

DP07

Electronic Paddle-Bellows Flowmeter, Counter and Switch with Analogue Output

- for liquids
- 2-line LCD-display for flow rate or total quantity
- linearised analogue output signal 4...20 mA or 0...10 V
- 2 independent limit switches
- optional RS-232-interface
- intensive to dirty / contaminated media
- easy installation, for piping up to DN 600
- measuring ranges: 1,5...600 l/min to 420...4500 m³/h
- P_{max}: 25 bar, T_{max}: 130 °C



Description:

The DP07 flowmeter work according to the paddle-bellows principle. By the flow of the liquid the paddle arm is moved in the direction of the flow against the force of a spring. This motion is transferred to a magnet and its position is detected by a Hall sensor. A microprocessor based electronic unit calculates according to a calibration curve the actual flow of the medium.

A two chamber system assures that even in the case of a device fault no medium can ingress the electronic housing.

Typical applications:

The DP07 flow transmitters are used to supervise the flow of low viscosity media up to large flows. Especially in the case of pipes bigger than DN 50 there is an unchallenged price performance ratio due the use of a weld on nozzle.

Models:

The flow monitors DP07 are available in 3 versions each and different materials combinations:

DP07.R... **with T-fitting and pipe thread connection**
...A: brass: with female thread from R 3/8 to R 1 1/2
 with male thread from R 1 to R 2
...B: st. steel: with female thread from R 3/8 to R 3/4
 with male thread from R 1 to R 2

DP07.R... **with T-fitting and pipe thread connection**

DP07.F... **with T-fitting and DIN-flange from DN 10 up to DN 50**

Material-combination A: housing made of brass
T-piece made of brass
pivoting system made of st. steel 1.4310
flange of galvanized carbon steel

Material-combination B: housing made of st. steel 1.4301
T-fitting made of st. steel 1.4571
pivoting system made st. steel 1.4310
flange made of st. steel 1.4571

DP07.A... **with weld-on flange for nominal pipe size DN 65 to DN 600**

Material-combination A: housing made of brass
pivoting system made of st. steel 1.4310
weld-on flange made of st. steel 1.4301

Material-combination B: housing made of st. steel 1.4301
pivoting system made of st. steel 1.4310
bellows made of st. steel 1.4571
weld-on flange made of st. steel 1.4301

Technical Data:

Max. pressure:
DP07.R and DP07.A: 25 bar
DP07.F: 16 bar

Max. med.-temperature: 130 °C
high temperature version: 250 °C

Accuracy: ± 2 % of full scale

Outputs: 4...20 mA, 0...10 V
Frequency output (programmable, max 32 kHz)
2 x relays SPDT, 230 V, 1 A

Totalisator: with EPROM – memory board

Power supply: 24 V_{DC} +/- 10 %

Protection class: IP65

Order Code:

Order number: **DP07.** **R025.** **B.** **1.** **20-100.** **0**

Electronic paddle bellows flowmeter, counter and switch, with analogue output

Process connection (xx=nominal pipe size):

R0xx = with female or male thread*
F0xx = with flange (DN 10 to DN 50 only)
Axxx = with weld-on nozzle
(from DN 65 to DN 600)

Material combination:

A = brass / st. steel (galvanized steel)
B = complete stainless steel
PVC version (threaded socket, flange etc.) on request

Output signals:

0 = universal output for current, voltage and frequency (adjustable on site)
2 relays, SPDT

Switching range:

xxxx-xxxx = min. - max. flow (see table „Measuring ranges“)

Options:

0 = without
1 = please specify in plain text
HT = high temperature version (only for material combination B) up to 250 °C
HTF = high temperature version for flange connection (only for material combination B) up to 250 °C

*female thread DP07...A: R 3/8 bis R 1 1/2;
DP07...B: R 3/8 up to R 3/4
male thread DP07...A: R 2; DP07...B: R 1 bis R 2

Additional specifications:

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

Accessories:

DP07-Z.SK: RS232 Interface cable
DP07-Z.BS: Cap set

Measuring Ranges:

Devices with thread or flange connection (T-piece):

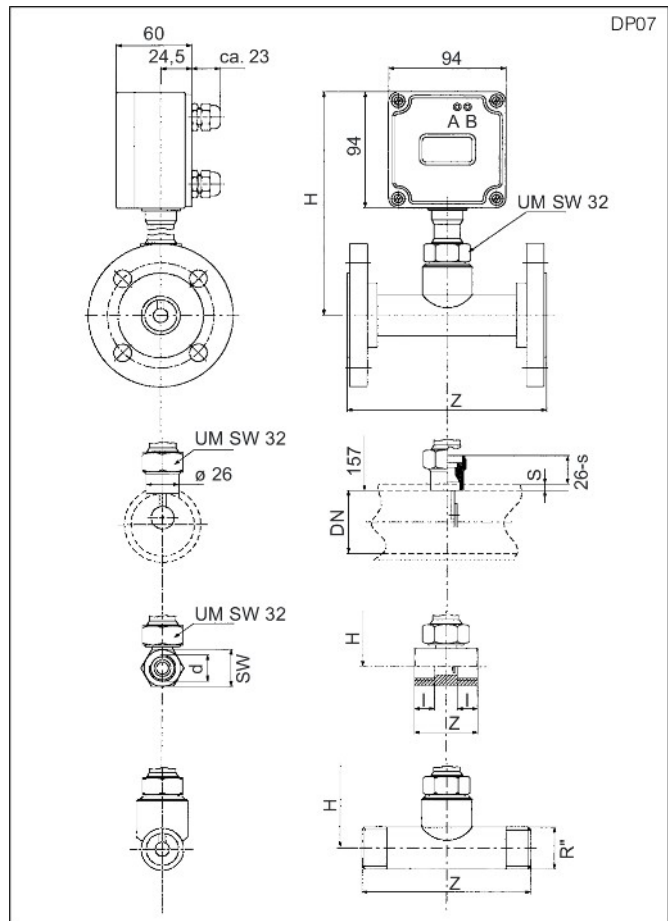
Process connection DP07.R... DP07.F...	Flow rate [l/min]		Flow ratio
	min	max	
3/8"/DN 10	1,5	25	1:10
1/2"/DN 15	1,5	45	1:10
3/4"/DN 20	5	100	1:10
1"/DN 25	6	150	1:10
1 1/4"/DN 32	10	250	1:10
1 1/2"/DN 40	20	400	1:10
2"/DN 50	50	600	1:10

Devices with weld-on nozzle:

Process connection DP07.A...	Flow rate [m³/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	102	1.200	1:10
DN 350	150	1.800	1:10
DN 400	180	2.400	1:10
DN 500	300	3.600	1:10
DN 600	420	4.500	1:10

Switching ranges apply to water at 20°C. Within the specified limits, all switching ranges can be achieved, provided that the max./min. ratio for the switching point is not exceeded. Example in the event of 1/2": 1-5, 2-10 or 11-55 possible.

Dimensions:



Nominal size	Installation length Z [mm]		Installation height H [mm]
	DP07.R...	DP07.F...	
3/8"/DN 10	50	155	157
1/2"/DN 15	50	155	157
3/4"/DN 20	50	155	157
1"/DN 25	135	155	DP07.x.A: 162 DP07.x.B: 178
1 1/4"/DN 32	170	190	DP07.x.A: 167 DP07.x.B: 178
1 1/2"/DN 40	170	190	DP07.x.A: 171 DP07.x.B: 178
2"/DN 50	170	190	DP07.x.A: 179 DP07.x.B: 188