

ATMI



ATMI

Applications Techniques Modernes Industrielles

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ABOUT ATMI

ATMI is a French ISO 9001-2008 certified company that offers the most extensive range of pump float switches and tilt level switches for solids, capable of meeting all customers' requirements through 20 types of high quality level switches available in 50 different versions.

The float level measurement system chosen by ATMI cannot be compared to the basic float switches that may be found on the market but that are limited to simple applications only. All ATMI products, exclusively manufactured in France and marketed across the world for more than 35 years, meet the exigent and specific level measurement requirements of the industry in the most simple, reliable, and economical way.

ATMI's distribution network comprises more than 250 companies in more than 100 countries, and its company policy is based on quality, zero defect, and continuous innovation.



N° 200406986

THE RANGE



INTERNAL BALLAST LEVEL REGULATORS

The AQUA XL and the AQUA MEDIUM (slightly smaller than the AQUA XL), are robust float level switches constructed with an internal ballast. This particular characteristic distinguishes them from the SOBA and SOBA SMALL models that come equipped with an external, adjustable ballast on the cable. This is also the case of the BIP STOP, AT, and the TUBA float switches which microswitch inside tilts as the liquid level rises, closing or opening an electrical circuit.

The AQUA XL and the AQUA MEDIUM can be used in all kinds of non-aggressive liquids sewage or wastewater coming from pumping stations, water treatment plants, etc. They can also be used for level control of multiple pumps or as high or low level alarm.

Besides, thanks to their volume and weight, the AQUA XL and the AQUA MEDIUM are able to penetrate the grease layers found on wastewater pumping stations.



For further information, please refer to the individual technical sheets.

Operation mode	
Allowed fluid density	
Maximum pressure	
Allowed temperature	
Protection index	
Power supply	
Cut-out power	
Reverser microswitch	
Housing material	
Cable 3 cond. 0.75mm ²	
Size	
Weight without cable	
Cable weight	
Ballast type	
Standard cable lengths	



Switching angle $\pm 10^\circ$

VR

Omnidirectionnal	
0,95 to 1,05	
2 bars	
70°C	
IP 68 <input type="checkbox"/>	
250 VAC - 50/60 Hz	



Switching angle $\pm 10^\circ$

VR

Omnidirectionnal	
0,95 to 1,05	
3,5 bars	
70°C	
IP 68 <input type="checkbox"/>	
12, 24, 48 VAC/VDC et 250 VAC - 50/60 Hz	

IMPORTANT

For certain classic applications, the AQUA range also offers economical "drop-shaped" float switches.

Information available upon request.

SPECIAL RANGE FOR DRINKING WATER *meant for human consumption*



In France, since 24/12/06, in compliance with the decree of 29/05/97, any device or accessory in contact with drinking water meant for human consumption must be ACS certified (ACS = Sanitary Conformity Certification). The SOBA EP and ATS 165 EP float switches (designed from the classic models, having the same technical characteristics) are constructed with special components and are ACS certified for use in drinking water, in accordance with the XP P41 -

250 (1-2-3) standard. These float switches are equipped with EPDM cable (weight: 105g/m) and with an adjustable stainless steel ballast AISI 316 (weight: 230 g).

WATCH OUT FOR PENALTIES! The non-compliance of the ACS standard during an inspection of the French DGCCRF Departement results in fines and products recall. However, considering that health is an important issue worldwide, it is most likely that each country may have a similar certificate. For this reason, we recommend you to contact your local authorities to find out more information about a sanitary certification requirement.

SOBA EP and ATS 165 EP – ACS certified



Switching angle $\pm 25^\circ$

VR



Switching angle $\pm 165^\circ$

VR

LEVEL REGULATORS FOR PUMPING STATIONS

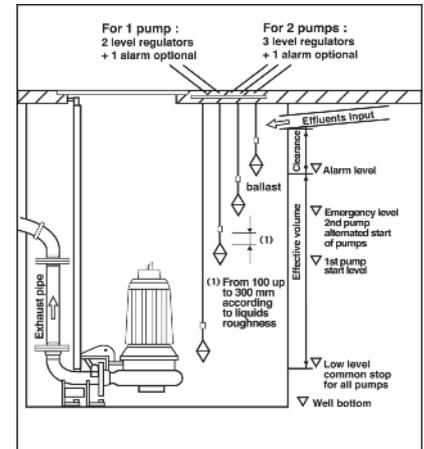
FOR LEVEL CONTROL OF MULTIPLE PUMPS

These omnidirectional floats operate by switching as the water level rises, thus closing or opening a circuit connected to an electrical panel. To perform a pump regulation for instance, the floats will be installed at the high and low required level without any level limit. A 3rd float can be placed higher to connect a sound or light alarm. A second pump can be started by means of another device fitted at the required level, the bottom one being common to all pumps. This is the simplest, the cheapest, and the most commonly used level regulation system.

