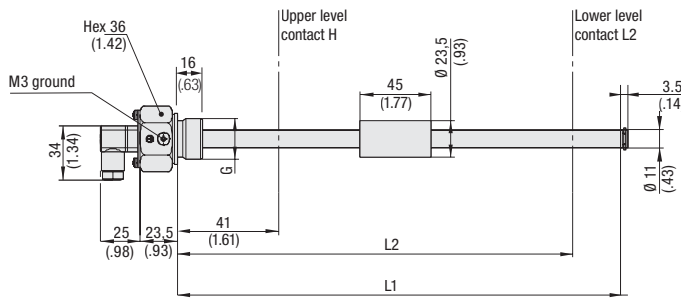
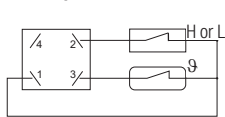
Level-Temperature Switch - Type SLTS

Wiring Scheme

two level contacts
one temperature contact



one level contact
one temperature contact



Order Codes

SLTS 12 - 0 - H41 - L251 - B12 - G048 - M12

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Series and Type

Level-Temperature Switch **SLTS**

② Stem Length

L1: 305 mm / 12 in L2: 251 mm / 9.88 in **12**
L1: 457 mm / 18 in L2: 403 mm / 15.87 in **18**

③ Switching Temperature

Without temperature switch **0**
+60 °C / +140 °F **140**
+70 °C / +158 °F **158**

④ H (Upper Level Contact)

Without upper level contact **0**
41 mm / 1.61 in **H41**

⑤ L2 (Lower Level Contact)

Without lower level contact **0**
251 mm / 9.88 in (SLTS 12 only) **L251**
403 mm / 15.87 in (SLTS 18 only) **L403**

⑥ Process Connection

G3/4 (standard option) **B12**
1 NPT **N16**

Note: Others on request

⑦ Voltage (Volt AC/DC)

48 Volt max. (standard option) **G048**
115 Volt max. (for thread N16 only) **G115**

⑧ Electrical Connection

similar DIN VDE 0627 / IEC 61984 **CB**
M12 pin terminal **M12**

Product Description

The STAUFF Level-Temperature Switches (SLTS Series) are unique in their design and modularity. One of the greatest advantages is the ability of the end-user to adjust the switching level. The internal support wire carrying the level and temperature switches makes it a simple and quick job to change the level switch position.

Level contact positions (L2, H) are set as given in the order code. They can be adjusted individually later on. Please consider a minimum distance of 40 mm / 1.57 in between the switching points.

Features

- Suitable for Mineral Oil and HFC fluids, other fluids on request
- Either 1 or 2 level contacts available
- 1 integrated temperature sensor (optional)
- Standard electrical function:
 - Level contacts: Normally closed, opens with falling level
 - Temperature contacts: Normally closed, opens with rising temperature

STAUFF Level-Temperature Switches SLTS are available with other electrical functions on request.

Options

- 1 NPT and others available on request
- max. 115 Volt switching (for thread N16 only)

Technical Data

Materials

- Stem: Brass
- Float/Sealing: NBR (Buna-N®)

- Max. operating temp.: +80 °C / +176 °F

Electrical Data and Output

- Max. current level contact: 0.5 A
- Max. current temp. contact: 2.0 A
- Contact load level contact: 10 VA
- Max. operating voltage: (See ordering code)

- Specific gravity of fluid: ≥0.8 kg/dm³
- Hysteresis: +18 °C / +64.4 °F

Protection Rating

- IP 65 protection rating: Dust tight and protected against water jets

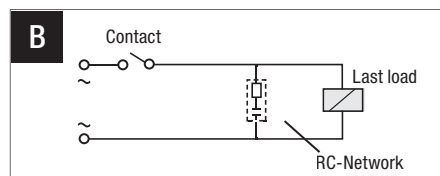
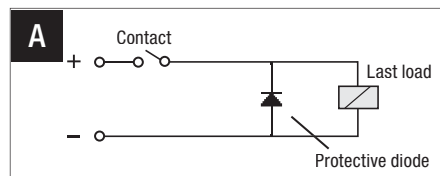
Contact Life Time

Due to their design Reed contacts have a very high life expectancy. However, it is worthwhile to note the following information.

Contact Protection

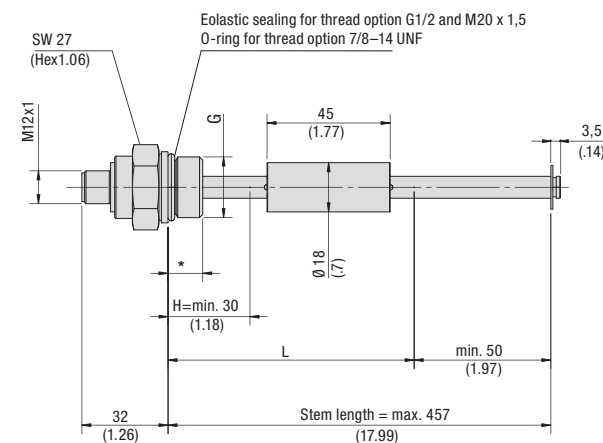
To reduce the high reverse voltage produced when a reed switch opens, the following contact protection can be applied.

- DC voltage: a diode parallel to the load, see figure A
- AC voltage: a RC-network parallel to the load, see figure B and table below



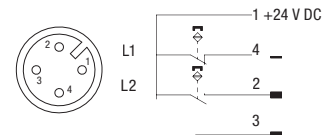
Open contact voltage V	10 VA		25 VA		50 VA		75 VA		100 VA	
	R (Ω)	C (μF)	R (Ω)	C (μF)	R (Ω)	C (μF)	R (Ω)	C (μF)	R (Ω)	C (μF)
24	22	0,022	1	0,1	1	0,47	1	1	1	1
48	120	0,0047	22	0,022	1	0,1	1	0,47	1	0,47
110	470	0,001	120	0,0047	22	22	22	0,047	22	0,1

Level-Temperature Switch Aluminium ▪ Type SLTSA



* 14 (.55) for thread option G1/2 and M20 x 1,5
13 (.51) for thread option 7/8-14 UNF

Wiring Scheme



Product Description

Efficient and inexpensive indication of level and temperature.

Level contact positions (L2, H) are set as given in the order code. They can be adjusted individually later on. Please consider a minimum distance of 50 mm / 1.97 in between the switching points.

Features

- Threads: G1/2, 7/8-14 UNF, M20 x 1,5
- Stem length available from 140 ... 457 mm / 5.5 ... 18.00 in
- Electrical connection M12 / 4-Pin terminal

Technical Data

Materials

- Connector: Anodized Aluminium
- Stem: Brass
- Float: Polyurethane
- Sealing: NBR (Buna-N®)

Electrical Connection

- Connector type: M12 x 1 / 4-Pin

- Max. operating pressure: 1 bar / 14.5 PSI

Permissible Temperature

- Operating: -20 °C ... +80 °C / -4 °F ... +176 °F

- Specific gravity of fluid: ≥ 0,8 kg/dm³

Electrical Data and Output

- Level contact type: K40
- Max. operating voltage: 36 V
- Max. current: 0.5 A
- Contact load: 5 VA

Protection Rating

- IP 67 protection rating: Dust tight and protected against powerful water jets; even immersion (up to 1 m / 3.28 ft) in water is possible under defined conditions of pressure and time

Order Codes

SLTSA	12	0	H60	L255	B08	G036	M12
①	②	③	④	⑤	⑥	⑦	⑧

① Series and Type

Level-Temperature Switch Aluminium **SLTSA**

② Stem Lengths

140 mm / 5.51 in	55
170 mm / 6.69 in	67
215 mm / 8.46 in	85
280 mm / 11.02 in	11
305 mm / 12.01 in	12
370 mm / 14.57 in	146
457 mm / 18.00 in	18

③ Switching Temperature

Without temperature switch **0**

④ H (Upper Level Contact)

30 mm / 1.18 in (only for stem length code 55)	H30
50 mm / 1.97 in (only for stem length code 67)	H50
60 mm / 2.36 in (only for stem length codes 55, 12, 18)	H60
85 mm / 3.35 in (only for stem length code 85)	H85
90 mm / 3.54 in (only for stem length codes 67, 12, 18)	H90
135 mm / 5.31 in (only for stem length code 85)	H135
200 mm / 7.87 in (only for stem length code 11)	H200
290 mm / 11.42 in (only for stem length code 146)	H290

⑤ L (Lower Level Contact)

90 mm / 3.54 in (only for stem length code 55)	L90
120 mm / 4.72 in (only for stem length code 67)	L120
165 mm / 6.50 in (only for stem length code 85)	L165
230 mm / 9.06 in (only for stem length code 11)	L230
255 mm / 10.04 in (only for stem length code 12)	L255
320 mm / 12.60 in (only for stem length code 146)	L320
407 mm / 16.02 in (only for stem length code 18)	L407

⑥ Process Connection

G1/2 (standard option)	B08
7/8-14 UNF	U10
M20 x 1,5	M20

⑦ Voltage

36 Volt max.	G036
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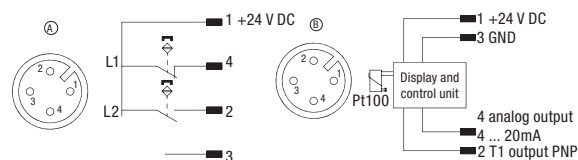
⑧ Electrical Connection

M12 / 4-Pin terminal	M12
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Wiring Scheme

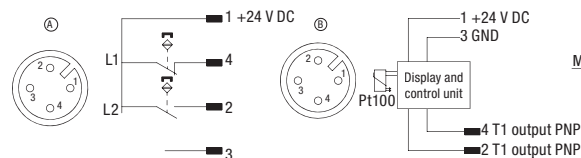
for SLTSD...-1-...

1 temperature PNP switch output + 1 Analog Output 4 ... 20mA



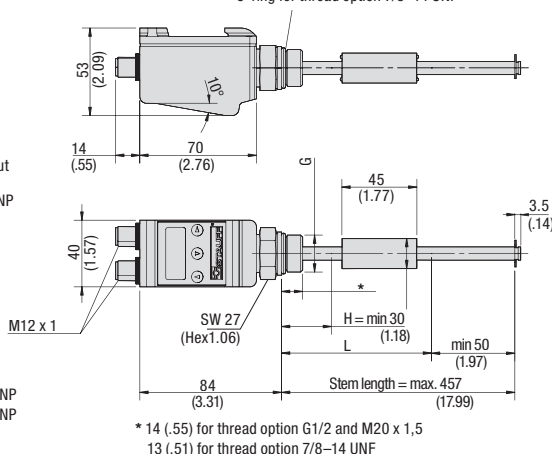
for SLTSD...-2-...

2 temperature PNP switch outputs



Level-Temperature Switch Display - Type SLTSD

Elastic sealing for thread option G1/2 and M20 x 1,5
O-ring for thread option 7/8-14 UNF



Order Codes

SLTSD	12	- 1	- H60	- L255	- B08	- G036	- M12
①	②	③	④	⑤	⑥	⑦	⑧

① Series and Type

Level-Temperature Switch Display **SLTSD**

② Stem Length

140 mm / 5.51 in	55
170 mm / 6.69 in	67
215 mm / 8.46 in	85
280 mm / 11.02 in	11
305 mm / 12.01 in	12
370 mm / 14.57 in	146
457 mm / 18.00 in	18

③ Temperature Output Options

2x PNP switch outputs	1
1x PNP switch outputs + 1x analog 4 ... 20mA	2

④ H (Upper Level Contact)

30 mm / 1.18 in (only for stem length code 55)	H30
50 mm / 1.97 in (only for stem length code 67)	H50
60 mm / 2.36 in (only for stem length codes 55, 12, 18)	H60
85 mm / 3.35 in (only for stem length code 85)	H85
90 mm / 3.54 in (only for stem length codes 67, 12, 18)	H90
135 mm / 5.31 in (only for stem length code 85)	H135
200 mm / 7.87 in (only for stem length code 11)	H200
290 mm / 11.42 in (only for stem length code 370)	H290

⑤ L (Lower Level Contact)

90 mm / 3.54 in (only for stem length code 55)	L90
120 mm / 4.72 in (only for stem length code 67)	L120
165 mm / 6.50 in (only for stem length code 85)	L165
230 mm / 9.06 in (only for stem length code 11)	L230
255 mm / 10.04 in (only for stem length code 12)	L255
320 mm / 12.60 in (only for stem length code 146)	L320
407 mm / 16.02 in (only for stem length code 18)	L407

⑥ Process Connection

G1/2 (standard option)	B08
7/8-14 UNF	U10
M20 x 1,5	M20

⑦ Voltage

36 Volt max.	G036
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⑧ Electrical Connection

M12 / 4-Pin terminal	M12
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Product Description

Combination of a temperature controller with level indication in a small inexpensive package.

Level contact positions (L2, H) are set as given in the order code. They can be adjusted individually later on. Please consider a minimum distance of 50 mm / 1.97 in between the switching points.

Features

- Threads: G1/2, 7/8-14 UNF, M20 x 1,5
- Stem length available from 140 ... 457 mm / 5.5 ... 18.00 in
- Electrical connection M12 / 4-Pin terminal

Technical Data

Materials

Housing:	Polyamide
Connector:	Anodized Aluminium
Stem:	Brass
Float:	Polyurethane

Electrical Connection

Connector type: M12 x 1 / 4-Pin

Max. operating pressure: 1 bar / 14.5 PSI

Permissible Temperature

- Operating: -20 °C ... +80 °C / -4 °F ... +176 °F
- Specific gravity of fluid: ≥ 0,8 kg/dm³

Level Contacts (Connector A)

- Level contact type: K40
- Max. operating voltage: 36 V
- Max. current: 0.5 A
- Contact load: 5 VA

Temperature Outputs (Connector B)

- Output option 1: Two PNP programmable switching outputs
- Output option 2: One PNP switching output and one 4 ... 20 mA analog output
- Max. current: 0.5 A
- Load resistance: 500 Ω

Display

- Display temp. range: -20 °C ... +120 °C / -4 °F ... +248 °F
- Alarm indication range: 0 °C ... +100 °C / +32 °F ... +212 °F
- LED display: 4 digit, 7 segment
- Resolution: 0,5 °C / 1 °F
- Current consumption at power up: 100 mA for 100ms
- Current consumption at operating: 50 mA
- Supply voltage: 10 ... 32 V DC
- Ambient temperature: -20 °C ... +70 °C / -4 °F ... +158 °F
- Accuracy: ±1 % FS*
- Sensor type: Temperature: PT100

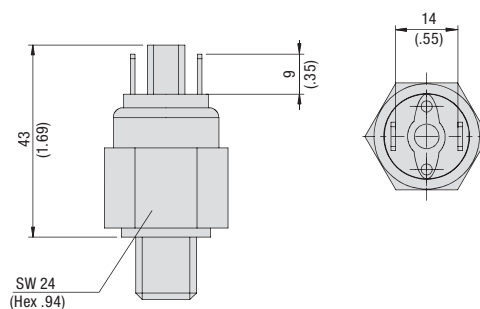
Protection Rating

- IP 65 protection rating: Dust tight and protected against water jets (IP 67 with accordant connection plug)

*FS = Full Scale

Dimensional drawings: All dimensions in mm (in).

