

UR3K- ... G/A, UR1/UR2-...G/A, UR1/UR2-...V, UR3K-...V, UM3K- ... G/A, UM3K- ... V, UI- ... G/A

Лопастные реле и индикаторы потока с герконовым замыкающим или размыкающим контактом

GHM MESSTECHNIK



Технические характеристики

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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	PN 10 bar (UR2)
	PPS	
Medium temperature	Brass	-20..+110 °C
	Stainless steel	(optionally 150 °C) (UR1)
	POM	-20..+80 °C
	PPS	(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,	1.4305,
	CW614N nickelled,	1.4571, 1.4310,
	1.4310, 1.4301, hard ferrite, NBR	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	
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

Product Information

Sensors and Instrumentation

Ranges

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

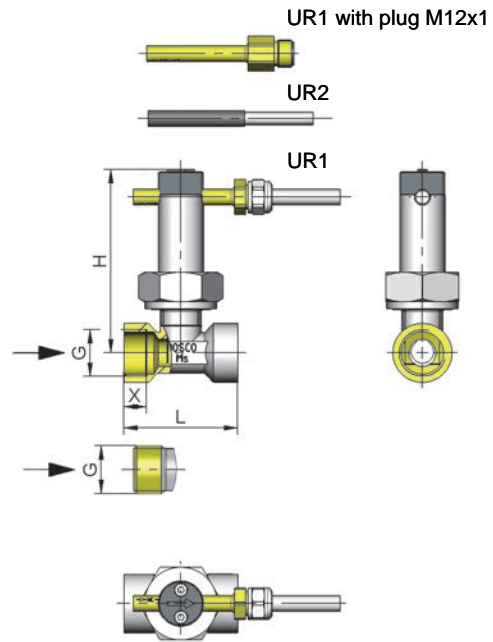
UR2 (Plastic switching unit) is adjusted in the factory; please specify switching value.

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.	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	50	12	0.40	0.40
	UR.-025GK				0.45	0.45
G 1 1/4	UR.-032GM	91	50	12	0.50	0.40
	UR.-032GK				0.50	0.50
G 1 1/2	UR.-040GM	94	50	12	0.55	0.40
	UR.-040GK				0.65	0.65
G 2	UR.-050GM	103	50	12	0.80	0.75
	UR.-050GK				0.95	0.95



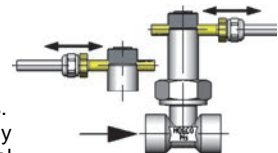
Handling and operation

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"



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).

Flow Switch UR1 / UR2-...V



- Low pressure loss
- Compact design
- Soldered/welded 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 15..80	
Process connection	soldered/welded nozzle (further process connections available on request)	
Switching range	5..174 l/min	for details see table "Ranges"
Q_{max.}	to 600 l/min	
Tolerance	±15 % of full scale value	
Pressure	Brass	PN 25 bar (UR1)
	Stainless steel	
	PVC PPS	PN 10 bar (UR2)
Medium temperature	-20..+110 °C (optionally 150 °C)	
Ambient temperature	-20..+70 °C	
Media	water (oils, gases and aggressive media available on request)	
For electrical data see "UR1 Brass switching unit" or "UR1 Plastic switching unit"	see "UR1 Brass switching unit" or "UR1 Plastic switching unit"	
Materials medium-contact	<i>Brass construction:</i> CW617N nickelled, CW614N, 1.4310, 1.4301, hard ferrite, NBR	<i>Stainless steel construction:</i> 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)	
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 cap.	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 (n.o.) 0.446 Normally closed (n.c.) 0.447

Switching voltage	max. 230 V AC
Switching current	max. 1 A
Switching cap.	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

