

Flow monitor Flow indicator

DUG



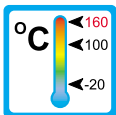
Operation

The flow monitors and indicators type DUG operate with the float measuring principle



Application

The flow monitors and indicators type DUG are used for measuring and monitoring volumeflow of liquid media.



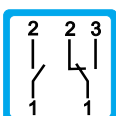
Areas of application:



– Coolingsystems and cooling-circuits



– Mechanical Engineering
e.g. Weldingmachinery,
Laserplants



– Medicine technology

– Pharma industry

– Chemical industry

– Research and development



Features

The DUG series proves itself through reliable function and easy handling. Further characteristics of this sturdy type are:

- universal mounting
- high switch accuracy
- wide switch range
- infinitely variable switchpoint adjustment through user
- EX-version to ATEX available
- Scales are burned into to the sightglass
- Threaded connection
Special threads on request

Installation hints

The installation of the flow monitor can be done in any way in the system. The flow direction must be observed.

The flow monitor must not be used as a supporting part in a pipeconstruction!

The medium must not contain solid particles!
We recommend the installation of strainers type SFD or SFM.

External magnetic fields influence the switch contact. Keep adequate distance to those magnetic fields (e.g. electromotors)!

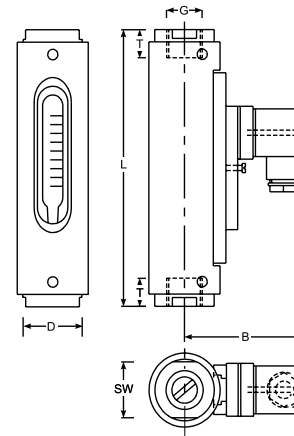
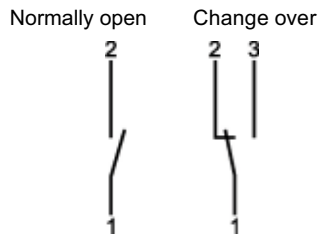
The operating instruction for DUG must be observed under any circumstances!

DUG 1 0001 09-04 E M



Measuring Ranges, Technical Data

Connection diagram



Summary of types DUG

Type	Switch range* H ₂ O [l/min]	Overall dimensions mm							Weight approx. [g]
		SW	D	B	G	DN	T	L	
DUG - 4	0,2 - 4	32	43	73	1/4"	8	14	132	625
DUG - 6	0,5 - 6				3/8"	10	14	132	
DUG - 8	0,5 - 8				1/2"	15	15	135	
DUG - 14	0,5 - 14	32	43	73	1/2"	15	15	135	650
DUG - 22	2 - 22				1/2"	15	15	135	
DUG - 28	1 - 28				1/2"	15	15	135	
DUG - 45	2,5 - 45	32	43	73	3/4"	20	18	167	850
DUG - 80	2 - 80	41	50	76	3/4"	20	18	164	1000
DUG - 90	6 - 90				1"	25	19	184	
DUG - 110	6 - 110				1"	25	19	184	
DUG - 150	15 - 150	50	55	79	1 1/4"	32	21	216	1300
DUG - 220	30 - 220	55	60	81	1 1/4"	32	21	210	1700
DUG - 250	35 - 250	50	55	79	1 1/4"	32	21	222	1400

* Other media on request

Operating data		DUG	
Operating pressure:		PN 10 bar	
Pressure drop:		0,02 - 0,8 bar	
Maximum temperature:		100 °C (optional 160 °C)	
Accuracy:		± 5% of full scale	
Electrical data		Normally open	Change over
IP 65 (plug connection DIN 43650)		max. 250V • 3A • 100VA	max. 250V • 1,5A • 50VA
IP 67 (1m sealed in cable)			
Atex II 2G EEx m II T6 (2m sealed in cable)		max. 250V • 2A • 60VA	max. 250V • 1A • 30VA
EEx m II T6 (2m sealed in cable)		max. 250V • 2A • 60VA	max. 250V • 1A • 30VA
EEx ia IIC T6 (2m sealed in cable)		max. 45V • 1A	max. 45V • 1A
Output signal:		The contact opens / changes, when the flow falls below the set point.	
Power supply:		Not required (potentialfree reed contacts)	
Other plug types or cable lengths on request			
Material		Brass	Stainless Steel
Wetted parts:		Brass nickel-plated	1.4571
Spring: (wetted part)		1.4571	1.4571
Sight glass: (wetted part)		Duran 50	
Gaskets: (wetted part)		Perbunan (optional Viton, EPDM) *	Viton (optional Perbunan, EPDM) *
Housing: (non wetted part)		Aluminium anodized	

* Other gasket materials on request

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