



# NIVOMAG

MAGNETIC LEVEL SWITCHES



OUR PROFESSION IS YOUR LEVEL

## GENERAL

NIVOMAG MK-200 series magnetic float level switches are used for point level detection of liquids in all types of vessels. Operation without external power, side or top mounting, wide temperature and pressure ranges, various process connections, stainless steel wetted parts and Ex versions make it a universally applicable level switch.

## MODEL SELECTION

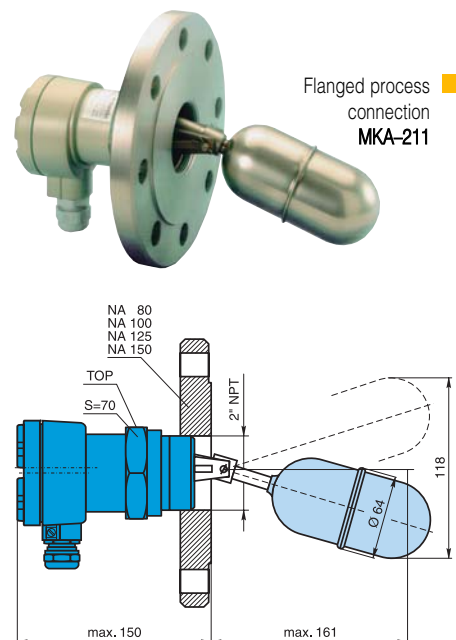
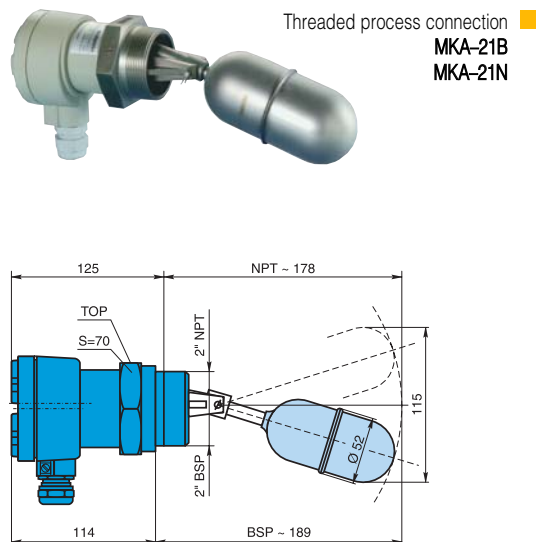
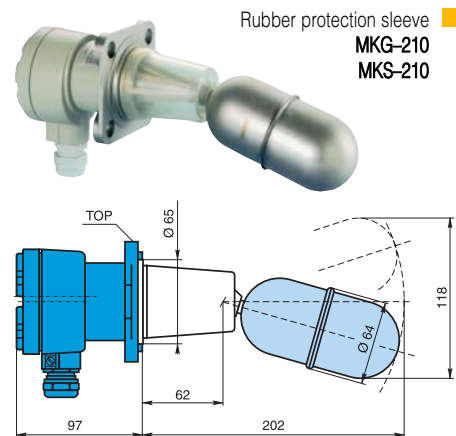
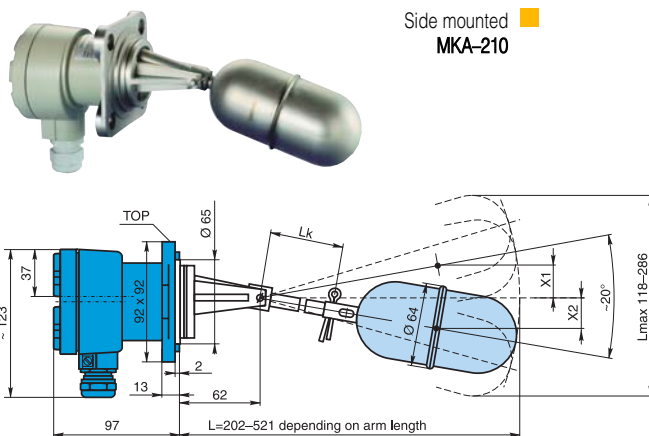
To assist in the selection of the correct model the following tables and diagrams are provided. When selecting a model due consideration must be given to fixed or adjustable hysteresis, liquid density, mounting position and process connection.

