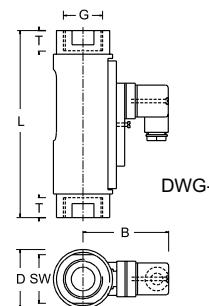


9 Specifications

| DWG-L | | |
|--|---|--------------------------|
| Pressure: | PN 10 bar | |
| Pressure drop.: | 0,01 - 0,2 bar | |
| Temperature max.: | 80°C | |
| Accuracy: | ±10% of final value | |
| Electrical Data: | SPST N.O. | SPDT |
| IP65 (plug connection DIN43650 Form A or C) | max. 250V • 3A • 100VA | |
| IP67 (with 1m sealed in cable) | max. 250V • 1,5A • 50VA ⁽¹⁾ | |
| Ex Atex II 2G EEx m II T6 max. 80°C (2m sealed in cable IP67) | max. 250V • 2A • 60VA | max. 250V • 1A • 30VA |
| EEx m II T6 max. 80°C | max. 250V • 2A • 60VA | max. 250V • 1A • 30VA |
| Output signal: | The contact switches off, if minimum flow is below setpoint | |
| Power supply: | not necessary (reed contacts) | |
| Cable diameter for IP65: | 6 - 8 mm | |
| Grade of pollution: | 2 (EN 61058-1) | |
| Other plug types or cable lengths on request | | |
| Materials | brass | stainl. st. |
| Wetted parts: | brass | 1.4571 (316 ti) |
| Float (wetted parts) | Delrin | |
| Glass (wetted parts) | Duran 50 | |
| Seals | NBR (other on request) | Viton (other on request) |
| Housing (not wetted parts) | aluminium | |

(1) Minimum load 3VA



| | SW | D | B | G | DN | T | L |
|---------------|----|----|----|------|----|----|-----|
| DWG-L- 1,5-12 | 32 | 43 | 73 | 1/4" | 8 | 14 | 132 |
| | | | | 1/2" | 10 | 14 | 132 |
| DWG-L- 18 | 32 | 43 | 73 | 1/2" | 15 | 15 | 135 |
| | | | | 3/4" | 20 | 16 | 163 |
| DWG-L- 35-50 | 41 | 50 | 76 | 3/4" | 20 | 18 | 164 |
| | | | | 1" | 25 | 19 | 184 |
| DWG-L- 100 | 41 | 50 | 76 | 1" | 25 | 19 | 200 |

Overall dimensions mm

3 Principle of operation

The instruments, type DWG-L, operate on the principle of the float type flow meter. Through the flowing medium a float is set in motion, whose integrated magnets create a magnetic field. The position of the float is detected with the switch contact. The instrument must be installed vertical in the system. Flow direction from bottom to top.

1 Preface

The flowmonitors type DWG-L prove themselves through reliability and simple handling. To use the advantages of the instrument to the full extent, please take notice of the following:

Every person, in charge of commissioning and operating this instrument, must have read and understand this operating instruction and specially the safety hints!

2 Safety hints

2.1 General hints

The instructions contained in the operating instructions must be followed to ensure a safe operation of the instrument. Further, the additional Legal- and safety-regulations for the individual application must be observed. Accordingly this applies for the use of accessories as well.

2.2 Application as directed

The instruments, type DWG-L, serve as monitors for continuous flow of gaseous media. Any other use counts as nondirected. If not indicated otherwise, the scaling of the instruments refer to air. Special applications, where intermittent loads (e.a. cyclic operation) could occur, should be discussed and checked with our technical Staff.

With every start up it should be watched that the shutoff valves are opened slowly, this is to avoid line shock, which can damage the instrument.

In general should fast changes of the operating conditions (pressure, temperature, flow) be avoided.

The instruments, type DWG-L, must not be used as single source to avoid dangerous situations on machinery and in plants.

Machinery and plants must be constructed in that way, that faulty conditions do not lead the operators into dangerous situations.

