

Optical display

NIVOFLIP

BYPASS LIQUID LEVEL INDICATORS



LEVEL INDICATORS



OUR PROFESSION IS YOUR LEVEL

FEATURES

- Clearly visible optical display
- Measuring range: 500-3500 mm
- ±10 mm accuracy
- Max. 40 bar process pressure
- Optional level switches
- Optional magnetostrictive level transmitter
- PED approval

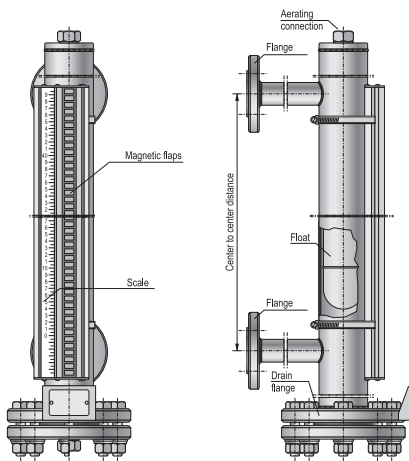
APPLICATIONS

- Oil and gas industries
- Chemical industry
- Power industry
- Boilers
- Pressurized vessels

GENERAL

The NIVOFLIP is a bypass level indicator for pressurized vessels up to 3.5 m height containing liquids. The welded bypass chamber that is the body of the indicator and the tank form one pressurized system. Mounted on suitable connection flanges located on the side of the tank the liquid level in the bypass tube and the tank is equal. A float in the bypass tube incorporating a polarized magnet tracks the level of the liquid. Bi-coloured magnetic flaps mounted on the tube composing a bar are serving as visual indicators by changing their colour as the float passes. The bottom section of the indicating bar represents the true level. The lower 100 mm of the bottom section of the indicating bar has different colouring providing for an optical error signal in case the liquid level drops below the lower connection point of the instrument. NIVOFLIP can be equipped with optional limit switches or with NIVELCO's NIVOTRACK M□L-500 high precision magnetostrictive level transmitter if level transmission is needed. All optional units are operated via magnetic coupling, there is no direct contact with the measured medium.

OUTLINE



ORDER CODES

NIVOFLIP bypass liquid level indicator

NIVOFLIP ML - - - -

Process conn.	Code	Code	Center to center	Code
DN15	A	0	0 m	0 dm
DN20	B	1	1 m	1 dm
DN25	C	2	2 m	2 dm
DN40	D	3	3 m	3 dm
DN50	E		4 dm	4
ANSI 1/2"	F	Type	Code	5 dm
ANSI 3/4"	G	Standard	1	6 dm
ANSI 1"	H	Viscous	2	7 dm
ANSI 1 1/2"	J			8 dm
ANSI 2"	K			9 dm

TECHNICAL DATA

BYPASS LIQUID LEVEL INDICATOR		
Type	Standard	Viscous
Optical display	Bi-coloured magnetic flaps	
Display	scale	cm
	accuracy	±10 mm
	resolution	5 mm
	error indication	lower 100 mm, inverse polarized flaps
Tube diameter	Ø60.3 x 2.9 mm	Ø73.3 x 3.0 mm
Flange distance center to center (measuring range)	500-3500 mm (as per order codes)	
Process connection	DIN, ANSI flanges (as per order codes)	
Aerating connection	M20x1.5	
Process pressure	max. 4 MPa (40 bar)	
Test pressure	6 MPa (60 bar)	
Material of wetted parts	Stainless steel 1.4571/1.4404/Ti	
Medium temperature	-40 ... +130°C	
Ambient temperature	-40 ... +60°C	
Medium density*	with stainless steel float: 0.8-1.2 kg/dm ³ with titan float: 0.5-0.9 kg/dm ³	
Level switches	optional (max 4pcs), freely adjustable MAK-100 level switch	
Level transmitter	optional NIVOTRACK M□L-500 magnetostrictive level transmitter	

* In case of using MAK-100 level switch the minimal medium density decreases with 0.1 kg/dm³ by each level switch

LEVEL SWITCH	MAK-100-0	MAK-100-6
Medium temperature	max 130°C	See: Temperature classes table
Ambient temperature	-20°C ... +80°C	
Material of the switch-housing	Paint coated aluminium cast	
Switch	1 microswitch, with NO, NC contacts	
Switching data	250 V AC12 10A, 220 V DC13 0.6A	only Ex ia certified and approved contact isolator should be used for supply
Electrical connection	cable gland: M20x1.5 terminal for max. 2.5 mm ² wire cross section	
Ingress protection	IP 65	
Electrical protection	Class I.	
Ex marking	-	Ex II 1G
Mass	1.5 kg	

TEMPERATURE CLASSES			
CLASS	T6	T5	T4
Max. medium temp.	+80°C	+95°C	+130°C
Max. ambient temp.	-20...+60°C	-20...+70°C	-20...+80°C

ACCESSORIES

NIVOFLIP magnetic level switch

MAK-100- -

Output / Ex	Code
Normal	0
Ex ia	6

Float	Code
Stainless steel	0
Titan	1

Level transmitter

NIVOTRACK M□L-500
series magnetostrictive level transmitters in accordance to the measurement range