BIOTECH SOLVENT LINE MONITOR

The next generation programmable, high sensitivity bubble and “Empty-Bottle” detector

Designed to eliminate common problems

Running out of solvent during operation of an HPLC or any other liquid chromatography system is a problem most separation scientists have encountered. Running out of solvent can lead to loss of data, need to re-prime the pump / system downtime and often necessitates system re-validation to make sure the obtained results are within expected limits.

The Biotech Solvent Line Monitor is designed to eliminate this problem, without any user input or need for regular resetting. It runs independently and is fully compatible with any liquid chromatograph. This simple-to-use device will constantly monitor the status of the feed line of up to two chromatograph pumps (very handy when gradients are involved) and trigger an alarm if an "Empty Bottle" is detected. Set-up is via an intuitive PC-App which allows individual settings for different attached pumps. Further to an acoustic alarm, the Solvent Line Monitor also provides a relay contact which can be utilized to stop a pump or to forward the alarm condition to the PC Software used in your liquid chromatography system.

Connected to a liquid chromatograph pump feed line, the Biotech Solvent Line Monitor will non-invasively check the status of liquid flows for air / gas bubbles and stop operation if any are detected thereby, increasing the performance reproducibility and reliability of any liquid chromatography or flow chemistry system.

The presence of bubbles or microbubbles can result in changes in retention time, pulsating baseline, unexpected changes to peak area, irregular peak shape, pump outage and excessively high back pressure. As a result of these problems, accuracy and precision can decline to the point where analytical scientists may be unable to distinguish between trace amounts of analytes they are trying to detect and the system baseline.

If you want...

- ☑ ... To avoid air related pump breakdowns
- ☑ ... To stop unreliable results due to air bubbles
- ☑ ... To be able to rely on your HPLC, GPC/SEC or Ion chromatography system
- ☑ ...then choose the new Biotech Solvent Line Monitor!

Technical information

The AB-41001 Solvent Line Monitor is specifically designed to detect the status of the liquid content in a transparent or translucent tube feeding a liquid chromatography system. Two detectors can be connected to the main unit at the same time, allowing detection of two different flow paths. The sensors are simply clipped onto the tubing without any need of modification or interaction with the tubing content.

The Solvent Line Monitor is compact in size and is powered via a USB connection. PC based software app allows easy configuration of the device when connected to a liquid chromatograph or flow chemistry system. The Solvent Line Monitor App provides an unattended "listener" service displaying chromatograph alarm settings status on your PC monitor. In "gas bubble detection mode" – the status of the monitored chromatograph pump tubing is also displayed on the Solvent Line Monitor's high-resolution OLED display.

The Solvent Line Monitor supports up to two optical sensors capable of detecting bubbles in any transparent or translucent PTFE, Tygon® or similar tubing materials commonly used in HPLC, Ion Chromatography and GPC/SEC systems.

The device provides constant feedback on the status of connected sensors via an integral OLED display and offers optical and acoustic alarm as well as a digital output which can be used to stop a pump before a bubble can affect its operation. The compact and easy-to-use Biotech Solvent Line Monitor is programmable in terms of sensitivity, mode of operation and alarm reaction. System set-up is a straightforward process using a highly intuitive PC-based app included with each device. Detection parameters including the minimum size, frequency and number of bubbles can be configured using the PC App, which also provides facility for different actions to be taken once an alarm status is detected. Examples include a simple beep or a stop signal to a connected pump.

Technical Data	
Display	High-resolution OLED Display with online status information
Number of Sensors	Two, automatic detection of connected sensor and type Sensor Operation
Optical Tube Size	AB-41002 1/8" (3 mm) AB-41003 1/16" (2mm with adapter)
Control Output	Potential-free contact, programmable as NC or NO
Acoustic Alarm	Programmable Beep Signal with Auto Shut-off
Power	USB Plug and Play functionality
Dimensions	Main Unit 40 x 20 x 70 mm Sensors 20 x 15 x 16 mm
Cable Length	Sensor to Main Unit 1000 mm

Content Delivery	
Quantity	Content
1	Solvent Line Monitor
1	USB Cable 1m
1	2-Pin Alarm cable connector with Molex Picoblade Plugs, 450mm
1	3M Dual Lock Sticker for the Solvent Line Monitor
2	3M Dual Lock Stickers for Bubble Sensors
1	Bubble Sensor for 1/8" Tubing (if selected upon ordering)
1	Bubble Sensor for 2mm tubing with 1/16" Adapter (if selected upon ordering)
1	User Manual
Ordering Information	
AB-41001	Solvent Line Monitor
AB-41002	Solvent Line Sensor for tubing with 2mm or 1/16" OD
AB-41003	Solvent Line Sensor for tubing with 3-4mm or 1/8"OD
AB-41004	Solvent Line Sensor for tubing with 4.76mm or 3/16" OD

For ordering and technical support, please contact:
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