

## Flow Indicator/ Switch NJ / NJV



- Scale for various viscosities or viscosity stabilised from 30 to 200 mm<sup>2</sup>/s
- Also for dark or dirty media
- Robust construction

### Characteristics

Mechanical flow meter with spring-supported piston for fluid media. The measured value is transferred to a display ring via a magnetic coupling. Because of this separation, the display cannot become dirty. Robust construction in brass or stainless steel.

### Technical data

<b>Switch</b>	optional reed switch	
<b>Nominal width</b>	DN 8..25	
<b>Process connection</b>	female thread G 1/4..G 1 (further process connections available on request)	
<b>Display range</b>	2..80 l/min	for details see table "Ranges"
<b>Q<sub>max.</sub></b>	to 80 l/min	
<b>Tolerance</b>	±8 % of the full scale value, minimum 1 l/min	
<b>Pressure resistance</b>	PN 100 bar	
<b>Media temperature</b>	-20..+100 °C	
<b>Ambient temperature</b>	-20..+70 °C	
<b>Media</b>	water (NJ only), oils (aggressive media available on request)	
<b>Wiring</b>	for options, see "Switch contact options"	
<b>Switching voltage</b>		
<b>Switching current</b>		
<b>Switch performance</b>		
<b>Protection class</b>		
<b>Protection class</b>		
<b>Electrical connection</b>		
<b>Materials medium-contact</b>	<i>Brass construction:</i> CW614N nickelled, CW614N, 1.4310, hard ferrite, NBR	<i>Stainless steel construction only with NJ:</i> 1.4571, 1.4310, hard ferrite PTFE-coated, FKM
<b>Non-medium-contact materials</b>	Acrylic HS	

<b>Weight</b>	see table "Dimensions and weights"
<b>Installation location</b>	Standard: Vertical inwards flow from below; other installation positions are possible; the installation position affects the switching point and range.

### Ranges

Details in the table correspond to horizontal inwards flow with increasing flow rate.

#### Standard NJ

G	Display range l/min H <sub>2</sub> O	Q <sub>max.</sub> recommended	Types
G 1/4	2 - 10	10	NJ-008G.010
			NJ-010G.010
G 3/8	4 - 20	20	NJ-010G.020
			NJ-015G.010
			NJ-015G.020
G 1/2	2 - 10	40	NJ-015G.040
			NJ-020G.010
			NJ-020G.020
G 3/4	2 - 10	60	NJ-020G.040
			NJ-025G.010
			NJ-025G.020
G 1	2 - 10	80	NJ-025G.040
			NJ-025G.080
			NJ-025G.010
			NJ-025G.080

Special ranges are available.

#### Multi-scale display ranges

1	20-45	75-120	180-250	mm <sup>2</sup> /s
2 - 10	0.6 - 8	0.2 - 7	0.1 - 4	l/min
4 - 20	2.0 - 19	1.0 - 17	0.5 - 15	
10 - 40	7.0 - 38	6.0 - 37	4.0 - 36	
20 - 80	19.0 - 73	17.0 - 68	13.0 - 63	

#### Viscosity stabilised NJV

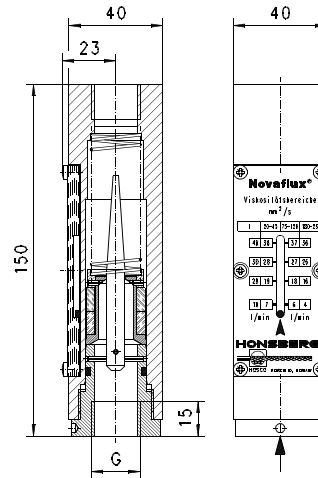
Viscosity compensated devices are measured in the factory as per ISO VG100.

G	Display range l/min oil 30..200 mm <sup>2</sup> /s	Q <sub>max.</sub> recommended	Types
G 1/4	2 - 10	10	NJV-008G.010
			NJV-010G.010
G 3/8	4 - 20	20	NJV-010G.020
			NJV-015G.010
			NJV-015G.020
G 1/2	2 - 10	40	NJV-015G.040
			NJV-020G.010
			NJV-020G.020
G 3/4	2 - 10	60	NJV-020G.040
			NJV-020G.080
			NJV-025G.010
			NJV-025G.020
G 1	2 - 10	80	NJV-025G.040
			NJV-025G.060
			NJV-025G.010
			NJV-025G.080

Special ranges are available.

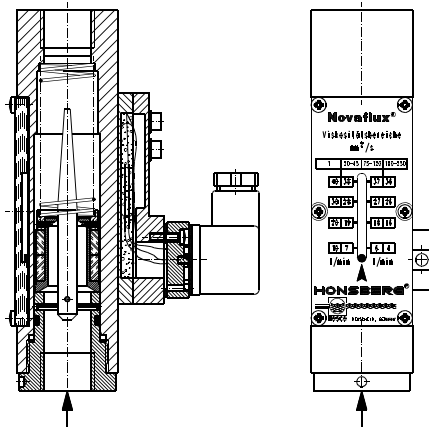
**Dimensions and weights**

G	Types	Weight kg		
		without switching head NJ- / NJV-	With switching head Plastic NJK / NJVK	with metal switching head NJM / NJVM
G 1/4	...-008G....	1.5	1.65	1.95
G 3/8	...-010G....	1.4	1.55	1.85
G 1/2	...-015G....	1.3	1.45	1.75
G 3/4	...-020G....			
G 1	...-025G....	1.2	1.35	1.65



