



PKP Prozessmesstechnik GmbH

Borsigstrasse 24

D-65205 Wiesbaden-Nordenstadt

Tel: 06122 / 7055 - 0

Fax: 06122 / 7055 – 50

Operating Instructions

DVO1

Gear Wheel Flow Meter For Viscous Liquids

General

Please observe all points mentioned in this operating instruction in order to ensure the correct function of the flow meter. PKP will not warrant any damages caused by non-observation of the operating instructions.

Disassembly of the flow meter within the warranty period is only allowed with permission of PKP.

Description

The DV01 positive displacement flow meters work according to the gear wheel principle. A set of matched gear wheels precisely fitted into the meter housing form the measurement assembly. The rotation of the gear wheels is picked up tooth by tooth by means of an inductive sensor. The space between two gear wheel teeth is defined as the measuring volume per pulse and given as cm³/pulse.

Mounting

Before mounting the materials of the flow meter are suitable for the medium being measured.

Mounting position: any

Flow direction: any

Operation

Before start-up please observe the following:

- all pipes have to be free of dirt and particles
- the system has to be vented thoroughly
- make sure that the maximum permissible operating pressure of the flowmeter is not exceeded:

DV01.1:	100 bar
DV01.2 and DV01.3:	160 bar
- the electrical connection must be according to the wiring plan

Filtration

To prevent problems caused by dirt or particles in the medium we recommend the use of a 20 µm filter.

Maintenance

The DV01 flow meters are essentially maintenance-free. However, with critical applications, especially with media with very high viscosities, it is advisable to periodically send the meter back to the manufacturer for check-up and/or recalibration. Thus severe damage, caused for example by blocking of the gear wheels, may be avoided.

Return of goods

When returning a meter to the manufacturer please make sure that the unit has been cleaned thoroughly and that a description of the problem as well as the medium is enclosed.

Otherwise the meter has to be sent back to the customer.

These precautions have to be taken to protect our personnel. We thank you for your understanding.

Technical Data

Size / Model	DV01.1	DV01.2	DV01.3
Measuring range	0,25...10 l/min	0,16...16 l/min	1...65 l/min
Viscosity	20...4000 cSt	20...3000 cSt	20...4000 cSt
Accuracy	+/- 3% of meas. value	+/- 0,3% of meas. value	+/- 2,5% of meas. value
max. operating pressure	100 bar	160 bar	
max. medium temperature	80 °C		
Connection	G 3/8	G 3/8	G 3/4
Resolution	5000 pulses/l	4082 pulses/l	500 pulses/l
Measuring volume	0,2 ml/puls	0,25 ml/puls	2 ml/puls
Output signal	Square wave pulses, min $0,8 \cdot U_B$		
Supply voltage	12...30 VDC, short-protected		
Electrical connection	Plug incl. socket acc. to DIN 43650 / ISO 4400		
Electrical protection	IP 65		

Materials

Size / Model	DV01.1 / DV01.3	DV01.2
Housing	Aluminium	
Gear wheels	Steel	
Bearings	plain bearings	St. steel ball bearings

Electrical connection

