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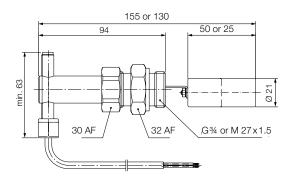


## Description

The KOBOLD level switch model NV is a reasonably-priced compact instrument for monitoring levels. A stainless steel cylindrical float attached to one end of a balance arm moves up and down with the liquid level.

The motion of the float is transferred to a permanent magnet fitted at the other end of the balance arm. The permanent magnet switches a reed contact that is fitted in a sliding tube outside the medium. The tube is set as a N/O contact at the factory, that is, the contact closes when the level rises. The switching function is reversed by moving the tube. The instruments are delivered in standard sleeves for side installation. PTFE tape is used to seal the switch.

#### Dimensions



# Re-adjusting the contact unit

Order Details (Example: NV-1101R1)

To re-adjust the contact unit the locking plate on the top part of the housing must be loosened and the contact unit moved. Blue (white) or red arrows are situated on the contact unit for re-adjustment purposes. The front edge of the locking plate serves as an adjustment mark.

# N/O contact:

Adjust the contact unit near the red arrow. The contact closes as the liquid level rises.

N/C contact:

Adjust the contact unit near the blue (white) arrow. The contact opens as the liquid level rises.

# **Technical Details**

Housing:	NV-11: brass, Ms 58			
riousing.	NV-12: stainless steel, 1.4301			
Connections:	NV-11: brass, Ms 58			
	NV-12: stainless steel, 1.4301			
Float:	stainless steel, 1.4301			
Leaf spring:	stainless steel, 1.4310			
Balance arm:	stainless steel, 1.4310			
Sleeve:	NV-11: brass, Ms 58			
	NV-12: stainless steel, 1.4301			
Contact tube:	Polyamide			
Seal:	NV-11: NBR			
	NV-12: FPM			
Max. temperature:	110°C			
Max. pressure:	16 bar			
Installation position:	horizontal			
Bistable reed contact				
R	N/O contact / N/C contact Standard			
	max. 2 A, max. 230 V <sub>AC/DC</sub> ,			
	max. 40 W, 40 VA			
U	Changeover contact Standard			
U	Changeover contact Standard max, 0.5 A, max. 150 V <sub>AC/DC</sub> ,			
-	Changeover contact Standard max, 0.5 A, max. 150 V <sub>AC/DC</sub> , max. 20 W, 20 VA			
U C	Changeover contact Standard max, 0.5 A, max. 150 V <sub>AC/DC</sub> , max. 20 W, 20 VA N/O contact / N/C contact 🕵			
-	Changeover contact Standard max, 0.5 A, max. 150 V <sub>AC/DC</sub> , max. 20 W, 20 VA			
-	Changeover contact Standard max, 0.5 A, max. 150 V <sub>AC/DC</sub> , max. 20 W, 20 VA N/O contact / N/C contact 2 A, 20 V <sub>AC</sub> , 0.18 A, 230 V <sub>AC</sub> , max. 40 W Changeover contact			
с	Changeover contact Standard max, 0.5 A, max. 150 $V_{AC/DC}$ , max. 20 W, 20 VA N/O contact / N/C contact $O_{AC}$ , max. 40 V Changeover contact $O_{AC}$ , 40 $V_{AC}$ , 0.13 A, 150 $V_{AC}$ , 0.5 A, 40 $V_{AC}$ ,			
C D	Changeover contact Standard max, 0.5 A, max. 150 $V_{AC/DC}$ , max. 20 W, 20 VA N/O contact / N/C contact $\textcircled{O}_{AC}$ , 2 A, 20 $V_{AC}$ , 0.18 A, 230 $V_{AC}$ , max. 40 W Changeover contact $\textcircled{O}_{AC}$ 0.13 A, 150 $V_{AC}$ , 0.5 A, 40 $V_{AC}$ , max. 20 W			
C D Electrical connection:	Changeover contact Standard max, 0.5 A, max. 150 $V_{AC/DC}$ , max. 20 W, 20 VA N/O contact / N/C contact $\textcircled{A}_{AC}$ , 2 A, 20 $V_{AC}$ , 0.18 A, 230 $V_{AC}$ , max. 40 W Changeover contact $\textcircled{A}_{AC}$ 0.13 A, 150 $V_{AC}$ , 0.5 A, 40 $V_{AC}$ , max. 20 W PVC cable			
C D Electrical connection: Contact resistance:	Changeover contact Standard max, 0.5 A, max. 150 $V_{AC/DC}$ , max. 20 W, 20 VA N/O contact / N/C contact $\textcircled{A}_{AC}$ , 2 A, 20 $V_{AC}$ , 0.18 A, 230 $V_{AC}$ , max. 40 W Changeover contact $\textcircled{A}_{AC}$ 0.13 A, 150 $V_{AC}$ , 0.5 A, 40 $V_{AC}$ , max. 20 W PVC cable max. 80 m $\Omega$			
C D Electrical connection: Contact resistance: Closing point:	Changeover contact Standard max, 0.5 A, max. 150 $V_{AC/DC}$ , max. 20 W, 20 VA N/O contact / N/C contact $\textcircled{O}_{AC}$ , max. 40 V Changeover contact $\textcircled{O}_{AC}$ , 0.13 A, 150 V <sub>AC</sub> , 0.5 A, 40 V <sub>AC</sub> , max. 20 W PVC cable max. 80 m $\Omega$ max. 6 mm (above centre line)			
C D Electrical connection: Contact resistance: Closing point: Opening point:	Changeover contact Standard max, 0.5 A, max. 150 $V_{AC/DC}$ , max. 20 W, 20 VA N/O contact / N/C contact $\textcircled{A}_{AC}$ , 2 A, 20 $V_{AC}$ , 0.18 A, 230 $V_{AC}$ , max. 40 W Changeover contact $\textcircled{A}_{AC}$ 0.13 A, 150 $V_{AC}$ , 0.5 A, 40 $V_{AC}$ , max. 20 W PVC cable max. 80 m $\Omega$ max. 6 mm (above centre line) max. 3 mm (below centre line)			
C D Electrical connection: Contact resistance: Closing point: Opening point: Switching hysteresis:	Changeover contact Standard max, 0.5 A, max. 150 $V_{AC/DC}$ , max. 20 W, 20 VA N/O contact / N/C contact $\textcircled{A}_{20}$ 2 A, 20 $V_{AC}$ , 0.18 A, 230 $V_{AC}$ , max. 40 W Changeover contact $\textcircled{A}_{20}$ 0.13 A, 150 $V_{AC}$ , 0.5 A, 40 $V_{AC}$ , max. 20 W PVC cable max. 80 m $\Omega$ max. 6 mm (above centre line) max. 3 mm (below centre line) approx. 8 mm			
C D Electrical connection: Contact resistance: Closing point: Opening point: Switching hysteresis: Ex-range:	Changeover contact Standard max, 0.5 A, max. 150 $V_{AC/DC}$ , max. 20 W, 20 VA N/O contact / N/C contact $\textcircled{A}_{20}$ 2 A, 20 $V_{AC}$ , 0.18 A, 230 $V_{AC}$ , max. 40 W Changeover contact $\textcircled{A}_{20}$ 0.13 A, 150 $V_{AC}$ , 0.5 A, 40 $V_{AC}$ , max. 20 W PVC cable max. 80 m $\Omega$ max. 6 mm (above centre line) max. 3 mm (below centre line) approx. 8 mm ATEX-zone 1 as »simple apparatus«			
C D Electrical connection: Contact resistance: Closing point: Opening point: Switching hysteresis:	Changeover contact Standard max, 0.5 A, max. 150 $V_{AC/DC}$ , max. 20 W, 20 VA N/O contact / N/C contact $\textcircled{A}_{AC}$ , 2 A, 20 $V_{AC}$ , 0.18 A, 230 $V_{AC}$ , max. 40 W Changeover contact $\textcircled{A}_{AC}$ 0.13 A, 150 $V_{AC}$ , 0.5 A, 40 $V_{AC}$ , max. 20 W PVC cable max. 80 m $\Omega$ max. 6 mm (above centre line) max. 3 mm (below centre line) approx. 8 mm ATEX-zone 1 as »simple apparatus« > 0.8 kg/dm <sup>3</sup> 25 mm float			
C D Electrical connection: Contact resistance: Closing point: Opening point: Switching hysteresis: Ex-range:	Changeover contact Standard max, 0.5 A, max. 150 $V_{AC/DC}$ , max. 20 W, 20 VA N/O contact / N/C contact $\textcircled{A}_{20}$ 2 A, 20 $V_{AC}$ , 0.18 A, 230 $V_{AC}$ , max. 40 W Changeover contact $\textcircled{A}_{20}$ 0.13 A, 150 $V_{AC}$ , 0.5 A, 40 $V_{AC}$ , max. 20 W PVC cable max. 80 m $\Omega$ max. 6 mm (above centre line) max. 3 mm (below centre line) approx. 8 mm ATEX-zone 1 as »simple apparatus«			

