

Description

Level transmitter operating on the float principle for monitoring liquid levels of inert and corrosive media. They can be used with open, closed and pressurized vessels.

Level Transmitter

Construction

The level transmitter basically consists of the following sections: Connection head, immersion tube, float and stop rings.

Within the immersion tube are reed switches which are actuated by the permanent magnet incorporated in the float.

The level transmitter is available in various materials to suit the individual chemical and temperature requirements.

Function of the Type 900

Type 900 level transmitters are used where individual control signals are required without the need for a continuous output signal, e.g. for the protection of pumps against dry running, for alarm signals etc.

Function of the Type 901

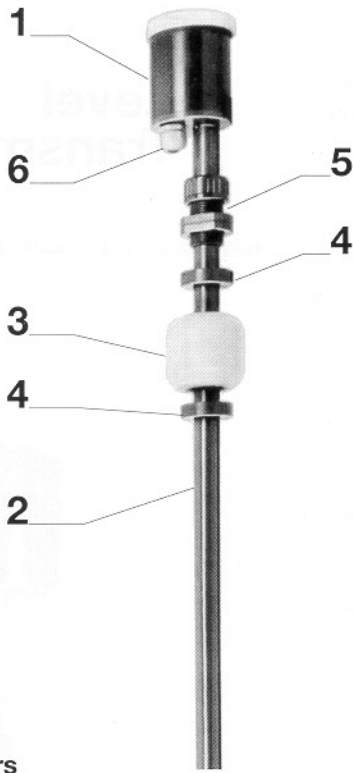
Type 901 level transmitters used in conjunction with a signal transmitter, E-module type 1275, provide continuous level indication between 0% and 100%, or continuous level indication with triggered control signals at specific levels.

The readings from the 901 transmitter, when fed to the type 1275 signal transmitter are shown in digital form and an analogue output is available for further data handling.



Types 900 and 901

Type 900 and 901 Level Transmitters



- 1 Connection Head**
- 2 Immersion Tube**
Materials: hard PVC (standard), PP, PVDF, Stainless Steel (1.4571)
Length: up to 12 m
- 3 Float**
Materials: hard PVC, PP, PVDF, Stainless Steel (1.4571)
Number: Type 900 - to suit switch function
Type 901 - 1 off
- 4 Float Stop Rings**
Adjusted and set at works (see ordering instructions)
- 5 Clamp Sleeve Mounting**
A mounting bracket support either straight or angle design is supplied. Alternatively, a clamping flange design is available. The clamp sleeve and clamping flange can be adjusted on the immersion tube.
- 6 Connection Cable:**
LType NYM nx 1.5 mm² water proof installation cable. The number of cores depends upon the number of switch points and the number of contacts. A numbered cable (length = length of immersion tube + 1 m) is supplied wired to the connection head.

Cable Gland: PG 11
Protection Class: IP 65
Electrical Data: Max. switch capacity d.c. 20W
 Max. switch capacity a.c. 60 VA
 Max. switching current 1 A
 Max. switching voltage 250 V

Type 900 and 901 Level Transmitters

Mounting Instructions

The level transmitter should be mounted in a vertical position in tanks or containers to allow the floats guided by the immersion pipe to adjust to the respective fluid level.

Solid particles with a grain size below 3 mm contained in the measured medium do not impair the mechanical function of the level control device. If coarser solid particles occur in the fluid, the floats and immersion pipe should be mounted in a protective outer pipe. Ensure that the level control device is not installed in the immediate vicinity of inlets or agitators. The base of the immersion pipe should be located on the tank floor. (Do not tighten the clamping sleeve or clamping flange until the device has been set up.) In the case of immersion pipes longer than appr. 3000 mm, and where there is considerable movement of the measured fluid, we recommend using an additional fixture at the lower end of the immersion pipe, for example using a floor pipe (see page 4).

Do not shorten the supplied connecting cable, and mount the connecting socket as close to the connecting head as possible. This will permit the level control device to be removed if necessary (e.g. for cleaning the tank) without disconnecting the cable. If necessary, tighten the lid of the connecting head and the cable union. In the type 900, the switching points are fixed in the factory to the values specified on ordering. For this reason, do not adjust the stop rings when mounting the device.

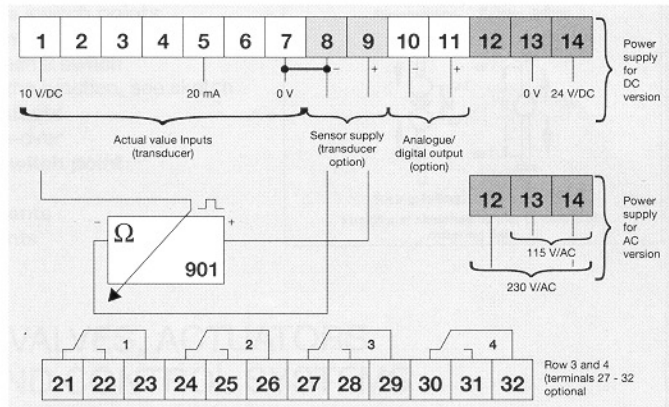
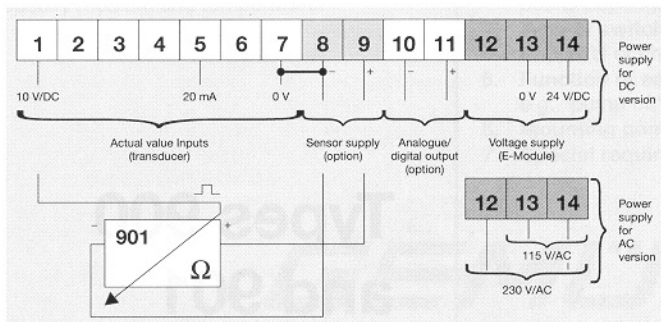
In the type 901, the switching points are set when type 1275 is put into operation, and can be positioned at any optional point over the whole display range.

