



SP-04

Digital Flowmeter/Switch with Way-Deflection-System



Features

- / 4...20 mA or 0...10 V DC output
- / Optional RS 232 interface
- / Totalizer
- / 2 separately adjustable switching contacts
- / Soil-resistant
- / For pipes up to DN600
- / LCD display for flow & total volume
- / Operating range 1:10

Description:

Profimess' measuring device SP-04 is a flow transmitter with a digital display of the current flow, analogue output, totalizer, voltage output and two adjustable switching relays with display of the setpoints for monitoring the flow rate. An RS 232C interface is optionally available. The flowing medium moves a baffle plate mounted to a pendulum and thus generates the measured displacement. The spring-loaded pendulum alters its position depending on the flow. The position of a magnet fixed to the pendulum is recorded by a Hall sensor located outside the measuring chamber and transmitted to the microchip-controlled electronics where it is processed. This 2-chamber system ensures that no fluid can penetrate the electronics housing even if the device is defective.

Application:

The SP-04 series of flowmeters and -switches is used for detection of thin-bodied media in nominal diameter ranges up to DN600. Particularly in the range of DN50 upwards the extremely cost-effective price-performance ratio is perceptible. Measurement by means of a baffle plate is independent of the conductivity of the medium due to which also glycol, oils and other hydrocarbons can be captured without problems. The SP-04 can be adapted to a large number of processes thanks to different material combinations.



Technical Specifications:

max. Pressure /	SP-04.GW and SP-04.AU 25 bar SP-04.FL 16 bar
max. Media temp. /	-20. . . +100°C (others on request)
Accuracy /	± 2% of full scale value
Totalizer /	with EEPROM-memory
Display /	LCD DOT-Matrix-module 2 x 8 digits (illuminated)
Flow direction /	any

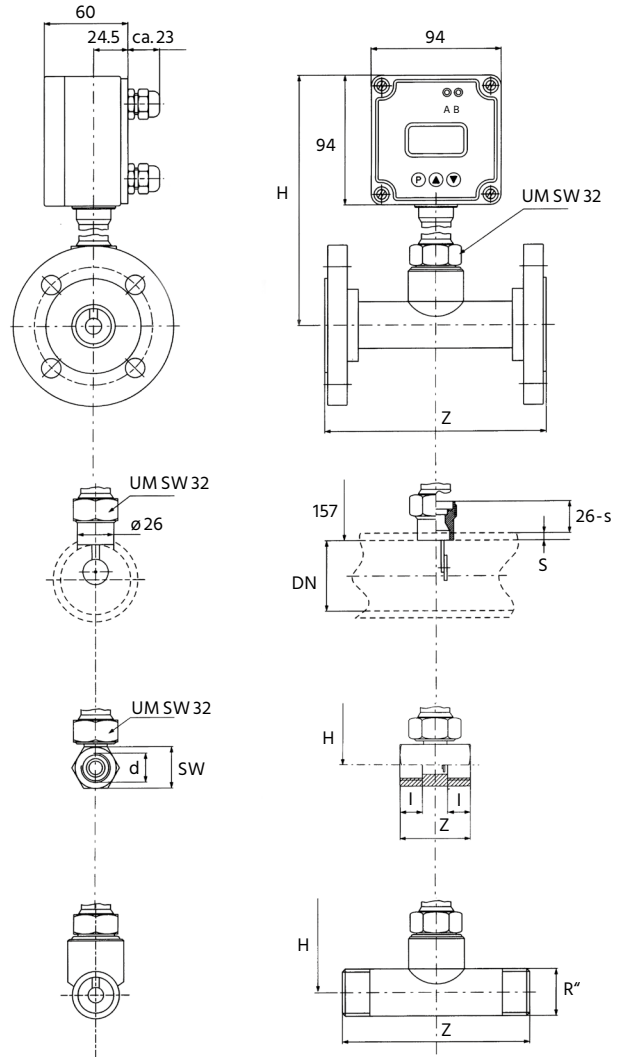
Electrical Specifications:

