

## Ankersmid Liquid Alarm sensor ALA 001

### Application

A liquid sensor is used in gas sample conditioning/systems as a security alarm in case of condensate breakthrough.

Coolers, water-stops and automated drains are some of the Ankersmid components used for condensate evacuation. The performance of these components is monitored with a liquid alarm sensor. The liquid alarm will report any breakthrough of condensate and thus protect liquid-sensitive optical analyzers or analytical cells from moisture damage. The alarm sensor can be set to shut of a pump or activate a solenoid valve for protection when tripped by moisture detection.

### Description

The **ALA 001** sensor works on the principle of **electrical conductivity**. When liquid comes in contact with the sensor's two electrodes, a small current is measured and the alarm is given. (Min conductance: 40µmS/cm).

The electrodes are mounted under a vertical gas path that – due to gravity - projects the smallest droplet onto the electrodes.

An alarm is generated by an electronic module with a potential fuse contact.

### Technical data

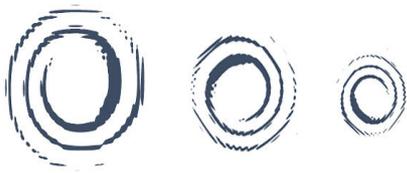
Model	ALA 001
Connection cable	3m, ø 4,2 mm, 2-core
Pressure	0 - 4bar g
Flow	0 - 1000l/h
Operating temperature	Max. +80°C
Gas connections	ø 12mm
Material of gas wetted parts	Glass, platinum
Mounting position	Vertical
Insertable length	10mm
Electrical conductivity	>50µS/cm
Weight	50gr



\* Picture may vary

- **Safe detection of very small quantities**
- **High chemical resistance**
- **Sensor also used in Ankersmid:**

<b>Compressor coolers</b>	<b>ACC</b>
<b>Peltier coolers</b>	<b>APC</b>
<b>Condensate separators</b>	<b>ACS</b>
<b>Condensate vessels</b>	<b>ACV</b>
<b>Universal filters</b>	<b>AUF</b>
<b>Material filters</b>	<b>AAM</b>
<b>Portable systems</b>	<b>APS/ASS</b>
- **Suitable electronic alarm module:**  
**ALA 101**



## Ankersmid Liquid Alarm sensor

ALA 002

### Application

The liquid sensor is used in gas sample conditions/systems as a security alarm in case of condensate breakthrough.

Coolers, water-stops and automated drains are some of the Ankersmid components used for condensate evacuation. The performance of these components is monitored with a liquid alarm sensor. The liquid alarm will report any breakthrough of condensate and thus protect liquid-sensitive optical analyzers or analytical cells from moisture damage. The alarm sensor can be set to shut of a pump or activate a solenoid valve for protection when tripped by moisture detection.

### Description

The Ankersmid **ALA 002** sensor works on the **principle of the detection of a change in internal reflection**. When a liquid is disposed on the outside lens of the sensor the reflection will be changed and detected by the sensor. The transparent dome contains an LED and an optical sensor. An alarm is generated by an electronic module with a potential fuse contact.

### Technical data

Model	ALA 002
Connection cable	3m, ø 4,2 mm, 3-core
Pressure	0 - 5bar g
Flow	0 - 1000l/h
Operating temperature	Min. -25°C / Max. +80°C
Gas connections	ø 12mm
Material of gas wetted parts	PTFE, Polysulphone
Mounting position	Vertical
Insertable length* <sup>1</sup>	15mm
Output sink current* <sup>2</sup>	@ 25°C: 10mA max.
	@ 80°C: 3mA max.
Response time	50µs
Supply current	15mA nominal @ 5V DC
Supply voltage	5V DC - 12V DC
Operation mode	User defined single point on/off switch
Ambient IR light limit	10mW/cm <sup>2</sup> in operation
Weight	50gr

\*1 Other lengths possible

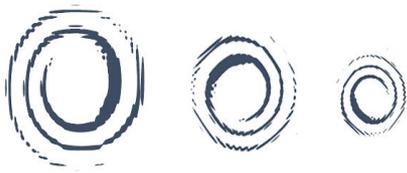
\*2 The output sink is intended as a TTL compatible output signal for interfacing to logic systems



\* Picture may vary

- **Safe detection of very small quantities**
- **High chemical resistance**
- **Sensor also used in Ankersmid:**

<b>Compressor coolers</b>	<b>ACC</b>
<b>Peltier coolers</b>	<b>APC</b>
<b>Condensate separators</b>	<b>ACS</b>
<b>Condensate vessels</b>	<b>ACV</b>
<b>Universal filters</b>	<b>AUF</b>
<b>Material filters</b>	<b>AAM</b>
<b>Portable systems</b>	<b>APS/ASS</b>
- **Suitable electronic alarm module: ALA 102**



## Ankersmid Alarm Electronic Controller ALA 101/102

### Application

The electronic controllers ALA 101 and ALA 102 are used for feeding and signal processing of the liquid alarm sensors ALA 001 and ALA 002.

