

# DP01

## Paddle-Type Flow Switch

- for liquids
- long-term stable switching points by counter magnet technology
- with or without T-fitting for piping from 1/4" to 6"
- design in brass, stainless steel and with PVC T-fitting
- upper part detachably connected with T-piece, thus cleaning and exchange fast possible
- switching range: 2,1...83 l/min water
- available with reed contact or microswitch
- instant response
- switching function depends only on flow, not on pressure and temperature of fluid



### Description:

The model DP01 flow switches operate according to the paddle principle. The flowing liquid pushes against the surface area of a paddle mounted at the end of a pivoting arm. The dynamic pressure against the plate deflects the arm. This motion causes a permanent magnet attached on the other end of the arm to switch an adjustable reed contact located outside the liquid being monitored. By moving the reed contact, different switching points can be set.

Two repulsive magnets generate the restoring force. This results in better long-term stability and higher tolerance to pressure peaks.

### Typical application:

The DP01 paddle flow switch is suitable for monitoring the switching point of low-viscosity liquids.

Typical fields of application:

- Cooling systems
- Heating systems
- Welding systems
- Laser cooling systems

The paddle principle makes the device relative dirt resistant.

## Models and switching ranges

(all switching ranges refer to water, 20 °C,  
horizontal pipeline, tolerance +/- 15 %)

### DP01.1.: with brass- or stainless steel T-fitting and reed contact

Nominal size DN	Connection	Switch on at [l/min] H <sub>2</sub> O	Switch off at [l/min] H <sub>2</sub> O	Max. flow rate [l/min] H <sub>2</sub> O
8	G 1/4	2,1...2,7	1,8...2,4	45
10	G 3/8	2,5...3,2	2,2...2,9	60
15	G 1/2	3,4...4,2	3,0...3,8	67
20	G 3/4	7,0...9,1	6,4...8,2	120
25	G 1	13,5...17	12...15,5	195
32	G 1 1/4	15,5...20,5	14,5...19	240
40	G 1 1/2	26,5...34,5	15,5...32,5	400
50	G 2	39,5...51,0	39...50	400

### DP01.2.: with PVC- T-fitting and reed contact

Nominal size DN	Connection	Switch on at [l/min] H <sub>2</sub> O	Switch off at [l/min] H <sub>2</sub> O	Max. flow rate [l/min] H <sub>2</sub> O
15	DN 15	5,1...6,9	4,9...6,5	50
20	DN 20	9,4...12,3	9,1...11,9	100
25	DN 25	10,7...15,2	10,4...14,8	100
32	DN 32	17,0...22,6	16,8...22,5	150
40	DN 40	21,8...30,1	21,6...29,9	200
50	DN 50	29,0...40,0	28,6...39,9	260

### DP01.3.: with brass-T-fitting and microswitch

Nominal size DN	Connection	Switch off at [l/min] H <sub>2</sub> O decreasing	Max. flow rate [m <sup>3</sup> /h] H <sub>2</sub> O
10	G 3/8 female	4,0...5,0	10
15	G 1/2 female	5,0...6,0	20
15	G 1/2 male	4,0...5,0	10
20	G 3/4 female	8,0...10,0	40
25	G 1 female	17,0...20,0	60
32	G 1 1/4 female	24,0...28,0	80
40	G 1 1/2 female	43,0...50,0	100
50	G 2 female	69,0...83,0	150

### DP01.4.: without T-fitting, screw-in thread 1/2", installation length 51 mm, reed contact

Can be used in nominal size	Connection screw-in spigots*	Switch on at [m <sup>3</sup> /h] H <sub>2</sub> O	Switch off at [m <sup>3</sup> /h] H <sub>2</sub> O	Max. flow rate [m <sup>3</sup> /h] H <sub>2</sub> O
DN 50	G 1/2 male	1,9...2,7	1,8...2,6	30
DN 80	G 1/2 male	5,0...8,0	4,9...7,9	80
DN 100	G 1/2 male	8,3...12,5	8,2...12,4	150
DN 150	G 1/2 male	17,5...25,0	17,4...24,9	200

\*Installation in welding socket acc. to EN 10241, 15 mm long

## Order Code:

Order number: **DP01.** 1. 2. 25. 0. 0.

Paddle type flow switch

### Version:

1 = with T-fitting, brass or st. steel (reed contact)  
2 = with PVC-T-fitting, glue fittin (reed contact)  
3 = with brass-T-fitting (micro switch)  
4 = with 1/2" screw-in thread, (reed contact)  
brass or st. steel, installation length 51 mm

### Material:

1 = brass (not DP01.2.)  
2 = stainless steel (not DP01.2., DP01.3.)  
3 = PVC (DP01.2. only)

### Nominal size:

#### DP01.1. only

08 = 1/4"

#### DP01.1. and DP01.3.

10 = 3/8"

#### DP01.3. only

14 = 1/2" male thread

#### DP01.1., DP01.2., DP01.3.

15 = 1/2"

20 = 3/4"

25 = 1"

32 = 1 1/4"

40 = 1 1/2"

50 = 2"

#### DP01.4.

00 = all nominal sizes from 2" to 6" acc. to table

### Preset switching point:

0 = without

1 = factory set switching point (increasing)

2 = factory set switching point (decreasing)

### Options:

0 = without

1 = please specify in plain text

## Technical Data:

**Max. pressure:** brass and st. st.: PN 25  
PVC: PN 10 at 0...20 °C  
PN 2,5 at 0...60 °C

### Temperature ranges:

**Media:** brass and st. st.: -20...+110 °C

PVC 60 °C

**Environment:** brass and st. st.: -25...+80 °C

-20...+70 °C at microsw.

