

# PLOVÁKOVÝ HLÍDAČ PRŮTOKU HR2K1

## Flow switch HR2K1



- Optimized for use with water
- Low pressure loss
- Solid construction

#### **Characteristics**

Mechanical flow switch for fluid media, with spring-supported piston and magnetic triggering of a reed switch. Robust construction in brass or stainless steel.

#### **Technical data**

Switch   reed switch     Nominal width   DN 32 / 40 / 50     Process   female thread G 1 <sup>1</sup> / <sub>4</sub> G 2     connection   f(urther process connections available on request)     Switching range   10150 l/min     Pressure loss   ~ 1 bar at Q <sub>max</sub> up to 300 l/min   for details see table "Ranges"     Q <sub>max</sub> .   up to 300 l/min     Tolerance   ±10 % of full scale value     Pressure   PS 200 bar     resistance   -20+120 °C     Media   -20+70 °C     Media   vater     Wiring   transformer No. 0.213     optionally transformer No. 0.282   j     optionally transformer No. 0.282   j     optionally red or red/green signal lamp in the plug DIN 43650-A / ISO 4400     Switching current   max. 1.5 A     Switch   max. 50 VA							
Process connectionfemale thread G 1 <sup>1</sup> /4G 2 (further process connections available on request)Switching range10150 l/minfor details see table "Ranges"Pressure loss~ 1 bar at Qmax up to 300 l/minfor details see table "Ranges"Qmax.up to 300 l/minfor details see table "Ranges"Tolerance±10 % of full scale valuePressure PS 200 barPressure resistancePS 200 barMedia temperature-20+70 °CMedia temperature-20+70 °CMedia to 0.213 $\int_{1 \ 2 \ 3}^{-1}$ Optionally transformer No. 0.282 $\int_{3 \ 1 \ 2}^{-1}$ Optionally red or red/green signal lamp in the plug DIN 43650-A / ISO 4400Switching current 	Switch	reed switch					
connection(further process connections available on request)Switching range10150 l/minfor details see table "Ranges"Pressure loss~ 1 bar at Qmaxfor details see table "Ranges"Qmax.up to 300 l/minTolerance±10 % of full scale valuePressure PS 200 barPressure resistancePS 200 barMedia temperature-20+120 °CAmbient temperature-20+70 °CMediawaterWiringtransformer No. 0.213Viringoptionally transformer No. 0.282optionally red or red/green signal lamp in the plug DIN 43650-A / ISO 4400Switching voltagemax. 1.5 ASwitching currentmax. 50 VA	Nominal width	DN 32 / 40 / 50					
Pressure loss   ~ 1 bar at Q_max.   for details see table "Ranges"     Qmax.   up to 300 l/min   table "Ranges"     Tolerance   ±10 % of full scale value   Pressure     Pressure   PS 200 bar   PS 200 bar     Pressure   PS 200 bar   PS 200 bar     Media   -20+120 °C   Pressure     Media   -20+70 °C   PMedia     Media   water   Viring     Wiring   transformer   No. 0.213     optionally   i   2     optionally   i   j     i   2   3     optionally red or red/green signal lamp in the plug DIN 43650-A / ISO 4400   max. 250 V AC     Switching current   max. 1.5 A   max. 50 VA		female thread G 1 <sup>1</sup> / <sub>4</sub> G 2 (further process connections available on					
Pressure loss~ 1 bar at $Q_{max}$ table "Ranges" $Q_{max.}$ up to 300 l/mintable "Ranges"Tolerance±10 % of full scale valuePressure resistancePS 200 barMedia temperature-20+120 °CAmbient temperature-20+70 °CMediawaterWiringtransformer 	Switching range						
Qmax.   up to 300 l/min     Tolerance   ±10 % of full scale value     Pressure resistance   PS 200 bar     Media temperature   -20+120 °C     Ambient temperature   -20+70 °C     Media   vater     Wiring   transformer No. 0.213     optionally transformer No. 0.282   Image: Company and the plug DIN 43650-A / ISO 4400     Switching voltage   max. 250 V AC     Switching current   max. 50 VA	Pressure loss	- 1 hor of ()					
Pressure resistance   PS 200 bar     Media temperature   -20+120 °C     Ambient temperature   -20+70 °C     Media   water     Wiring   transformer No. 0.213     optionally transformer No. 0.282   Image: Comparison of the plug DIN 43650-A / ISO 4400     Switching voltage   max. 250 V AC     Switching current   max. 50 VA	Q <sub>max.</sub>	up to 300 l/min	table ranges				
resistance     Media     temperature     Ambient     temperature     Media     water     Wiring     transformer     No. 0.213     i     j     wotomally red or red/green signal lamp in the plug DIN 43650-A / ISO 4400     m	Tolerance	±10 % of full scale va	lue				
temperatureAmbient temperature-20+70 °CMediawaterWiringtransformer No. 0.213No. 0.213112optionally transformer No. 0.2823120ptionally red or red/green signal lamp in the plug DIN 43650-A / ISO 4400Switching voltagemax. 250 V ACSwitching currentmax. 1.5 ASwitchmax. 50 VA		PS 200 bar					
Image:		-20+120 °C					
Wiring   transformer No. 0.213     optionally transformer No. 0.282   I     optionally red or red/green signal lamp in the plug DIN 43650-A / ISO 4400     Switching voltage   max. 250 V AC     Switching current   max. 1.5 A     Switch   max. 50 VA		-20+70 °C	-20+70 °C				
No. 0.213   Image: constraint of the plug bit with the plu	Media	water					
transformer No. 0.282   j	Wiring						
the plug DIN 43650-Å / ISO 4400Switching voltagemax. 250 V ACSwitching currentmax. 1.5 ASwitchmax. 50 VA		transformer					
Switching current max. 1.5 A   Switch max. 50 VA		the plug DIN 43650-A / ISO 4400					
Switch max. 50 VA	• •						
	Switch performance	max. 50 VA					
Protection class 2 - Safety insulation	Protection class	2 - Safety insulation					
Ingress protection IP 65	Ingress protection	IP 65					