Product Information

Sensors and Instrumentation

Ranges

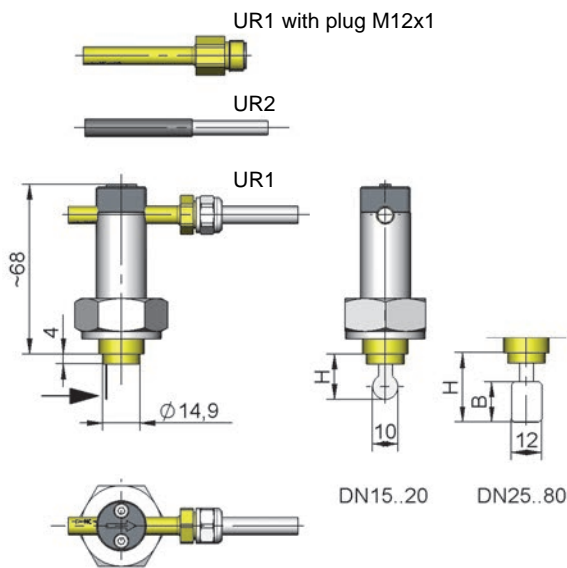
Details in the table correspond to horizontal inwards flow with decreasing flow rate. UR2 (Plastic switching unit) is adjusted in the factory; please specify switching value.

DN	Switching range l/min H ₂ O	Types	Q _{max.} recommended
DN 15	5.0 - 6.5	UR.-015V.	20
DN 20	10.0 - 15.5	UR.-025V.	40
DN 25	11.0 - 13.0		80
DN 32	26.0 - 33.0		100
DN 40	37.0 - 42.5	UR.-050V.	150
DN 50	47.5 - 60.0		200
DN 65	95.0 - 117.0		400
DN 80	147.0 - 179.0		600

Special ranges are available.

Dimensions and weights

DN	Types	H	D	A	B	Weight kg	
						UR1	UR2
DN 15..20	UR.-015V.	18.0	13	-	-	0.25	0.20
DN 25..50	UR.-025V.	27.5	-	12	16		
DN 50..80	UR.-050V.	42.0			19		



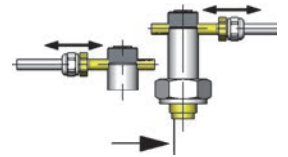
Handling and operation

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 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 - V

○=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	
015	DN 15..25
025	DN 25..40
050	DN 50..80
3. Process connection	
V	soldered/welded nozzle
4. Connection material	
M	brass
K	stainless steel
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 quantity
- 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).

Flow Switch UR3K-...G / A



- Threaded connection
- Reed switch
- Low pressure loss
- Compact design
- Threaded connection
- Plug DIN 43650-A / ISO 4400

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	female thread G 3/8..G 1 (further process connections available on request)	
Switching range	3.5..69 l/min	for details see table "Ranges"
Q_{max.}	to 150 l/min	
Tolerance	±15 % of full scale value	
Pressure resistance	PN 25 bar	
Medium temperature	-20..+110 °C	
Ambient temperature	-20..+70 °C	
Media	water (oils, gases and aggressive media available on request)	
Wiring	normally open (n.o.) No. 0.372	
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	plug DIN 43650-A / ISO 4400, optionally for round plug connector M12x1, 4-pole	
Materials medium-contact	<i>Brass construction:</i> CW617N nickelled, CW614N nickelled, 1.4310, 1.4301, hard ferrite, NBR	<i>Stainless steel construction:</i> 1.4305, 1.4571, 1.4310, 1.4310, Hard ferrite PTFE coated, FKM

Non-medium contact materials	ABS, PA, NBR
Weight	see table "Dimensions and weights"
Installation location	Standard: horizontal inwards flow; switching head not recommended underneath; other installation positions are possible; the installation position affects the switching point and range.