Pressure Switch ▪ Type SPW-...-NC/NO



Wiring Scheme

Wiring diagram normally open



Wiring diagram normally closed



Product Description

The SPW Mechanical Pressure Switch is available in a variety of pressure ranges. This durable unit has an adjustable set point that is easily changed by using the adjustment screw which is located under the protective cap.

Features

- Normally open, normally closed
- Pressure ranges available up to 206 bar / 3000 PSI
- G1/4 and 1/4 NPT process connection
- NBR (Buna-N®) sealings
- Steel, zinc plated
- Spade terminal connection

Options

- G1/8, 1/8 NPT and 7/16–20 UNF process connections
- FPM (Viton®) and EPDM sealings on request
- Flying leads with shrink tubing, flying leads, rubber boot, Deutsch connector, weather pack connector female/male and IP option on request
- 316 Stainless Steel

Technical Data

Materials

- Body: Steel, zinc plated or 316 Stainless Steel
- Connector: Polyamide

Electrical Data and Output

- Switching function: Normally open (NO), normally closed (NC)
- Cycle rate: 30 CPM
- Mechanical life: 2000000 operations
- Max. electrical rating: 100 VA

Permissible Temperatures

- NBR (Buna-N®): -9 °C ... +110 °C / +15 °F ... +230 °F
- FPM (Viton®): -18 °C ... +110 °C / 0 °F ... +230 °F
- EPDM: -40 °C ... +110 °C / -40 °F ... +230 °F

Process Connection

- G1/8, G1/4, 1/8 NPT, 1/4 NPT and 7/16–20 UNF

Electrical Connection

- Spade terminals

Protection Rating

- IP 00 protection rating

Order Codes



① Series and Type

Mechanical Pressure Switch **SPW**

② Version

1 ... 4 bar / 14.5 ... 60 PSI	B0004
3 ... 10 bar / 40 ... 150 PSI	B0010
6 ... 18 bar / 75 ... 275 PSI	B0018
11 ... 34 bar / 150 ... 500 PSI (standard option)	B0034
19 ... 55 bar / 275 ... 800 PSI	B0055
28 ... 75 bar / 400 ... 1100 PSI (standard option)	B0075
69 ... 206 bar / 1000 ... 3000 PSI (standard option)	B0206

③ Process Connection

G1/8	B02
G1/4 (standard option)	B04
1/8 NPT	N02
1/4 NPT (standard option)	N04
7/16–20 UNF	U04

④ Switching Outputs

Normally open (standard option)	NO
Normally closed	NC

⑤ Electrical Connection

Spade terminals (standard option)	SP
Flying leads	F
Flying leads with shrink tubing	FL
Deutsch DT04-3P / 3-Pin	D
Rubber boot	RB
Weather pack connector female	WF
Weather pack connector male	WM
IP Option (IP 66)	IP

Note: IP Option requires a fixed set point indicate at the end of part number.

⑥ Body Material

Steel, zinc plated (standard option)	(none)
316 Stainless Steel	W5

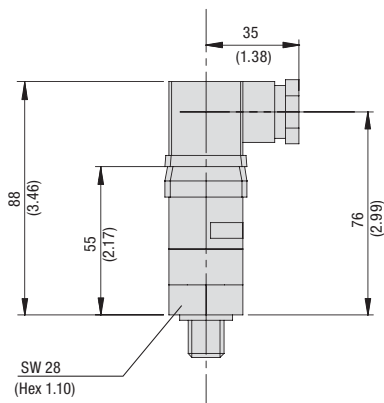
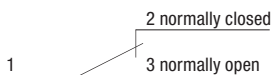
Pressure Ranges

Version	Pressure Range (bar/PSI)	Maximum Pressure (bar/PSI)	Burst Pressure (bar/PSI)	Repeatability	Average Deadband
B0004	1 ... 4	410	600	±0,10 bar + 3 % of setting	0,21 bar + 5 % of setting
	14.5 ... 60	6000	9000	±1.5 PSI + 3 % of setting	3 PSI + 5 % of setting
B0010	3 ... 10	410	600	±0,17 bar + 3 % of setting	0,35 bar + 6 % of setting
	40 ... 150	6000	9000	±2.5 PSI + 3 % of setting	5 PSI + 6 % of setting
B0018	6 ... 18	410	600	±0,26 bar + 3 % of setting	0,48 bar + 8 % of setting
	75 ... 275	6000	9000	±3.75 PSI + 3 % of setting	7 PSI + 8 % of setting
B0034*	11 ... 34	410	600	±0,34 bar + 3 % of setting	0,69 bar + 10 % of setting
	150 ... 500	6000	9000	±5 PSI + 3 % of setting	10 PSI + 10 % of setting
B0055	19 ... 55	410	600	±0,55 bar + 3 % of setting	10,3 bar + 11 % of setting
	275 ... 800	6000	9000	±8 PSI + 3 % of setting	15 PSI + 11 % of setting
B0075*	28 ... 75	410	600	±0,90 bar + 3 % of setting	2,07 bar + 12 % of setting
	400 ... 1100	6000	9000	±13 PSI + 3 % of setting	30 PSI + 12 % of setting
B0206*	69 ... 206	410	600	±2,41 bar + 3 % of setting	4,83 bar + 14 % of setting
	1000 ... 3000	6000	9000	±35 PSI + 3 % of setting	70 PSI + 14 % of setting

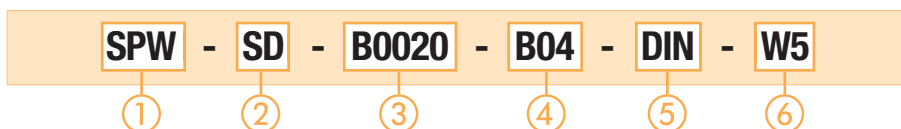
* Standard option

Dimensional drawings: All dimensions in mm (in).

Wiring Scheme



Order Codes



① Series and Type

Mechanical Pressure Switch **SPW**

② Switching Function

SPDT **SD**

③ Version

0,7 ... 2 bar / 10 ... 30 PSI	B0002
1,7 ... 5,2 bar / 25 ... 75 PSI	B0005
4,5 ... 20,7 bar / 65 ... 300 PSI (standard option)	B0020
17,2 ... 69 bar / 250 ... 1000 PSI (standard option)	B0069
69 ... 206 bar / 1000 ... 3000 PSI (standard option)	B0206
173 ... 344 bar / 2500 ... 5000 PSI	B0344

④ Process Connection

G1/8	B02
G1/4 (standard option)	B04
1/8 NPT	N02
1/4 NPT (standard option)	N04
7/16-20 UNF	U04

⑤ Electrical Connection

Flying leads	F
Flying leads with shrink tubing	FL
DIN EN 175301-803A (DIN 43650-A) (standard option)	DIN
Deutsch DT04-3P / 3-Pin	D
Weather pack connector female	WF
Weather pack connector male	WM
IP Option (IP 66)	IP

⑥ Body Material

Steel, zinc plated (standard option)	(none)
316 Stainless Steel	W5

Pressure Ranges

Version	Pressure Range (bar/PSI)	Maximum Pressure (bar/PSI)	Burst Pressure (bar/PSI)	Repeatability	Average Deadband
B0002	0,7 ... 2	410	600	±0,10 bar + 2 % of setting	0,24 bar + 11 % of setting
	10 ... 30	6000	9000	±1.5 PSI + 2 % of setting	3.5 PSI + 11 % of setting
B0005	1,7 ... 5,2	410	600	±0,17 bar + 2 % of setting	0,24 bar + 11 % of setting
	25 ... 75	6000	9000	±2.5 PSI + 2 % of setting	3.5 PSI + 11 % of setting
B0020*	4,5 ... 20,7	410	600	±0,34 bar + 2 % of setting	1,38 bar + 11 % of setting
	65 ... 300	6000	9000	±5 PSI + 2 % of setting	20 PSI + 11 % of setting
B0069*	17,2 ... 69	410	600	±1,03 bar + 2 % of setting	3,10 bar + 12 % of setting
	250 ... 1000	6000	9000	±15 PSI + 2 % of setting	45 PSI + 12 % of setting
B0206*	69 ... 206	410	600	±2,07 bar + 2 % of setting	4,83 bar + 12 % of setting
	1000 ... 3000	6000	9000	±30 PSI + 2 % of setting	70 PSI + 12 % of setting
B0344	173 ... 344	410	600	±3,45 bar + 2 % of setting	9,65 bar + 13 % of setting
	2500 ... 5000	6000	9000	±50 PSI + 2 % of setting	140 PSI + 13 % of setting

* Standard option

Dimensional drawings: All dimensions in mm (in).

Pressure Switch ■ Type SPW-SD



Product Description

The SPW-SD Mechanical SPDT Pressure Switch is available in a variety of pressure ranges. This durable unit has an adjustable set point that is easily changed by using the adjustment screw which is located under the protective cap.

Features

- SPDT switching function
- Pressure ranges available up to 344 bar / 5000 PSI
- G1/4 and 1/4 NPT process connection
- NBR (Buna-N®) sealings
- Steel, zinc plated
- Spade terminal connection

Options

- G1/8, 1/8 NPT and 7/16-20 UNF process connections
- FPM (Viton®) and EPDM sealings on request
- Flying leads with shrink tubing, flying leads, Deutsch connector, weather pack connector female/male and IP option on request
- 316 Stainless Steel

Technical Data

Materials

- Body: Steel, zinc plated or 316 Stainless Steel
- Connector: Polyamide

Electrical Data and Output

- Switching function: SPDT
- Cycle rate: 20 CPM
- Mechanical life: 2000000 operations
- Max. electrical rating: 5 A at 125/250 V AC, 5 A resistive / 3 A inductive at 28 V DC

Permissible Temperatures

- NBR (Buna-N®): -9°C ... +85°C / +15°F ... +185°F
- FPM (Viton®): -18°C ... +85°C / 0°F ... +185°F
- EPDM: -23°C ... +85°C / -10°F ... +185°F

Process Connections

- G1/8, G1/4, 1/8 NPT, 1/4 NPT and 7/16-20 UNF

Electrical Connection

- DIN EN 175301-803 form A (DIN 43650-A)

Protection Rating

- IP 65 protection rating: Dust tight and protected against water jets

Pressure Transmitters ▪ Type SPT



Product Description

The SPT Pressure Transmitter is designed for many industrial and OEM pressure measurement applications. The SPT pressure transmitters convert applied pressure from 1 bar up to 600 bar / 14.5 PSI up to 8702 PSI into the corresponding output signals. The SPT Series provides resistance to vibration, shock, wide temperature variations and many other extreme environmental conditions that are typical of industrial and OEM applications.

Features

- Stainless Steel housing construction
- L-plug DIN EN 175301-803A (DIN 43650-A) electrical connection
- Pressure ranges up to 600 bar / 8702 PSI
- G1/4 or 1/4 NPT process connection
- Output signal 4 ... 20 mA
- Non-linearity $\leq \pm 0.5\%$ BFSL
- Environmental protection of IP 65
(IP 65 protection rating: Dust tight and protected against water jets)
- Protection against incorrect polarity, short circuits and over-voltage
- Temperature compensated
- Long term stability

Options

- Mini L-plug DIN EN 175301-803C, M12 x 1 and flying lead electrical connections
- 1/2 NPT and 7/16–20 UNF process connections
- Output signals 0 ... 5 V, 0 ... 10 V, 1 ... 5 V and 0,5 ... 4,5 V ratiometric on request
- Non-linearity $\leq \pm 0.25\%$ BFSL
- Environmental protection of IP 67
(IP 67 protection rating: Dust tight and protected against powerful water jets; even immersion (up to 1 m / 3.28 ft) in water is possible under defined conditions of pressure and time)
- Extended temperature option on request
-30 °C ... +100 °C / -22 °F ... +212 °F

Order Codes

SPT - B0400 - B04 - 420A - DIN				
①	②	③	④	⑤
① Series and Type		③ Process Connection		
Pressure Transmitter		G1/4 (standard option)		
SPT		1/4 NPT (standard option)		
		1/2 NPT		
		7/16–20 UNF		
② Version		④ Signal Output		
0 ... 1 bar / 0 ... 14.5 PSI		4 ... 20 mA, 2-wire (standard option)		
B0001		420A		
0 ... 1,6 bar / 0 ... 23 PSI		0 ... 10 V, 3-wire		
B001.6		010V		
0 ... 2,5 bar / 0 ... 36 PSI		0 ... 5 V, 3-wire		
B002.5		05V		
0 ... 4 bar / 0 ... 58 PSI		1 ... 5 V, 3-wire		
B0004		15V		
0 ... 6 bar / 0 ... 87 PSI		0,5 ... 4,5 V, ratiometric		
B0006		0545V		
0 ... 10 bar / 0 ... 145 PSI		⑤ Electrical Connection		
B0010		DIN EN 175301-803A (DIN 43650-A)		
0 ... 16 bar / 0 ... 232 PSI (standard option)		(standard option)		
B0016		DIN EN 175301-803C		
0 ... 25 bar / 0 ... 362 PSI		M12 x 1 / 4-Pin		
B0025		Flying leads with shrink tubing		
0 ... 40 bar / 0 ... 580 PSI (standard option)				
B0040				
0 ... 60 bar / 0 ... 870 PSI				
B0060				
0 ... 100 bar / 0 ... 1450 PSI (standard option)				
B0100				
0 ... 160 bar / 0 ... 2320 PSI (standard option)				
B0160				
0 ... 250 bar / 0 ... 3625 PSI				
B0250				
0 ... 400 bar / 0 ... 5801 PSI (standard option)				
B0400				
0 ... 500 bar / 0 ... 7251 PSI				
B0500				
0 ... 600 bar / 0 ... 8702 PSI (standard option)				
B0600				

Pressure Transmitters ■ Type SPT



Technical Data

Materials

- Body: 316 L Stainless Steel

Internal Transmission Fluid

- Silicone Oil (only pressure ranges up to 0 ... 10 bar / 0 ... 100 PSIG and 0 ... 25 bar / 0 ... 300 PSI absolute)

Fatigue Life

- 10 million load cycles maximum

Signal Output and Maximum Load

- Signal 4 ... 20 mA, 2-wire:
Power supply 8 ... 30 V DC
Ra<= (UB-10 V)/ 0,02A
- Signal 0 ... 10 V, 3-wire:
Power supply 14 ... 30 V DC
Ra>10kΩ
- Signal 0 ... 5 V, 3-wire:
Power supply 8 ... 30 V DC
Ra>5kΩ
- Signal 1 ... 5 V, 3-wire:
Power supply 8 ... 30 V DC
Ra>5kΩ
- Signal 0,5 ... 4,5 V, ratiometric:
Power supply 8 ... 30 V DC
Ra>4,5kΩ