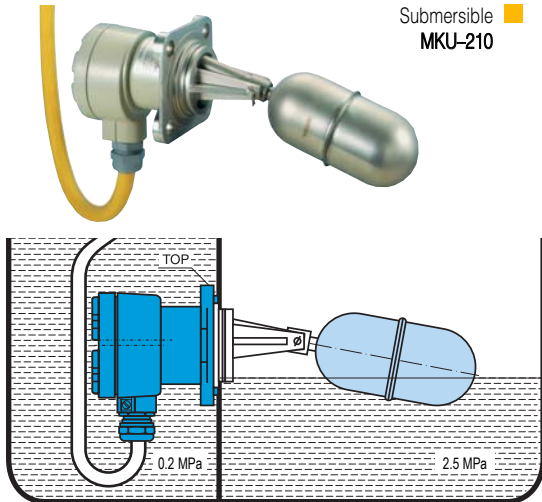
ARM LENGTH (mm)	MINIMUM LIQUID DENSITY (kg/dm <sup>3</sup> )			
	0 – 100	200	300	1000 – 3000
FLOAT Ø (mm)				
52	0.7	0.8	0.85	–
64	0.7	0.8	0.8	–
120	–	–	–	0.7

TYPE	MK- 21	MK- 22	MK- 23
Fixed differential	◆		
Adjustable differential		◆	◆
Straight arm	◆	◆	◆
L or Z arm	◆		
Side mounted	◆	◆	
Top mounted	◆		◆
Submersible	◆		
Rubber protection sleeve	◆		
Flanged process connection		◆	◆
Threaded process connection	◆		
Ex version	◆	◆	◆
Tester	◆	◆	

## MODELS

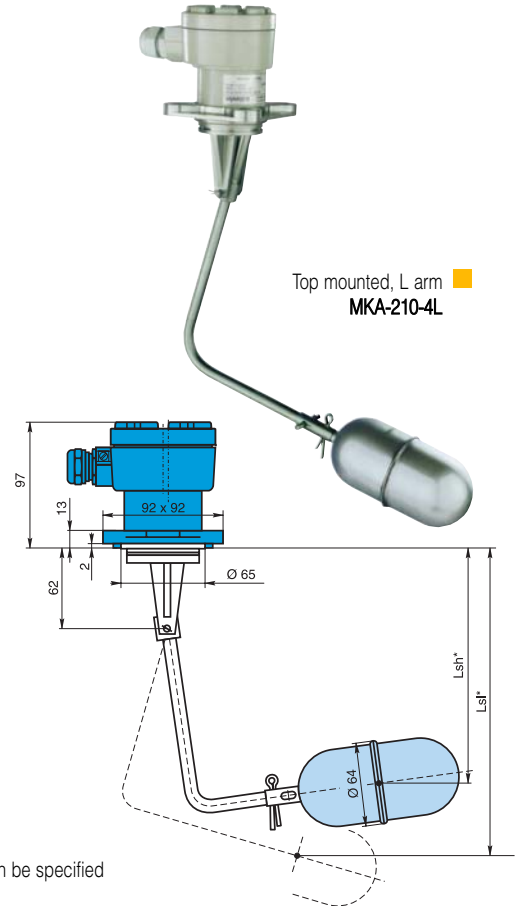
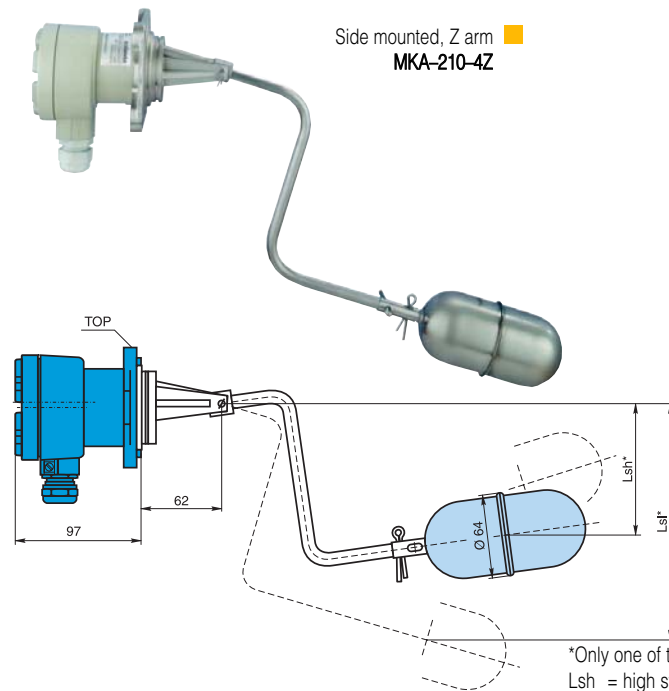
### FIXED SWITCH DIFFERENTIAL