Ranges

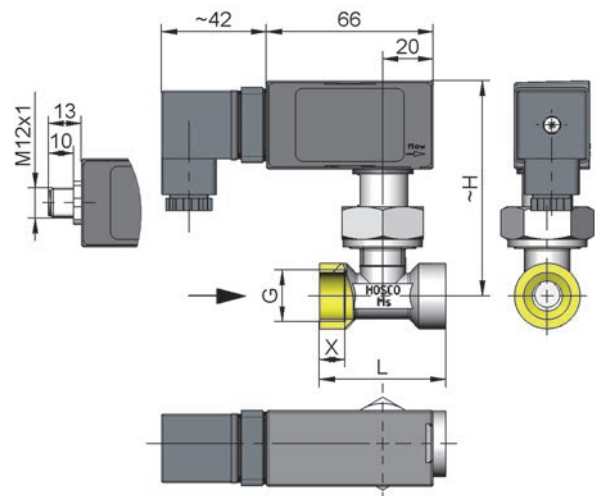
Details in the table correspond to horizontal inwards flow with decreasing flow rate.

G	DN	Switching range l/min H ₂ O	Types	Q _{max.} recommended
G 3/8	DN 10	3.5 - 5.0	UR3K-010G.050	10
G 1/2	DN 15	5.0 - 6.5	UR3K-015G.065	20
G 3/4	DN 20	6.0 - 8.5	UR3K-020G.085	40
G 1	DN 25	12.0 - 15.0	UR3K-025G.150	60
G 1 1/4	DN 32	20.0 - 27.0	UR3K-032G.270	80
G 1 1/2	DN 40	34.0 - 44.0	UR3K-040G.440	100
G 2	DN 50	54.0 - 69.0	UR3K-050G.690	150

Special ranges are available.

Dimensions and weights

G	Types	H	L	X	Weight kg
G 3/8	UR3K-010GM	87	50	10	0.45
	UR3K-010GK				0.50
G 1/2	UR3K-015GM	88	50	10	0.40
	UR3K-015GK				0.45
G 3/4	UR3K-020GM	92	50	12	0.50
	UR3K-020GK				
G 1	UR3K-025GM	96	50	12	0.60
	UR3K-025GK				
G 1 1/4	UR3K-032GM	99	50	12	0.75
	UR3K-032GK				
G 1 1/2	UR3K-040GM	108	50	12	0.85
	UR3K-040GK				
G 2	UR3K-050GM	108	50	12	1.05
	UR3K-050GK				



Product Information

Sensors and Instrumentation

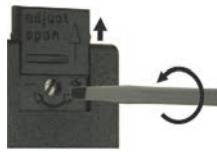
Handling and operation

Note

- Include straight calming section of 5 x DN in inlet and outlet
- When tightening the union nut, the connection piece must be counteracted using an open-ended spanner (SW 19).
- 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 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

To adjust, open the slider. Adjustment is made using the adjustment screw with a lengthways slot; this is located under the valve.



Turn clockwise for a lower switching point; turn anticlockwise for a higher switching point. After adjustment, close the slider again.

Example: The adjustment range 20 to 27 l/min corresponds to 7 l/min Adjustment option in 7 revolutions. Adjustment is therefore 1 l/min for each revolution.

Ordering code

UR3K - 1. 2. 3. 4.
UR3K - **G**

1. Nominal width	
010	DN 10 - G ³ / ₈
015	DN 15 - G ¹ / ₂
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
2. Process connection	
G	female thread
3. Connection material	
M	brass
K	stainless steel
4. Switching range H ₂ O for horizontal inwards flow	
050	3.5 - 5.0 l/min
065	5.0 - 6.5 l/min
085	6.0 - 8.5 l/min
150	12.0 - 15.0 l/min
270	20.0 - 27.0 l/min
440	34.0 - 44.0 l/min
690	54.0 - 69.0 l/min

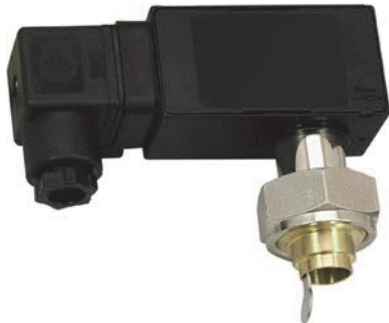
Options

- Connection for round plug-in connector
- Signal lamp red or red/green in the plug DIN 43650-A
- Protective bellows
- Switching ranges for oil or gas
- Special values
- Soldered copper fitting
- Adhesive PVC fitting
- Male thread G ¹/₂ A - brass

Ordering information

- Specify direction of flow, medium, and switching range.
- 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).

