

Thank you for choosing a NIVELCO instrument!

## 1. APPLICATION

NIVOFLIP MAK-200 type magnetic level switches are used for NIVOFLIP magnetic-lamella bypass level indicator as an optional level switch.

### OPERATING PRINCIPLE:

Mounted on suitable connection flanges on the side of the tank, the liquid level in the bypass tube and the tank is equal. A magnetic float tracks the liquid's level in the stainless-steel bypass tube. A permanent magnet is incorporated in the float, which operates the MAK-200 adjustable bistable reed switch through the stainless-steel side of the tube and provides a non-contact signal to the microswitch.

The position of the switch can be changed to adjust the switching level. The distance between the two MAK-200 units must be at least 60 mm (2.4").

The cable is led through a cable gland. The maximum cross-section of the wire is 0.75 mm<sup>2</sup> (AWG18). The level switch is attached with a hose clamp.

## 2. TECHNICAL DATA

MAK-2□□	
Process temperature	up to +130 °C (+266 °F)
Ambient temperature	-25...+90 °C (-13...+194 °F)
Housing material	Stainless steel (DIN 1.4571, AISI SS316Ti)
Bracket material	Aluminum
Switch	1 bistable reed switch, with NO, NC contacts <sup>(1)</sup>
Switching hysteresis	max. Δ 20 mm (0.79")
Switching data	120 W / VA; 250 V AC/DC; max. 3 A
Electrical connection	M12 cable gland: cable diameter: Ø4...6 mm (Ø0.16...0.24"), max 0.75 mm <sup>2</sup> (AWG18) wire cross section
Ingress protection	IP65
Electrical protection	Class II reinforced insulation
Overvoltage Protection	Class II (degree of pollution: 2)
Weight	~0.15 kg (~0.33 lb)

<sup>(1)</sup> The contact type must be specified in the order code.

### 2.1 ACCESSORIES

- User's manual
- Warranty card
- EU Declaration of Conformity
- Support bracket and hose clamps for 63 mm (2.48") bypass

### 2.2 ORDER CODE

NIVOFLIP MAK-2 □ □ - □ □

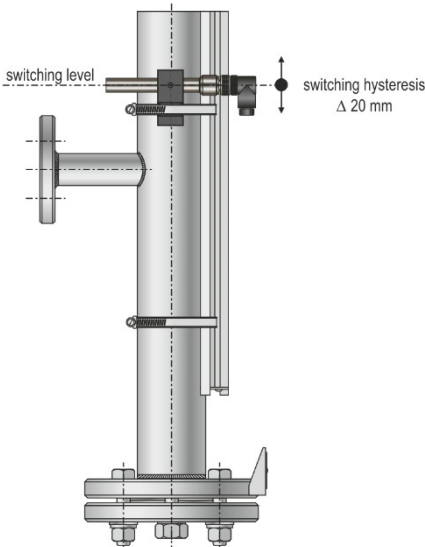
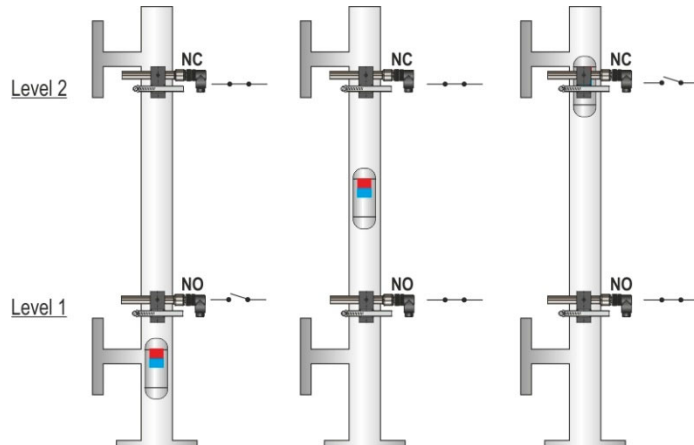
Output	Code	Electrical connection	Code	Type	Code
1× bi-stable reed-switch NO	0	M12x1 connector	0	Normal	0
1× bi-stable reed-switch NC	1	Integrated cable	1		

## 3. MOUNTING

### 3.1 RECOMMENDED MOUNTING

#### Default start-up

Ensure that the switches are set to the correct position for the float position before starting up. If necessary, move the float vertically up and down once by the switches before installing the float. It will set the switching positions to the float's default (bottom).



**NIVOFLIP**  
MAGNETIC LEVEL SWITCH

USER'S MANUAL  
MAK-200

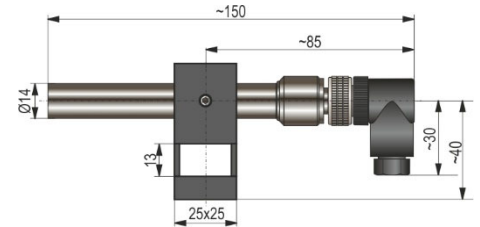


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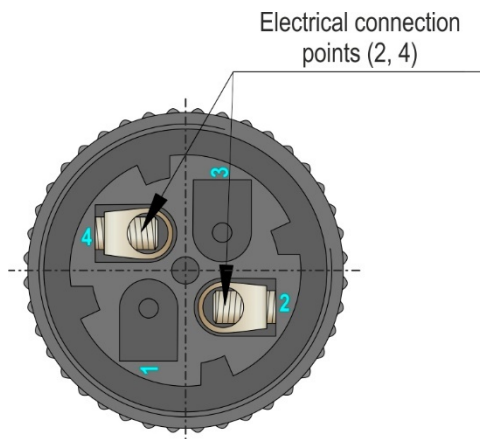


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### 2.3 DIMENSIONS



#### 4. WIRING



#### 5. MAINTENANCE AND REPAIR

The device does not require regular maintenance. The warranty card contains the terms and conditions. Before returning the device for repairs, it must be cleaned thoroughly. The parts in contact with the medium may contain harmful substances; therefore, they must be decontaminated.

Our official form ([Returned Equipment Handling Form](#)) must be filled and enclosed in the parcel. Download it from our website [www.nivelco.com](http://www.nivelco.com). The device must be sent back with a declaration of decontamination. A statement must be provided in the declaration that the decontamination process was successfully completed and that the device is clean from any hazardous substances.

#### 6. STORAGE CONDITIONS

Ambient temperature:  $-25\dots+60\text{ }^{\circ}\text{C}$  ( $-13\dots+140\text{ }^{\circ}\text{F}$ )

Relative humidity: max. 98% non-condensing!

*mak200en22h01*

*January 2022*

*NIVELCO reserves the right to change anything in this manual without notice!*