

# DEDICATED AND RELIABLE LEVEL SWITCH

The Grundfos level switches MS1 UL and MS1 Ex is the ideal solution to control liquid levels in pump stations with aggressive media and solids such as raw sewage.

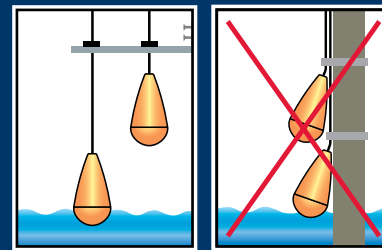
For use in municipalities, commercial and residential applications.

The Grundfos level switches type MS1 UL and MS1 Ex are of the non-mercury type and engineered especially for use in sewage works and pumping stations, together with Grundfos controls type SLC and DLC. MS1 UL is available for standard pumps and MS1 Ex for explosion-proof pumps. The hermetically sealed polypropylene housing and thermoplastic rubber cable makes the level switch resistant to many chemicals, alcohol, uric acid, sewage, oils, petrol and fruit acid.

**Installation:**

When installing the level switches make sure that they are suspended freely and vertically, they do not rest on the pump that they can float without interference from the shaft walls, pipes, fittings etc.

For simple mounting we can supply a stainless steel, cable support bracket to be mounted on the wall. The bracket includes two M16 cable glands. One or two level switches can be suspended freely at the required height.



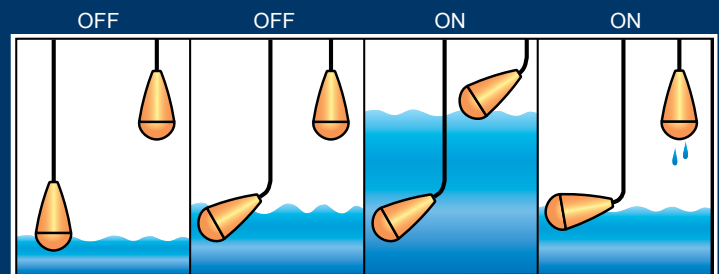
Standard level switches	Product numbers	Technical Data	MS1 UL	MS1 Ex IECEx
Level switch MS1 UL with 33-ft cable	98365984	Housing quality:	Polypropylen (PP)	PRE-ELEC Polypropylen (PP)
Level switch MS1 UL with 40-ft cable	98365985	Cable quality / cross section:	SJOW 18/3 AWG	TPR 4GO / 75 mm <sup>2</sup>
Level switch MS1 UL with 60-ft cable	98365986	Contacts:	1 change-over	1 change-over
<b>Level switch for explosion proof pumps</b>		Breaking voltage:	125 VAC	4 - 40 V
Level switch MS1 Ex IECEx with 33-ft cable	98372085	Breaking capacity:	5 A	1 - 100mA
Level switch MS1 Ex IECEx with 40-ft cable	98372086	Protective system:	IP68	Ex II 1G EX ia IIC T6 Ga
Level switch MS1 Ex IECEx with 60-ft cable	98372087	Listing:	cETLus File 4004472	IECEx SEV 13.0001
<b>Level switch for explosion proof pumps</b>		When correctly installed and mounted, the level switch function is practically maintenance-free. Depending on the medium's pollution level, the installation must be checked for dirt deposits from time to time and cleaned if necessary.		
Cable support for two level switches	98365987			

**System Schematics:**

The level switches are to be installed in the collecting tank floating on the liquid. The level switches are freely suspended from a highly flexible, heavy-duty cable and set at the required level "OFF", "ON", and "ALARM".

**The position of the level switches decides when the SLC or DLC controller will start and stop the pump:**

- When the level switch is pointing downwards, the level switch contact will be opened and the pump will stop. OFF position.
- The pump will start when both level switches are tilted and remain ON until both level switches hang straight. ON position.
- One additional level switch can be installed for high water level alarm. When the alarm level switch is tilted or pointing upwards it will activate the alarm.



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