SWITCHING DATA				
TYPE: MK-21	-0	-1	-2	-3
FEATURES	-9	-5	-6	-7
Lk= arm length	0	100	200	300
L= protrusion length	202	321	421	521
Lm= max. shifting	118	180	234	286
X1= high switch point	7	27	45	81
X2= low switch point	16	30	47	43

Note: values for water at 20°C



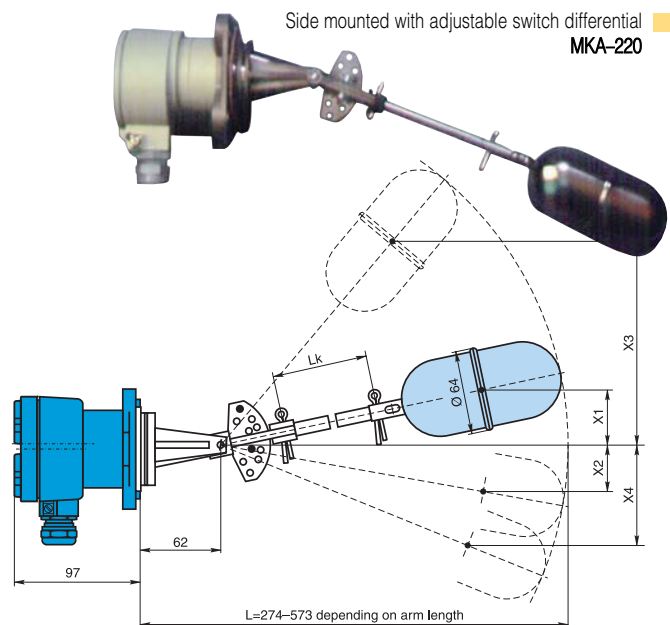
\*Only one of the values can be specified  
Lsh = high switch point  
Lsl = low switch point

## ADJUSTABLE SWITCH DIFFERENTIAL

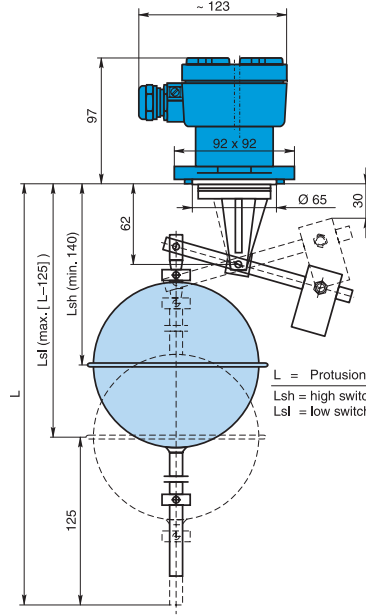
Switch differential between high and low switch point can be changed by changing positions of the two pins.

