

## Flow Switch UR1- / UR2-...G / A



- Low pressure loss
- Compact design
- Threaded connection

### Characteristics

The devices function via the principle of a spring-supported paddle, and the magnetic triggering of a reed switch.

### Technical data

<b>Switch</b>	reed switch	
<b>Nominal width</b>	DN 10..50	
<b>Process connection</b>	brass / stainless steel - female thread G 3/8..G 1 brass / POM - male thread G 1/2 A (further process connections available on request)	
<b>Switching range</b>	1.3..35 l/min	for details see table "Ranges"
<b>Q<sub>max.</sub></b>	to 150 l/min	
<b>Tolerance</b>	±15 % of full scale value	
<b>Pressure</b>	Brass	PN 25 bar (UR1)
	Stainless steel	
	POM PPS	PN 10 bar (UR2)
<b>Medium temperature</b>	Brass	-20..+110 °C (optionally 150 °C) (UR1)
	Stainless steel	
	POM PPS	-20..+80 °C (UR2)
<b>Ambient temperature</b>	-20..+70 °C	
<b>Media</b>	water (oils, gases and aggressive media available on request)	
<b>Electrical data</b>	see "UR1 brass switching unit" or "UR1 plastic switching unit"	
<b>Materials medium-contact</b>	<i>Brass construction:</i>	<i>Stainless steel construction:</i>
	CW617N nickelled, CW614N nickelled, 1.4310, 1.4301, hard ferrite, NBR	1.4305, 1.4571, 1.4310, 1.4310, hard ferrite PTFE-coated, FKM
	<i>Optional:</i> Body made from POM (PN 10) Body made from PPS (PN 10) Connection G 1/2 A POM (PN 10)	
<b>Non-medium-contact materials</b>	see "UR1 brass switching unit" or "UR1 plastic switching unit"	
<b>Weight</b>	see table "Dimensions and weights"	

<b>Installation location</b>	Standard: horizontal inwards flow; switching unit not recommended underneath; other installation positions are possible; the installation position affects the switching point and range
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### UR1 Brass switching unit

<b>Wiring</b>	normally open (n.o.) or normally closed (n.c.), no. 0.225
<b>Switching voltage</b>	max. 230 V AC
<b>Switching current</b>	max. 1 A
<b>Switching capacity</b>	max. 50 VA
<b>Protection class</b>	1 - PE connection
<b>Ingress protection</b>	IP 65
<b>Electrical connection</b>	cable 1.5 m, optionally for round plug connector M12x1, 4-pole
<b>Materials, non-medium-contact</b>	CW614N, nickelled, CW614N, NBR, PVC, POM

### UR2 Plastic switching unit

<b>Wiring</b>	'Normally open', no. 0.446	Normally closed (n.c.) no. 0.447
<b>Switching voltage</b>	max. 230 V AC	
<b>Switching current</b>	max. 1 A	
<b>Switching capacity</b>	max. 50 VA	
<b>Protection class</b>	2 - safety insulation	
<b>Ingress protection</b>	IP 65	
<b>Electrical connection</b>	cable 1.5 m	
<b>Materials, non-medium-contact</b>	PA, PVC, POM	

### Ranges

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

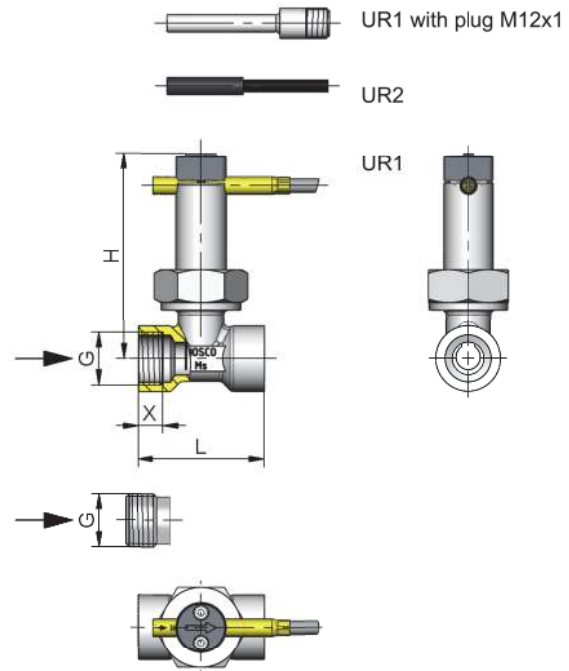
UR2 (Plastic switching unit) is adjusted in the factory; please specify switching value.