Isolation Voltage

- 500 V DC

Response Time

- <4 ms

Current Consumption

- Signal current:
(max. 25 mA) for current output,
(max. 8 mA) for voltage output

Non-linearity

- $\leq \pm 0,5 \%$ (BFSL) or optional $\leq \pm 0,25 \%$ (BFSL)

Accuracy

- $\leq \pm 1,0 \%$ FS* (with non-linearity 0,5 %) *
- $\leq \pm 0,5 \%$ FS* (with non-linearity 0,25 %) *
- $\leq \pm 0,6 \%$ FS* (with non-linearity 0,25 % and signal output 0 ... 5 V) *
- * (Includes non-linearity, hysteresis, zero point and full scale error)

Zero Offset

- $\leq 0,15$ typ. % FS*; $\leq 0,4$ max. % of span (non-linearity 0,25 %)
- $\leq 0,5$ typ. % FS*; $\leq 0,8$ max. % of span (non-linearity 0,25 %)

Hysteresis

- $\leq 0,16 \%$ FS*

Non-repeatability

- $\leq 0,1 \%$ FS*

Long Term Drift

- $\leq 0,1 \%$ FS*

Signal Noise

- $\leq 0,3 \%$ FS*

Permissible Temperatures (Standard)

- Media: 0 °C ... +80 °C / +32 °F ... +176 °F
- Ambient: 0 °C ... +80 °C / +32 °F ... +176 °F
- Storage: -20 °C ... +80 °C / -4 °F ... +176 °F
- Operating temp. range: 0 °C ... +80 °C / +32 °F ... +176 °F

Permissible Temperatures (Extended Temperature Option)

- Media: -30 °C ... +100 °C / -22 °F ... +212 °F
- Ambient: -30 °C ... +100 °C / -22 °F ... +212 °F
- Storage: -30 °C ... +100 °C / -22 °F ... +212 °F

Electrical Connection

- DIN EN 175301-803A (DIN 43650-A), DIN EN 175301-803C
M12 x 1 / 4-Pin, flying leads

Process Connection

- G1/4, 1/4 NPT, 1/2 NPT, 7/16-20 UNF

Temperature Error within Compensated Temperature Range

- $\leq 1,0$ typ. % FS* $\leq 2,5$ max. % FS*

CE Conformity

Pressure Equipment Directive

- 97/23/EC

EMC Directive

- 89/336/EEG emission (class B) and immunity according to EN 61 326

Shock Resistance

- 500g according to IEC 60068-2-27 (mechanical shock)

Vibration Resistance

- 10g according to IEC 60068-2-6 (vibration under resonance)

Wiring Protection

- Overvoltage protection: 32 V DC; 36 V DC with 4 ... 20 mA
- Short circuit protection: Sig+ to UB-
- Reverse polarity protection: UB+ to UB-

Test Reference Conditions

- Relative humidity: 45 ... 75 %
- Temperature: +15 °C ... +25 °C / +59 °F ... +77 °F
- Atmospheric pressure: 86 ... 106 kPa / 25,4 ... 31,3 inhg

RoHS-conformity

- Yes

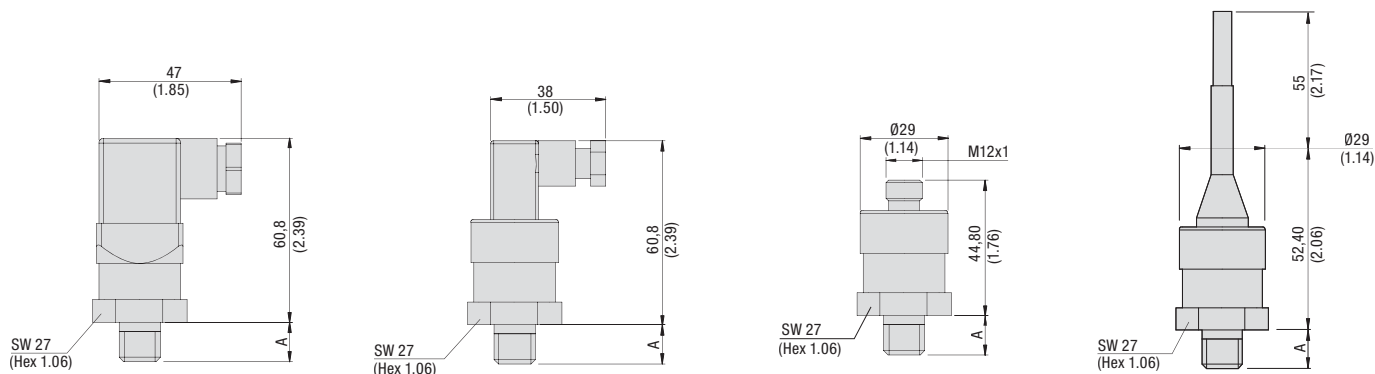
Weight

- Approximately 80g / 2.8 oz

Protection Rating

- DIN EN 175301-803A: IP 65 protection rating: Dust tight and protected against water jets (DIN 43650-A)
- DIN EN 175301-803C: IP 65 protection rating: Dust tight and protected against water jets
- M 12 x 1: IP 67 protection rating: Dust tight and protected against powerful water jets; even immersion (up to 1 m / 3.28 ft) in water is possible under defined conditions of pressure and time
- Flying leads: IP 67 protection rating: Dust tight and protected against powerful water jets; even immersion (up to 1 m / 3.28 ft) in water is possible under defined conditions of pressure and time

Pressure Transmitters ■ Type SPT



DIN 175301-803A (DIN 43650-A)

DIN 175301-803C

M12x1 / 4-Pin

Flying leads with shrink tubing

Dimensions

Version	A (mm/in)	Process Connection
B04	14,0	G1/4
	.55	
N04	13,0	1/4 NPT
	.51	
N08	19,0	1/2 NPT
	.75	
U04	9,1	7/16–20 UNF
	.36	

Pressure Ranges

Version	Pressure Range (bar/PSI)	Maximum Pressure ** (bar/PSI)	Burst Pressure *** (bar/PSI)
B0001	0 ... 1	2	5
	0 ... 14.5	29	72
B001.6	0 ... 1,6	3,2	10
	0 ... 23	46	145
B002.5	0 ... 2,5	5	10
	0 ... 36	72	145
B0004	0 ... 4	8	17
	0 ... 58	116	246
B0006	0 ... 6	12	34
	0 ... 87	174	493
B0010	0 ... 10	20	34
	0 ... 145	290	493
B0016*	0 ... 16	32	100
	0 ... 232	464	1450
B0025	0 ... 25	50	100
	0 ... 362	725	1450
B0040*	0 ... 40	80	400
	0 ... 580	1160	5801
B0060	0 ... 60	120	550
	0 ... 870	1740	7977
B0100*	0 ... 100	200	800
	0 ... 1450	2900	11603
B0160*	0 ... 160	320	1000
	0 ... 2320	4641	14503
B0250	0 ... 250	500	1200
	0 ... 3625	7251	17404
B0400*	0 ... 400	800	1700
	0 ... 5801	11603	24656
B0500	0 ... 500	1200	2400
	0 ... 7251	17404	34809
B0600*	0 ... 600	1200	2400
	0 ... 8702	17404	34809

Note:

- Absolut pressure: 0 ... 1 bar up to 0 ... 25 bar
0 ... 14.5 PSI up to 0 ... 362 PSI

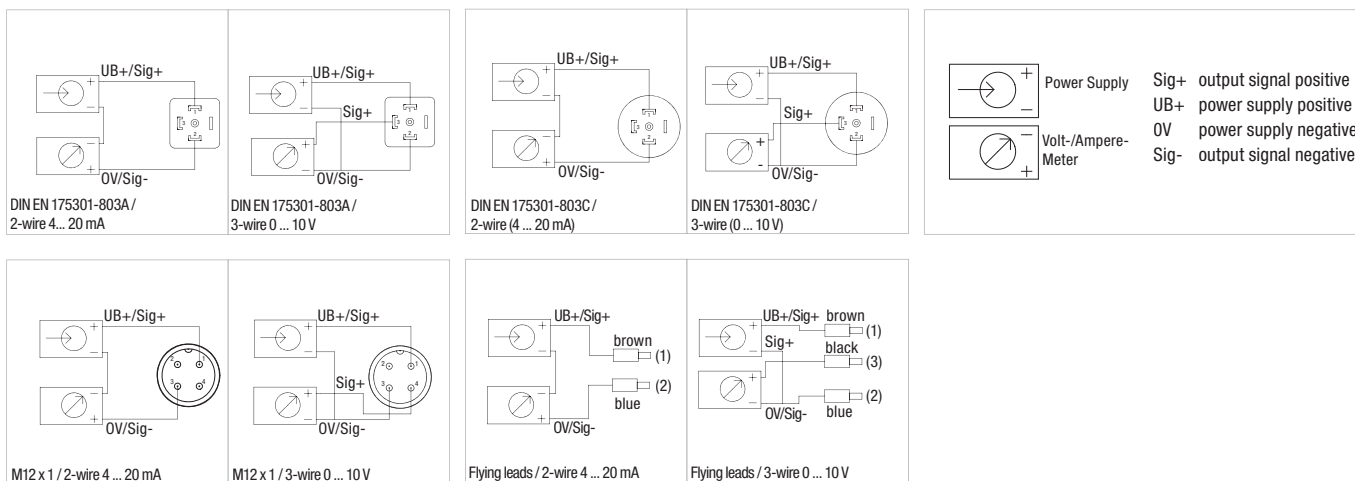
* Standard option

** Maximum pressure, causing no perminate changes in specifications but may lead to zero point and span shifts

*** Burst pressure, leading to perminate changes in specifications or destruction of the transmitter

Pressure Transmitters ▪ Type SPT

Electrical Connections



Pressure Transmitters ▪ Type PT



Product Description

The PT Pressure Transmitters features a durable fibre-glass reinforced PBT case, an internal metal sleeve for excellent EMI protection and an all welded thin film measuring cell for exceptional long term stability. This product is available with a flying lead option which is rated to IP69K for resistance to high pressure steam wash down. Produced on a high volume fully automated assembly line, the PT Pressure Transmitter is especially focused to provide a high number of transmitters to the end user while maintaining a consistent quality.

Features

- IP69K rated safety class (flying leads)
- Pressure ranges up to 600 bar / 8702 PSI
- G1/4, 7/16–20 UNF process connection
- Output signal 4 ... 20 mA
- Rugged PBT housing
- Internal metal sleeve
- Stainless Steel connection
- Protect against incorrect polarity, short circuits and overvoltage
- M12 x 1, Deutsch 3-Pin and flying leads with shrink tubing electrical connections

Options

- 0 ... 10 V, 1 ... 5 V, 0.5 ... 4.5 V ratiometric available outputs on request
- 1/4 NPT process connection on request

Order Codes

PT - B0400 - B04 - 420A - M12				
①	②	③	④	⑤
① Type ② Version ③ Process Connection ④ Signal Output ⑤ Electrical Connection				
Pressure Transmitter				
PT				
0 ... 16 bar / 0 ... 232 PSI	B0016	G1/4 (standard option)	420A	M12
0 ... 25 bar / 0 ... 362 PSI	B0025	1/4 NPT	010V	FL
0 ... 40 bar / 0 ... 580 PSI	B0040	7/16–20 UNF (standard option)	15V	D
0 ... 60 bar / 0 ... 870 PSI	B0060			
0 ... 100 bar / 0 ... 1450 PSI	B0100			
0 ... 160 bar / 0 ... 2320 PSI	B0160			
0 ... 250 bar / 0 ... 3625 PSI	B0250			
0 ... 400 bar / 0 ... 5801 PSI	B0400			
0 ... 500 bar / 0 ... 7251 PSI	B0500			
0 ... 600 bar / 0 ... 8702 PSI	B0600			

Pressure Transmitters ■ Type PT



Technical Data

Materials

- Body: Stainless Steel
- Connector: Fiberglass-reinforced Polybutylene Terephthalate (PBT)

Signal Outputs and Maximum Load

- Signal 4 ... 20 mA, 2-wire:
Power supply 10 ... 36 V DC
 $R_a \leq (U_B - 10 \text{ V}) / 0,02 \text{ A}$
- Signal 0 ... 10 V, 3-wire:
Power supply 14 ... 36 V DC
 $R_a > 5 \text{ k}\Omega$
- Signal 1 ... 5 V, 3-wire:
Power supply 8 ... 36 V DC
 $R_a > 2,5 \text{ k}\Omega$
- Signal 0,5 ... 4,5 V, ratiometric:
Power supply 5 ... 30 V DC
 $R_a > 4,5 \text{ k}\Omega$

Response Time (10-90%)

- $\leq 2 \text{ ms}$

Isolation Voltage

- 500 V DC

Accuracy

- $\leq \pm 0,5 \% \text{ FS}^*$
- $\leq \pm 1,0 \% \text{ FS}^*$
*(limit point calibration) (Includes linearity, hysteresis and repeatability)

Repeatability

- $\leq 0,2 \% \text{ FS}^*$

One Year Stability

- $\leq 0,3 \% \text{ FS}^*$ (at reference conditions)

Permissible Temperatures

- Media*: $-40 \dots +125^\circ\text{C} / -40 \dots +257^\circ\text{F}$
- Ambient*: $-40 \dots +100^\circ\text{C} / -40 \dots +212^\circ\text{F}$
- Storage*: $-40 \dots +120^\circ\text{C} / -40 \dots +248^\circ\text{F}$
* Also complies with EN 50178, Tab. 7,
Operation (C) 4K4H, Storage (D) 1K4, Transport (E) 2K3
- Compensated temp. range: $0 \dots +80^\circ\text{C} / +32 \dots +176^\circ\text{F}$

Temperature Coefficients (TC) within Compensated Temperature Range

- Mean TC of zero: $\leq 0,15 / 10 \text{ k}$ (special pressure ranges may have increased zero TC % FS*)
- Mean TC of range: $\leq 0,15 / 10 \text{ k \% FS}^*$

CE Conformity

- 89/336/EEG interference emission and immunity see EN 61 326 interference emission limit class A and B 97/23/EEG pressure equipment directive

Shock Resistance

- 500 g according to IEC 60068-2-27 (mechanical shock)

Vibration Resistance

- 20 g according to IEC 60068-2-6 (vibration under resonance)

Wiring Protection

- Protected against short circuiting signal+ to UB- / 0V
- Protected against reverse polarity except ratiometric output signals

Weight

- Approximately 59,53 g / 2.10 oz

Electrical Connection

- Flying leads, Deutsch DT04-3P, M12 x 1 / 4-Pin

Process Connection

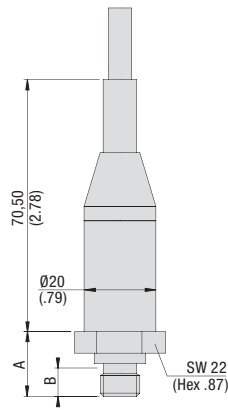
- G1/4, 1/4 NPT, 7/16-20 UNF

Protection Rating

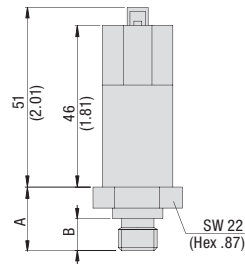
- Flying leads: IP69K protection rating: Dust tight, for high-pressure, high-temperature wash down applications
- M 12 x 1: IP 67 protection rating: Dust tight and protected against powerful water jets; even immersion (up to 1 m / 3.28 ft) in water is possible under defined conditions of pressure and time
- Deutsch DT04-3P: IP 67 protection rating: Dust tight and protected against powerful water jets; even immersion (up to 1 m / 3.28 ft) in water is possible under defined conditions of pressure and time

