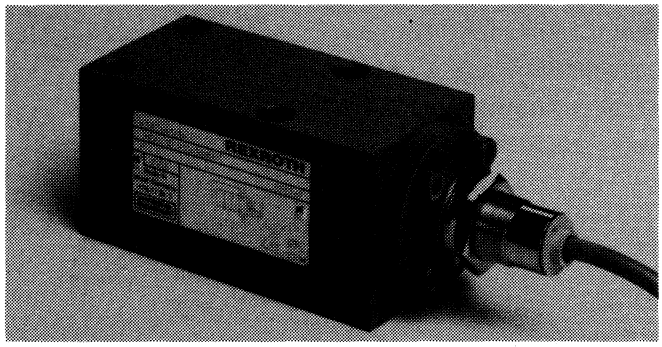
MANNESMANN REXROTH	Flow Indicator Type HDM 10, Series 1X			RE 30 180/10.85
	Size 10	... 16 bar	... 23 L/min	Replaces: 4.84

- flows from 0.1 to 23 L/min
- simple setting ty turning the proximity switch
- fast response
- low hysteresis



Turning the switch 15° gives an alteration in flow of approx. 0.4 L/min. When set, tighten locknut (4).

Description of function, section

Flow indicators type HDM are spool valves.
They consist basically of the housing (1), measuring spool (2) and proximity switch (3).

The duty of these flow indicators is to produce an electrical signal when an oil flow is present. The converse of this is also true, in that, should the oil flow fall below the set value, the electrical signal is broken. The oil flow pushes the spool (2) towards the proximity switch (3). On reaching the required switching distance between the spool (2) and the switch (3), the switch is operated. A further increase in flow up to maximum value is permissible.

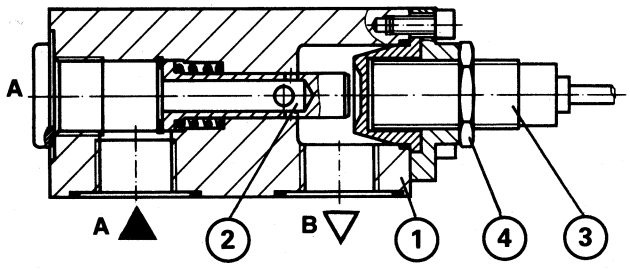
Port "B" should be connected to tank at as near zero pressure as possible, as otherwise switching delays and switching errors may occur.

Setting the switching point

To set the switching point, the locknut (4) is loosened and the proximity switch (3) roteted.

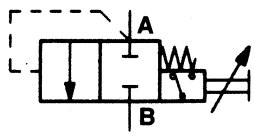
When delivered, the flow indicator is set to 1 L/min.

Screwing the proximity switch (3) further in reduces the flow at which the switch operates.



Typ HDM 10 P 1X/...

Symbol



Ordering Code

HDM 10		1X /		*

for subplate mounting = **P**
for in-line mounting = **G**

Series 1X (10 to 19 ≙ installation and connection dimensions remain unchanged) = **1X**

without proximity switch = **no code**
proximity switch, 24 V DC = **G 24**
proximity switch, 220 V AC = **W 220**

Further details in clear text

M = suitable for mineral oils to DIN 51524 (HL, HLP)
V = suitable for phosphate-ester (HFD-R)

Technical Data (For applications outside these parameters, please consult us!)

Hydraulic

Fluid: Mineral oils to DIN 51524 (HL, HLP)
Phosphate-ester (HFD-R)

Fluid temperature range: – 20 ... + 70 °C

Viscosity range: 2.8 ... 380 mm^2/s

Switching accuracy: dependent on set volume; at 1 L/min approx. ± 0.1 L/min

max. perm. operating pressure (A, B): 16 bar

Cracking pressure: approx. 2.5 bar

Setting range: min. 0.1 L/min
max. 23 L/min

Max. flow: siehe Kennlinie

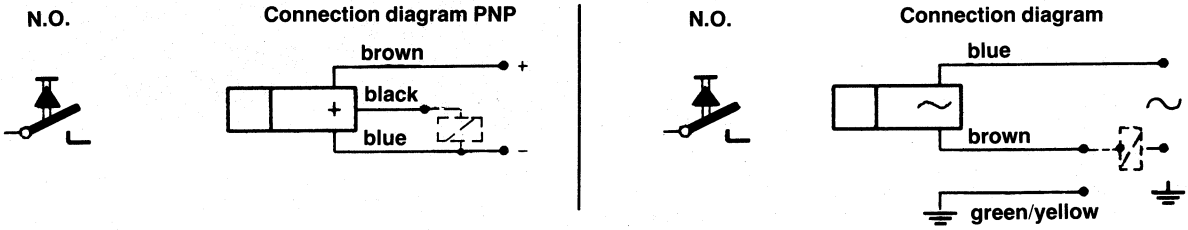
Weight: 1.8 kg

Technical Data, electrical (For applications outside these parameters, please consult us!)