G	DN	Switching range l/min H <sub>2</sub> O	Types	Q <sub>max.</sub> recommended
G 3/8	DN 10	2.5 - 3.5	UR.-010G.	10
G 1/2 A	DN 15	1.3 - 2.1	UR.-015A.	20
G 1/2		4.0 - 4.5	UR.-015G.	
G 3/4	DN 20	5.0 - 6.0	UR.-020G.	40
G 1	DN 25	9.5 - 11.5	UR.-025G.	60
G 1 1/4	DN 32	13.5 - 17.5	UR.-032G.	80
G 1 1/2	DN 40	30.0 - 38.0	UR.-040G.	100

Special ranges are available.

### Dimensions and weights

G	Types	H	L	X	Weight kg	
					UR1	UR2
G 3/8	UR.-010GM	82	50	10	0.35	0.35
	UR.-010GK				0.40	0.40
G 1/2 A	UR.-015AM	60	60	12	0.35	0.30
	UR.-015AP				0.15	0.15
G 1/2	UR.-015GM	50	50	10	0.35	0.30
	UR.-015GK				0.40	0.40
G 3/4	UR.-020GM	83	50	12	0.35	0.35
	UR.-020GK				0.40	0.40
G 1	UR.-025GM	87	60	12	0.40	0.40
	UR.-025GK				0.45	0.45
G 1 1/4	UR.-032GM	91	60	12	0.50	0.40
	UR.-032GK				0.50	0.50
G 1 1/2	UR.-040GM	94	60	12	0.55	0.65
	UR.-040GK				0.65	0.65
G 2	UR.-050GM	103	60	12	0.80	0.75
	UR.-050GK				0.95	0.95



### Handling and operation

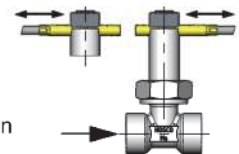
#### Note

- Include straight calming section of 5 x DN in inlet and outlet
- Include a filter if the media are dirty (use magnetic filter for ferritic components).
- It must be ensured that the values given for voltage, current, and power are not exceeded.
- When switched 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

UR1 - loosen bolts, push the switching current tube into the desired position. Retighten the bolts.

Normally closed (n.c.) or normally open (n.o.) as per table "Technical data"



### Ordering code

1. 2. 3. 4. 5.  
UR -  -

○=Option

1. Switching unit				
1	brass			
2	○ plastic (already adjusted, specify switching value and normally closed (n.c.) or normally open (n.o.))			
2. Nominal width				
010	DN 10 - G $\frac{3}{8}$	●	●	
015	DN 15 - G $\frac{1}{2}$	●	●	
	DN 15 - G $\frac{1}{2}$ A		●	●
020	DN 20 - G $\frac{3}{4}$	●	●	
025	DN 25 - G 1	●	●	
032	DN 32 - G $1\frac{1}{4}$	●	●	
040	DN 40 - G $1\frac{1}{2}$	●	●	
050	DN 50 - G 2	●	●	
3. Process connection				
G	female thread	●	●	
A	male thread		●	●
4. Connection material				
M	brass			
K	stainless steel			
P	POM (PN 10)			
5. Switching unit options				
A	for switching unit ATEX A-U1.1 The switching head is ordered in addition.			
S	○ for round plug connector M12x1, 4-pole			

### Options

- Switching ranges for oil or gas
- Special values
- Soldered copper fitting
- Adhesive PVC fitting

### Ordering information

- Specify direction of flow, medium, and switching range, UR1 or switching value UR2.
- For UR2 specify normally closed (n.c.) or normally open (n.o.).
- For oils, state viscosity, temperature and designation (e.g. ISO VG 68) (enquire about range).
- For gases, state pressure (relative or absolute), temperature and medium (e.g. air) (enquire about range).