Flow Switch UR3K-...V



- Soldered/welded connection
- Reed switch
- Low pressure loss
- Compact design
- Threaded connection
- Plug DIN 43650-A / ISO 4400

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 15..80	
Process connection	soldered/welded nozzle (further process connections available on request)	
Switching range	8.5..248 l/min	for details see table "Ranges"
Q_{max.}	to 600 l/min	
Tolerance	±15 % of full scale value	
Pressure resistance	PN 25 bar	
Medium temperature	-20..+110 °C	
Ambient temperature	-20..+70 °C	
Media	water (oils, gases and aggressive media available on request)	
Wiring	normally open (n.o.) No. 0.372	
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	plug DIN 43650-A / ISO 4400, optionally for round plug connector M12x1, 4-pole	

Materials medium-contact	<i>Brass construction:</i> CW614N, CW614N nickelled, 1.4310, 1.4301, hard ferrite, NBR	<i>Stainless steel construction:</i> 1.4305, 1.4571, 1.4310, NBR, hard ferrite PTFE coated, FKM
Non-medium contact materials	ABS, PA, NBR	
Weight	0.3 kg	
Installation location	Standard: horizontal inwards flow; switching head not recommended underneath; other installation positions are possible; the installation position affects the switching point and range.	

Ranges

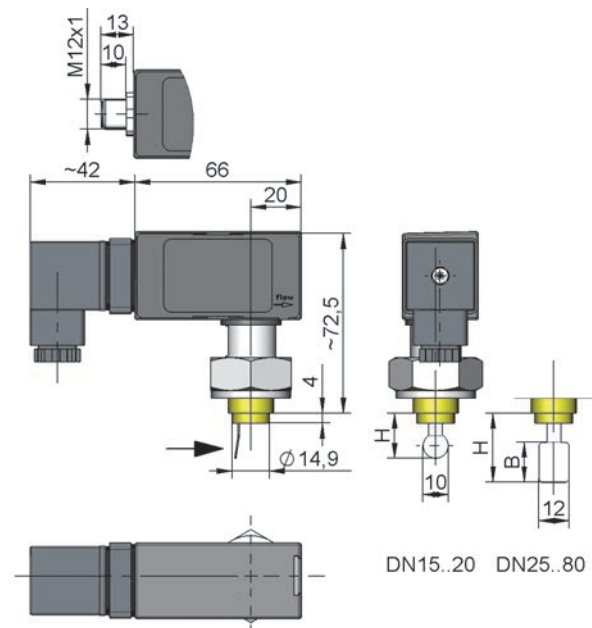
Details in the table correspond to horizontal inwards flow with decreasing flow rate.

DN	Switching range l/min H ₂ O	Types	Q _{max.} recommended
DN 15	8.5 - 11.0	UR3K-015V.	20
DN 20	14.0 - 19.0		40
DN 25	15.0 - 20.0	UR3K-025V.	80
DN 32	39.0 - 52.0		100
DN 40	49.0 - 64.0	UR3K-050V.	150
DN 50	68.0 - 84.0		200
DN 65	127.0 - 163.0		400
DN 80	189.0 - 248.0		600

Special ranges are available.

Dimensions

DN	Types	H	D	B
DN 15..20	UR3K-015V.	18.5	13	-
DN 25..50	UR3K-025V.	27.0	-	12
DN 50..80	UR3K-050V.	40.5	-	16
				19



DN15..20 DN25..80

Flow Switch UM3K-...G / A

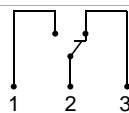
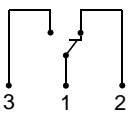


- Threaded connection
- Micro switch
- Low pressure loss
- Compact design
- Threaded connection
- Plug DIN 43650-A / ISO 4400