These liquid sensors are used in gas sample conditions/systems as a security alarm in case of condensate breakthrough.

Coolers, water-stops and automated drains are some of the Ankersmid components used for condensate evacuation. The performance of these components is monitored with a liquid alarm sensor. The liquid alarm will report any breakthrough of condensate and thus protect liquid-sensitive optical analyzers or analytical cells from moisture damage. The alarm sensor can be set to shut of a pump or activate a solenoid valve for protection when tripped by moisture detection.

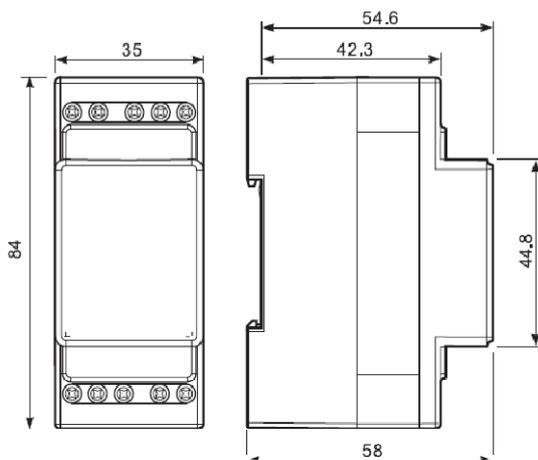
### Description

Two electronic controllers are available, ALA 101 and ALA 102, both for rail-mounting.

The main application for these electronics is detecting of conductive and non-conductive liquids in combination with the liquid alarm sensors ALA 001 and ALA 002.

Furthermore the electronics can be used for control of the level of conductive liquids.

Selectable options allow for this control to be achieved either through a filling operation or through an emptying operation, and in either case "positive logic" is used.

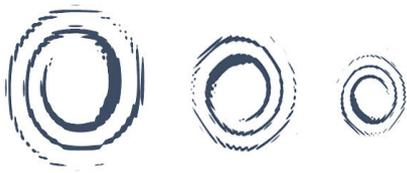


Picture ALA 101/102 Dimensions



\* Picture may vary

- **LED indicator**
- **Reinforced insulation (6 kV - 1.2/50µs) between:**
  - **supply and contacts**
  - **electrodes and supply**
  - **contacts and electrodes**
- **35 mm rail mounting (EN 60715)**
- **Control about a single level or between Min./Max. limits (ALA 101)**
- **Sensitivity range (5...150) kΩ adjustable**



## Technical data

Model	ALA 101/102		
Contact configuration	1 CO (SPDT)		
Rated current/Maximum peak current	16/30A		
Rated voltage/Maximum switching voltage AC	250/400V		
Rated load AC1	4,000VA		
Rated load AC15 (230 V AC)	750VA		
Single phase motor rating (230 V AC)	0.55kW		
Breaking capacity DC1: 30/110/220 V A	16/0.3/0.12		
Minimum switching load	500mW (10V/5mA)		
Standard contact material	AgCdO		
Nominal voltage (UN)	V AC	V DC	
	24-110..125-230..240	24	
Rated power AC/DC	2.5 VA (50 Hz)/1.5W		
Operating range	AC	DC	
	(0.8...1.1)U <sub>N</sub>		
Electrical life at rated load AC1	100 · 10 <sup>3</sup> cycles		
Electrode voltage	4V AC	10V AC	
Electrode current	max 0.2mA		
Run-on time	0.5 – 7s (selectable)	NA	
Max sensitivity range	5-150kΩ (adjustable)	NA	
Insulation between supply/contacts/electrode (1.2/50 μs)	6kV		
Ambient temperature	-20...+60°C		
Protection category	IP20		
Insulation	Dielectric strength	Impulse (1.2/50 μs)	
	between supply and contacts	4,000 V AC	6 kV
	between electrodes, Z1-Z2 and supply	4,000 V AC	6 kV
	between contacts and electrodes	4,000 V AC	6 kV
	between open contacts	1,000 V AC	1.5 kV
Current absorption on Z1 and Z2	< 1mA		
Power lost to the environment			
	without contact current	1.5W	
	with rated contact current	3.2W	
Max cable length between electrode and relay	200m		