* FS = Full Scale

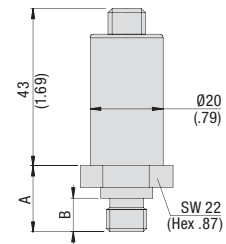
Pressure Transmitters ■ Type PT



Flying Leads



Deutsch DT04-3P / 3-Pin



M12 x 1 / 4-Pin

Dimensions

Version	A (mm/in)	B (mm/in)	Process Connection
B04	20,2	12,0	G1/4
	.80	.47	
N04	19,2	18,0	1/4 NPT
	.76	.71	
U04	17,6	9,14	7/16-20 UNF
	.69	.36	

Pressure Ranges

Version	Pressure Range (bar/psi)	Maximum Pressure * (bar/psi)	Burst Pressure ** (bar/psi)
B0016	0 ... 16	32	160
	0 ... 232	464	2320
B0025	0 ... 25	50	250
	0 ... 362	725	3625
B0040	0 ... 40	80	400
	0 ... 580	1160	5801
B0060	0 ... 60	120	550
	0 ... 870	1740	7977
B0100	0 ... 100	200	800
	0 ... 1450	2900	11603
B0160	0 ... 160	320	1000
	0 ... 2320	4641	14503
B0250	0 ... 250	500	1200
	0 ... 3625	7251	17404
B0400	0 ... 400	800	1700
	0 ... 5801	11603	24656
B0500	0 ... 500	1200	2400
	0 ... 7251	17404	34809
B0600	0 ... 600	1200	2400
	0 ... 8702	17404	34809

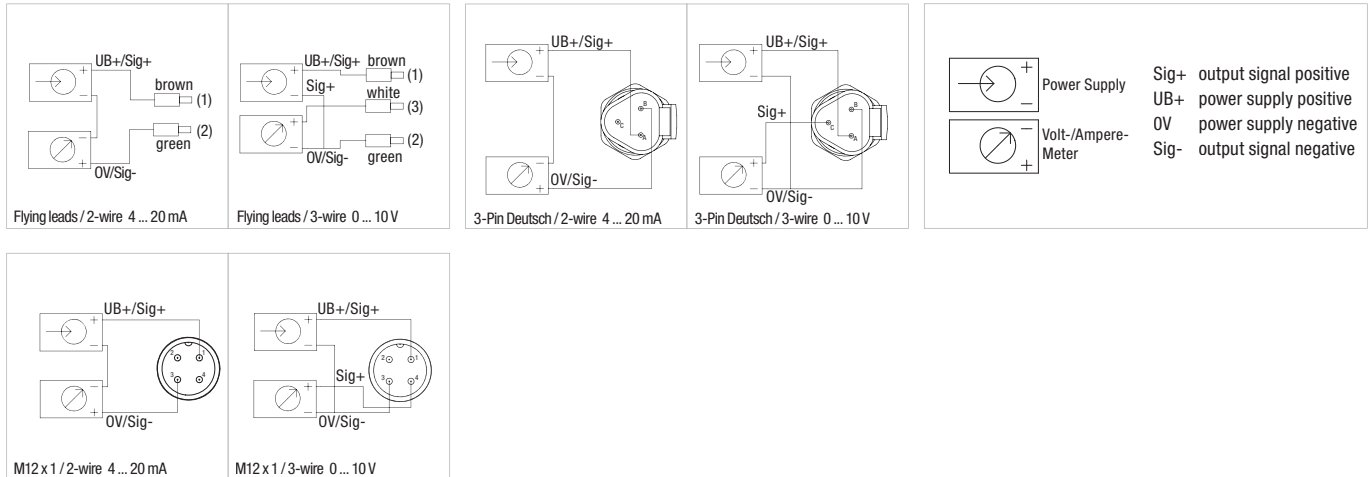
Note:

* Pressure applied up to the maximum rating will cause no permanent change in specifications but may lead to zero and span shifts.

** Exceeding the burst pressure may result in destruction of the transmitter and possible loss of media.

Pressure Transmitters ▪ Type PT

Electrical Connections



Pressure Switch and Transmitter ■ Type SPWF



Product Description

The SPWF Pressure Switch and Transmitter features a LED display to provide continuous pressure monitoring and allows the operator to program the set points without having to pressurize the unit. The display can be rotated up to 330° to offer the best possible viewing position in any application.

Features

- Stainless Steel construction
- LED display and easy programming of set points
- Two switching outputs
- Adjustment ranges of: -1 ... 700 bar / 14.5 ... 10152 PSI
- G1/4 and 1/4 NPT process connections
- LED display rotates up to 330°

Options

- G1/2 and 1/2 NPT available process connections
- One switching output and one analog output
- Two switching outputs and one analog output

Order Codes

SPWF	-	B0100	-	B04	-	1
①		②		③		④

① Series and Type

Pressure Switch and Transmitter	SPWF
---------------------------------	-------------

② Version

-1 ... 2 bar / -14.5 ... 29 PSI	BN0002
-1 ... 3 bar / -14.5 ... 43 PSI	BN0003
-1 ... 5 bar / -14.5 ... 72 PSI	BN0005
-1 ... 10 bar / -14.5 ... 145 PSI	BN0010
0 ... 2 bar / 0 ... 29 PSI	B0002
0 ... 5 bar / 0 ... 72 PSI	B0005
0 ... 10 bar / 0 ... 145 PSI	B0010
0 ... 20 bar / 0 ... 290 PSI	B0020
0 ... 50 bar / 0 ... 725 PSI (standard option)	B0050
0 ... 100 bar / 0 ... 1450 PSI (standard option)	B0100
0 ... 160 bar / 0 ... 2320 PSI (standard option)	B0160
0 ... 250 bar / 0 ... 3625 PSI (standard option)	B0250
0 ... 400 bar / 0 ... 5801 PSI (standard option)	B0400
0 ... 600 bar / 0 ... 8702 PSI (standard option)	B0600
0 ... 700 bar / 0 ... 10152 PSI	B0700

③ Process Connection

G1/4 (standard option)	B04
G1/2	B08
1/4 NPT (standard option)	N04
1/2 NPT	N08

④ Signal Output

Two switching outputs (standard option)	1
One switching output, one 4 ... 20 mA output	2
One switching output, one 0 ... 10 V output	3
Two switching outputs, one 4 ... 20 mA output	4

Pressure Switch and Transmitter ■ Type SPWF



Technical Data

Materials

- Measuring Element: Stainless Steel for pressures above 103,42 bar / 1500 PSI, Ceramic for below 103,42 bar / 1500 PSI
- Housing: Stainless Steel
- Process Connection: Stainless Steel

Supply Voltage

- 12 ... 30 V DC, protection from reverse polarity and overload

Power Consumption

- ≤ 50 mA, without load current

Switching Outputs

- Switching function: Normally Closed (NC) or normally Open (NO)
- Damping (option): 0 ... 2000 ms
- Delay (option): 0 ... 99,99 s
- Power rating: 0,5 A max.

Adjustment

- Set point: 1 ... 100 % FS*
- Reset point: 0 ... 99 % FS*

Analog Outputs

- Standard: 4 ... 20 mA, 3-wire
- Option: 0 ... 10 V, 3-wire
- Scaling: 20 ... 100 % FS*
- Load resistance: Current output <500, Voltage output >10 k
- Hysteresis: 0,3 % FS*
- Response time: ≤2 ms within 10 ... 90 % of FS*

Accuracy

- ±1 % FS* +1 digit

Repeatability

- ≤0.2 % FS*

Electrical Connection

- M12 x 1 / 4-Pin or M12 x 1 / 5-Pin

Process Connection

- G1/4, G1/2, 1/4 NPT, 1/2 NPT

Permissible Temperatures

- Media: -20 °C ... +80 °C / -4 °F ... +176 °F
- Ambient: -20 °C ... +70 °C / -4 °F ... +158 °F
- Storage: -30 °C ... +80 °C / -22 °F ... +176 °F
- Tk: 0.3 % per 10K

Display

- 7 segments, LED display, red, 7,6 mm / .30 in high
- 4 digits (-999 ... 9999)

Load Capacity

- Shock resistance: 50 g according to IEC 60068-2-27
- Vibration resistance: 10 g according to IEC 60068-2-6

Weight

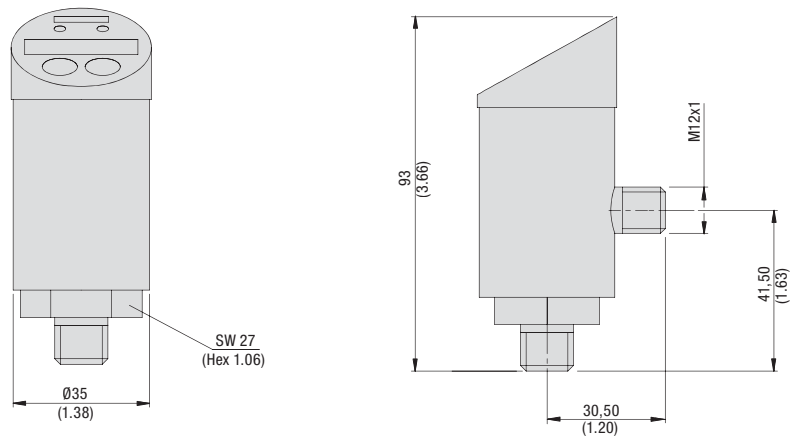
- Approximately 0.30 kg / .70 lbs

Protection Rating

- IP 65 protection rating: Dust tight and protected against water jets

* FS = Full Scale

Pressure Switch and Transmitter ■ Type SPWF



Pressure Ranges

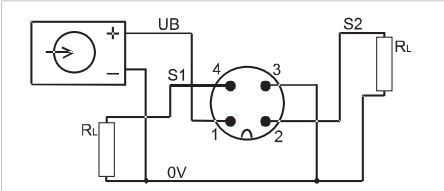
Version	Pressure Range ^(bar/psi)	Maximum Pressure ^(bar/psi)	Burst Pressure ^(bar/psi)
BN0002	-1 ... 2	5	6
	-14.5 ... 29	72	87
BN0003	-1 ... 3	5	6
	-14.5 ... 43	72	87
BN0005	-1 ... 5	10	12
	-14.5 ... 72	145	174
BN0010	-1 ... 10	20	25
	-14.5 ... 145	290	362
B0002	0 ... 2	5	6
	0 ... 29	72	87
B0005	0 ... 5	10	12
	0 ... 72	145	174
B0010	0 ... 10	20	25
	0 ... 145	290	362
B0020	0 ... 20	40	50
	0 ... 290	580	725
B0050*	0 ... 50	100	120
	0 ... 725	1450	1740
B0100*	0 ... 100	200	800
	0 ... 1450	2900	11603
B0160*	0 ... 160	320	1000
	0 ... 2320	4641	14503
B0250*	0 ... 250	500	1200
	0 ... 3625	7251	17404
B0400*	0 ... 400	800	1700
	0 ... 5801	11603	24656
B0600*	0 ... 600	1200	2400
	0 ... 8702	17404	34809
B0700	0 ... 700	1200	2400
	0 ... 10152	17404	34809

Note:

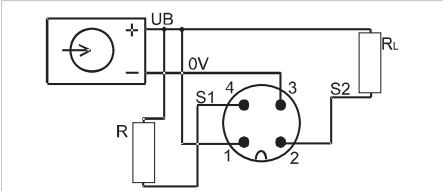
* Standard option

Pressure Switch and Transmitter ▪ Type SPWF

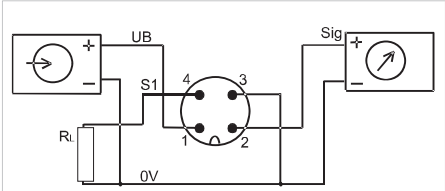
Electrical Connections



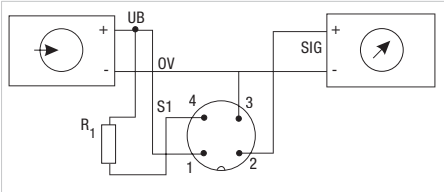
2 Switching outputs, p-type



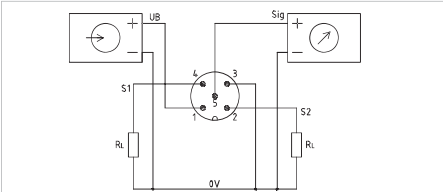
2 Switching outputs, n-type



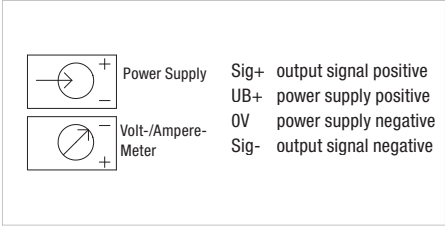
1 Switching output Pin-4-p-type, 1 analog output Pin 2



1 Switching output Pin-4-n-type, 1 analog output Pin 2



2 Switching outputs Pin 4 and Pin 2-p-type with 1 analog output Pin 5



Temperature Switch and Transmitter ■ Type STWE



Product Description

The STWE Temperature Switch and Transmitter features LED display to provide continuous temperature monitoring and allows the operator to easily adjust set and reset points by using the two programming buttons located on the display face on the unit. The display face can be rotated up to 330° to offer the best possible viewing position in any application.