Characteristics

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

Technical data

Switch/sensor	micro switch	
Nominal width	DN 10..50	
Process connection	female thread G 3/8..G 1 (further process connections available on request)	
Switching range	4..93 l/min	for details see table "Ranges"
Q_{max.}	to 150 l/min	
Tolerance	±15 % of full scale value	
Pressure resistance	PN 25 bar	
Medium temperature	-20..+110 °C	
Ambient temperature	-20..+70 °C	
Media	water (oils, gases and aggressive media available on request)	
Wiring	changeover no. 0.371  optionally changeover no. 0.282  optionally red or red / green diode in the DIN 43650-A plug	
Switching voltage	max. 250 V AC	
Switching current	max. 5 A (round plug connector max. 4 A)	
Protection class	2 - safety insulation	
Ingress protection	IP 65	

Electrical connection	plug DIN 43650-A / ISO 4400, optionally for round plug connector M12x1, 4-pole	
Materials medium-contact	<i>Brass construction:</i> CW617N nickelled, CW614N nickelled, 1.4310, 1.4301, hard ferrite, NBR	<i>Stainless steel construction:</i> 1.4305, 1.4571, 1.4301, 1.4310, hard ferrite PTFE-coated, FKM
Non-medium contact materials	ABS, PA, NBR	
Weight	see table "Dimensions and weights"	
Installation location	Standard: horizontal inwards flow; switching head not recommended underneath; other installation positions are possible; the installation position affects the switching point and range.	

Ranges

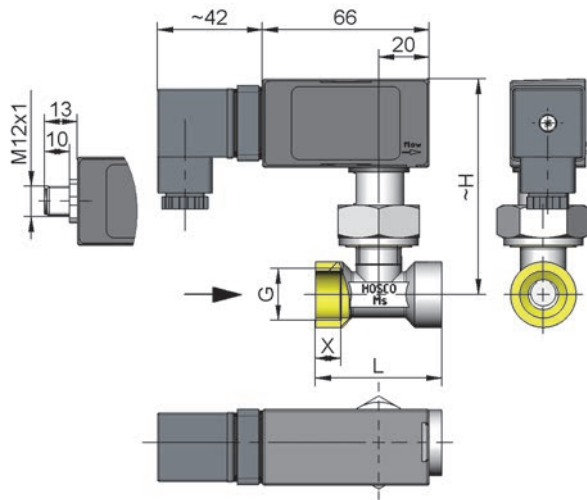
Details in the table correspond to horizontal inwards flow with decreasing flow rate

G	DN	Switching range l/min H ₂ O	Types	Q _{max.} recommended
G 3/8	DN 10	4.0 - 5.5	UM3K-010G.055	10
G 1/2	DN 15	5.5 - 7.0	UM3K-015G.070	20
G 3/4	DN 20	7.5 - 10.0	UM3K-020G.100	40
G 1	DN 25	14.0 - 18.0	UM3K-025G.180	60
G 1 1/4	DN 32	22.0 - 30.0	UM3K-032G.300	80
G 1 1/2	DN 40	37.0 - 50.0	UM3K-040G.500	100
G 2	DN 50	67.0 - 93.0	UM3K-050G.930	150

Special ranges are available.

Dimensions and weights

G	Types	H	L	X	Weight kg
G 3/8	UM3K-010GM	87	50	10	0.45
	UM3K-010GK				0.50
G 1/2	UM3K-015GM	88	50	10	0.40
	UM3K-015GK				0.45
G 3/4	UM3K-020GM	92	92	12	0.50
	UM3K-020GK				
G 1	UM3K-025GM	96	96	12	0.60
	UM3K-025GK				
G 1 1/4	UM3K-032GM	99	99	12	0.75
	UM3K-032GK				
G 1 1/2	UM3K-040GM	108	108	12	0.85
	UM3K-040GK				
G 2	UM3K-050GM	108	108	12	1.05
	UM3K-050GK				



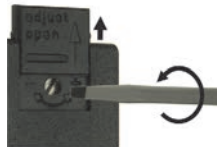
Handling and operation

Note

- Include straight calming section of 5 x DN in inlet and outlet
- When tightening the union nut, the connection piece must be countered using an open-ended spanner (SW 19).
- 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 switched on, a load must be connected in series.
- The electrical details apply to ohmic loads. Capacitive and inductive loads must be operated using a protective circuit.