**Switch contact options**

**Plastic switch contacts**



**Switch contact K2**

<b>Wiring</b>	normally open ( n.o.) no. 0.445	
<b>Switching voltage</b>	max. 250 V AC	
<b>Switching current</b>	max. 0.5 A	
<b>Switching capacity</b>	max. 10 VA	
<b>Protection class</b>	2 - safety insulation	
<b>Ingress protection</b>	IP 65	
<b>Electrical connection</b>	DIN 43650-A plug	
<b>Non-medium-contact materials</b>	PA	
<b>Additional Weight</b>	0.2 kg	

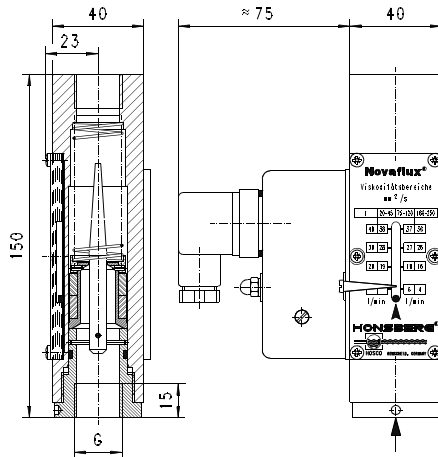
**Switch contact K3**

<b>Wiring</b>	changeover no. 0.347	
<b>Switching voltage</b>	max. 24 V DC	
<b>Protection class</b>	2 - safety insulation	
<b>Ingress protection</b>	IP 65	
<b>Electrical connection</b>	plug Hirschmann G 4	
<b>Non-medium-contact materials</b>	PA	
<b>Additional weight</b>	0.2 kg	

**Switch contact K1**

<b>Wiring</b>	maker no. 0.338 diode green	
<b>Switching voltage</b>	max. 250 V AC	
<b>Switching current</b>	max. 0.5 A	
<b>Switch performance</b>	max. 10 VA	
<b>Protection class</b>	2 - safety insulation	
<b>Ingress protection</b>	IP 65	
<b>Electrical connection</b>	DIN 43650-A plug	
<b>Non-medium-contact materials</b>	PA	
<b>Additional weight</b>	0.2 kg	

Switching contacts made of metal



Switch contact M1

<b>Wiring</b>	no. 0.333  yellow beige blue brown black Attention! Only hood is earthed, not the body of the flow indicator
<b>Switching voltage</b>	max. 250 V AC
<b>Switching current</b>	max. 5 A
<b>Supply voltage</b>	230 V AC, optionally 125 V AC, 24 V DN (10 mA)
<b>Protection class</b>	1 - PE connection
<b>Ingress protection</b>	IP 65
<b>Electrical connection</b>	cable 2.5 m
<b>Non-medium-contact materials</b>	steel, rilsan-coated, PA
<b>Additional weight</b>	0.35 kg

Switch contact M2

<b>Wiring</b>	normally open (n.o.) no. 0.215  blue brown
	Attention! Only hood is earthed, not the body of the flow indicator
<b>Switching voltage</b>	max. 250 V AC
<b>Switching current</b>	max. 0.5 A
<b>Switch performance</b>	max. 10 VA
<b>Protection class</b>	1 - PE connection
<b>Ingress protection</b>	IP 65
<b>Electrical connection</b>	cable 2.5 m
<b>Non-medium-contact materials</b>	steel, rilsan-coated, PA
<b>Additional weight</b>	0.3 kg

## Handling and Operation

### Note

- Include straight calming section of 5 x DN in inlet and outlet.
- If the media are dirty, install a filter (use magnetic filter for ferritic components).
- It must be ensured that the values given for voltage, current, and power are not exceeded.
- When switch on, a load must be connected in series.
- The electrical details apply to ohmic loads. Capacitive, inductive and lamp loads must be operated using a protective circuit.

### Adjustment

If it is necessary to set the switching value, the switching head can be adjusted lengthways. When the switching value is reached, the switch contact is fixed in place by fastening bolts.

## Ordering code

1.	2.	3.	4.	5.	6.
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="text" value="G"/>	<input type="text"/>	<input type="text"/>

○=Option

<b>1. Construction</b>		
NJ	standard	
NJV	viscosity compensated	
<b>2. Switching contact</b>		
-	without switch contact	
K1-	with switch contact K1 - wiring 0.338	
K2-	○ with switch contact K2 - wiring 0.445	
K3-	○ with switch contact K3 - wiring 0.347	
M1-	○ with switch contact M1 - wiring 0.333	
M2-	○ with switch contact M2 - wiring 0.215	
<b>3. Nominal width</b>		
008	DN 8 - G 1/4	
010	DN 10 - G 3/8	
015	DN 15 - G 1/2	
020	DN 20 - G 3/4	
025	DN 25 - G 1	
<b>4. Process connection</b>		
G	female thread	
<b>5. Connection material</b>		
M	brass	
K	○ stainless steel	
<b>6. NJ - display range H<sub>2</sub>O for vertical inwards flow</b>		
010	2 - 10 l/min	●
020	4 - 20 l/min	●
040	10 - 40 l/min	●
080	20 - 80 l/min	●
<b>NJV - display range oil 30..200 mm<sup>2</sup>/s for vertical inwards flow</b>		
010	2 - 10 l/min	●
020	4 - 20 l/min	●
040	10 - 40 l/min	●
060	20 - 60 l/min	●

## Options

- Special quantities/special scaling

## Ordering information

- Specify direction of flow, medium, and display range.
- For viscous media specify viscosity, temperature, and medium (e.g. ISO VG 68) (enquire about display range).
- For gases, state pressure (relative or absolute), temperature and medium (e.g. air) (request display range).