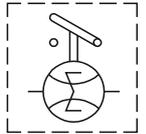




**Flow checking device
KPD**



this device follows the progressive system

Use:

It is used in central lubrication systems

Functioning:

The supplied lubricant actuates a positive piston system. Every piston moves once per cycle. The piston movements can both be indicated (visually) and monitored electrically (1 switching pulse per cycle). The number of cycles is in proportion to the flow volume.

Technical data:

Flow volume KPD-A

at oil: max. 180 cm³/min *
at grease: max. 70 cm³/min *
Flow volume per cycle: 1,2 cm³

Flow volume KPD-B

at oil: max. 120 cm³/min *
at grease: max. 70 cm³/min *
Flow volume per cycle: 0,8 cm³

Operating pressure: max. 150 bar

Delivery medium: Oil and grease up to NLGI-class 2

Temperature range: -20 ... +80 °C

* Maximum flow volume depend on viscosity and penetration, respectively.

Material:

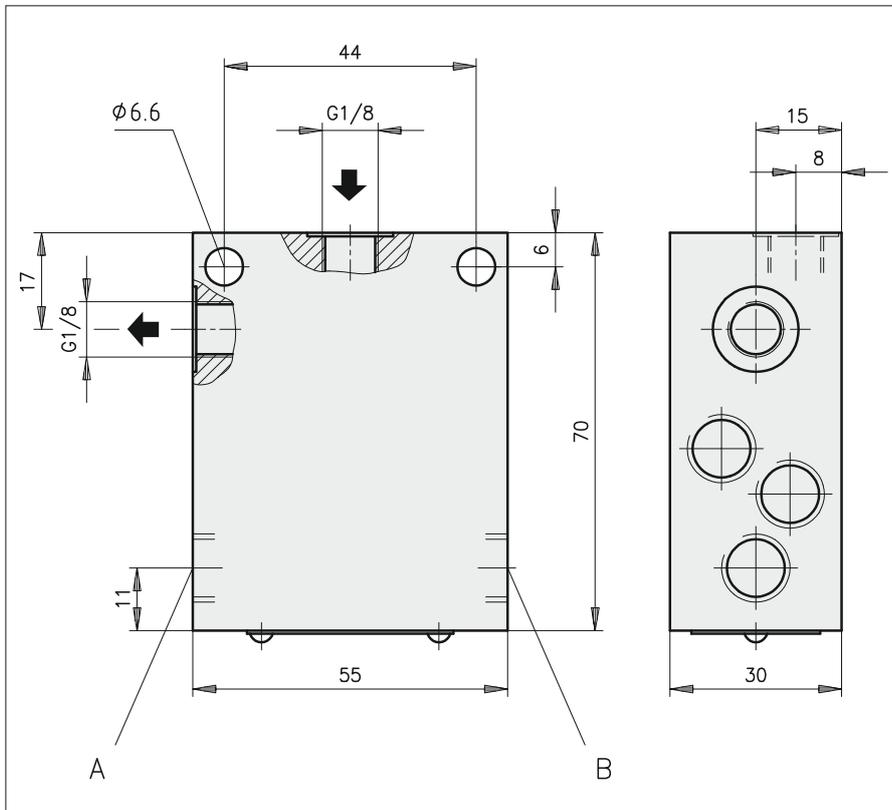
Outer body: Aluminium
Inner parts: Steel, tenifer treated
Gaskets: FPM

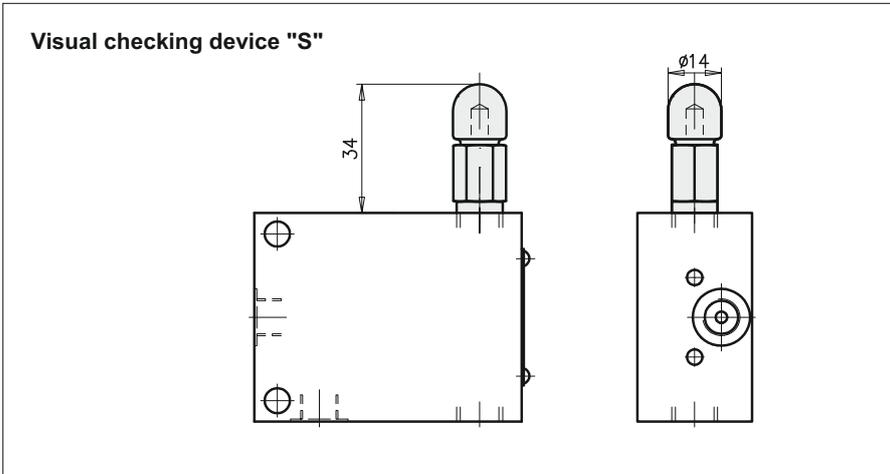
Weight: 0,35 kg

Note to dimensional drawing:

