

LEVEL CONTROLLER

VMN

APPLICATION

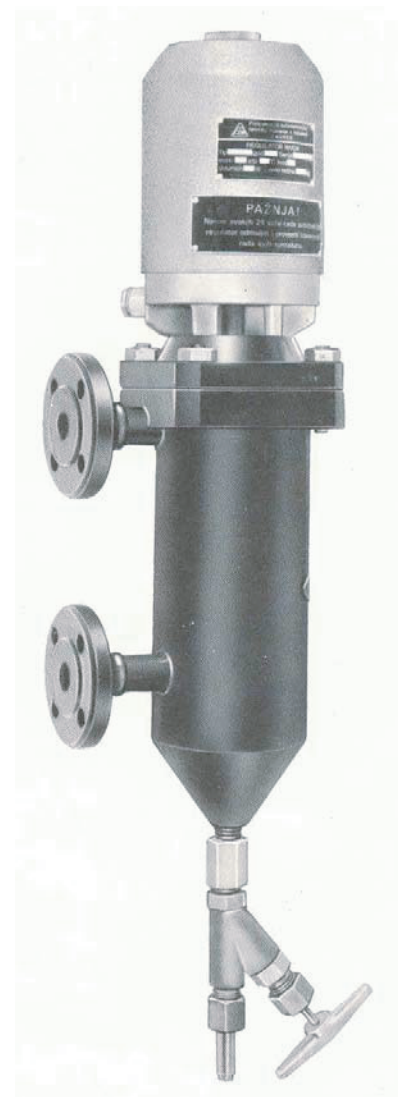
Model VMN vertical float-operated level controllers is designed for control water level in steam boilers and other vessels and storage tanks.

OPERATION

The float in the steel tube with a mounted magnet slides in the dependence with a change of level. The magnet slides in a non-magnetic stainless steel tube and controls magnetic switches, arranged along the tube, by either breaking or making the corresponding circuit connected to feed pump, signal unit or fuel supply. Connection diagram on figure 2. is a basic circuit diagram for 5 switches as example.

CONSTRUCTION

Model VMN level controllers comply with the TRD (Technische Regeln für Dampfkessel) technical regulations on steam boilers and pressure vessels. Construction of this level controller as a type i.e. as a single device is approved by corresponding ship registers. The pressure chamber is made of steel, the float and the tube inside which slides the magnet of stainless steel. The magnet is made of an AlNiCo alloy featuring stable magnetic properties. Magnetic switches are insensitive to vibrations appearing in the operation of steam boilers and are heat-resistant under specified plant conditions. If the operation of a magnetic switch has to be reversed, as example to make instead to break a circuit or vice versa, remove it from the rod and turn it for 180°. Level controllers for vessels containing ammonia are designed with an oblong float



MOUNTING ON STEAM BOILER

The level controller is mounted vertically outside of the boiler (see figure. 1.). The method of connection to boiler and operating instructions are given in "Operation manual for level controller". In the case of connecting the inductive load the corresponding RC-combination (e.g. 0,1iF/100Ω) or varistor has to be connected in parallel to the connections of magnetic switch. Because of regular maintenance, the drain valve Code No. 39.00.050 is fixed on the bottom of the level controller. It has to be ordered separately.

SPECIFICATIONS

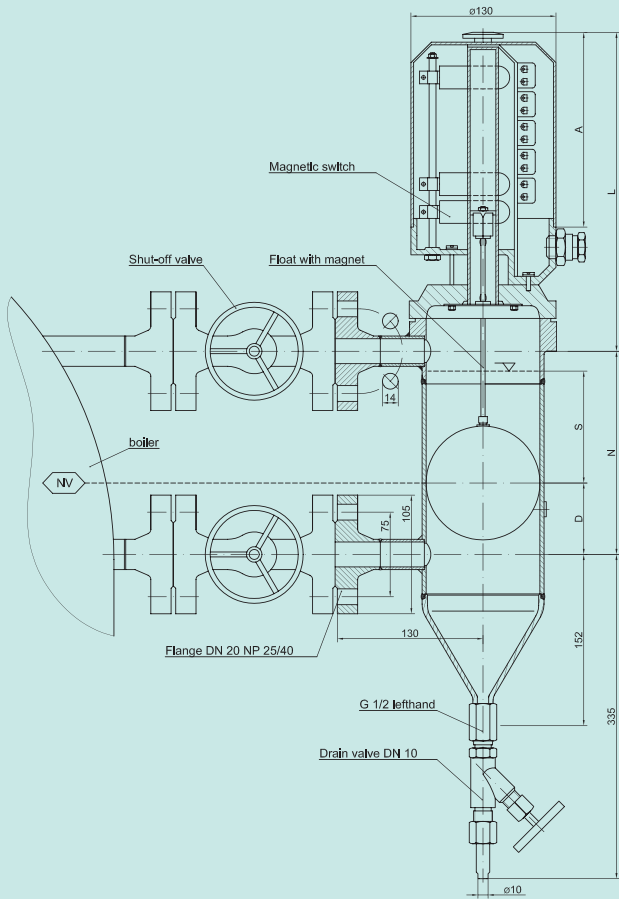
Maximum permissible working pressure	25 bar
Maximum permissible working temperature	225°C
Magnetic switch	bi-stable
Switch maximum permissible load	250 V; ≤ 1 A; ≤ 150 VA
Number of switches	2 to 6
Silumin alloy cable gland Pg 13,5 to DIN 46320	2
Protection class to DIN 40050	IP 54
Minimum distance between two switching	15 mm
Mounting dimensions	see figure No. 1.
Weight	see the table

LEVEL CONTROLLER

VMN

DIMENSIONS

Figure 1



ORDERING DATA

LEVEL CONTROLLER VMN 11.26. .

FLANGE DISTANCE			
340 mm	0		
230 mm	1		
180 mm	2		
400 mm (S = 250)	4		
500 mm	5		
400 mm (S = 100)	7		
APPLICATION			
for stationary boilers	2		
for ammonia vessels	4		
for marine boilers	5		
NUMBER OF SWITCHES			
2		1	
3		2	
4		3	
5		4	
6		5	
SHIP REGISTER CERTIFICATE			
Whitout			0
With (name the register)			1

Mounting dimensions	Steam boilers					Ammonia vessels		
	S (mm)	M (mm)	D (mm)	A (mm)	L (mm)	Weight (kg)		
Level change S (mm)	100	250	180	250	350	100	70	220
Flange distance M (mm)	180	340	230	400	500	400	230	340
Distance NV D (mm)	60	60	35	100	100	100	35	60
Cover height A (mm)	163	303	303	303	403	163	163	303
L (mm)	340	430	430	430	530	340	340	430
Weight (kg)	12	14	13	15	17	14	13	14

APPLICATION

Figure 2

SCHEME OF CONNECTION

ABBREVIATIONS

- AUTO CONTROL A
- MANUAL CONTROL R
- SIGNALIZATION OF HIGHEST WATER LEVEL K5
- PUMP OFF K4
- PUMP ON K3
- SIGNALIZATION OF LOWEST WATER LEVEL K2
- HEATING SHUTDOWN K1