SWITCHING DATA				
TYPE: MK-22	-0	-1	-2	-3
FEATURES	-9	-5	-6	-7
Lk= arm length	0	100	200	300
L= protrusion length	254	373	473	573
X1= min. high switch point	25	52	73	94
X2= min. low switch point	25	48	61	68
X3= max. high switch point	110	190	250	310
X4= max. low switch point	90	170	250	305

Note: values for water at 20°C



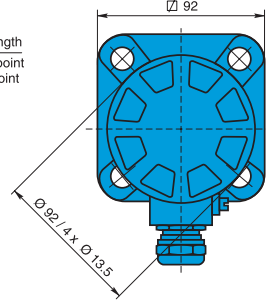
L=274-573 depending on arm length



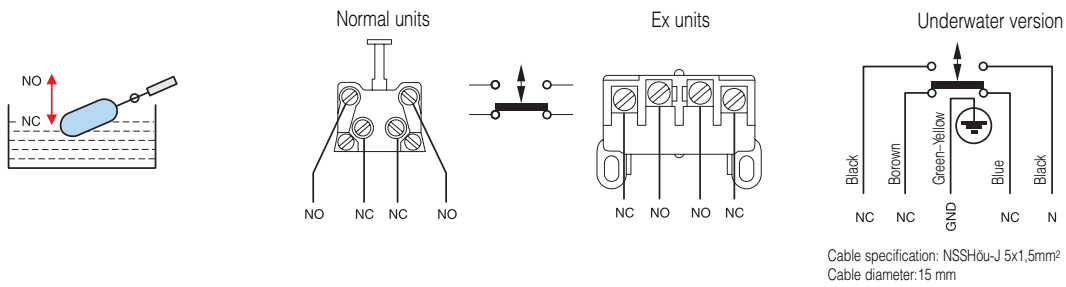
Top mounted with adjustable switch differential **MKA-230**

Switch differential can be adjusted by moving the rings on the rod. Weight of different rod lengths is compensated for by adjusting the counter weight.