PVC: 0...60 °C

**Device plug:** device plug DIN EN 175301-803-A  
incl. connector

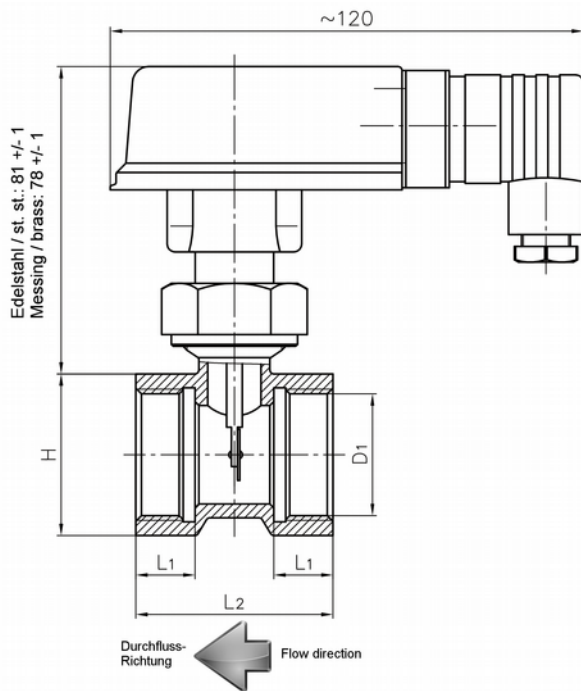
**Reed contact:** contact function: N/C / N/O  
switching capacity: 230 VAC / 48 VDC,  
1 A, 20 W / 26 VA

**Microswitch:** contact function: changeover contact  
switching capacity: 250 VA, 5 A, 1250 VA  
switching hysteresis: 10...30 %

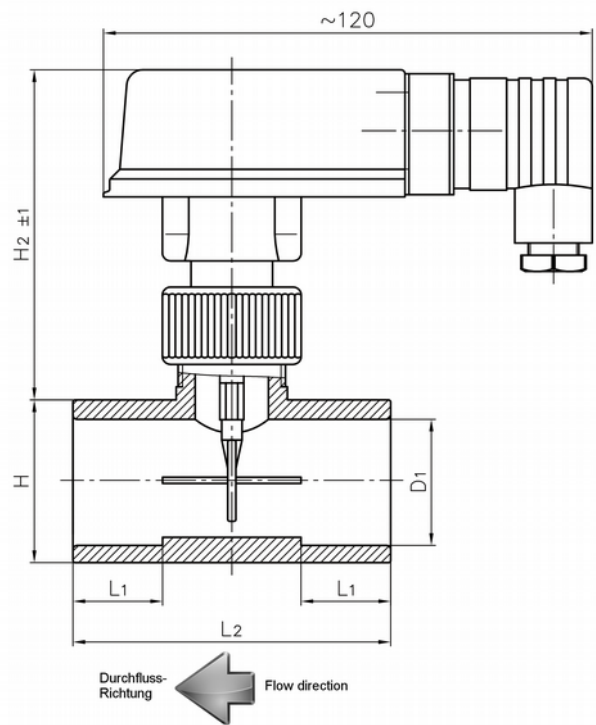
**Protection cl.:** IP 65  
class II, EN 60730-1

## Dimensions and Materials:

DP01.1.: with brass- or stainless steel T-fitting and reed contact



DP01.2.: with PVC- T-fitting and reed contact



Connection	brass version			st. steel version		
	L <sub>1</sub>	L <sub>2</sub>	H	L <sub>1</sub>	L <sub>2</sub>	H
G 1/4	11	50	27	11	50	27
G 3/8	11	50	27	11	50	27
G 1/2	11	50	27	11	50	27
G 3/4	15	50	32	15	50	32
G 1	15	50	41	15	50	41
G 1 1/4	15	50	48	15	50	46
G 1 1/2	15	50	55	15	50	55
G 2	22	64	70	15	50	70

Nominal size	L <sub>1</sub>	L <sub>2</sub>	H <sub>1</sub>	H <sub>2</sub>
DN 15	16	54	28	84
DN 20	19	66	34	86
DN 25	22	78	40	86
DN 32	26	98	50	104
DN 40	31	118	62	103
DN 50	38	144	77	101

### Material:

	DP01.1.1.	DP01.1.2.
Body, paddle	brass	st. steel 1.4571
Pipe section	brass	st. steel 1.4571
Socket	PPE Noryl GFN 3	PVDF
Rivet	brass	st. steel
Pivot	st. steel 1.4571	st. steel 1.4571
Magnet	hard ferrite	hard ferrite
Gasket	NBR	NBR