Adjustment

To adjust, open the slider. Adjustment is made using the adjustment screw with a lengthways slot; this is located under the valve.



Turn clockwise for a lower switching point; turn anticlockwise for a higher switching point. After adjustment, close the slider again.

Example: The adjustment range 20 to 27 l/min corresponds to 7 l/min Adjustment option in 7 revolutions. Adjustment is therefore 1 l/min for each revolution.

Ordering code

UM3K - 1. 2. 3. 4. **G**

1. Nominal width	
010	DN 10 - G ³ / ₈
015	DN 15 - G ¹ / ₂
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
2. Process connection	
G	female thread
3. Connection material	
M	brass
K	stainless steel
4. Switching range H ₂ O for horizontal inwards flow	
055	4.0 - 5.5 l/min
070	5.5 - 7.0 l/min
100	7.5 - 10.0 l/min
180	14.0 - 18.0 l/min
300	22.0 - 30.0 l/min
500	37.0 - 50.0 l/min
930	67.0 - 93.0 l/min

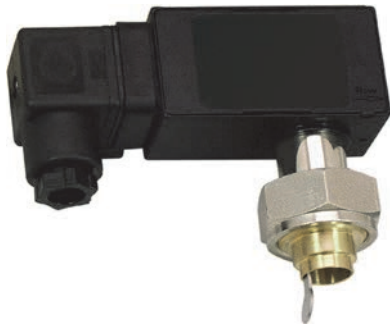
Options

- Connection for round plug-in connector
- Signal lamp red or red/green in the plug DIN 43650-A
- Gold contact 125 V AC / 30 V DC, 100 mA
- Protective bellows
- Switching ranges for oil or gas
- Special values
- Soldered copper fitting
- Adhesive PVC fitting
- Male thread G ¹/₂ A - brass

Ordering information

- Specify direction of flow, medium, and switching range.
- 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).

Flow Switch UM3K-...V

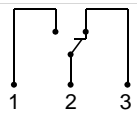
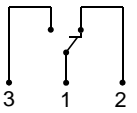


- Soldered/welded connection
- Micro switch
- Low pressure loss
- Compact design
- Threaded connection
- Plug DIN 43650-A / ISO 4400

Characteristics

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

Technical data

Switch	micro switch	
Nominal width	DN 15..80	
Process connection	soldered/welded nozzle (further process connections available on request)	
Switching range	10..268 l/min	for details see table "Ranges"
Q_{max.}	to 600 l/min	
Tolerance	±15 % of full scale value	
Pressure	PN 25 bar	
Medium temperature	-20..+110 °C	
Ambient temperature	-20..+70 °C	
Media	water (oils, gases and aggressive media available on request)	
Wiring	changeover no. 0.371  optionally changeover No. 0.282  optionally red or red / green diode in the DIN 43650-A plug	
Switching voltage	max. 250 V AC (gold contact max. 125 V AC / 30 V DC)	
Switching current	max. 5 A (round plug connector max. 4A) (gold contact max. 100 mA)	
Protection class	2 - safety insulation	
Ingress protection	IP 65	
Electrical connection	plug DIN 43650-A / ISO 4400, optionally for round plug connector M12x1, 4-pole	

Materials medium-contact	<i>Brass construction:</i> CW617N, CW614N nickelled, 1.4310, 1.4301, hard ferrite, NBR	<i>Stainless steel construction:</i> 1.4305, 1.4571, 1.4310, 1.4310, Hard ferrite PTFE coated, FKM
Non-medium-contact materials	ABS, PA, NBR	
Weight	0.3 kg	
Installation location	Standard: horizontal inwards flow; switching head not recommended underneath; other installation positions are possible; the installation position affects the switching point and range.	