A = Mounting point for electrical function checking device
B = Mounting point for visual indicator

- Subject to modifications -



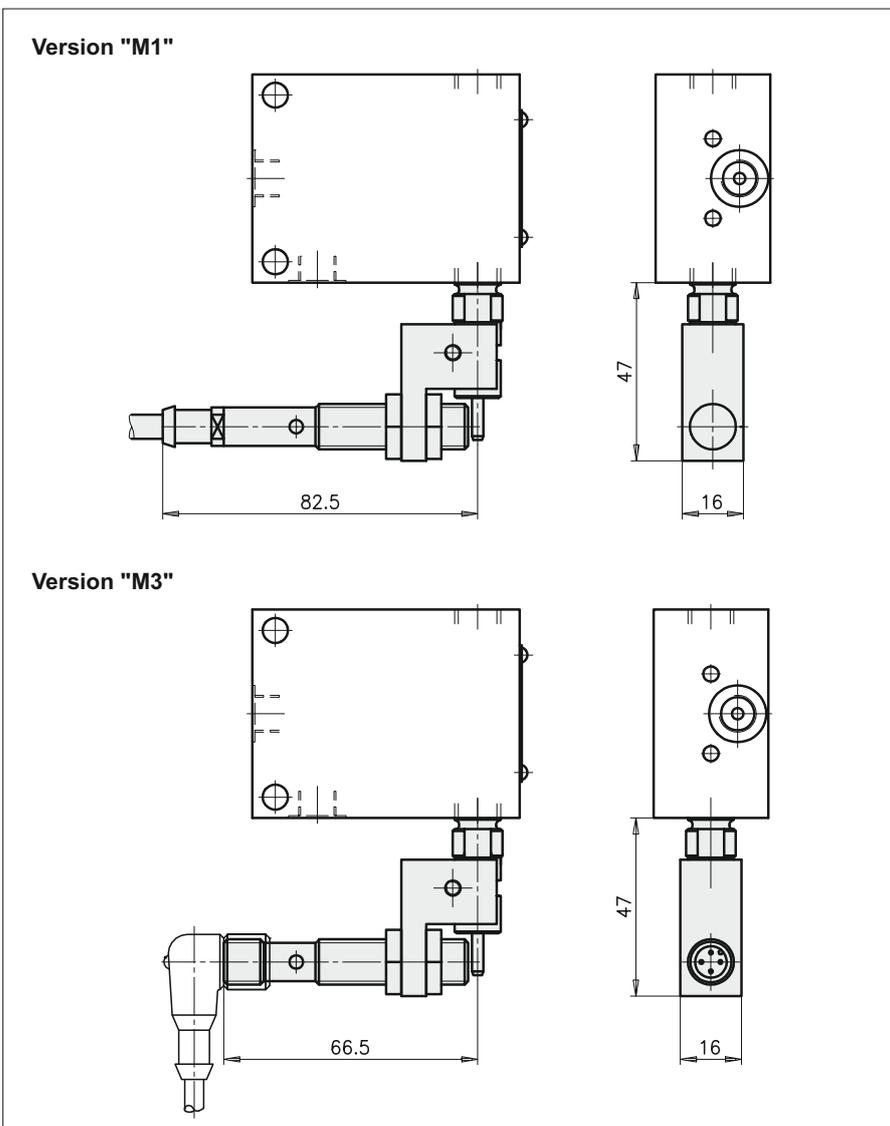


Functional checks:

Visual checking device "S":

In a transparent polyamide enclosure, a red piston-mounted pin serves to indicate the piston's movement.

Enclosure material: Polyamide, transparent
 Ambient temperature: -10 ... +80 °C
 Weight: 0,035 kg
 Mounting point at the distributor: A or B



Electrical checking

by means of proximity switch:

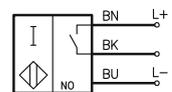
A pin being connected with the piston attenuates an proximity switch once per cycle.

Material
 Holder: Aluminium
 Indicator pin: 1.4521

Version proximity switch "M1" with cable:

Operating voltage: 8 ... 30 VDC
 Residual ripple: $\leq 10\%$
 Output: NO contact, plus switching PNP
 Load current: max. 400 mA
 System of protection: DIN EN 60529 IP67
 Connection: Cable 2 m

Connection diagram:

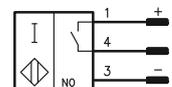


Version proximity switch "M3" with unit plug M12x1, 4-pin:

(for matching cable jack see page 3 below)

Operating voltage: 8 ... 30 VDC
 Residual ripple: $\leq 10\%$
 Output: NO contact, plus switching PNP
 Load current: max. 400 mA
 System of protection: DIN EN 60529 IP65
 Connection: Unit plug