The SOBA SMALL is technically similar to the SOBA but with a smaller size.

The HR HY range is highly appreciated in the chemical industry and the Ex devices ATEX certified are necessary to fit pumping stations and explosion-proof pumps in hazardous areas 0, 1, 2 (gas) and 20, 21, 22 (dust).

Millions of SOBA have been working all over the world for more than 35 years.



IMPORTANT

Please refer to the "Accessories" section (on the back) for intrinsic safety relays, different types of ballasts, and cable clamps. All the SOBA float switches including the ACS certified model come with appropriate ballasts. For the BIP STOP, AT and TUBA float switches, the ballasts are optional.

For further information, please refer to the individual technical sheets.

Operation mode
Allowed fluid density
Maximum pressure
Allowed temperature
Protection index
Power supply

Cut-out power

Reverser microswitch
Housing material

Cable 3 cond. 1mm²

Size

Weight without cable

Cable weight

Adjustable ballast on cable (serie)*

Standard cable lengths (serie)
(other lengths on request)

	SOBA SMALL	SOBA	SOBA HR HY	SOBA Ex (EC HY2000 ECO)
				
	CE	CE	CE	CE
Switching angle	$\pm 25^\circ$	$\pm 25^\circ$	$\pm 25^\circ$	$\pm 25^\circ$
	VR	VR	VR	VR - "GP" version
Operation mode	Omnidirectional	Omnidirectional	Omnidirectional	Omnidirectional
Allowed fluid density	0,70 to 1,25	0,70 to 1,15	0,80 to 1,10	0,80 to 1,10
Maximum pressure	3,5 bars	3,5 bars	4 bars	4 bars
Allowed temperature	85°C	85°C	90°C	16 i.e. from -20°C to +70°C - idem for storage
Protection index	IP 68 <input type="checkbox"/>	IP 68 <input type="checkbox"/>	IP 68 <input type="checkbox"/>	IP 6X
Power supply	12, 24, 48 VAC/VDC and 250 VAC 50/60 Hz	12, 24, 48 VAC/VDC and 250 VAC 50/60 Hz	12, 24, 48 VAC/VDC and 250 VAC 50/60 Hz	24 VAC/VDC - 10 mA or 12 VAC/VDC 100 mA
Cut-out power	16 (6) A (16 A resistive - 6 A inductive)	16 (6) A (16 A resistive - 6 A inductive)	16 (6) A (16 A resistive - 6 A inductive)	10 (4) A / Obligatory use with an intrinsic safety relay
Reverser microswitch	Silver/Nickel contacts	Silver/Nickel contacts	Silver/Nickel contacts	Gold plated contacts
Housing material	Copolymer polypropylene	Copolymer polypropylene	Copolymer polypropylene + HR HY vulcanized	Copolymer polypropylene + HR HY vulcanized
Cable 3 cond. 1mm ²	Neoprene or HR HY	Neoprene or HR HY	HR HY	HR HY
Size	Height 130 mm Ø 70 mm	Height 170 mm Ø 80 mm	Height 200 mm Ø 92 mm	Height 200 mm Ø 92 mm
Weight without cable	110 g	200 g	295 g	300 g
Cable weight	Neoprene 115 g/m - HR HY 110 g/m	Neoprene 115 g/m - HR HY 110 g/m	HR HY 110 g/m	HR HY 110 g/m
Adjustable ballast on cable (serie)*	Loaded resin 250 g	Loaded resin 250 g	Loaded resin 250 g	Loaded resin 250 g
Standard cable lengths (serie) (other lengths on request)	5, 6, 10, 13, 15, 20 and 25 m	5, 6, 10, 13, 15, 20 and 25 m	5, 6, 10, 13, 15, 20 and 25 m	5, 10, 15, 20, 25 and 30 m

* See « Advantages of external ballasts »

ADVANTAGES OF ATMI FLOAT LEVEL SWITCHES

- No maintenance needed**
Thanks to their biconical shape (against clogging) and to their omnidirectional operation.
- Accurate operation**
Thanks to the choice of specific adjustable external ballasts. The ballasts allow the float switch to work in a wide range of densities.
- Protection of the pumps' engines**
No jerking of the pumps' engines guaranteed thanks to our wide-switching-angle float switch models.
- A wide range to choose from**
For each specific need, ATMI proposes a specific float switch: 20 models available in 50 versions.
- Cable choice depending on your application**
Available cable types: PVC, Neoprene, EPDM, HR HY (High Resistance, exclusive to ATMI).
- Product customization**
Customized colors, branding, and packaging upon request and based on volume.

