



SM-411 Solvent Monitor



The Solvent monitor SM-411 is an

- intelligent
- easy to use and
- reliable

level monitoring system.

The SM-411 keeps you informed

of all levels of your solvents.

The SM-411 alerts you in advance

when the level of a solvent approaches a critical value.

The SM-411 triggers an akustic alarm when an eluent is empty or when the waste is full.

The SM-411 supports up to 4 minimum- and one maximum level sensors.

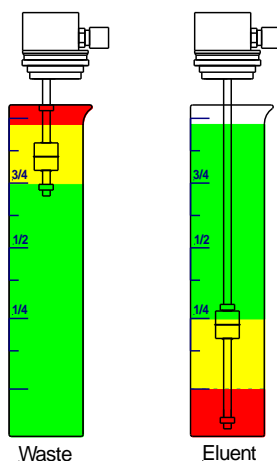
The SM-411 supports passive as well as active level sensors.

The SM-411 has a digital output interface for the signal status (contact closures NO or NC).

The SM-411 can be connected to the safety switch PSM-420 of HPLConsult for safety power shut down in order to prevent solvent spillages.

Signal light notification for level indication

The SM-411 allows a sophisticated indication of the solvent level status following the light signal principle green – yellow – red. Each sensor which is connected to the system is represented by an RG LED on the front side of the instrument.



The required three stage (green – yellow – red) sensors are available as accessories from HPLConsult.

Signal transmission

The signal transmission may be configured to be fail safe. This means that the system detects a broken cable or a badly plugged connector to give an alarm.

Safety shutdown

Should your solvent pumping system (e.g. a HPLC system) be shut down in case of an empty eluent or a full waste, the SM-411 may be combined with the power switch PSM-420 of HPLConsult. The HPLC system then is plugged to the PSM-420 and in case of an alarm (not a warning, «yellow») the PSM-420 cuts off power following a preset power scheme.

Flexible configuration

All input- as well as output signals can be configured as closing (NO) or opening (NC) as well as potential free contact closures. The acoustic alarm can be activated or deactivated as well.



Level sensors

The SM-411 supports passive (float level probes) as well as active level sensors (e.g. capacitive probes).



Technical data

Electrical connections:

12 VDC
Electrical ground

Sensor hookup:

4 x eluents
1 x waste

Interfaces:

Signal OUT, DB9f
RS 232, DB9m

Display:

1 LED power
4 RG LED eluents
1 RG LED waste

Dimensions:

13 x 19 x 6 cm (l x d x h)

Weight: 700g

HPLConsult offers a variety of adaptors with horizontal or vertical hose connection for flasks and barrels with standard threads such as G2", GL45 and GL80.

For highly pure solvents for sensitive analytics HPLConsult recommends its contactless level measurement solution with its level detection from the outside of the bottle.

The example shows a 5L SCHOTT bottle with contactless level detection with two detection levels

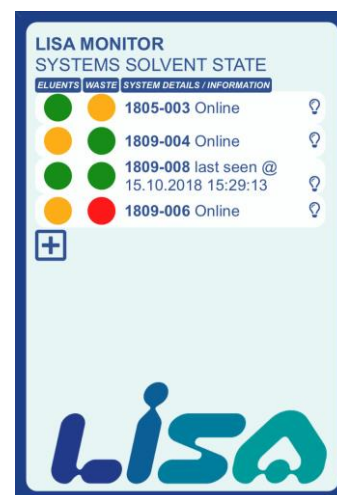
Electrical connections



All electrical connections are at the rear side of the instrument.

Level monitoring via Internet

The SM-411w allows remote enquiry of the status via the internet.



Contactless level detection



Interface

Output: the combined signals „EluentWarning“ (one or more eluents are getting empty), „Eluent-Empty“ (one or more eluents are empty), „WasteWarning“ (the waste is getting full) as well as „WasteFull“ (the waste is full) are available as closing or as opening contacts, respectively.

The digital signals may be used as an input for a HPLC system.

On the LISA monitor all devices in your responsibility may be displayed in order that you stay informed of the solvent level status even if you are not close to your lab.