Connection diagram:

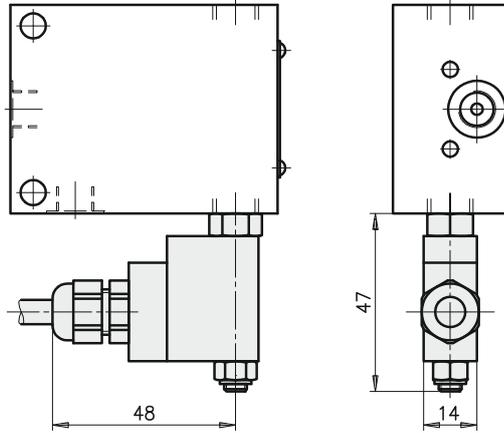


- Subject to modifications -

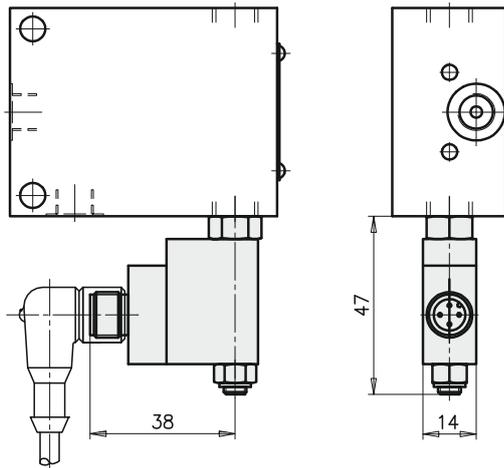


- Subject to modifications -

Version "RK"



Version "RS"



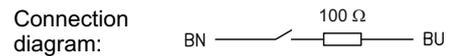
Electrical check by means of reed contact:

A magnet being connected with the piston switches a reed contact once per cycle.

Switching voltage:	10 ... 36 VUC
Switching current:	max. 25 mA
Switching power:	max. 0,9 VA
Ambient temperature:	-5 ... +80 °C

Version "RK" with cable:

Material (enclosure):	PA or 1.4305
System of protection:	DIN EN 60529 IP65
Cable	
Length:	10 m
Cross section:	2x0,75 mm ²
Material:	Oilflex



Version "RS" with unit plug M12x1, 4-pin: (for matching cable jack see below)

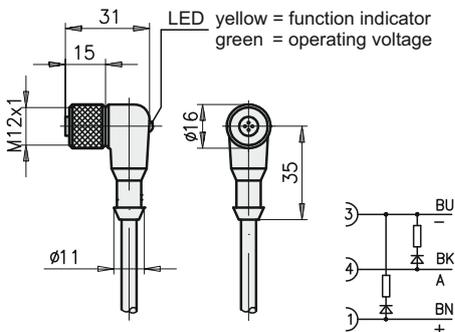
Material (enclosure): PA or 1.4305



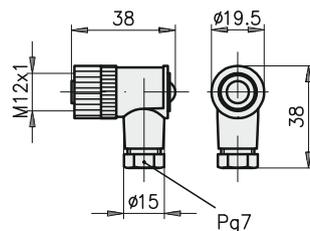
Auxiliaries:

Cable jack for function checking device "RS" and proximity switch "M3" (please order-no. specify)

Cable jack with LED and cable



Cable jack with connecting terminals



Cable jack with LED and cable:

Order-no.:	913.404-19
Operating voltage:	10 ... 30 VDC
Cable	
Cross section:	3x0,34 mm ²
Length:	5 m
System of protection:	DIN EN 60529 IP68

Cable jack with connecting terminals: (without LED)

Order-no.:	913.404-24
Connection type:	Screws
Connector cross section:	max. 0,75 mm ²
Cable diameter:	4 ... 6 mm
System of protection:	DIN EN 60529 IP67

Order designation:



Flow volume per cycle	Flow checking device by means of	
	Visual indicator	electrical monitoring
1,2 cm ³ (A)	without (0)	without (0) Mounting without proximity switch (M0) Proximity switch with cable (M1) Proximity switch with plug (M3) Reed contact with cable (RK) Reed contact with plug without cable jack (see above) (RS)
0,8 cm ³ (B)	with (S)	

Order example:

Flow checking device with a flow volume of 1,2 cm³ per cycle, without visual indicator, with reed contact (with cable).

Order designation:

KPD-A/0/RK

Note:

Version KPD-../0/0 not possible.

With back pressure at the outlet, the flow rate per cycle may be reduced by 20%.

With functional control "M", the flow rate per cycle is reduced due to the design by

KPD-A = 4%

KPD-B = 6%

- Subject to modifications -



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