



Instruction Manual

DG01

***Flow Indicator with and without Rotor,
with Wipers for Cleaning of Sight Glass***



PKP Prozessmesstechnik GmbH
Borsigstraße 24
D-65205 Wiesbaden-Nordenstadt
Tel.: ++49-(0)6122-7055-0
Fax: ++49-(0)6122-7055-50
Email: info@pkp.de

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Safety Information

General Instructions

To ensure safe operation, the device should only be operated according to the specifications in the instruction manual. The requisite Health & Safety regulations for a given application must also be observed. This statement also applies to the use of accessories. Every person who is commissioned with the initiation or operation of this device must have read and understood the operating instructions and in particular the safety instructions!

The liability of the manufacturer expires in the event of damage due to improper use, non-observance of this operating manual, use of insufficiently qualified personnel and unauthorized modification of the device.

Proper Usage

The flow indicators of the series DG01 are used for the optical control of flows of liquids and gases which do not attack the materials used. Any other use of the device is prohibited and outside the scope of application.

In particular, applications in which shock loads occur (for example, pulsed operation) should be discussed and checked in advance with our technical staff.

The devices of the DG01 series should not be used as sole monitoring devices in order to detect or even avoid dangerous operating states in plants and machines. The plant or machine itself must be planned and constructed in such a way that critical conditions which pose a danger to man and the environment are excluded from the outset

Dangerous substances

For dangerous media such as e.g. Oxygen, Acetylene, flammable or toxic substances as well as refrigeration systems, compressors, etc. must comply with the relevant regulations beyond the general rules.

Qualified Personnel

The devices of the DG01 may only be installed by trained, qualified personnel who are able to mount the devices correctly. Qualified personnel are persons, who are familiar with assembling, installation, placing in service and operating these devices and who are suitably trained and qualified.

Inward Monitoring

Please check directly after delivery the device for any transport damages and deficiencies. Additional with reference to the accompanying delivery note the number of parts must be checked.

Claims for replacement or goods which relate to transport damage can only be considered valid if the delivery company is notified without delay.

Functional Description

The type series DG01 is used for optical monitoring of liquid, dirty or coloured media. In the version with rotor, they are also suitable for monitoring transparent media. Plastic wipers attached to the inside of the sight glass allow quick cleaning of the glass.

Installation and Commissioning

The following instructions must be observed to ensure trouble-free operation of the DG01 flow sight glasses:

- The flow indicator can be installed in any position.
- The arrow on the flow indicator indicates the only possible direction of flow.
- The medium to be measured should have as few solids as possible. Especially fibrous impurities should be avoided with flow indicators with rotor.

Attention:

- The two process connections are connected by two metal webs.
- The mounting location should be at a characteristic point in the process.
- When installing the flow indicators, it is essential to ensure that the device is held against the hexagon into which the connection line is screwed with a suitable open-end wrench.
- Failure to observe this warning may result in deformation of the connection bars and glass breakage. Any guarantee is excluded in this case.

Service and Maintenance

The inside of the glass is cleaned from deposits, algae build-up etc. by turning the sight glass against the inside wipers by hand.

Attention:

The cleaning process may only be carried out by hand. When using tools such as water pump pliers or similar. There is a risk of glass breakage.

Attention: Opening the device voids the warranty claim!

DG01

Flow Indicator with and without Rotor, with Wipers for Cleaning of Sight Glass

- for liquids and gases
- small mounting dimensions
- design in brass or stainless steel
- may be installed in any position
- optionally with or without rotor for visual flow confirmation
- with internal wiper blades for easy cleaning of the sight glass
- 360° visible
- max. pressure 16 bar, max. temperature 100 °C



Description:

The flow indicator of the model series DG01 are designed to display the flow through a pipe system. The flowing gas or liquid can be monitored through a sight glass. A rotor that is set in motion by the gas or liquid to provide visual confirmation of flow is available as an option. Wiper blades mounted in the flow indicator are pressed against the inside of the sight glass. The inside of the sight glass can easily be cleaned of deposits, algae or calcification by simply rotating it by hand. This design feature allows regular cleaning without having to interrupt the process being monitored, making time-consuming and costly maintenance and cleaning unnecessary (no downtime).