Electrical connection	plug DIN 43650-A / ISO 44000, optionally round plug connector M12x1, 4-pole				
Materials medium-contact	Brass construction: CW614N nickelled, CW614N, 1.4305, 1.4310, hard ferrite	Stainless steel construction: 1.4571, 1,4310, hard ferrite			
Non-medium- contact materials	CW614N nickelled, PC, PA, NBR, 1.4301, CW508L nickelled,				
Weight	see table "Dimensions and weights"				
Installation location	Standard: horizontal inwards flow from the left; other installation positions are possible; the installation position affects the switching point and range.				

#### Ranges

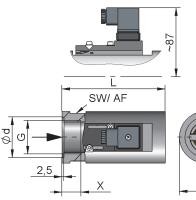
For switching ranges, the details in the table correspond to horizontal inwards flow and decreasing flow rate; for display ranges they correspond to horizontal inwards flow and increasing flow rate.

Switching range I/min H <sub>2</sub> O	Display range I/min H <sub>2</sub> O	<b>Q</b> <sub>max.</sub> recommended
10 - 40	10 - 60	300
15 - 60	15 -100	300
20 - 90	20 -200	300
25 -150	30 -300	300

Special ranges are available.

#### **Dimensions and weights**

DN	G	Types	L	ØD	SW	Ød	X	Weight kg		
32	G 1 <sup>1</sup> / <sub>4</sub>	HR2K1-032GM	130	65	60	51	23	2.6		
40	G 1 <sup>1</sup> / <sub>2</sub>	HR2K1-040GM	170	60	05	05	00	56	24	3.2
50	G 2	HR2K1-050GM	185	80	75	70	26	5.3		







additional weights for options

Display O1 / Z1	0.05 kg
	0.00.09

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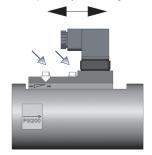
## Handling and Operation

### 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

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



## Ordering code

HR2	1 <b>K1</b>	. 2. 3. 4. 5. G			
1.	Displa	y options			
	-	no mechanical display			
	01-	with measurement display at side O1			
	Z1-	with frontal measurement display Z1			
2.	Nomin	al width			
	032	DN 32 - G 1 <sup>1</sup> / <sub>4</sub>	HR2K101-		
	040	DN 40 - G 1 <sup>1</sup> / <sub>2</sub>			
	050	DN 50 - G 2			
3.	Proces	Process connection			
	G	female thread	<b>Nato</b>		
4.	Conne	ection material	VEL		
	М	brass			
	K	stainless steel	HR2K1Z1-		
5.	Switch inward				
	040	10 - 40 l/min	]		
	060	15 - 60 l/min			
	090	20 - 90 l/min	]		
	150	25 -150 l/min			

## Options

- Special values
- Signal lamp red or red/green
- Connection for round plug connector M12x1
- Rhodium contact 250 V AC, 0.5 A, 30 VA
- Two to four switching heads
- ATEX switching heads A-H4.1 and A-H4.2

#### **Ordering information**

• Specify direction of flow, medium, and switching range.