



Instruction Manual

DS51

OEM Piston Type Flow Switch for Low-Flow Applications



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

Contents

1 Introduction	2
2 Safety Information	2
3 Functional description	3
4 Electrical connection	3
4 Specifications	See data sheet in the appendix

1 Introduction

Series D51 flow indicators are noted for their reliable function and easy operation. To obtain the greatest benefit from this device, please observe the following cautionary statement:

Persons who are responsible for setting up or operating this device must be sure to read the and understand the operating instructions and the safety information pertaining to it.

2 Safety Information

2.1 General Instructions

To ensure safe operation, the device must only be operated according to the information in the operating instructions. When the device is in use, the regulations and safety standards applicable to the specific application must also be observed. This statement also applies to the use of accessories.

2.2 Proper Usage

Series DS51 flow switches are designed to monitor the flow of liquids.

Any application extending beyond this specific intended use does not constitute proper usage. Series DS51 flow switches must not be employed as the sole means of avoiding hazardous conditions in machinery and installations.

The machinery and installations must be designed in such a manner that faulty conditions and malfunctions will not present hazardous situations for operating personnel.

2.3 Qualified Personnel

Series DS51 flow switches must only be used by qualified, knowledgeable personnel trained in correct use of these devices. Qualified personnel are those persons familiar with setting up and assembling these devices, placing them in service and operating them. In addition, such personnel must also be qualified to perform the work associated with the application for which the device is being used.

3 Functional Description

The model DS51 flow monitors are rugged, heavy duty devices that are to a great extent immune to faults. A piston with integrated permanent magnet is forced by the flow against a stainless steel spring in the direction of flow and actuates a reed switch attached to the enclosure. The reed contact closes upon flow and opens when the flow drops below a preset value.

4 Electrical Connection

The Reed contacts used in the DS51 flow switches are potential free and do not need any supply voltage.

Attention: The Reed contacts used are by nature very sensitive against overloading. Make sure that neither the values for voltage, current or max. load are being exceeded.

DS51

OEM Piston Type Flow Switch for Low-Flow Applications

- for low-viscosity liquids
- low-cost model
- factory-set switchpoint
settable between 0,1 and 2,5 l/min
- small dimensions
- housing made of brass, nickel plated brass
or stainless steel, piston made of POM
- available for any mounting position
- P_{\max} : 25 bar, T_{\max} : 100 °C



Description:

The flow monitors of the DS51 type series are characterised by their robust and trouble-free design.

A piston with integrated permanent magnet is moved by the flowing medium against a stainless steel spring in the direction of flow and thus switches a reed contact attached to the housing. The contact is closed at flow and opens when the flow drops below the set value.

Typical applications:

The flow monitors DS51 are mainly used where flows of low-viscosity media have to be monitored at low cost.

- These are for example
- cooling circuits
 - heating systems
 - welding machines
 - laser cooling systems

Models:

DS51.M...:	housing brass
DS51.MN...:	housing brass, nickel-plated
DS51.E...:	housing stainless steel
DS51.S...:	special housing

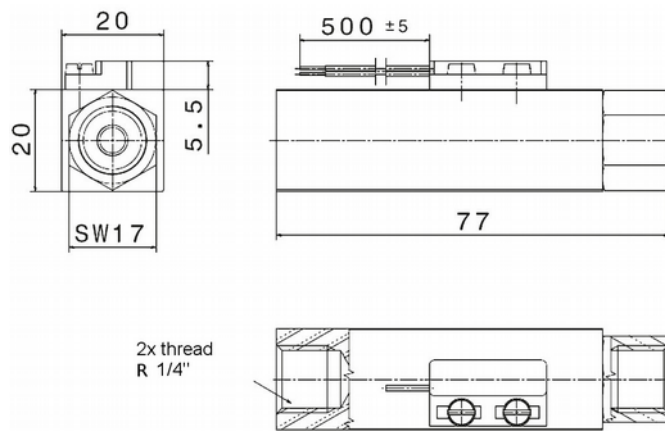
Switching Point:

factory set, between
0,1 to 2,5 l/min water
rising or falling flow rate

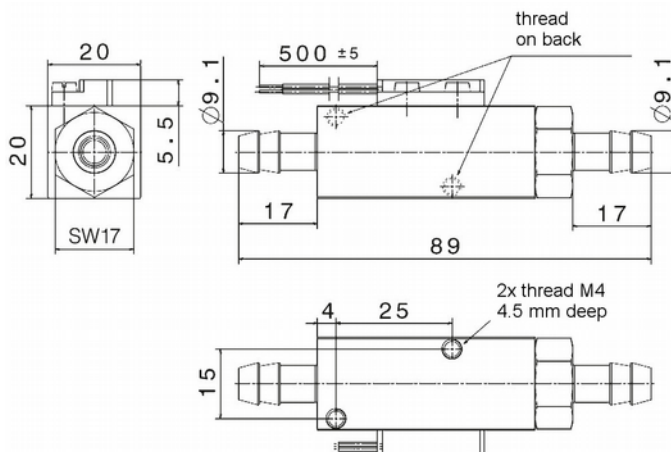
other material versions, process connections and
switching points on request

Dimensions:

DS51...GG08... (1/4" R female thread bilateral):



DS51...SS08... (hose fitting 8 mm bilateral):



Order Code:

Order number: **DS51. M. GG08. F0,5. 0**

OEM Piston-type flow switch

Models:

M = housing brass, piston POM
MN = housing brass, nickel-plated, piston POM
E = housing stainless steel, piston POM
S = special version

Process connection:

GG08 = 1/4" R-thread female bilateral
GS08 = input 1/4" R-thread female, output
hose connection, 8 mm
SG08 = input hose connection, 8 mm,
output 1/4" R-thread female
SS08 = input hose connection, 8 mm,
output hose connection, 8 mm
S = special connection

Switching point (xx = 0,1...2,5 l/min, please specify):

Fxx = for falling flow
Sxx = for rising flow

Options:

0 = without
9 = please specify in plain text

Minimum purchase quantity: 10 units

Special versions with higher switching points,
lower pressure loss or other connections
on request.

Technical Data:

Material:

housing: brass, nickel plated brass or stainless steel
piston: POM
spring: stainless steel 1.4401
magnet: hard ferrite OX300

Pressure loss: 1 bar at 2,5 l/min

Max. pressure: 25 bar

**Max. medium-
temperature:** 100 °C

Switch point: 0,1...2,5 l/min water

**Mounting
position:** any

Contact: reed contact, N/O, casting,
200 VDC / 1 A / 15 W

**Electrical
connection:** 2-wire strand, 50 cm

Accuracy: ± 2 % of switching point