2.3 Qualified personnel

The instruments, type DWG-L, must only be installed by qualified personnel, which is capable of using these instruments in a professional manner. Qualified personnel are such persons, which are familiar with the erection, installation, commissioning and operation of these instruments and which hold a corresponding qualification for this function.

5 Electrical connection

The switch contacts are potential free and do not need any supply.

Attention! Switch contact and unit are matched. After the exchange of a switch contact a readjustment must be made. Kindly request the relevant instruction.

Switch position under No flow condition:

Connection: normally open

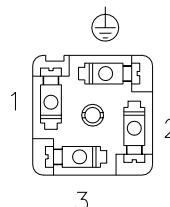


Connection: change over



5.1 Standard switch contact

Pin-allocation of the supplied socket (DIN 43650 Form A or C). The Ground-pin is not used.



Important instruction:

When using the socket DIN 43650, the ingress protection IP65 is only warranted in connection with a suitable cable diameter.

For infos on this subject please refer to page 4.

5.2 Switch contact with cable

The individual cores of the cable are marked according to the above connection diagram.

5.3 Special design

On request special designed switch contacts (socket, ready-made cable) can be supplied.

5.4 EEx-proof switch contacts

Attention!

For the connection of EEx-proof switch units special instructions apply, which must be followed! Pay attention to the hints in the separate operating instruction for EEx-proof switch contacts!

5.5 Contact protection arrangement

Attention!

The following requirements must be adhered to under any circumstances, otherwise the switch contact will be destroyed!

The reed-contacts employed in the switch contacts are, due to their construction, very fragile against over load. Non of the values voltage, current and wattage must be exceeded (Not even for a fractional moment)

The danger of overloads exist by means of:

- inductive loads
- capacitive loads
- resistive loads

Inductive load

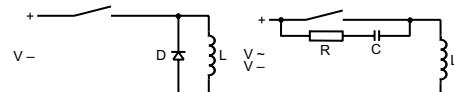
This kind of load will be caused by:

- contactors, relais
- solenoid valves
- electricmotors

Danger:

Voltage peaks during switch off
(up to 10-times of the nominal voltage)

Precautionary measure: (sample)



Capacitive load

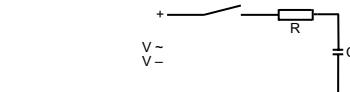
This kind of load will be caused by:

- extrem long leads
- capacitive consumption

Danger:

High current peaks during switch on of the switch contact
(exceeding the nominal current)

Precautionary measure: (sample)



Limiting the current by means of a resistor

Resistive load

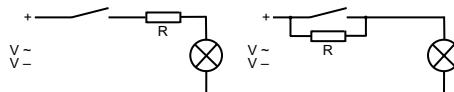
This kind of load will be caused by:

- incandescent bulbs
- Motor start up

Danger:

High current peaks during switch on of the switch contact, because the filament has low resistance at low temperatures.

Precautionary measure: (sample)



Limiting the current by means of a resistor or heating of the filament.

8 Fault finding hints

The switch contact does not react:

The switch contact is permanent in break position

1. No flow

check for medium flow

2. Flow to low or switch contact adjusted to high

Adjust switch point to a lower flow

Use instrument with different range

3. Incorrect reduced (pipe diameter to small)

reduce according to section 4

4. Float got stuck (polluted)

Clean the instrument and ensure free movement of the float

5. Switch contact faulty

Eliminate the reason for the fault (short circuit, overload)

Exchange switch contact, refer section 5

The switch contact is permanent in made position

1. Flow to high and switch contact adjusted to low

Reduce flow

Adjust switch contact to a higher flow

2. Float got stuck (polluted)

Clean the instrument and ensure free movement of the float

3. Switch contact faulty

Eliminate the reason for the fault (short circuit, overload)

Exchange switch contact, refer section 5

Switch point does not match with actual flow

1. No medium specific scale

Request a correction table or medium specific scale

2. Incorrect reduced

reduce according to section 4

3. Instrument polluted

clean the instrument

4. Instrument defect

Return instrument for repair and calibration to manufacturer