



Flow Transmitter HFT 2500

Float

Any installation position

Two accuracy classes

For water / water-based media

Description:

The HYDAC flow transmitters of the HFT 2500 series are based on a variable-area float principle.

Irrespective of the installation position, the measuring medium deflects a spring-loaded float in the direction of flow, depending on the flow rate. A Hall sensor detects the position of the float and is fitted to the outside of the device therefore separated from the fluid circuit. In proportion to the deflection of the float, the sensor produces an analogue signal which corresponds to the particular measuring range.

The device is calibrated for vertical installation and for an upwards flow direction.

Fields of application are to monitor flow rate in fluids (water / water-based) in the following areas, amongst others:

- Cooling systems and circuits
- Hydraulic systems
- Pumps
- Welding machines and laser plants
- Medical technology
- Pharmaceutical industry
- Chemical industry
- Research and development

Technical data:

Input data

Measuring ranges [l/min]	10 % accuracy			5 % accuracy	
	Size 1	Size 2	Size 3	Size 4	
0.005 .. 0.06	0.02 .. 0.2	10 .. 30	0.2 .. 4.0	8 .. 90	
0.04 .. 0.13	0.2 .. 0.6	15 .. 45	0.6 .. 5.0	5 .. 110	
0.1 .. 0.6	0.4 .. 1.8	20 .. 60	0.5 .. 8.0	10 .. 150	
0.2 .. 1.2	0.8 .. 3.2	30 .. 90	1 .. 14	35 .. 220	
0.4 .. 2.0	2 .. 7	60 .. 150	1 .. 28	35 .. 250	
0.5 .. 3.0	3 .. 13		2 .. 40		
1.0 .. 5.0	4 .. 20		4 .. 55		
	8 .. 30		1 .. 70		

Operating pressure				
Brass version [bar]	300	300	250	200
Stainless steel version [bar]	350	350	300	300
Pressure drop [bar]	0.02 .. 0.2	0.02 .. 0.3	0.02 .. 0.4	0.02 .. 0.8
Mechanical connection	see dimensions			
Parts in contact with fluid				
Brass version	Stainless steel 1.4571; NBR ¹⁾ ; br. nickel-plated; br.; hard ferrite			
Stainless steel version	Stainless steel 1.4571; FKM ¹⁾ ; hard ferrite			
Housing material				
Measuring parts	Brass (nickel-plated) or stainless steel 1.4571			
Transmitter	Brass, nickel-plated			

Output data

Output signal, max. load resist.	4 .. 20 mA, 3-conductor, R _{Lmax} ~ 500 Ω
max. current	0 .. 10 V, 3-conductor, I _{max} ~ 10 mA
Accuracy	≤ ± 10 % / ≤ ± 5 % (size 4)
Repeatability	1 % FS

Environmental conditions

Operating temperature range	-20 .. +70 °C
Fluid temperature range	-20 .. +70 °C
€ mark	Directive 2014 / 30 / EU
Protection class acc. to DIN EN 60529 ²⁾	IP 67

Other data

Supply voltage	18 .. 30 V DC
Power consumption	< 1 W

Note: **FS (Full Scale)** = relative to complete measuring range

¹⁾ Other seal materials on request

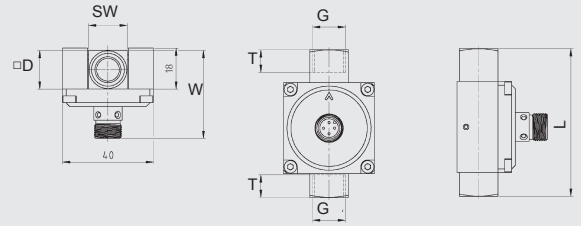
²⁾ With mounted mating connector in corresponding protection class

Dimensions:

Type [l/min]	Installation dimensions [mm]							Weight (approx.) [g]
	SW	D	W	G	DN	T	L	

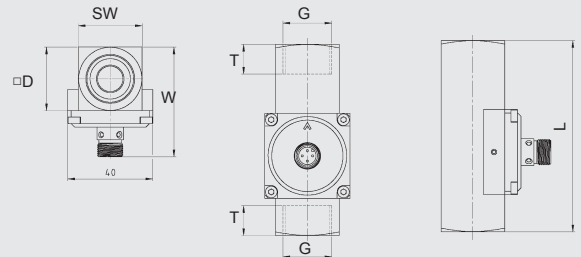
Size 1

Flow Range [l/min]	SW	D	W	G	DN	T	L	Weight [g]
0.005 .. 0.06	17	17	39	1/4"	8	10	65	210
0.04 .. 0.13								
0.1 .. 0.6								
0.2 .. 1.2								
0.4 .. 2.0								
0.5 .. 3.0								
1.0 .. 5.0								