Ranges

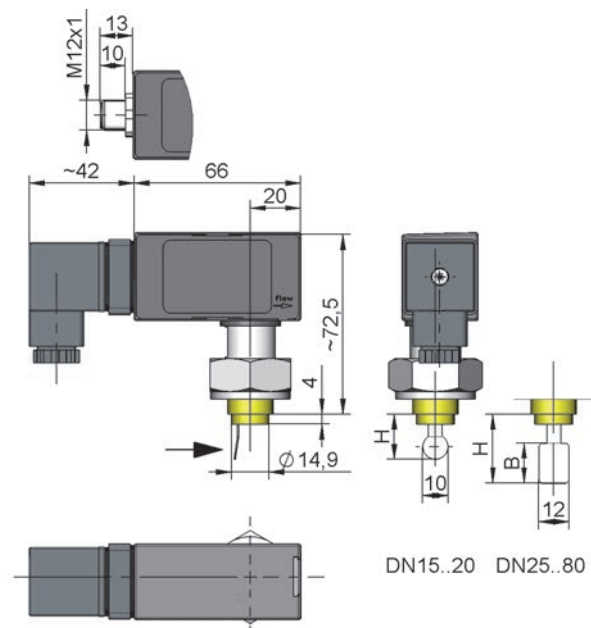
Details in the table correspond to horizontal inwards flow with decreasing flow rate

DN	Switching range l/min H ₂ O	Types	Q _{max.} recommended
DN 15	10.0 - 13.0	UM3K-015V.	20
DN 20	17.5 - 22.0	UM3K-025V.	40
DN 25	18.0 - 22.5		80
DN 32	44.0 - 55.5	UM3K-050V.	100
DN 40	55.5 - 72.0		150
DN 50	75.0 - 90.0		200
DN 65	151.0 - 186.0		400
DN 80	228.0 - 238.0		600

Special ranges are available.

Dimensions

DN	Types	H	D		B
DN 15..20	UM3K-015V.	18.5	13	-	-
DN 25..50	UM3K-025V.	27.0	-	12	16
DN 50..80	UM3K-050V.	40.5			19



Flow Switch UI-...G / A



- For media with ferritic components
- Low pressure loss
- Compact design
- Inductive proximity switch

Characteristics

The devices function via the principle of a spring-supported paddle, and the triggering of an inductive proximity switch.

Technical data

Switch	inductive proximity 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)	
Adjustment range	1.7..55 l/min	for details see table "Ranges"
Q_{max.}	to 150 l/min	
Tolerance	±5 % of full scale value	
Pressure resistance	PN 16 bar	
Medium temperature	-20..+60 °C	
Ambient temperature	-20..+60 °C	
Media	water (oils and gases available on request)	
Wiring	no. 0.319 (Z=Load)	
	<p>PNP</p> <p>optionally</p> <p>NPN</p>	
Supply voltage	10..30 V DC	
Current consumption	< 10 mA	
Current under load	max. 100 mA	

Voltage drop	< 3 V
Ingress protection	IP 67
Electrical connection	Cable 2 m
Materials medium-contact	POM GV, 1.4310, 1.4301, NBR Connection: CW614N nickelled or POM
Non-medium-contact materials	POM, CW614N nickelled, PVC
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.

Ranges

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

G	DN	Switching value l/min H ₂ O Choose between	Types	Q _{max.} recommended
G 3/8	DN 10	2.0 - 4.0	UI-010G040	10
G 1/2 A	DN 15	1.7 - 2.5	UI-015A025	20
G 1/2		4.0 - 6.0	UI-015G060	
G 3/4	DN 20	6.0 - 8.0	UI-020G080	40
G 1	DN 25	10.0 - 17.0	UI-025G170	60
G 1 1/4	DN 32	18.0 - 27.0	UI-032G270	80
G 1 1/2	DN 40	28.0 - 37.0	UI-040G370	100
G 2	DN 50	45.0 - 55.0	UI-050G550	150

Special ranges are available.

