# Thank you for choosing a NIVELCO instrument. We are sure that you will be satisfied throughout its use!

# 1. General indtroduction, Operation

NIVOFLIP MAK-100-□ type magnetic level switches are suitable for level switching of variuos liquids. MAK-100 type magnetic level switches are used for magnetic-lamella bypass level indicator (named NIVOFLIP) as an optional level switch.

#### **OPERATION PRINCIPLE:**

Mounted on suitable connection flanges on the side of the tank the liquid level in the bypass tube and the tank is equal. In the stainless steel bypass tube a magnetic float tracks the level of the liquid. In the float a permanent magnet is incorporated, which operates the MAK-100 type adjustable positioned magnetic level switch through the stainless steel side of the tube, and provides non-contact signal transfer to the microswitch.

Electronic connection is performed with cable gland, wired with a maximal 2.5 mm² cross sectioned cable. Installation of the level switch is made by 2 pieces of hose clamps. Position of the switch can be changed to adjust the needed switching level. The level switches are available in normal and Ex versions.

#### 2. TECHNICAL DATA

| TYPE                           | MAK-100-0   | MAK-100-6   |  |
|--------------------------------|---|---|--|
| Medium temperature             | max. +130 °C  | See: Temperature data for Ex versions table                                   |  |
| Ambient temperature            | -20°C+80°C  |   |  |
| Material of the switch-housing | Paint coated aluminium cast                                       |   |  |
| Switch                         | 1 microswitch, with NO / NC contacts                              |   |  |
| Switch rating                  | 250V AC12 10 A<br>220V DC13 0,6 A                                 | Only Ex ia certified and approved contact isolator should be used for supply! |  |
| Electrical connections         | cable gland: M20x1.5 terminal for max. 2.5 mm² wire cross section |   |  |
| Mechanical protection          | IP 65 MSZ EN 60529:2001   |   |  |
| Electrical protection          | Class I.  |   |  |
| Ex marking                     | -   | ⟨ि II 1G  |  |
| Mass                           | 1,5 kg  |   |  |

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# **NIVOFLIP**

MAGNETIC LEVEL SWITCH

USER'S MANUAL FOR MAK - 100 -  $\Box$ 





# ООО "РусАвтоматизация"

454010 г. Челябинск, ул. Гагарина 5, оф. 507 гел. 8-800-775-09-57 (звонок бесплатный), тел.: (351)799-54-26, тел./факс (351)211-64-57 info@rusautomation.ru; www.rusautomation.ru русавтоматизация.рф

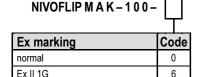
#### 2.1 GENERAL DATA

| Temperature classes     |            |            |            |  |
|-------------------------|------------|------------|------------|--|
| Class                   | T6         | T5         | T4         |  |
| Max. medium temperature | +80°C      | +95°C      | +130°C     |  |
| Ambient temperature     | -20°C+60°C | -20°C+70°C | -20°C+80°C |  |

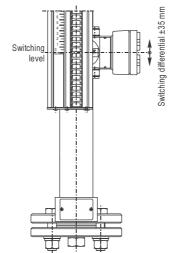
#### 2.2 ACCESSORIES

- Users manual
- Warranty card
- Declaration of Conformity
- 2 pcs. Hose clamps

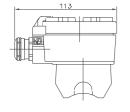
# 2.3 ORDER CODE

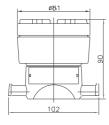


### 2.5 MOUNTING

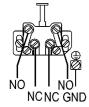


#### 2.4 DIMENSIONS





#### 3. WIRING



## 4. CONDITIONS OF EX APPLICATIONS

The housing of the instrument should be grounded by its grounding screw to the EP system. Only Ex ia certified and approved contact isolator should be used for supply!

# 5. MAINTENANCE

The instrument do not require maintenance, but the instrument (depending on the application) may need to be checked or cleaned regularly.

## 6. STORAGE

Ambient temperature: -25...max:+80°C, see: "Temperature data for Ex versions table"

Relative humidity: max. 98% non-condensing!

mak1100a0600h\_01 2010. december NIVELCO reserves the right to change technical data without notice!