Size 2

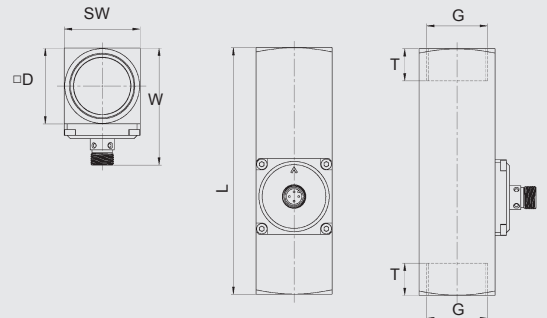
Flow Range [l/min]	SW	D	W	G	DN	T	L	Weight [g]
0.02 .. 0.2	30	30	62	1/2"	15	14	90	560
0.2 .. 0.6								
0.4 .. 1.8								
0.8 .. 3.2								
2.0 .. 7.0								
3.0 .. 13.0								
4.0 .. 20.0								
8.0 .. 30.0								



Size 3

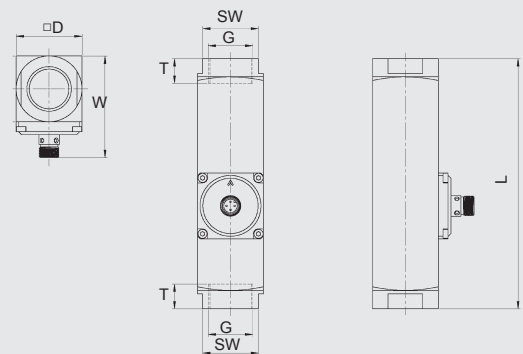
Flow Range [l/min]	SW	D	W	G	DN	T	L	Weight [g]
10 .. 30	34	40	62	3/4" 1")	20	15	152	1240
15 .. 45								
20 .. 60								
30 .. 90								
60 .. 150	40	40	62	1"	25	17	130	1050

*) Standard



Size 4

Flow Range [l/min]	SW	D	W	G	DN	T	L	Weight [g]
0.2 .. 4.0	27	40	52	1/4" 3/8" 1/2"	8	10	131	900
0.6 .. 5.0								
0.5 .. 8.0								
1 .. 14								
1 .. 28								
2 .. 40	27	40	52	1/2" 3/4"	15	14	146	950
4 .. 55								
1 .. 70	34	40	62	3/4" 1"	20	15	152	1420
8 .. 90								
5 .. 110								
10 .. 150	50	50	72	1 1/4"	32	20	200	2770
35 .. 220	50	50	72	1 1/4"	32	20	200	3020
35 .. 250	60	60	72	1 1/2"	40	20	200	3820



Model code:

HFT 2 5 X 6 - X - XXXX-XXXX - X - X - 0 - 000

Measuring principle

2 = variable area float

Measuring medium

5 = water / water-based

Mechanical connection ³⁾

1 = 1/4"

2 = 3/8"

3 = 1/2"

4 = 3/4"

5 = 1"

6 = 1 1/4"

7 = 1 1/2"

Electrical connection

6 = male M12x1, 4 pole
(mating connector not supplied)

Output signal ⁴⁾

B = 0 .. 10 V, 3-conductor

C = 4 .. 20 mA, 3-conductor

Measuring ranges in l/min

Size 1

.005-0.06; 0.04-0.13; 0.1-0.06; 0.2-0.1.2; 0.4-0.2.0;
0.5-0.3.0; 0.1-0.05.0

Size 2

0.2-0.0.2; 0.2-0.0.6; 0.4-0.1.8; 0.8-0.3.2; 0.2-0.0.7.0;
0.3-0.0.13; 0.4-0.0.20; 0.8-0.0.30

Size 3

0.010-0.030; 0.015-0.045; 0.020-0.060; 0.030-0.090; 0.060-0.150

Size 4

0.2-0.4.0; 0.6-0.5.0; 0.5-0.8.0; 0.1-0.0.14; 0.1-0.0.28;
0.2-0.0.40; 0.4-0.0.55;

0.1-0.0.070; 0.8-0.0.090; 0.005-0.110; 0.010-0.150;
0.035-0.220; 0.035-0.250

Accuracy

6 = $\leq \pm 5.0\%$ FS (only for size "4")

7 = $\leq \pm 10.0\%$ FS

Housing material

B = brass, nickel-plated

S = stainless steel

Mechanical indicator

0 = without indicator

Modification number

000 = standard

³⁾ Mechanical connection options depend on housing type
(see Dimensions)

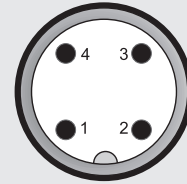
⁴⁾ 0 V or 4 mA resp. correspond to 0 l/min

Accessories:

Appropriate accessories, such as mating connectors, can be found in the Accessories brochure.

Pin connections:

M12x1



Pin	HFT 25X6-C	HFT 25X6-B
1	+U _B	+U _B
2	Reserved	Reserved
3	GND	GND
4	4 .. 20 mA	0 .. 10 V

Note:

The information in this brochure relates to the operating conditions and applications described.

For applications or operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.

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