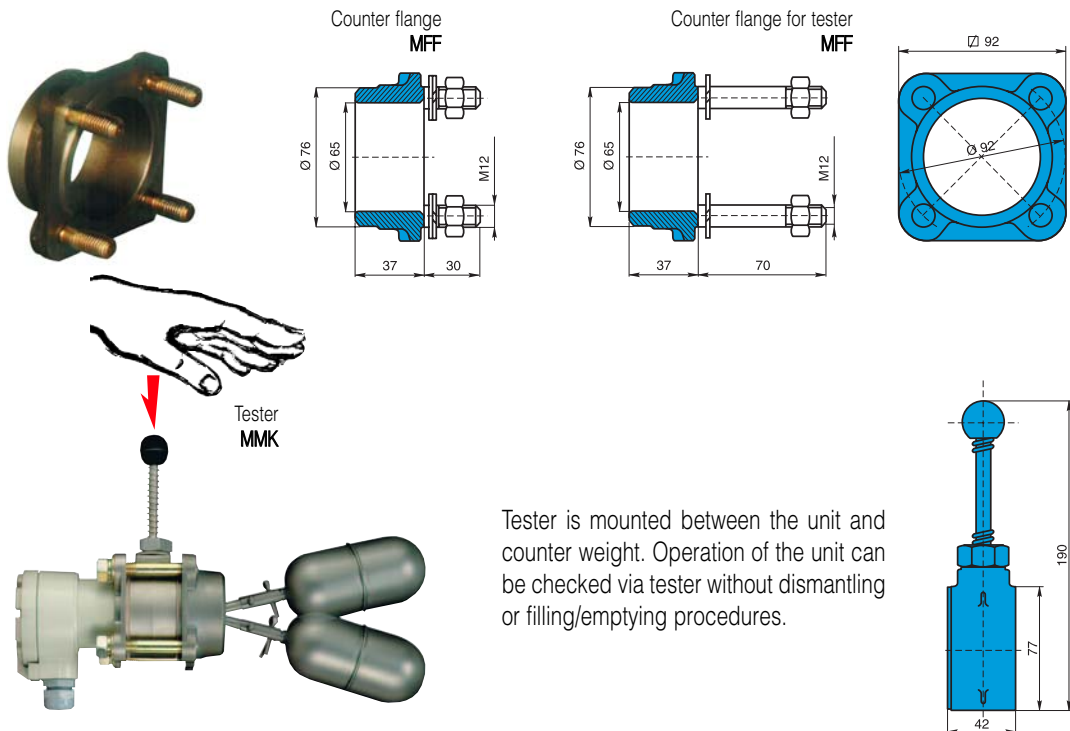
Connection flange



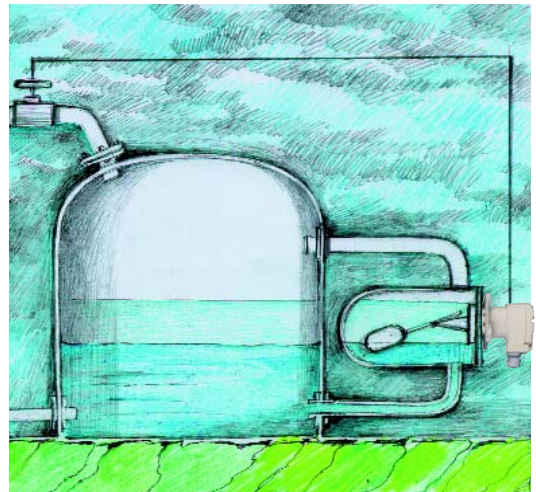
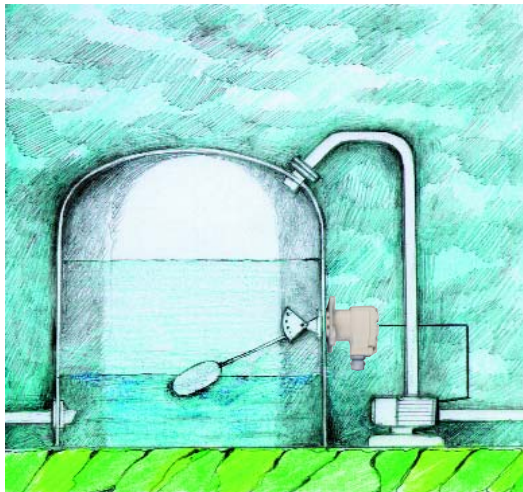
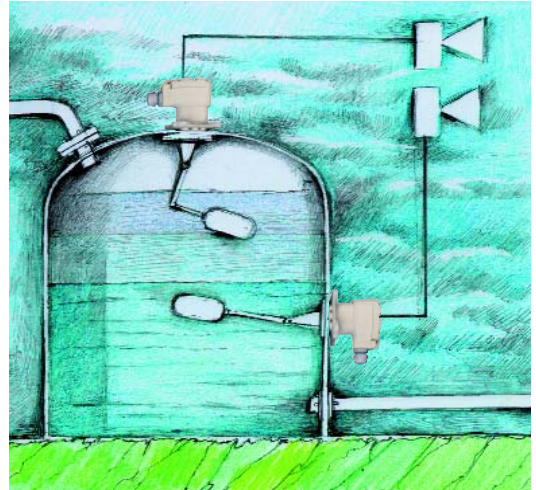
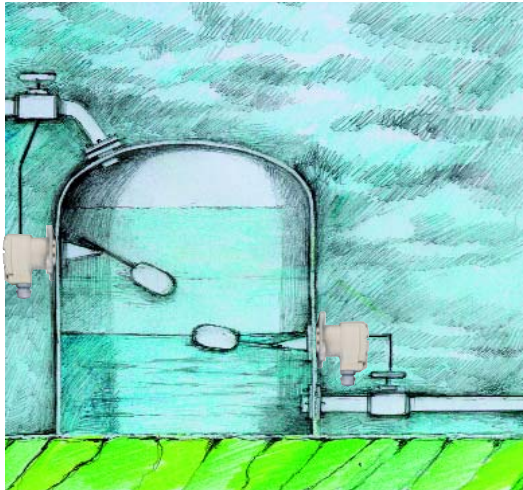
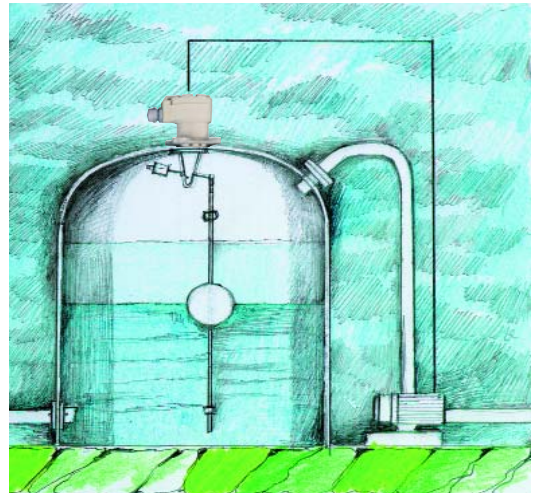
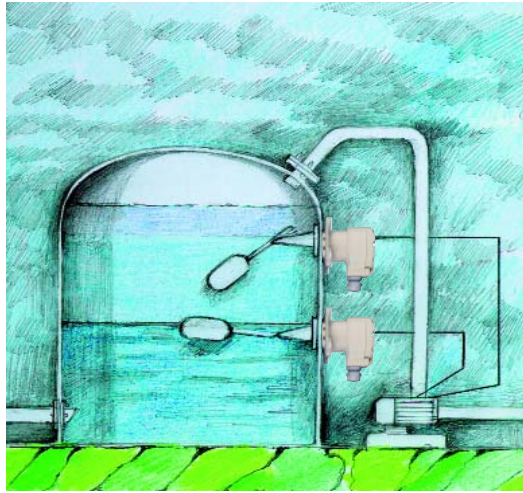
## ELECTRICAL CONNECTION