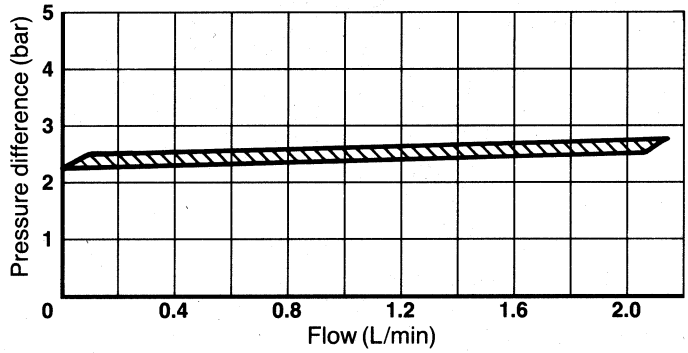
Voltage type "G" (DC)
Switching capacity: 200 mA/24 V
Input voltage: 24 V
Residual ripple of input: max. 10 %
Pilot current: max. 10 mA
Load resistance: min. 120 Ω
Switching frequency: max. 1 kHz
Cable length: 2 m / 3 x 0.5 mm²

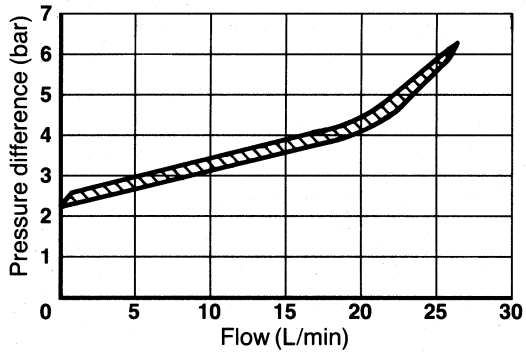
Voltage type "W" (AC)
Input voltage: 220 V
Mains frequency: 40 - 60 Hz
Pilot current: 5 mA
Nominal load at 220 V: max./min. 80/3 VA
Peak load at 220 V: max. 700 VA
Switching frequency: max. 10 Hz
Cable length: 2 m / 3 x 0.75 mm²

Switch type and connection diagram of proximity switch

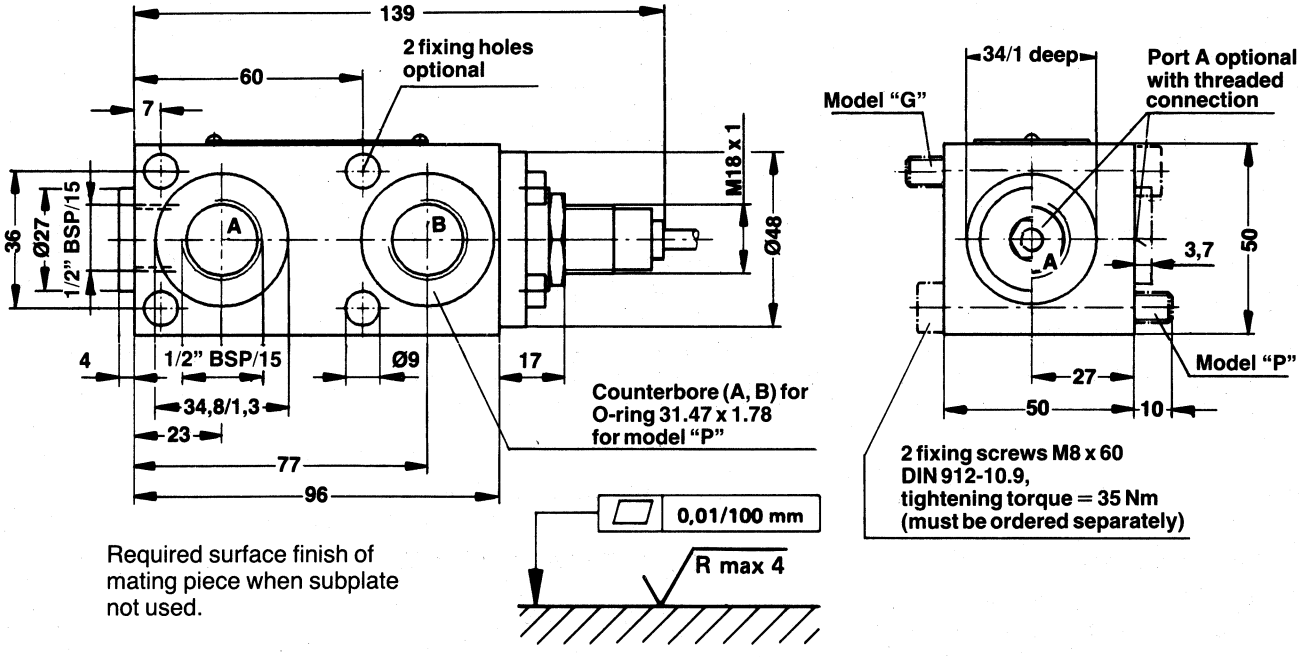


Flow/pressure drop curves (measured at ν = 41 mm²/s and t = 50 °C)





Unit dimensions (dimensions in mm)



Required surface finish of mating piece when subplate not used.

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Hinw