Contacts /	relay, 230 V, 1 A
Supply voltage /	24 VDC ± 10%, 200 mA max.
Protection class /	IP65
Analogue output /	4. . . 20mA, load 500Ω; 0. . . 10 VDC

Versions:

SP-04.GW...	with T-piece and pipe thread connection from R 3/8" to R 2"
SP-04.FL...	with T-piece and DIN flange from DN 10 to DN 50
Material combination A:	housing made of brass T-piece made of brass pendulum system, st. steel 1.4310 flange made of steel
Material combination B:	housing made of stainless steel 1.4571 T-piece made of stainless steel 1.4571 pendulum system, st. steel 1.4310 flange made of st. steel 1.4571
Material combination C:	T-piece made of PVC pendulum system, st. steel 1.4310 flange made of PVC
SP-04.AU...	IP65
Material combination A:	housing made of brass pendulum system, st. steel 1.4310 welding props made of steel
Material combination B:	housing made of stainless steel 1.4571 pendulum system, st. steel 1.4310 bellow made of stainless steel 1.4571 welding props made of st. steel 1.4571

Dimensions in mm:



Ordering Codes:

Order number	SP-04.	GW25.	A.	2.	10-100
SP-04 Baffle Disc Flowmeter					
Process connection / GW... = with thread (DN 10 to DN 50 only) FL... = with flange (DN 10 to DN 50 only) AU... = with welding props (from DN 65 to DN 600)					
Material combination / A = brass / stainless steel / steel B = fully stainless steel C = PVC / stainless steel (not for SP-04.AU)					
Switching output / 2 = 2 relays (230 V / 1A)					
Operating range / xxxx-xxxx = min. - max. flow (see table operating ranges)					

Additional details /

- media density and viscosity (if different from water)
- operating pressure and temperature · **mounting position and direction of flow**

Measuring Ranges:

Processconnection:
SP-04.GW..., SP-04.FL...

Processconnection:
SP-04.AU...

ND	Flow (l/min)		Flow ratio
	min.	max.	
3/8"	1,5	25	1:10
1/2"	1,5	45	1:10
3/4"	5	100	1:10
1"	6	150	1:10
1 1/4"	10	250	1:10
1 1/2"	20	400	1:10
2"	50	600	1:10

Values are applicable for water, 20°C.

Within the specified limits, all operating ranges can be implemented, provided that the ratio max. to min. 1 : 10 is not exceeded.

ND	Flow (m ³ /h)		Flow ratio
	min.	max.	
DN 65	4,8	60	1:10
DN 80	7,2	90	1:10
DN 100	12	144	1:10
DN 125	18	255	1:10
DN 150	24	330	1:10
DN 200	42	600	1:10
DN 250	72	900	1:10
DN 300	100	1200	1:10
DN 350	150	1800	1:10
DN 400	180	2400	1:10
DN 500	300	3600	1:10
DN 600	420	4500	1:10

Dimensions:

SP-04.GW...

Diameter	Mounting length Z in mm and (thread type)	Material	
		Material A	Material B
3/8" DN 10	50 (F)	50 (F)	50 (F)
1/2" DN 15	50 (F)	50 (F)	50 (F)
3/4" DN 20	50 (F)	50 (F)	50 (F)
1" DN 25	50 (F)	135 (M)	135 (M)
1 1/4" DN 32	50 (F)	170 (M)	170 (M)
1 1/2" DN 40	50 (F)	170 (M)	170 (M)
2" DN 50	170 (M)	170 (M)	170 (M)

SP-04.FL...

Diameter	Mounting length Z in mm	Mounting height H in mm	
		Material A	Material B
3/8" DN 10	155 ± 2	157	157
1/2" DN 15	155 ± 2	157	157
3/4" DN 20	155 ± 2	157	157
1" DN 25	155 ± 2	162	178
1 1/4" DN 32	190 ± 2	167	178
1 1/2" DN 40	190 ± 2	171	178
2" DN 50	190 ± 2	179	188