Terminal diagram type 901/1275

Digital display unit
Basic version

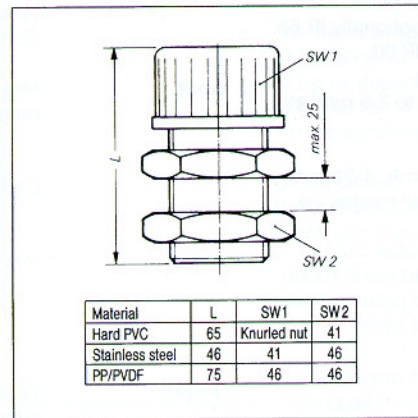
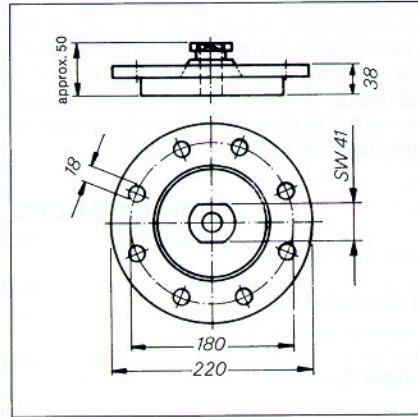
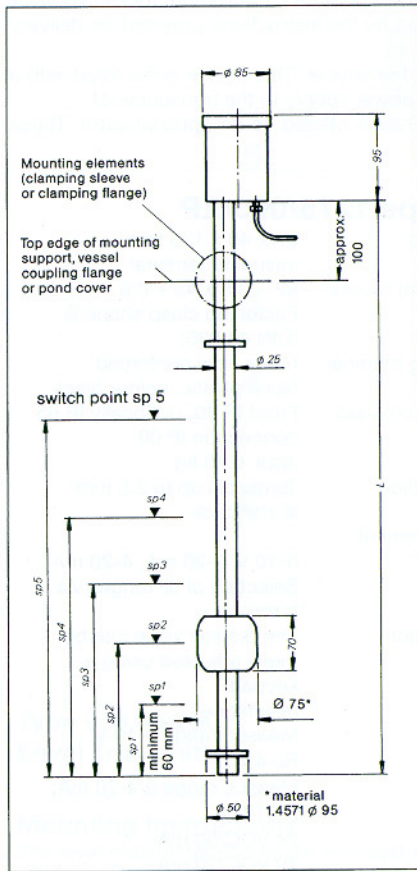


Programmable digital display unit
Multifunction device



If the optional "electrically isolated" version is ordered, the jumper between terminals 7 and 8 is omitted.

Dimensional Drawings, Circuit Diagram and Mounting Components



Clamping Flange

Application

Mainly used with pressurized vessels (up to 6 bar g) and where a tight seal is required due to vapours etc.

Materials:

Clamp components:
hard PVC, PP, PVDF
Clamp seals:
VITON
Loose flange: Plastic

Clamping Sleeve

Application

Used with open ponds or vessels.

Mounting:

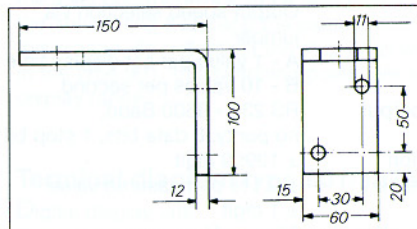
Plastic angled or straight bracket supplied as standard. In partially covered vessels the clamp connection can be achieved in a slot as per diagram.

Materials:

Hard PVC, PP, PVDF, stainless steel

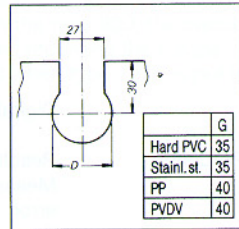
Angled bracket

for clamp sleeve
Material: hard PVC, PP



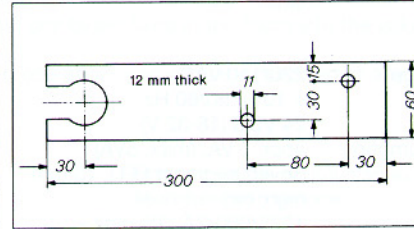
Slotted

for clamp sleeve



Straight bracket

for clamp sleeve
Material: hard PVC, PP

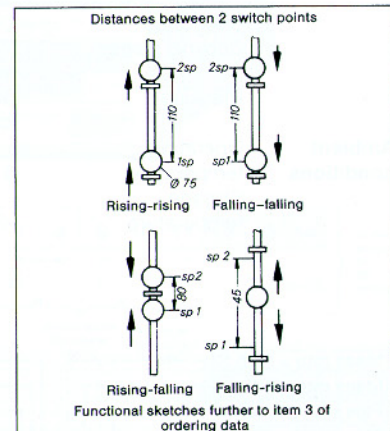


Order Example

Level transmitter type 900/3sp
(3 switch points)
L = 3000 mm
Sp1 = 150 mm, N/C contact protection against dry running
Sp2 = 2500 mm, N/O contact pump on
Sp3 = 2700 mm, N/O contact-alarm
With clamping sleeve and straight mounting bracket.
Specify medium and temperature.

Ordering Specifications

- Type**
- Immersion tube length**
L in mm
For tube length 1000 mm or longer the tube should rest on the bottom of the vessel or pond
- Set positions of the switch points**
Sp1, Sp2 etc in mm
Min. distance between 2 switch points depends on the function, see sketch
- Type of switch contacts**
N/C, N/O or change-over
- Function of each switch point**
e.g. "pump off"
- Mounting components**
- Special requirements**



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