

Product Information

UR1- / UR2-010..050G / A M / K / P

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

Switch	reed switch	
Nominal width	DN 10..50	
Process connection	brass / stainless steel - female thread G 3/8..G 1 brass / POM - male thread G 1/2 A (further process connections available on request)	
Switching range	1.3..35 l/min	for details see table "Ranges"
Q_{max.}	to 150 l/min	
Tolerance	±15 % of full scale value	
Pressure	Brass	PN 25 bar (UR1)
	Stainless steel	
	POM PPS	PN 10 bar (UR2)
Medium temperature	Brass	-20..+110 °C (optionally 150 °C) (UR1)
	Stainless steel	
	POM PPS	-20..+80 °C (UR2)
Ambient temperature	-20..+70 °C	
Media	water (oils, gases and aggressive media available on request)	
Electrical data	see "UR1 brass switching unit" or "UR1 plastic switching unit"	
Materials medium-contact	<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)	
Non-medium-contact materials	see "UR1 brass switching unit" or "UR1 plastic switching unit"	
Weight	see table "Dimensions and weights"	

Installation location	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

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

UR2 Plastic switching unit

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

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Ranges

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

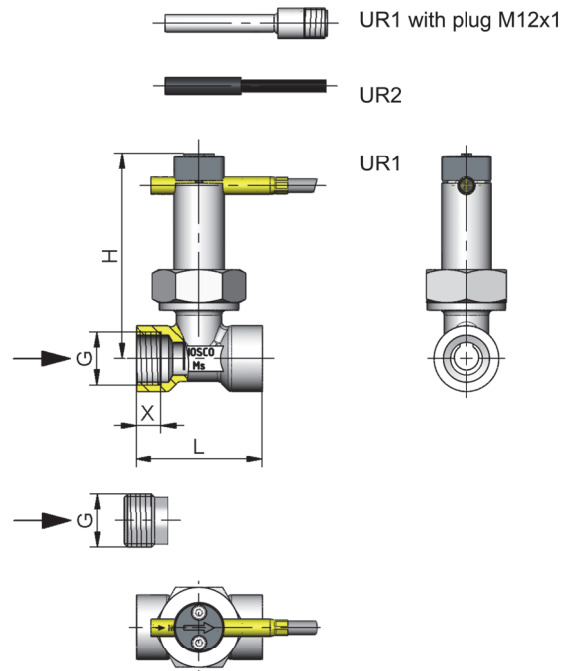
UR2 (Plastic switching unit) is adjusted in the factory; please specify switching value.

G	DN	Switching range l/min H ₂ O	Types	Q _{max.} 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.	
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					
G 1	UR.-025GM	87	50	12	0.40	0.40
	UR.-025GK				0.45	0.45
G 1 1/4	UR.-032GM	91	50	12	0.50	0.50
	UR.-032GK					
G 1 1/2	UR.-040GM	94	50	12	0.55	
	UR.-040GK				0.65	0.65
G 2	UR.-050GM	103	50	12	0.80	0.75
	UR.-050GK				0.95	0.95



Handling and operation

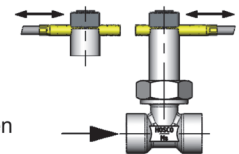
Note

- 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"



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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 ³ / ₈	●	●	
015	DN 15 - G ¹ / ₂	●	●	
	DN 15 - G ¹ / ₂ A		●	●
020	DN 20 - G ³ / ₄	●	●	
025	DN 25 - G 1	●	●	
032	DN 32 - G 1 ¹ / ₄	●	●	
040	DN 40 - G 1 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).