# Applications

- Heating boilers
- Car washes
- Cleaning machines

Model	Material	Connection/length of float	Contact type	Cable type/length
NV-	11 = brass 12 = stainless steel	01 = G¾; 25 mm 02 = M27x1.5; 25 mm 03 = G¾; 50 mm 04 = M27x1.5; 50 mm	$\mathbf{R} = N/O$ contact (Standard CE) $\mathbf{C} = N/O$ contact (cCSAus) $\mathbf{U} =$ Changeover contact (Standard CE) $\mathbf{D} =$ Changeover contact (cCSAus)	$\begin{array}{l} \mbox{PVC cable} \\ \mbox{1} = 1.5 \mbox{ m (Standard)} \\ \mbox{2} = 2.0 \mbox{ m}^1 \\ \mbox{4} = 3.0 \mbox{ m}^1 \\ \mbox{6} = 4.0 \mbox{ m}^1 \\ \mbox{8} = 5.0 \mbox{ m}^1 \\ \mbox{9} = PVC \mbox{ cable, special length}^2 \\ \mbox{9} = PVC \mbox{ cable, special length}^2 \\ \mbox{8} = Siliconecable}^{2(3)} \\ \mbox{6} = yellow \mbox{PUR cable}^{2(3)} \end{array}$

<sup>1)</sup> only for N/O contact "R" and "C" <sup>2)</sup> length as described <sup>3)</sup> only for N/O contact "R"

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# No responsibility taken for errors; subject to change without prior notice.