

General

In metering technology, liquids must be stored, conveyed, refilled, mixed and metered in many different ways.

The filling level must be monitored and controlled in order to determine the exact quantity to prevent overflowing, to refill an empty tank or to protect the pump from dry running.

A number of different systems have been developed to enable the optimum solution to be selected for all possible operating cases and liquid properties. The essential criteria for a suitable system include, among other things, the conductivity of the liquid and adhesive or crystallizing properties. The decision may also be influenced by the control supply voltage available. For instance, small pumps can be controlled in single-phase operation, or the main contactor of larger a.c. motors can be controlled directly by means of a float switch, without a separate relay interface.

In addition to the designs discussed here, a large range of level probes, operating according to the conductivity principle, with the float switch described on data sheet MB 1 22 01, is available. The range also includes easy-to-install combinations with the suction tube and foot valve and an integrated level monitoring system. Special designs for solenoid metering pumps are also described on the same sheet.

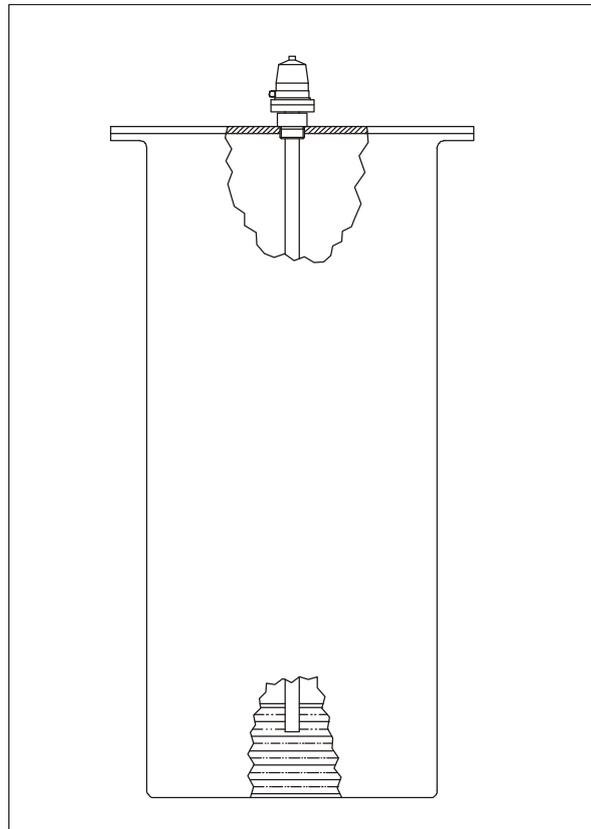
Diaphragm pressure switch

Diaphragm pressure switches react to variations in the hydrostatic pressure which is transmitted in the immersed pipe to the enclosed air by compression. As the level drops, the pressure is reduced and closes the circuit.

Part numbers

Immersed tube length L	Diaphragm pressure switch assembly
270	41027175
600	41027176
770	41027177
835	41019411
1000	41027220
1060	41019412
1095	41019413
1185	41019414
1205	41019415
1350	41019416

Rubber cover Part No. 78760

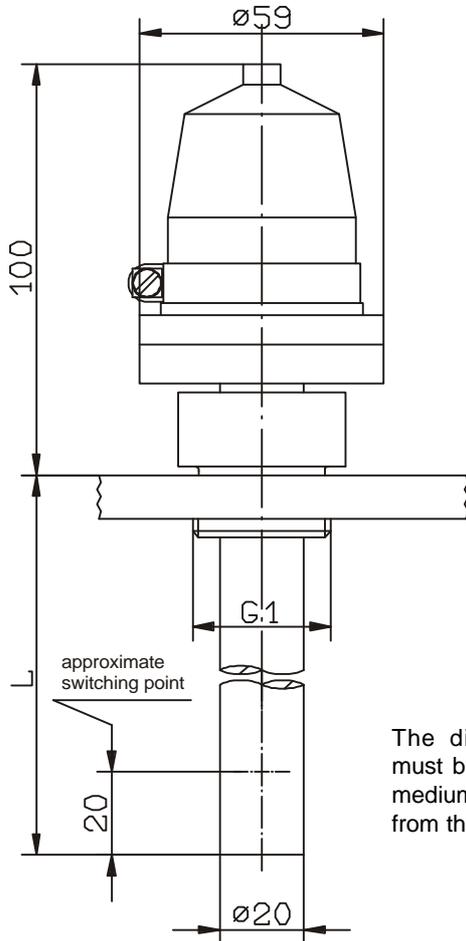


Technical data

Diaphragms:	Viton
Contact system:	Single-pole changeover switch
Switching point:	Adjustable, 2-8mbar
Electrical connections:	Screw terminals
Ambient temperature:	65° C max.
Bottom of housing:	PVC
Contact rating:	250V, 1A
Service life:	10 ⁶ switching cycles
Protection class:	IP 54 with cover (of rubber)
Length of immersed tube:	See part no.

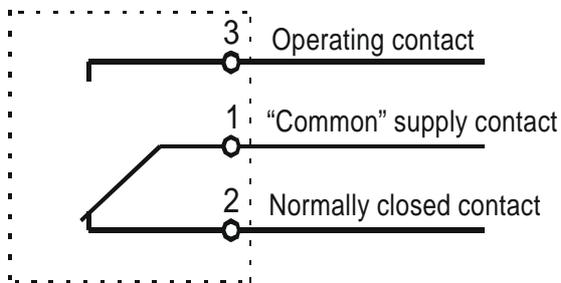
When making the selection it must be remembered that the lowest level switching point lies approx. 20mm above the inlet opening of the suction connection in order to ensure that the pump is protected from dry running. In the case of agitators, the level must not drop below the agitating mechanism (propeller).

Dimensions



The diaphragm-pipe assembly must be free of all leaks, and the medium must not absorb the air from the pipe in such a short time.

Wiring diagram



Diaphragm pressure switch