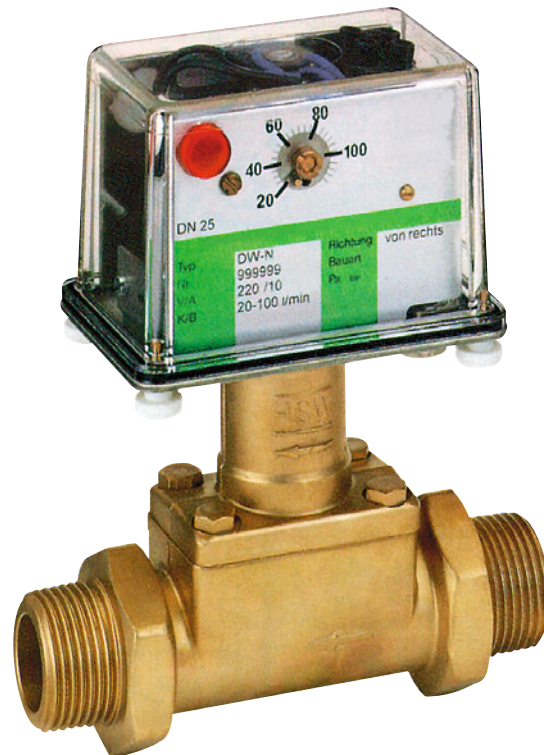


# DP05

## Paddle-bellows flow switch for liquids, with variable switching point

- **Easy switch-point adjustment over the entire switching range**
- **Bellows keeps liquid hermetically separated from the switching element**
- **Insensitive to dirty/contaminated fluids**
- **Very high reliability**
- **High electrical loading capacity through use of 1 or 2 independently adjustable microswitches**
- **Insensitive to electromagnetic fields**
- **Easy installation, for piping up to DN 600**



### Description:

The flow switches model DP05 operate according to paddle-bellows principle. The flowing liquid pushes against the surface area of a paddle mounted at the end of a pivoting arm. The arm is deflected against the force of a spring. This deflection is mechanically transmitted to an adjustable contact unit. A bellows system hermetically seals the liquid off from the mechanism.

In case of malfunction, the spring returns the paddle plate to the zero position (no flow), which causes the system to automatically signal a fault.

### Fields of application:

The DP05 paddle-bellows flow switch is suitable for monitoring thin and low-viscosity liquids in average to large flow volumes. For nominal pipe sizes over DN50, installation with a special intermediate mounting flange yields a price/performance ratio of exceptional economy.

## Designs:

Each of the 3 types of DP05 flow switches are available in 3 material combinations:

**DP05.R...** with T fitting and pipe-thread connection from G 3/8 to G 2 male thread

**DP05.F...** with T fitting and DIN flange from DN10 to DN50

**Material combination A:** T fitting of brass  
Pivoting system of brass  
Bellows of 1.4571 stainless steel  
Flange of galvanized steel

**Material combination B:** T fitting of 1.4571 stainless steel  
Pivoting system of 1.4305 stainless steel  
Bellows of 1.4571 stainless steel  
Flange of 1.4571 stainless steel

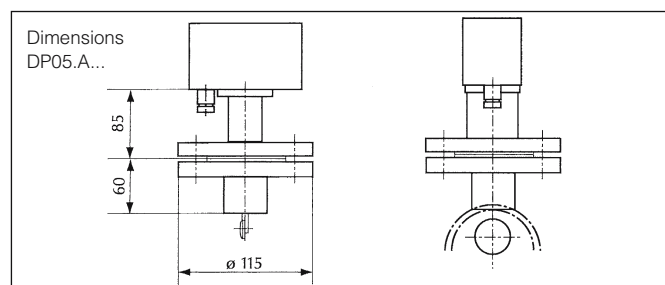
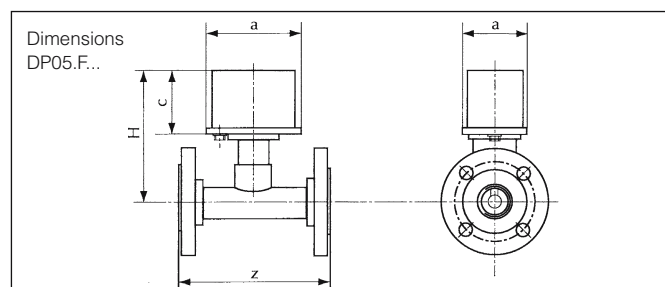
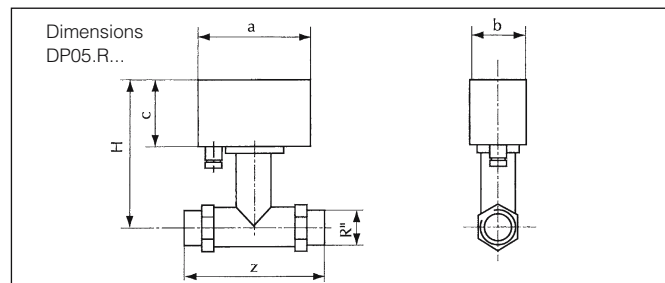
**Material combination C:** T fitting of PVC  
pivoting system of 1.4305 stainless steel  
Bellows of 1.4571 stainless steel  
Flange of PVC

