

# 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 m<sup>3</sup>/h
- P<sub>max</sub>: 25 bar, T<sub>max</sub>: 100 °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 materials combinations available:

**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.F...** with T-fitting and DIN-flange  
 von DN 10 bis 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

**Material-combination C:** T-fitting made of PVC  
 pivoting system made of st. steel 1.4310

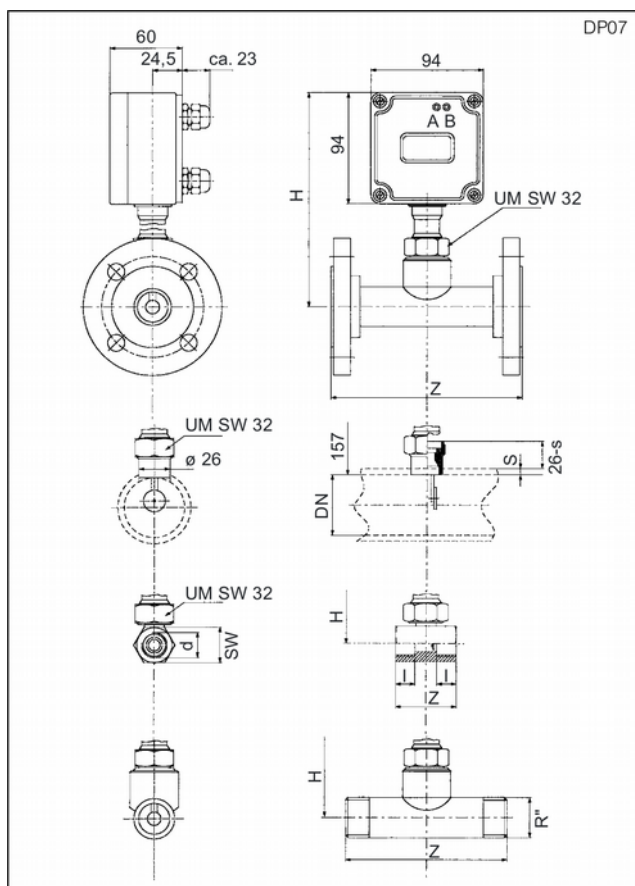
flange made of PVC  
**DP07.A...** with weld-on flange  
 for nominal pipe size DN 65 to DN 600

**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

## Dimensions:



## Order Code:

<b>Order number:</b>	<b>DP07.</b>	<b>R025.</b>	<b>B.</b>	<b>1.</b>	<b>20-100</b>
<b>Electronic paddle bellows flowmeter, counter and switch, with analogue output</b>					
<b>Process connection (xx=nominal pipe size):</b>					
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)					
<b>Material combination:</b>					
A = brass / st. steel (galvanized steel)					
B = complete stainless steel					
C = PVC / stainless steel (not for DP07.A..)					
<b>Output signals:</b>					
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“)

\*female thread DP07...A: R 3/8 bis R 1 1/2; DP07...B: R 3/8 bis 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

## Measuring Ranges:

Process connection DP07.R... DP07.F...	Flow [l/min]		Flow rate	Process connection DP07.A...	Flow [m³/h]		Flow rate
	min.	max.			min.	max.	
3/8"/DN 10	1,5	25	1:10	DN 65	4,8	60	1:10
1/2"/DN 15	1,5	45	1:10	DN 80	7,2	90	1:10
3/4"/DN 20	5	100	1:10	DN 100	12	144	1:10
1"/DN 25	6	150	1:10	DN 125	18	255	1:10
1 1/4"/DN 32	10	250	1:10	DN 150	24	330	1:10
1 1/2"/DN 40	20	400	1:10	DN 200	42	600	1:10
2"/DN 50	50	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, 20 °C.  
 All switching ranges can be implemented within the specified limits, provided that the ratio of max. to min. switching point is not exceeded.  
 e.g. in the case of 3/4":  
 5...50, 8...80 or 10...100 possible.

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

## Technical Data:

**max. pressure:** DP07.R and DP07.A: 25 bar  
 DP07.F: 16 bar

**max. med.-temperature:** 100 °C

**Accuracy:** ± 2 % of final value

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

**Power supply:** 24 VDC +/- 10 %

**Power input:** max. 200 mA

**Protection class:** IP65

**Totalizer:** with EPROM – memory