## ACCESSORIES



# N I V O M A G





## TECHNICAL DATA

TYPE	SIDE MOUNTING				TOP MOUNTING
	MKA-21 MKU-21	MKA-22	MKG-21	MKS-21	MKA-23
Nominal pressure max.	2.5 MPa (25 bar) [MKU: 0.2/2.5 MPa (2 bar/25 bar)]				1.6 MPa (16 bar)
Liquid temperature	MKA: -20°C ... +250°C [MKU: -20°C ... +250°C]		0°C...+100°C	0°C...+200°C	-20°C...+250°C
Ambient temperature	-20°C...+80°C				
Liquid density	min 0.7 – 0.85 kg/dm <sup>3</sup> see figures				
Switch differential	Fixed	Adjustable	Fixed	Fixed	Adjustable, min. 18 mm
Protrusion length	See figures				
Material of wetted parts	Stainless steel				
Housing material	Paint coated aluminium				
Switch action	1 micro-switch with 1 closing and 1 opening contact (NO and NC)				
Switch rating	Standard	250V AC12 10A; 220V DC13 0.6A (IEC 947-5-1)			
	Ex version	250V AC12 2.5A; 220V DC13 0.3A (IEC 947-5-1)			
Electrical connection	1x Pg 16 cable 5x2.5 mm <sup>2</sup> wire cross section (MKU: integrated cable)*				
Mechanical protection	IP 65 (MKU: IP 68 up to 20 m water gauge)				
Ex protection mark	Ex dme IIC T4 ... T6				
Certificates	Cenelec, Germanischer Lloyd				
Weight (approx)	1.8 – 3.5 kg				

\* Please specify cable length when order

## ORDER CODE