**DP05.A...** with weld-on flange for nominal pipe size DN65 to DN600

**Material combination A:** Housing of brass  
Pivoting system of brass  
Bellows of 1.4571 stainless steel  
Weld-on flange of carbon steel, painted

**Material combination B:** Housing of 1.4571 stainless steel  
Pivoting system of 1.4305 stainless steel  
Bellows of 1.4571 stainless steel  
Weld-on flange of 1.4571 stainless steel

## Dimensions:



## Ordering Code:

**Order number:** DP05. R025. B. 1. 20-100

**Paddle-bellows flow switch**

**Process connection (xx=nominal pipe size):**

R0xx = With male thread

(G 3/8 to G2 only)

F0xx = With flange

(DN10 to DN50 only)

Axxx = With weld-on flange

(from DN65 to DN600)

**Material combination:**

A = Brass / stainless steel (galvanized steel)

B = Completely of stainless steel

C = PVC / stainless steel (not for DP05.A..).

**Switching output:**

1 = 1 microswitch (250 V / 10 A)

2 = 2 microswitch (250 V / 5 A)

**Switching range:**

xxxx-xxxx = min. - max. switching point (refer to „Measuring Ranges“ table)

## Additional specifications:

- Liquid density and viscosity (if not water)
- Process pressure and temperature
- Mounting position and direction of flow
- Ratings of electrical connections

## Measuring ranges:

Process connection DP05.R... DP05.F...	Flow rate (l/min)		Flow ratio	Process connection DP05.A...	Flow rate (m³/h)		Flow ratio
	min.	max.			min.	max.	
3/8"/DN10	1	25	1:5	DN 65	4,8	60	1:4
1/2"/DN15	1	55	1:5	DN 80	7,2	90	1:4
3/4"/DN20	5	100	1:5	DN 100	12	144	1:4
1"/DN25	6	150	1:5	DN 125	18	255	1:4
1 1/4"/DN32	10	250	1:5	DN 150	24	330	1:4
1 1/2"/DN40	20	400	1:5	DN 200	42	600	1:4
2"/DN50	50	600	1:5	DN 250	72	900	1:4
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.				DN 300	102	1.200	1:4
				DN 350	150	1.800	1:4
				DN 400	180	2.400	1:4
				DN 500	300	3.600	1:4
				DN 600	420	4.500	1:4

Nominal size	Installation length Z (in mm)		installation clearance H (in mm)
	DP05.R...	DP05.F...	
3/8"/DN10	135	155	145
1/2"/DN15	135	155	145
3/4"/DN20	135	160	145
1"/DN25	135	160	145
1 1/4"/DN32	170	190	150
1 1/2"/DN40	170	190	155
2"/DN50	170	190	160

## Technical specifications:

Max. pressure: 16 bar

Max. temperature: 100 °C

Repeat accuracy: +/- 5% to 20 l/min

+/- 4% from 21 to 200 l/min

+/- 3% > 200 l/min

Switching hysteresis: 10% (to 2 bar)

Contacts: microswitch, 250 V, 10 A or 5 A

Status display: low-voltage lamp or LED

(depends on the voltage rating)