### Material:

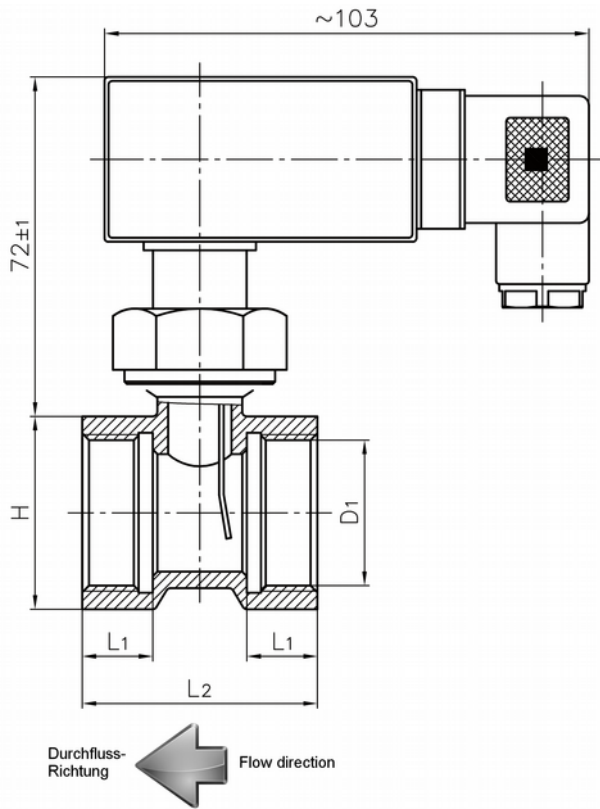
	DP01.2.2.
Body, paddle	PPE Noryl GFN 3
Pipe section	PVC
Magnet	hard ferrite
gasket	EPDM



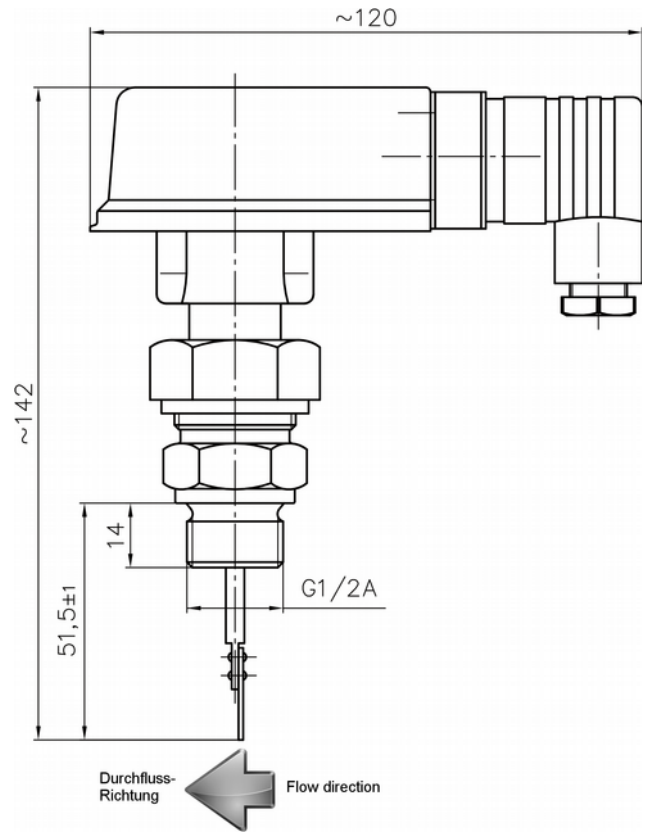
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**DP01.3.: with brass-T-fitting and microswitch**



**DP01.4.: without T-fitting, screw-in thread 1/2", installation length 51 mm, reed contact**



Connection	L <sub>1</sub>	L <sub>2</sub>	H
G 3/8 female	11	50	27
G 1/2 female	11	50	27
G 1/2 male	10	60	
G 3/4 female	15	50	32
G 1 female	15	50	41
G 1 1/4 female	15	50	48
G 1 1/2 female	15	50	55
G 2 female	22	64	70

**Material:**

	DP01.4.1.	DP01.4.2.
<b>Body, paddle</b>	brass	st. steel 1.4571
<b>Process connection</b>	brass	st. steel 1.4571
<b>Socket</b>	PPO Noryl GFN 3	PVDF
<b>Rivet</b>	brass	st. steel 1.4303
<b>Pivot</b>	st. steel 1.4571	st. steel 1.4571
<b>Magnet</b>	hard ferrite	hard ferrite
<b>Gasket</b>	NBR	NBR

**Material:**

	DP01.3.
<b>Body</b>	brass, nickel-plated
<b>Pipe section</b>	brass
<b>Paddle</b>	stainless steel 1.4310, 1.4301
<b>Magnet</b>	hard ferrite
<b>Gasket</b>	NBR