Features

- Stainless Steel construction
- LED display and easy programming of set points
- Two switching outputs
- Temperature range: -50 °C ... +125 °C / -58 °F ... +257 °F
- G1/4 and 1/4 NPT process connections
- Different stem lengths
- LED display rotates up to 330°

Options

- G1/2 and 1/2 NPT available process connections
- Temperature range available from -200 °C ... +600 °C / -328 °F ... +1112 °F
- One switching output and one analog output

Order Codes

STWE - CN0125 - B04 - 1 - 100

①

②

③

④

⑤

① Series and Type

Temperature Switch and Transmitter	STWE
------------------------------------	-------------

② Temperature Ranges

-50 ... +125 °C / -58 ... +257 °F (standard option)	CN0125
-50 ... +200 °C / -58 ... +392 °F	CN0200
-200 ... +600 °C / -328 ... +1112 °F	CN0600
0 ... +400 °C / +32 ... +752 °F	C0400
0 ... +600 °C / +32 ... +1112 °F (standard option)	C0600

③ Process Connection

G1/4 (standard option)	B04
G1/2	B08
1/4 NPT (standard option)	N04
1/2 NPT	N08

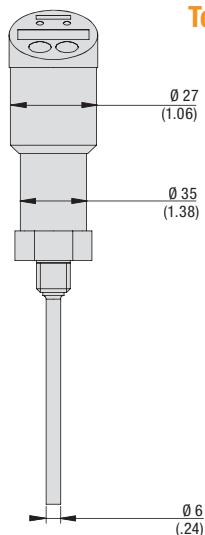
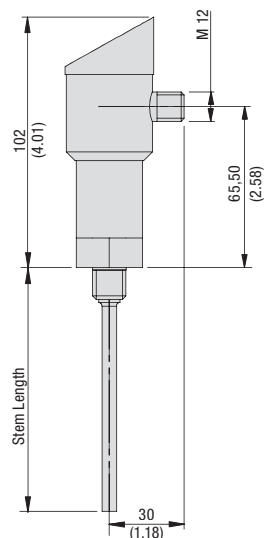
④ Signal Output

Two switching outputs (standard option)	1
One switching output, one 4 ... 20 mA Output	2

⑤ Stem Lengths

50 mm / 1.97 in	50
75 mm / 2.95 in	75
100 mm / 3.94 in	100
160 mm / 6.30 in	160
200 mm / 7.87 in	200
300 mm / 11.81 in	300

Temperature Switch and Transmitter ■ Type STWE



Technical Data

Materials

- Housing: Stainless Steel
- Process connection: Stainless Steel

Supply Voltage

- 12...30 V DC, protection from reverse polarity and overload

Power Consumption

- ≤50 mA, without load current

Switching Outputs

- Switching function: Normally open (NO) or normally closed (NC)
- Power rating: 100 mA per switch output

Adjustment

- Setpoint 0.1 ° steps within temperature range
- Resetpoint 0.1 ° steps within temperature range up to (Setpoint -0.1°)

Analog Output

- Signal 4 ... 20 mA, 3-wire
- Load resistance $R_a = U_s - 7 \text{ V} / 0.022 \text{ A}$

Accuracy

- Accuracy of PT100 sensing element $\pm 0.1 \%$ of temperature range

Repeatability

- 0.05 %

Stem Length and Working Pressure (standard option)

- Ø 6 x 50 mm / .24 x 1.97 in stem length, up to 40 bar / 580 PSI
- Additional stem lengths available upon request

Process Connection

- G1/4, G1/2, 1/4 NPT, 1/2 NPT

Electrical Connection

- M12 x 1 / 4-Pin

Permissible Temperatures

- Ambient: -30 °C ... +80 °C / -22 °F ... +176 °F
- Storage: -25 °C ... +70 °C / -13 °F ... +158 °F
- Tk: 0,1 % of measuring range per 10K

EMC to IEC / EN 61326

- IEC 61000/4/2 ESD: B
- IEC 61000/4/3 HF Radiated: A
- IEC 61000/4/4 Burst: A
- IEC 61000/4/5 Surge: A
- IEC 61000/4/6 HF Mains Borne: A

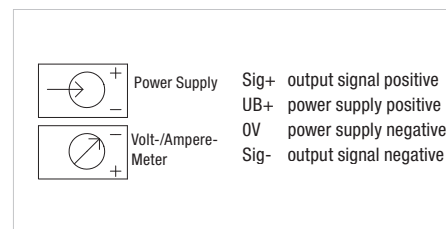
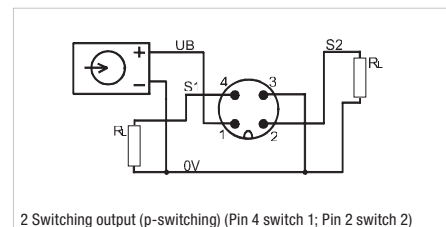
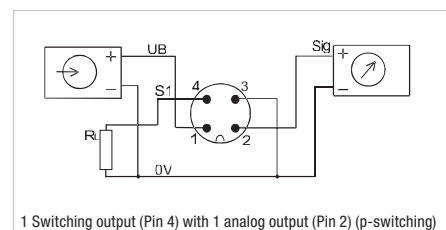
EMC to IEC / EN 61326

- Approx 0.30 kg / .70 lbs (dependent on stem length)

Protection Rating

- IP 65 protection rating: Dust tight and protected against water jets

Electrical Connections



Temperature Transmitter ▪ Type STC



Product Description

The STC Temperature Transmitters is designed for process temperature measurement in low pressures. This unit features an all stainless steel construction up to 300 mm / 11.81 in stem length with G1/4 and 1/4 NPT process connection and a 4 ... 20 mA output. The user can select the exact temperature range they require at time of order.

Features

- Stainless Steel construction
- 4 ... 20 mA output
- 0 °C ... 50 °C, 0 °C ... 100 °C and 0 °C ... 120 °C measuring ranges available
- L-Plug DIN EN 175301-803A (DIN 43650-A) electrical connection
- G1/4 or 1/4 NPT process connection
- 50 and 100 mm stem lengths

Options

- 0 ... 10 V available output
- M12 x 1 electrical connection available
- G1/2 and 1/2 NPT available process connections
- 75, 160, 200 and 300 mm stem lengths available
- Available with an adjustable compression ring version for variable stem length

Order Codes

STC	-	C0050	-	B04	-	420A	-	1	-	50	F
①		②		③		④		⑤		⑥	⑦

① Series and Type

Temperature Transmitter	STC
-------------------------	------------

② Temperature Ranges

0 ... +50 °C / +32 ... +122 °F	C0050
0 ... +100 °C / +32 ... +212 °F	C0100
0 ... +120 °C / +32 ... +248 °F	C0120

Note: Please consult STAUFF for alternative temperature ranges.

③ Process Connection

G1/4	B04
G1/2 *	B08
1/4 NPT *	N04
1/2 NPT *	N08

* Threads only available with adjustable compression ring fitting.

④ Signal Output

4 ... 20 mA (standard option)	420A
0 ... 10 V	010V

⑤ Electrical Connection

L-Plug DIN EN 175301-803A (DIN 43650-A) (standard option)	1
M12 x 1 / 4-Pin	2

⑥ Stem Lengths

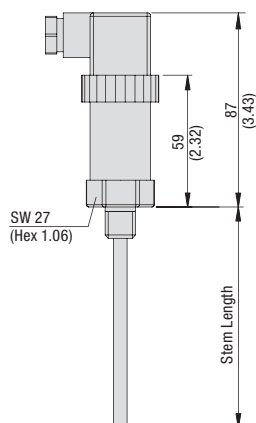
50 mm / 1.97 in (standard option) *	50
75 mm / 2.95 in *	75
100 mm / 3.94 in (standard option)	100
160 mm / 6.30 in	160
200 mm / 7.87 in	200
300 mm / 11.81 in	300

* Length only available with a fixed thread.

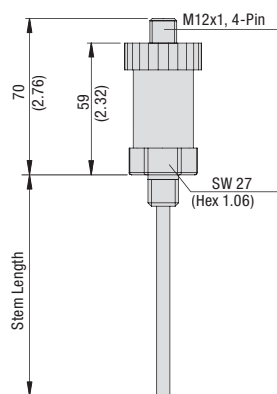
⑦ Style

Fixed thread (standard option)	F
Adjustable compression fitting	A

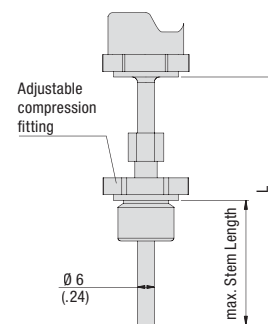
Temperature Transmitter ▪ Type STC



L-Plug DIN 175301-803A (DIN 43650-A)



M12 x 1 / 4-Pin



Adjustable Compression Fitting

Technical Data

Materials

- Housing: Stainless Steel 1.4571 (316 Ti)
- Process connection: Stainless Steel 1.4571 (316 Ti)
- Stem: Stainless Steel 1.4571 (316 Ti)

Signal Outputs and Supply Voltage

- 4 ... 20 mA, 2-wire, 10 ... 30 V DC, ripple <10%
- 0 ... 10 V, 3-wire, 12 ... 30 V DC, ripple <10%

Error Signals

- 23 mA sensor burnout
- 3.3 mA sensor short circuit

Accuracy

- $\leq \pm 5\%$ of FS*

Temperature Range

- -50 °C ... +200 °C / -58 °F ... +392 °F

Measuring Range

- Minimum range: 50 K
- Maximum range: 250 K

Process Connection

- G1/4, G1/2, 1/4 NPT, 1/2 NPT

Electrical Connection

- L-Plug according to DIN EN 175301-803A (DIN 43650-A)
- M12 x 1 / 4-Pin

Stem Length and Pressure Ranges

- 50 ... 500 mm / 1.97 x 19.67 in: up to 40 bar / 580 PSI (Pressure ranges refer to static pressure.)

Permissible Temperatures

- Ambient: max. +85 °C / +185 °F
- Storage: -40 °C ... +85 °C / -40 °F ... +185 °F

EMC-Resistance

- Emitted interference acc. to DIN EN 61326
- Breakdown effect acc. to DIN EN 61326

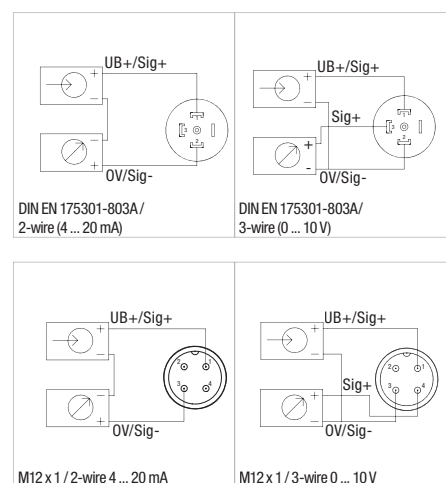
Weight

- Approx. 0.14 kg / .31 lbs (dependant on stem length)

Protection Rating

- L-Plug connection: IP 65 protection rating: Dust tight and protected against water jets
- M12 x 1 connection: IP 67 protection rating: Dust tight and protected against powerful water jets; even immersion (up to 1 m / 3.28 ft) in water is possible under defined conditions of pressure and time

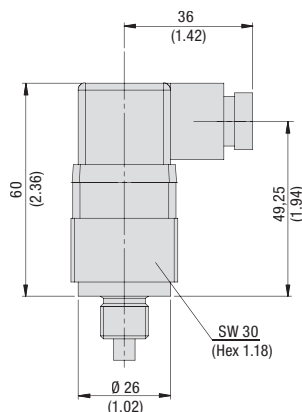
Wiring Scheme



* FS = Full Scale

Dimensional drawings: All dimensions in mm (in).

Temperature Switch ▪ Type STW



Wiring Scheme

Wiring diagram normally open



Wiring diagram normally closed



Product Description

The STW mechanical Temperature Switch is available in a variety of temperature ranges. This unit features a bimetallic fixed set point. The electrical connector of the SPW is designed to rotate in order to face the cable clamp into whatever position desired after installation.

Features

- Normally open and normally closed switching function
- Fixed set points from +60 °C ... +80 °C / +140 °F ... +176 °F
- G1/4 and 1/4 NPT process connections
- Brass body

Options

- Fixed set points from +30 °C ... +105 °C / +86 °F ... +221 °F
- G1/2 and 1/8 NPT process connections

Technical Data

Materials

- Body: Brass
- Connector: Polyamide

Signal Outputs

- Normally open (NO) or normally closed (NC)

Maximal Switching Values

- Maximal voltage: 250 V AC
- Maximal current: 10 A at 240 V AC
5 A at 24 V AC
10 A at 12 V AC

Accuracy

- ±5 °C / ±9 °F

Maximum Ratings

- Temperature: +130 °C / +266 °F
- Pressure: 150 bar / 2175 PSI

Electrical Connection

- DIN EN 175301-803 form A-PG09 (DIN 43650-A)

Process Connection

- G1/4, G1/2, 1/8 NPT, 1/4 NPT

Protection Rating

- IP 65 protection rating: Dust tight and protected against water jets

Order Codes



① Series and Type

Pressure Switch **STW**

② Temperature Ranges (Fixed Set Point)

+30 °C / +86 °F	C0030
+40 °C / +104 °F	C0040
+50 °C / +122 °F	C0050
+60 °C / +140 °F (standard option)	C0060
+70 °C / +158 °F (standard option)	C0070
+80 °C / +176 °F (standard option)	C0080
+90 °C / +194 °F	C0090
+100 °C / +212 °F	C0100
+105 °C / +221 °F	C0105

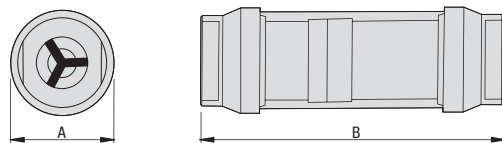
③ Process Connection

G1/4	B04
G1/2 (standard option)	B08
1/8 NPT	N02
1/4 NPT (standard option)	N04

④ Contacts

Normally open (standard option)	NO
Normally closed	NC

Flowtell Inline Flow Meter - Type SFF



Order Codes

SFF - L00005 - B08

①

②

③

① Series and Type

Flowtell Inline Flow Meter **SFF**

② Flow Ranges

2 ... 18 l/min / 0.5 ... 5 US GPM	L00005
12 ... 113 l/min / 3 ... 30 US GPM	L00030
31 ... 283 l/min / 8 ... 75 US GPM	L00075

③ Process Connection

G1/2 (only L00005)	B08
G3/4 (only L00030)	B09
G1-1/4 (only L00075)	B20
1/2 NPT (only L00005)	N08
3/4 NPT (only L00030)	N09
1-1/4 NPT (only L00075)	N20

Product Description

The STAUFF Flowtell Inline Flow Meter is ideal for monitor case drain flows, pump performance and media flows through hydraulic circuits and sub-circuits. It allows the designer to install it in any orientation (horizontal, vertical or inverted) and is weather-tight for use outdoors and/or on systems where wash downs are required. It is also a reliable service tool that provides years of maintenance-free performance. Flows can be measured up to a value of 283 l/min / 75 GPM.

