bach-messtechnik gmbh
Gotzweg 103
41238 Mönchengladbach

Telefon: +492166 / 915400
Telefax: +492166 / 9154025
EMail: FMLVQ@bach-messtechnik.de
http: www.bach-messtechnik.de

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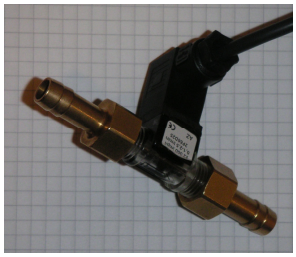
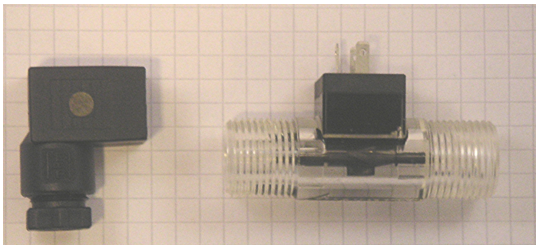
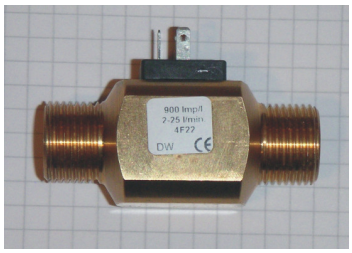
Liquid Turbine Meter DFS 1 i

The liquid turbine meters DFS 1i are for the exact measuring of small quantities. The actual flow as well as the already passed flow can be measured.







Faetures:

- *Low cost*
- *high accuracy*
- *operating pressure 25 bar*
- *impulse output, standard*
- *7 flow ranges*
- *small pressure loss*
- *FDA-proved materials*
- *analog output, option*
- *simple construction*
- *temperature range –20 bis +100 °C*
- *indipendent on position*
- *limit value adjusted, option*

Flow causes the blade rotor of the DFS 1i to turn at an angular velocity directly proportional to the velocity of the fluid mesured. As the blades pass beneath a magnetic pickup coil. A frequency signal is generated. Each pulse is equivilant to a discrete volume of fluid. Optionally an analog signal of 10V or a limit value is available.

The large number pf pulses gives a good resolution. As the mass of the turbine are very small the response time is very short. It is not necessary to install a straight length of pipeline at the upstream side.
The simple mechanical construction of the sensor DFS 1i guarantees a long lifespan without any loss of accuracy.
Pressure surges can not harm the measuring system.

model number.	measuring rang L/min	pulses /L	DN	connecting thread	frequency/ Hz	Instal-lation length	weight	limit value L/min
DFS 1 /35i	2,0-35 L/min	700	8mm	3/8“ A	23-408 Hz	55mm	15g	2,0
DFS 1 /25i	1,5-25 L/min	1000	8mm	3/8“ A	25-416 Hz	55mm	15g	1,5
DFS 1 /15i	1,0-15 L/min	2200	8mm	3/8“ A	37-550 Hz	55mm	15g	1,0
DFS 1 /10i	1,0-10 L/min	3300	8mm	3/8“ A	55-550 Hz	55mm	15g	1,0
DFS 1 /7,5i	0,5-7,5 L/min	4700	8mm	3/8“ A	38-575 Hz	55mm	15g	0,5
DFS 1 /5,0i	0,5-5,0 L/min	6900	6mm	3/8“ A	38-575 Hz	55mm	15g	0,5
DFS 1 /2,5i	0,1-2,5 L/min	20000	5mm	¼“ A	42-833 Hz	45mm	10g	0,1

Optionen:
g = limit value adjustes, OC
a = analog output 0-10V
o = OEM execution, housing and cabel connection after client specification
t = connection for 10mm cable with sleeves in POM or brass
e= suitable for Ethanol and Methanol, all measuring ranges
m= brass housing, operating pressure max. 200bar, not DFS1i/2,5

order example: DFS 1/25 ia
⇒ liquid turbine meter for max flow 25 L/min with puse and analog output.

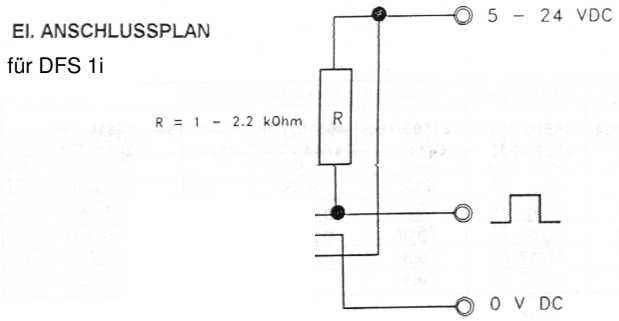
Technical data:

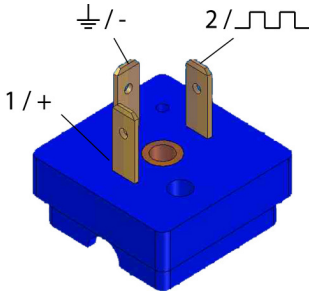
Flow rates	*see selection table*	
Flow medium	*liquids without particles, we recommend filtration with Approx. 20 to 40 micros*	
Pressure rating	*25 bar (100 bar bursting pressure), option 100bar*	
Installation length	*55mm*	
End connection	*G 3/8“*	
Temperature range	*-20 - +100 °C, option –10 °C bis +150 °C*	
accuracy	*+/- 3% of reading*	
repeatability	*better than 0,5%*	
viscosity	*up to approx. 15cSt*	
pressure drop	*refer to table*	
El. connection	*valve plug, option cable*	
Power supply	*5 – 24 VDC (DFS i), 24 V with option DFS 1 ia, DFS 1 ig*	
Power consumption	*ca. 8mA, DFS 1 i, ca. 20 mA DFS 1 ia, DFS 1 ig*	
Output signal	*frequency open collector (NPN sinking) DFS 1 i*	
Output current	*max. 20mA*	
Materials	*housing*	*Grilamid TR (PA12), brass*
	turbine	*Grilamid (PA12 Ferrit)*
	bearings	*PTFE 15% Graphit*

Operating and installation instructions

1. *Check compability with sensor material Grilamid TR55 (PA12).*
2. *Filtration is mandatory if solid particle or fibres are present.*
3. *Install sensor only in property clean pipeline.*
4. *Check ekectrical connection according to electrical wiring plan.*
5. *Do not exceed the specification limits.*
6. *The DFS 1i is a volumetric measuring device, i.e. air/gas in liquid will be included in measured volume.*
7. *Correctly installed the sensor works entirely maintenance free.*
8. *The DFS 1i is not not for public use and is to be installed and applied by trained personal only.*

The data are based on tests, material and documents, which we consider for reliable. Before a commercial use it is recommended to examine each application thoroughly and to make sure, independently of the technical data, over the appropriateness the employment.





Valve plug