Typical applications:

The flow indicators DG01 are used for monitoring in pipelines. The version of the DG01 with ball bearings is also suitable for use with gases.

Models:

DG 01.x.1: without rotor
 DG 01.x.2: with rotor

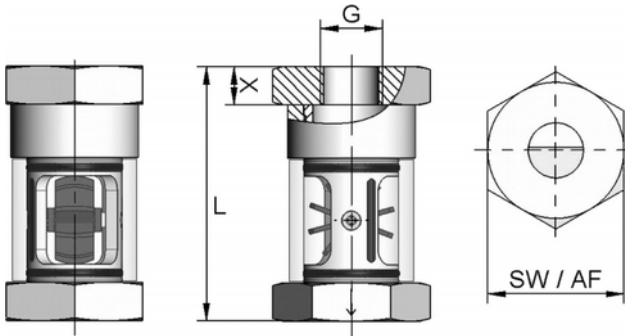
Materials: brass- or stainless steel version

Nominal sizes and flow rates with rotor:

Connection G	Liquids				Air	
	Rotor start up [l/min]			Q _{max.} recom.	Rotor start up [l/min] *	Q _{max.} recom.
	H ₂ O	40 mm ² /s	41...150 mm ² /s			
1/4	0,7	1,5	2,7	4	18	60
3/8	0,8		2,8	8	20	150
1/2	1,4	1,8	3,2	12	25	250
3/4		2,7	5,9	25	25	250
1	1,7	3,0	7,0	40	35	350
1 1/4	8,0	5,9	7,9	80	60	600
1 1/2		7,3		100	70	700

* 1 bar abs, 20 °C

Dimensions:



DG01.x. 1 (without rotor)				
Connection G	L [mm]	SW [mm]	X [mm]	Weight [kg]
1/4	71	36	9	0,3
3/8	71	36	9	0,3
1/2	86	46	13	0,6
3/4	94	46	16	0,6
1	104	46	16	0,6
1 1/4	120	65	19	1,5
1 1/2	130	65	20	1,6
DG01.x. 2 (with rotor)				
Connection G	L [mm]	SW [mm]	X [mm]	Weight [kg]
1/4	71	36	9	0,35
3/8	71	36	9	0,35
1/2	86	46	13	0,65
3/4	94	46	16	0,65
1	104	46	16	0,65
1 1/4	120	65	19	1,60
1 1/2	130	65	20	1,70

Order Code:

Order number : **DG01.** **F.** **2.** **3.** **M.** **0**

Flow indicator with or without rotor, with wipers for cleaning of sight glass

Medium:

F = liquids
 G = gases

Models:

1 = without rotor
 2 = with rotor

Connection:

1 = G 1/4 female thread
 2 = G 3/8 female thread
 3 = G 1/2 female thread
 4 = G 3/4 female thread
 5 = G 1 female thread
 6 = G 1 1/4 female thread
 7 = G 1 1/2 female thread

Materials:

M = brass, nickel plated
 E = stainless steel

Options:

0 = without
 9 = please specify in plain text

Technical Data:

Max. pressure: 16 bar

Medium-temperature:

DG01.x.1: -20 ... +100°C

DG01.x.2: 0 ... +100°C

Installation position: may be installed in any position

Materials:

Housing:

DG01.x.x.x.M: brass CW614N nickel plated
 DG01.x.x.x.E: stainless steel 1.4305

Sight glass:

borosilicate glass

Wipers:

DG01.x.x.x.M: NBR
 DG01.x.x.x.E: FKM

O-Ring:

DG01.x.x.x.M: NBR
 DG01.x.x.x.E: FKM

Rotor: (DG01.x.2.x.x only)

DN 8-DN 25: POM, red
 DN 32-DN 40: PA66, white

Bearing:

for liquids: PEEK
 for gases: steel 100 CR 6 chrome coated