Features

- G1/2, G3/4, G1-1/4, 1/2 NPT, 3/4 NPT and 1-1/4 NPT process connection
- Flow ranges up to 283 l/min / 75 US GPM

Options

- Other process connection on request

Technical Data

Materials

- Aluminium end caps
- Polycarbonate Windows Tube
- NBR (Buna-N®) and Teflon sealings
- Suitable for Mineral-Based Hydraulic Fluid

Accuracy

- ±2.5 % of full scale in mid-third of flow range
- ±4.0 % over entire flow range

Repeatability

- ±1 % of full scale

Max. Operating Pressure

- 240 bar / 3500 PSI

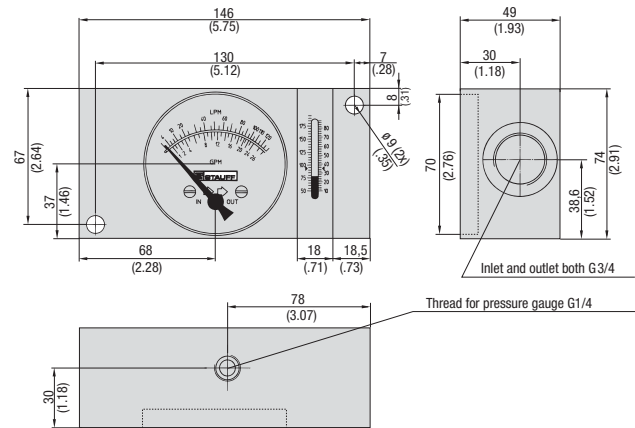
Max. Operating Temperature

- +116 °C / +240 °F

Dimensions

Codes	A (mm/in)	B (mm/in)
SFF-L00005-B08	48	167
	1.88	6.56
SFF-L00030-B09	60	182
	2.38	7.16
SFF-L00075-B20	90	258
	3.5	10.13
SFF-L00005-N08	48	167
	1.88	6.56
SFF-L00030-N09	60	182
	2.38	7.16
SFF-L00075-N20	90	258
	3.5	10.13

Flow Indicator ■ Types SDM / SDMK



Dimensions SDM-750

Product Description

Flow, pressure and temperature measuring of fluids (mobile and industrial hydraulics), also controlling of working pressure (only SDMK).

Features

- Suitable for Mineral Oil (Aluminium), HFC Fluids and Water (Bronze)
- Designed for in-line installation
- Mechanical flow measurement
- Controlling working pressure with a pressure control valve (only SDMK)
- Flow indication in l/min and GPM for Aluminium units, Bronze units have flow indication for Water and Oil both in l/min
- Aluminium unit: Dual scale
- Bronze unit: Single scale
- Thread to connect with pressure gauge (only SDM)

Technical Data

Accuracy

(at a kinematic viscosity of 28cSt):

- Flow: $\pm 4\%$ FSD
- Temperature: $\pm 2,5^\circ\text{C} / \pm 5^\circ\text{F}$
- Pressure (only SDMK): $\pm 1.6\%$ of max. pressure
- Temp. measuring range: $+12,5^\circ\text{C} \dots 117,5^\circ\text{C} / +55^\circ\text{F} \dots +245^\circ\text{F}$

Note: Other thread versions available on request.

Order Codes

SDM - 750 - A - 016 - T

① ② ③ ④ ⑤

① Series and Type

Flow Indicator Type SDM	SDM
Flow Indicator Type SDMK	SDMK

② Size

750	750
1500 (only SDM)	1500

③ Housing Material

Aluminium	A
Bronze (only SDM)	B

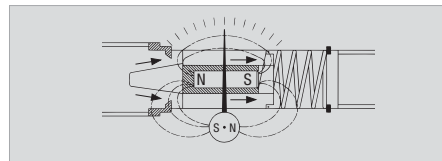
④ Flow Ranges

See table on page D79

⑤ Thermometer

With integrated thermometer (standard option) **T**

Functional Principal Flow Measuring



The flow indicators SDM and SDMK have a sharp-edged orifice and a tapered metering piston, which moves in proportion to changes of flow against a spring. In no flow condition the piston closes the opening and the pointer indicates zero.

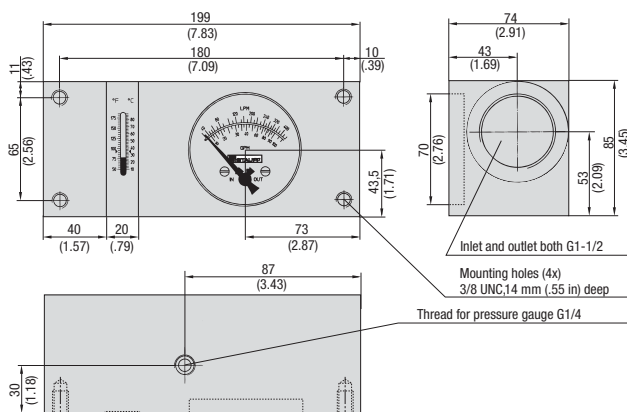
With increasing flow and differential pressure the piston moves against the calibrated spring. The piston movement is directly proportional to the flow rate and is magnetically coupled to the rotary pointer. During this function the sharp-edged orifice minimises the effects of viscosity. The flow is shown on a calibrated scale in l/min and gal/min.

Controlling Working Pressure with SDMK

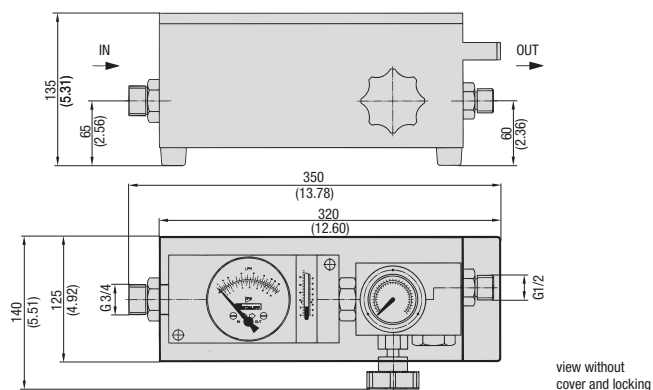
The pressure control valve of the SDMK is directly connected to a flow-block and together with the integrated pressure gauge it allows an exact control of the working pressure in the maximum range.

For protection the SDMK has two rupture disks. At a pressure of 440 bar / 6381 PSI the disks burst and the fluid is by-passed around the valve. The rupture disks (other pressure ranges on request) can be replaced easily.

Flow Indicators ■ Types SDM / SDM-K



Dimensions SDM-1500

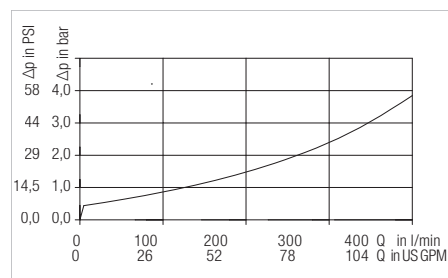
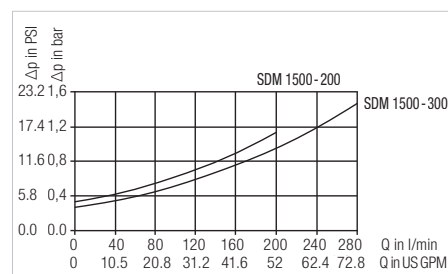
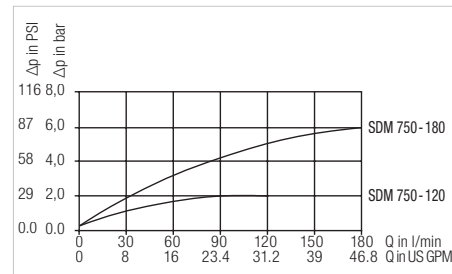
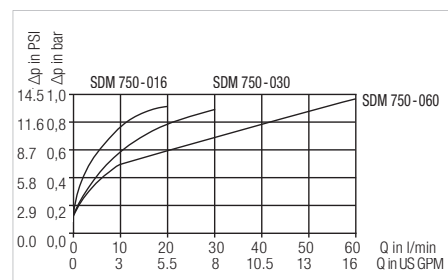


Dimensions SDM-K-750

Technical Data

Order Codes	Max. Working Pressure (bar/PSI)	Flow Range (l/min / US GPM) Aluminum Units	Flow Range Bronze Units (only SDM) *	Weight (kg/lbs)	Connection
SDM-750-A-016-T	420 6091	2 - 16 0.5 - 4	- -	1,36 3.0	G3/4
SDM-750-A-030-T	420 6091	2 - 30 0.5 - 8	- -	1,36 3.0	G3/4
SDM-750-A-060-T	420 6091	2 - 60 0.5 - 16	- -	1,36 3.0	G3/4
SDM-750-A-120-T	420 6091	4 - 120 1 - 32	- -	1,36 3.0	G3/4
SDM-750-A-180-T	420 6091	10 - 180 4 - 48	- -	1,36 3.0	G3/4
SDM-750-B-030-T	420 6091	- -	2 - 30 l/min in oil 2 - 30 l/min in water	3,80 8.40	G3/4
SDM-750-B-060-T	420 6091	- -	3 - 60 l/min in oil 3 - 70 l/min in water	3,80 8.40	G3/4
SDM-750-B-120-T	420 6091	- -	4 - 120 l/min in oil 4 - 140 l/min in water	3,80 8.40	G3/4
SDM-1500-A-200-T	350 5075	10 - 200 5 - 50	- -	3,0 6.61	G1-1/2
SDM-1500-A-300-T	350 5075	20 - 300 4 - 80	- -	3,0 6.61	G1-1/2
SDM-1500-A-400-T	350 5075	20 - 400 5 - 100	- -	3,0 6.61	G1-1/2
SDM-1500-B-200-T	350 5075	- -	10 - 200 l/min in oil 10 - 200 l/min in water	8,0 17.64	G1-1/2
SDM-1500-B-400-T	350 5075	- -	20 - 400 l/min in oil 20 - 400 l/min in water	8,0 17.64	G1-1/2
SDMK-750-A-030-T	420 6091	2 - 30 0.5 - 8	- -	4,5 9.92	G3/4 + G1/2
SDMK-750-A-060-T	420 6091	2 - 60 0.5 - 16	- -	4,5 9.92	G3/4 + G1/2
SDMK-750-A-120-T	420 6091	4 - 120 1 - 32	- -	4,5 9.92	G3/4 + G1/2
SDMK-750-A-180-T	420 6091	10 - 180 4 - 48	- -	4,5 9.92	G3/4 + G1/2

Curves refer to kinematic viscosity of 28cSt.



* The Bronze units have a scale for water and oil – both in l/min.
Dimensional drawings: All dimensions in mm (in).

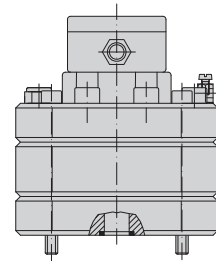
Flow Monitoring System ■ Type SGF

Product Description

With the SGF flow monitoring system STAUFF offers two different solutions for high accuracy and high pressure flow monitoring.

The SFG monitoring system can be integrated into manifolds or supplied with two types of mounting plates.

Please see page D81 for details.



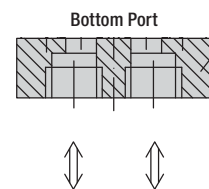
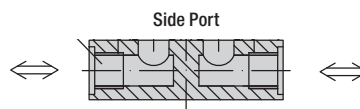
Mounting Plates ■ Types SGFM

The connection plate SGFM is available in two versions.

- Side port version
- Bottom port version

They are only to be used with the SGF.

Please see page D84 for details.



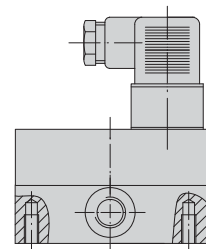
Flow Monitoring System ■ Type SGFE

Product Description

The SGFE Aluminum Ecoflow Flow Meter based on the same measuring principal like the SGF, but is the economical alternative.

This product only featured side port connection.

Please see page D86 for details.



Flow Rate Displays ■ Types STD 1 / STD 2 / STD 3 / STD 4

Product Description

The Flow Rate Display allows to visualize the values of both flow monitoring systems (SGF and SGFE).

STAUFF offers four versions of flow rate displays.

Please see page D89 for details.



STD 1



STD 2



STD 3



STD 4

Flow Monitoring System ■ Type SGF



Order Codes

SGF - **0.04** - **C** - **1** - **V** - **X**

① ② ③ ④ ⑤ ⑥

① Series and Type

Flow Monitoring System **SGF**

② Version

0,002 ... 2 l/min / 0.0005 ... 0.53 US GPM	0.02
0,004 ... 4 l/min / 0.0011 ... 1.06 US GPM	0.04
0,01 ... 10 l/min / 0.0026 ... 2.64 US GPM	0.1
0,02 ... 18 l/min / 0.0053 ... 4.76 US GPM	0.2
0,03 ... 40 l/min / 0.0079 ... 10.57 US GPM	0.4
0,05 ... 80 l/min / 0.0132 ... 21.13 US GPM	1
0,1 ... 120 l/min / 0.0264 ... 31.70 US GPM	2
1,0 ... 250 l/min / 0.2642 ... 66.00 US GPM	4

③ Material

Cast Iron	C
Stainless Steel 1.4305	S

④ Bearing Type

Ball bearing	1
Spindle - bearing	2

* Special bearing typ for special application on request

⑤ Sealings

FPM (Viton®) (standard option)	V
NBR (Buna-N®)	B
PTFE	T
EPDM	E

⑥ Special Options

Contact STAUFF for details	
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Note: Connection Plate see page D82.

Product Description

The STAUFF SGF positive displacement Flow Meter offers a comprehensive solution for high accuracy and high pressure flow monitoring. The units are available for flow ranges from 0.002 l/min to 250 l/min / 0.0005 to 66.00 US GPM and are suitable for pressures up to 450 bar / 6500 PSI. It is possible to integrate the units direct into the hydraulic circuit. Furthermore a special digital display to visualize the flow is available.

Media specific models are available for applications such as: Hydraulic test stand, Grease, Ink, Lubrication Systems, Diesel Fuel, Kerosene and Brake Fluid.

Technical Data

Materials

- Body: EN-GJS-400-15 (EN 1563) / Stainless Steel 1.4305
- Bearings: Ball, Spindle
- Sealings: FPM (Viton®), NBR (Buna-N®), PTFE, EPDM

Accuracy

- ± 0.3 % of measured value at 20 cSt

Repeatability

- ± 0.05 % of measured value at 20 cSt

Power Supply

- 10 ... 28 V DC

Max. Operating Pressure

- Cast Iron housing: 315 bar / 4568 PSI
- Stainless Steel housing: 450 bar / 6526 PSI

Medium Temperature

- 40 °C ... +120 °C / -40 °F ... +248 °F

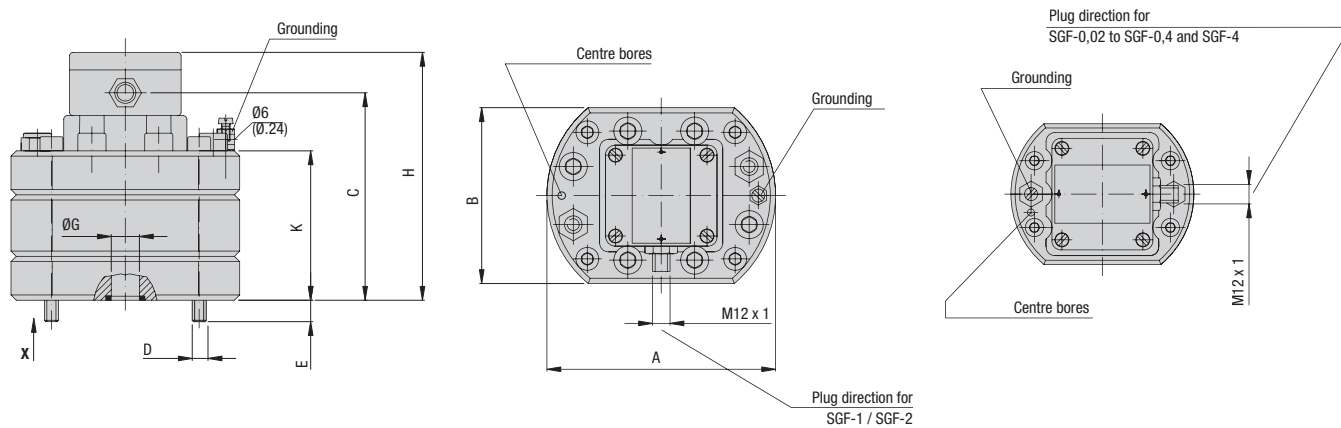
Viscosity Range

- Up to 100000 cSt (depends on type)

Available Ranges

Version	Geometric Tooth Volume cm ³	Measuring Range (l/min / US GPM)	K-Factor (lmp/Liter / lmp/Gal)
0.02	0,02	0,002 ... 2	50000
		0.005 ... 0.53	189272
0.04	0,04	0,004 ... 4	25000
		0.0011 ... 1.06	94636
0.1	0,1	0,01 ... 10	10000
		0.0026 ... 2.64	37854.4
0.2	0,2	0,02 ... 18	5000
		0.0053 ... 4.76	18927.2
0.4	0,4	0,03 ... 40	2500
		0.0079 ... 10.57	9463.6
1	1	0,05 ... 80	1000
		0.0132 ... 21.13	3785.44
2	2	0,1 ... 120	500
		0.0264 ... 31.70	1892.72
4	4	1 ... 250	250
		0.2642 ... 66.00	946.36

Flow Monitoring System ■ Type SGF



Cast Iron Version - Housing curve mill cuted

Connection Drawing (View X)



Cast Iron Version

Stainless Steel Version - Housing not mill cuted

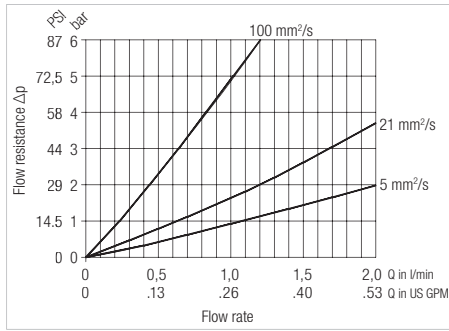
Dimensions

Version	A (mm/in)	B (mm/in)	C (mm/in)	D	E (mm/in)	ØG (mm/in)	H (mm/in)	K (mm/in)	L (mm/in)	M (mm/in)	N (mm/in)	O-Ring	Weight (kg/lbs)	
													Cast Iron *	Stainless Steel **
0.02	100,0	80,0	91,0	M6	12,5	9	114,0	58,0	70,0	40,0	20,0	11 x 2	2,8	3,4
	3.94	3.15	3.58		.49	.35	4.49	2.28	2.76	1.57	.79		6.17	7.50
0.04	100,0	80,0	91,5	M6	11,5	9	114,5	58,5	70,0	40,0	20,0	11 x 2	2,8	3,4
	3.94	3.15	3.60		.45	.35	4.51	2.30	2.76	1.57	.79		6.17	7.50
0.1	100,0	80,0	94,0	M6	9,0	9	117,0	61,0	70,0	40,0	20,0	11 x 2	2,8	3,4
	3.94	3.15	3.70		.35	.35	4.61	2.40	2.76	1.57	.79		6.17	7.50
0.2	100,0	80,0	93,5	M6	9,5	9	116,5	60,5	70,0	40,0	20,0	11 x 2	3,0	3,7
	3.94	3.15	3.68		.37	.35	4.59	2.38	2.76	1.57	.79		6.61	8.16
0.4	115,0	90,0	96,5	M8	11,5	16	119,5	63,5	80,0	38,0	34,0	17,96 x 2,62	4,0	5,0
	4.53	3.54	3.80		.45	.63	4.70	2.50	3.15	1.50	1.34		8.82	11.02
1	130,0	100,0	101,0	M8	12,0	16	124,0	68,0	84,0	72,0	34,0	17,96 x 2,62	5,3	6,8
	5.12	3.94	3.98		.47	.63	4.88	2.68	3.31	2.83	1.34		11.68	15.00
2	130,0	100,0	118,0	M8	15,0	16	141,0	85,0	84,0	72,0	34,0	17,96 x 2,62	6,7	8,4
	5.12	3.94	4.65		.59	.63	5.55	3.35	3.31	2.83	1.34		14.78	18.52
4	180,0	140,0	143,0	M12	20,0	30	166,0	110,0	46,0	95,0	45,0	17,96 x 2,62	14,7	18,4
	7.09	5.51	5.63		.79	1.18	6.54	4.33	1.81	3.74	1.77		32.41	40.57

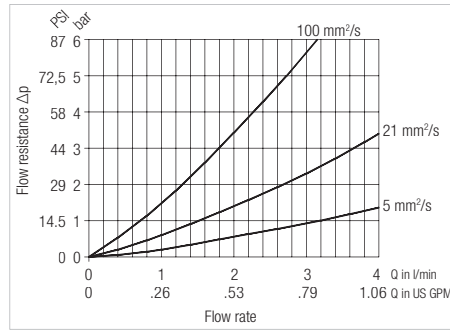
* Cast Iron EN-GJS-400-15 (EN 1563)

** Stainless Steel 1.4305

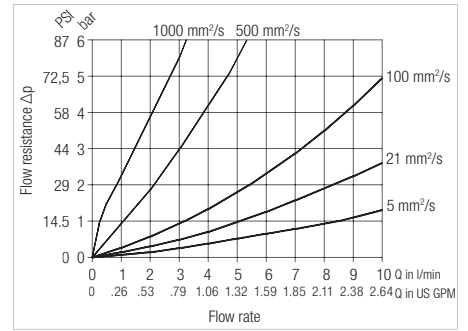
Flow Monitoring System ■ Type SGF



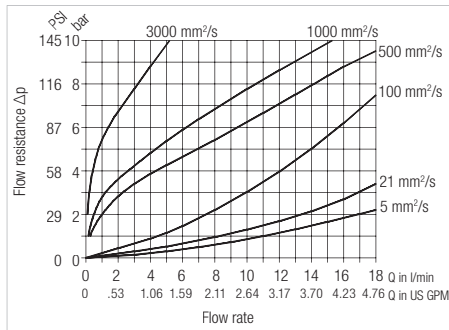
SGF-0.02



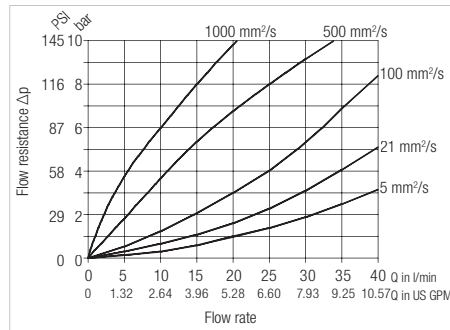
SGF-0.04



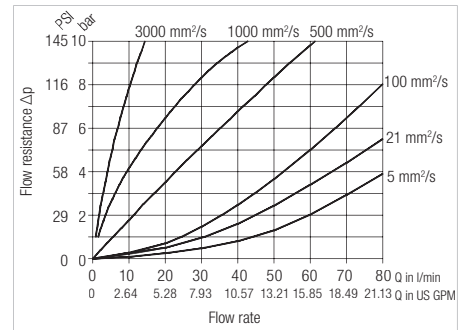
SGF-0.1



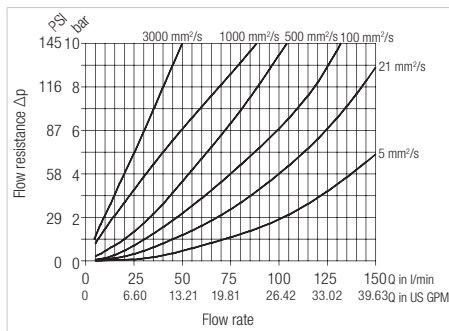
SGF-0.2



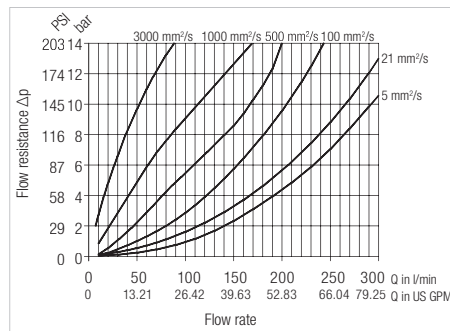
SGF-0.4



SGF-1

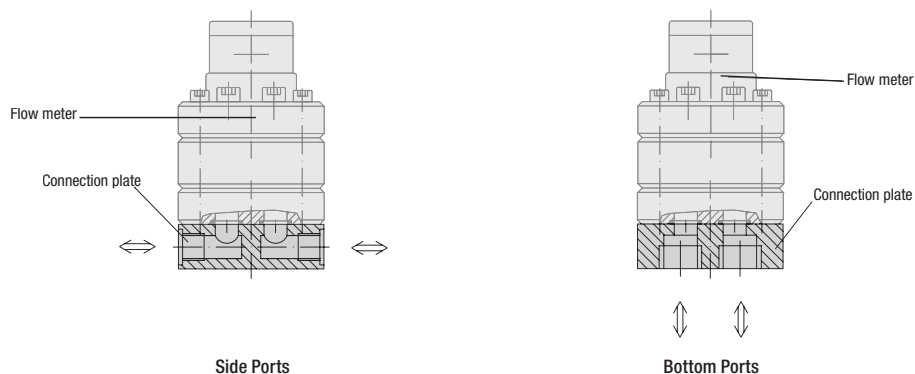


SGF-2



SGF-4

Flow Monitoring System - Connection Plate Type SGFM for use with SGF



Product Description

STAUFF offers different connections plates to connect your SGF flow monitoring system to your application. They allow a side port or bottom port connection and are available in different thread sizes.

Order Codes

SGFM - **0.4** - **S** - **C** - **15** - **X**

① ② ③ ④ ⑤ ⑥

① Series and Type

Flow Monitoring System - Connection Plate **SGFM**

② Size

Manifold Size	Available Thread Connections	Code
SGF-0.02 ... SGF-0.2	SAE -4, -6, -8, -12	0.2
	NPT 1/4 NPT, 3/8 NPT, 1/2 NPT, 3/4 NPT	
	BSPP G1/4, G3/8, G1/2, G3/4	
SGF-0.4	SAE -8, -12, -16	0.4
	NPT 1/2 NPT, 3/4 NPT, 1 NPT	
	BSPP G1/2, G3/4, G1	
SGF-1 ... 2	SAE -8, -12, -16	1
	NPT 1/2 NPT, 3/4 NPT, 1 NPT, 1-1/4 NPT	
	BSPP G1/2, G3/4, G1	
SGF-4	SAE -12, -16, -20	4
	NPT 3/4 NPT, 1 NPT, 1-1/4 NPT	
	BSPP G3/4, G1, G1-1/4, G1-1/2	
SGF-10	SAE Flange 1-1/2, 2	10
	BSPP G1-1/2, G2	

③ Connection Type

Side Port Connection **S**
Bottom Port Connection **B**

④ Material

Cast Iron **C**
Stainless Steel 1.4305 **S**

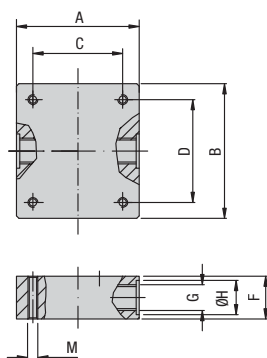
⑤ Connection Thread

G1/4	1
G3/8	2
G1/2	3
G3/4	4
G1	5
G1-1/4	6
G1-1/2	7
1/4 NPT	8
3/8 NPT	9
1/2 NPT	10
3/4 NPT	11
1 NPT	12
1-1/4 NPT	13
1-1/2 NPT	14
-8 SAE	15
-12 SAE	16
-16 SAE	17
-20 SAE	18
-24 SAE	19
-32 SAE	20
Others on request	

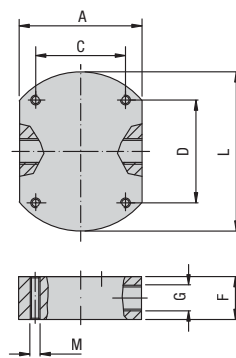
⑦ Special Options

Contact STAUFF for details

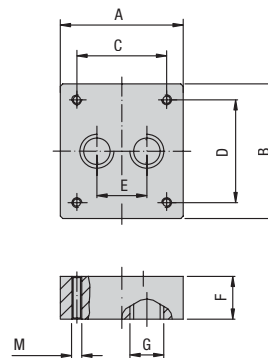
Connection Plate ■ Type SGFM



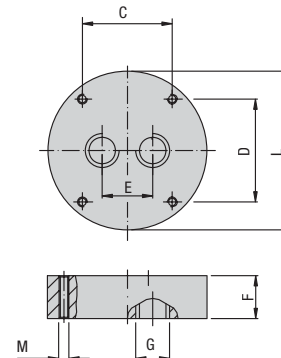
Side Port - Cast Iron



Side Port - Stainless Steel



Bottom Port * - Cast Iron



Bottom Port * - Stainless Steel

Dimensions

Affiliated Size	Size SGF	G Pipe Thread Classification	G	F (mm/in)	ØH (mm/in)	E ** (mm/in)
	0.02 / 0.04		G1/4	35	20	26
	0.1 / 0.2			1.38	.79	1.02
	0.02 / 0.04		G3/8	35	23	30
	0.1 / 0.2			1.38	.91	1.18
	0.02 / 0.04		G1/2	35	28	38
	0.1 / 0.2			1.38	1.10	1.50
	0.4 / 1 / 2		G1/2	35	28	46
				1.38	1.10	1.81
	0.4 / 1 / 2		G3/4	40	33	52
				1.57	1.30	2.05
	1 / 2		G1	55	41	55
				2.17	1.61	2.17
	4		G1-1/4	70	51	60
				2.76	2.01	2.36
	4		G1-1/2	AP..U=70	56	72
				AP..U= 2.76	2.20	2.83
	4		G1-1/2	AP..S=80	56	72
				AP..S=3.15	2.20	2.83

Size SGF	A (mm/in)	B (mm/in)	C (mm/in)	D (mm/in)	L *** (mm/in)	Depth M	Weight (kg/lbs)
0.02 / 0.04	80	90	40	70	100	M6/12	1,8
0.1 / 0.2	3.15	3.54	1.57	2.76	3.94		3.97
0.4	90	100	38	80	115	M8/15	2,7
	3.54	3.94	1.50	3.15	4.53		5.95
1 / 2	100	110	72	84	130	M8/15	3,6
	3.94	4.33	2.83	3.31	5.12		7.94
4	120	130	100	110	-	M8/15	7,4
	4.72	5.12	3.94	4.33	-		16.31
	140	120	120	100	-	M8/15	7,4
	5.51	4.72	4.72	3.94	-		16.31
	140	-	100	110	180	M8/15	12
	5.51		3.94	4.33	7.09		26.46

* Both bottom ports (G) for sizes 4 have a displacement of 90° to the shown drawings.

** Only for bottom port connections

*** Only for Stainless Steel versions

Dimensional drawings: All dimensions in mm (in).

Flow Monitoring System ■ Type SGFE



Product Description

Based upon the same positive displacement gear principle as the STAUFF SGF series, the SGFE Aluminum Ecoflow Flow Meter is an economical alternative for applications that require lower accuracy, temperature, and pressure.

Features

- In-line connection on the side
- An integrated pick up with PNP or NPN switching output produces one impulse per tooth volume.

Options

- LCD flow display with analog output and set limit switches mounted directly to the flow meter

Technical Data

Materials

- Body: Aluminium
- Bearings: Stainless Steel, Bronze, DU
- Sealings: FPM (Viton®), NBR (Buna-N®), PTFE, EPDM

Accuracy

- $\pm 2\%$ of measured value at 20 cSt

Power Supply

- 10 ... 30 V DC

Max. Operating Pressure

- 200 bar / 2900 PSI

Medium Temperature

- 0 °C ... +80 °C / 32 °F ... +176 °F

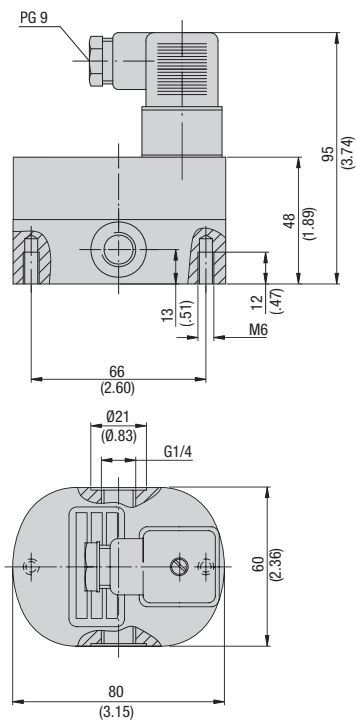
Viscosity Range

- Up to 100000 cSt (depends on type)

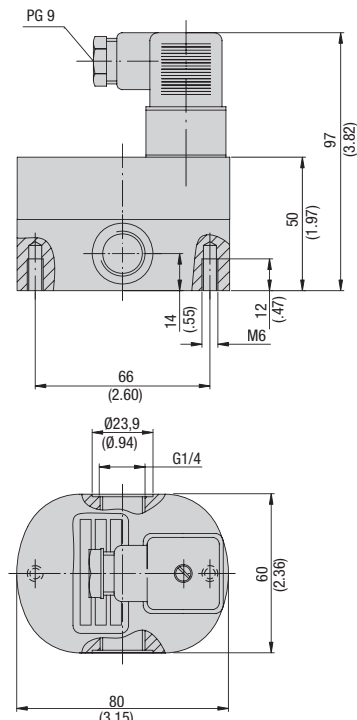
Order Codes

SGFE - 0.04 - S - 1 - N - V - X						
①	②	③	④	⑤	⑥	⑦
① Series and Type Flow Monitoring System SGFE						
② Version 0,05 ... 4 l/min / 0.013 ... 1.06 US GPM 0,1 ... 10 l/min / 0.026 ... 2.64 US GPM 0,2 ... 30 l/min / 0.053 ... 7.93 US GPM 0,5 ... 70 l/min / 0.132 ... 18.49 US GPM 3,0 ... 150 l/min / 0.79 ... 39.63 US GPM 0.04 0.1 0.4 2 4						
③ Connection Type Connection plate and location on side S						
④ Bearing Type Stainless Steel - ball bearing Bronze - sleeve bearing DU - sleeve bearing 1 2 3						
⑤ Pulse Output NPN PNP N P						
⑥ Sealings FPM (Viton®) (standard option) NBR (Buna-N®) PTFE EPDM V B T E						
⑦ Special Options Contact STAUFF for details						

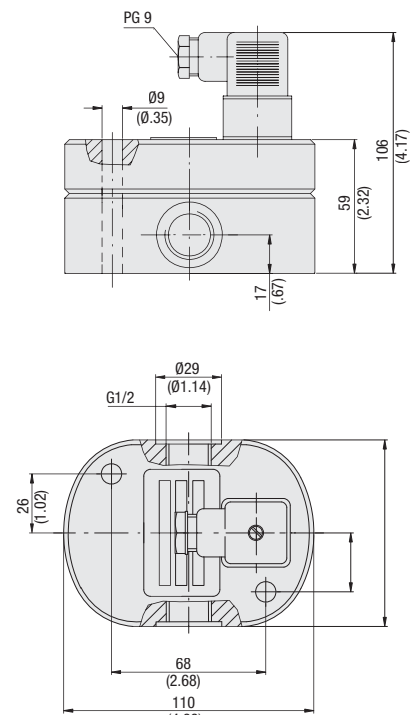
Flow Monitoring System ■ Type SGFE



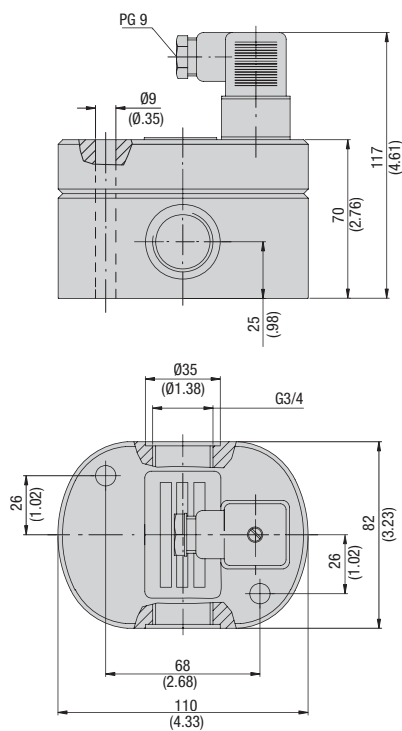
SGFE-0.04



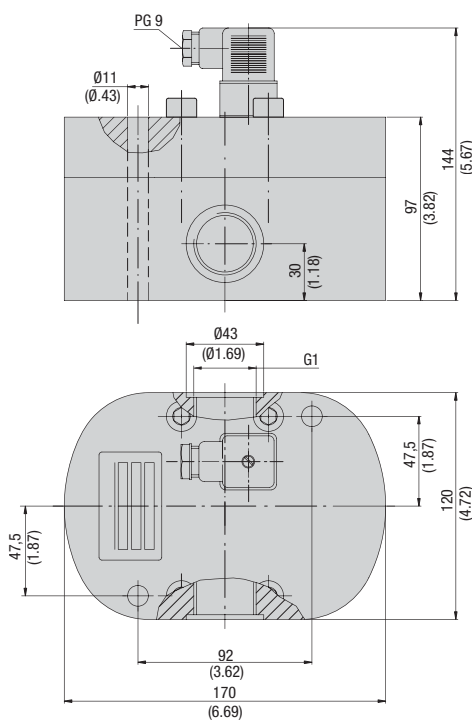
SGFE-0.1



SGFE-0.4

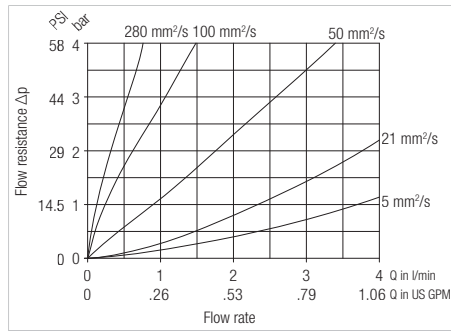


SGFE-2

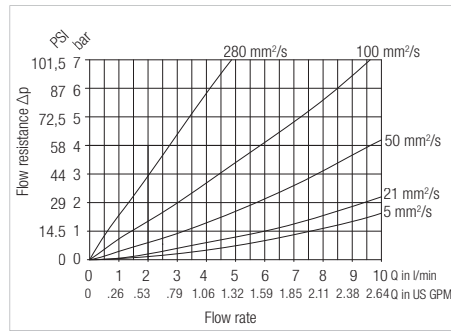


SGFE-4

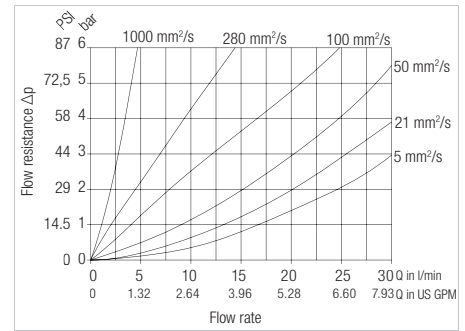
Flow Monitoring System ■ Type SGFE



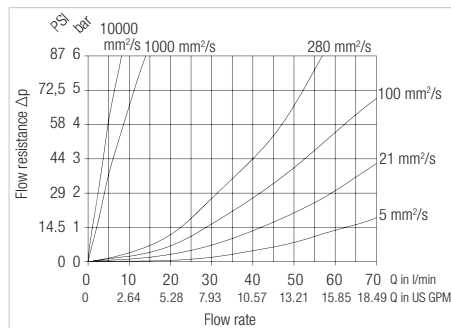
SGFE-0.04



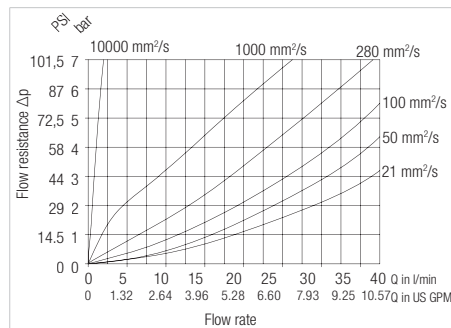
SGFE-0.1



SGFE-0.4



SGFE-2



SGFE-4

Note:

For trouble-free and safe operation of the flowmeters the correct selection of type and size is critical.

Due to the great number of different applications and flow-meter versions the technical data in the catalogue are of general character.

Certain characteristics of the devices depend on type, size and measuring range as well as on the medium to be measured.

For exact flowmeter select please contact STAUFF.

Flow Rate Display ■ Type STD 1



Order Codes

STD 1 - 420A - 24 - 1

①

②

③

④

Only flow rate display

Product Description

Flow rate instrument to display and process signals of the STAUFF flowmeters SGF and SGFE.

- Flow direction indication with switching outputs
- Desktop housing design, panel mounting 96 x 48 mm or 19" push in design
- Analog output: 0 ... ± 10 V, 0 ... ± 20 mA or 4 ... 20 mA flow rate direction dependent voltage-/current-polarity is available
- Integrated power supply for flow sensor 24 V DC / 50 mA
- Maximum input frequency 2000 Hz
- Refresh time 50 ms

① Series and Type

Flow rate display **STD 1**

② Output Signal

without analog output **0**
 0 ... 20 mA analog output **020A**
 4 ... 20 mA analog output **420A**
 0 ... 10 V analog output **010V**
 ±0 ... 20 mA analog output **N020A**
 ±0 ... 10 V analog output **N010V**

③ Power Supply

Power supply 12 V DC **12**
 Power supply 24 V DC **24**
 Power supply 115 V AC **115**
 Power supply 230 V AC **230**

④ Design

Panel Mount Design **1**
 19" Push in Design **2**
 Desktop Design **3**

Order Codes

STD 2 - V - N020A - 24 - 1

①

②

③

④

⑤

① Series and Type

Flow rate- or volume display **STD 2**

② Version

Volume display **V**
 Flow rate display **F**

③ Output Signal

±0 ... 20 mA analog output **N020A**
 ±0 ... 10 V analog output **N010V**
 4 ... 20 mA analog output **420A**

④ Power Supply

Power supply 24 V DC * **24**
 Power supply 230 V AC **230**

* 24 V supply only for STD 2

⑤ Design

Panel Mount Design **1**
 Desktop Design **2**

Product Description

Flow rate or volume display device to display and process signals of the STAUFF flowmeters SGF and SGFE.

- Flow meter type selectable by menu
- Flow meter direction indicator
- Desktop housing design or panel mount design
 96 x 48 x 150 mm / 3.78 x 1.89 x 5.91
 (12 V, 30 mA for sensor with 230 V AC power supply) or
 96 x 96 x 150 mm / 3.78 x 3.78 x 5.91
 (24 V, 100 mA for sensor with 24 V DC power supply)
- 16-bit analog output 0 ... ± 10 V, 0 ... ± 20 mA or 0 / 4 ... 20 mA
- 2 limit value outputs
- Semiconductor
- SGF and SGFE preprogrammed parameters
- Power supply for flow sensor integrated 24 V DC / 100 mA and 12 V DC / 30 mA

- Maximum input frequency 45000 Hz
- Refresh time 20 ... 9999 ms adjustable

Flow Rate or Volume Display ■ Type STD 2



Programmable display with switching outputs

Flow Rate and Volume Display ■ Type STD 3



Order Codes

Programmable display with switching outputs

STD 3 - **N020A** - **24** - **0** - **1**

① ② ③ ④ ⑤

Product Description

Selectable flow rate or volume display in once device to display and process signals of the STAUFF SGF and SGFE.

- Flow meter and volume meter type programmable
- Desktop housing design or panel mount design
- 12-bit analog output 0 ... 10 V, 0 ... 20 mA or 4 ... 20 mA
- Switching outputs available
- Power supply for flow sensor integrated 12 V / 100 mA
- Maximum input frequency 6000 Hz
- Refresh time 100 ... 9999 ms
- Power supply 24 V (11-36 V DC) or 110 / 230 V (85-250 V AC)

① Series and Type

Flow rate- and volume display **STD 3**

② Output Signal

Without	0
0 ... 10 V	010V
0 ... 20 mA	020A
4 ... 20 mA	420A

③ Power Supply

Power supply 24 V DC (11-36 V DC)	24VDC
Power supply 110/230 V AC (85-250 V AC)	230VAC

④ Switching Output

Without switching output	0
With switching output	W

⑤ Design

Panel Mount Design	1
Desktop Design	2

Signal Converter ■ Type STD 4



Product Description

STD 4 is a small and inexpensive, but very powerful converter for industrial applications where frequencies of the flowmeters SGF or SGFE will be converted into an analog signal or a serial data stream. The unit is housed in a compact housing for DIN rail mounting and is equipped with 12 screw terminal connections and a 9-pin Sub-D socket.

- Input frequency for scale in the range of 0.1 Hz to 1 MHz adjustable
- Extremely fast conversion time of only 1 ms ($f > 3$ kHz)
- Analog outputs ± 10 V, 0 ... ± 20 mA and 4 ... 20 mA
- Polarity of the output signal depends on the direction of rotation
- Converts also sum, difference, product or ratio of two frequencies
- RS 232 and RS 485 interface for serial readout of the sensor frequency
- Power supply 18 ... 30 V DC
- Programmable digital filter and default option for any linearization curves
- Maximum frequency 1 MHz (200 kHz with SGF / SGFE)
- Can also handle asymmetric TTL pulse

Order Code

STD 4