FLOAT SWITCHES FOR PUMP CONTROL

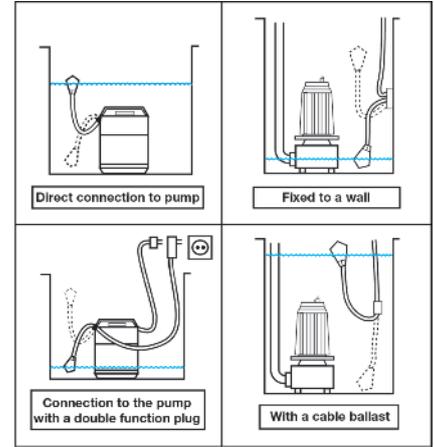
FOR LEVEL CONTROL OF INDIVIDUAL PUMPS

The BIP STOP and the AT are omnidirectional float switches designed for pump control (start and stop of pumps), the alarm, the water shortage stop, the filling stop, with one single device. These floats simply open or close the pumps power supply circuit either directly or through a relay. The distance between the float and the cable fastening point (1,50 m. max recommended depending on models) gives the regulation height. The BIP STOP is an economical level switch for use in lightly loaded liquids. It fits small pumps and has a +/- 110° switching angle. They are manufactured in large quantities.

The AT 120 (standard or HR HY) are bigger and can withstand intensive uses in heavily loaded liquids. They are intended for the professionals and fit any high power pumps through a relay. They have a switching angle of +/- 120°.

The ATS 165 has a very big switching angle (+/- 165°). An unique ATS 165 can replace 2 standard regulators even in very agitated liquids.

These devices are available in three versions: VR - VT - VS to meet all requirements (please, refer to glossary). Several types of ballasts are available in option.



IMPORTANT

Please refer to the "Accessories" section (on the back) for intrinsic safety relays, different types of ballasts, and cable clamps. All the SOBA float switches including the ACS certified model come with appropriate ballasts. For the BIP STOP, AT and TUBA float switches, the ballasts are optional.

For further information, please, refer to the individual technical sheets.

	BIP STOP	AT 120	AT 120 HR HY	ATS 165
				
Switching angle	+/- 110°	+/- 120°	+/- 120°	+/- 165°
	VR - VT - VS	VR - VT - VS	VR - VT - VS	VR
Operation mode	Omnidirectional	Omnidirectional	Omnidirectional	Omnidirectional
Allowed fluid density	0,70 to 1,15	0,70 to 1,15	0,80 to 1,10	0,70 a 1,10
Maximum pressure	3,5 bars	3,5 bars	4 bars	3,5 bars
Allowed temperature	85°C	85°C	90°C	85°C
Protection index	IP 68 <input type="checkbox"/>	IP 68 <input type="checkbox"/>	IP 68 <input type="checkbox"/>	IP 68 <input type="checkbox"/>
Power supply	250 VAC/VDC - 50/60 Hz	250 VAC/VDC - 50/60 Hz	250 VAC/VDC - 50/60 Hz	250 VAC/VDC - 50/60 Hz
Cut-out power	20 (8) A (20 A resistive - 8 A inductive)	20 (8) A (20 A resistive - 8 A inductive)	20 (8) A (20 A resistive - 8 A inductive)	20 (8) A (20 A resistive - 8 A inductive)
Reverser microswitch	Silver/Cd oxide contacts	Silver/Cd oxide contacts	Silver/Cd oxide contacts	Silver/Cd oxide contacts
Housing material	Copolymer polypropylene	Copolymer polypropylene	Copolymer polypropylene + HR HY	Copolymer polypropylene
Cable 2 or 3 cond. 1mm ²	Neoprene or HR HY	Neoprene or HR HY	HR HY	Neoprene or HR HY
Size	Height 130 mm Ø 70 mm	Height 170 mm Ø 80 mm	Height 200 mm Ø 92 mm	Height 152 mm Ø 95 mm
Weight without cable	105 g	195 g	295 g	325 g
Cable weight	Neoprene 115 g/m - HR HY 110 g/m	Neoprene 115 g/m - HR HY 110 g/m	HR HY 110 g/m	Neoprene 115 g/m - HR HY 110 g/m
Adjustable ballast on cable (option)*	Loaded resin 175 g or 250 g - Plastic 200 g - "clip" ballast 275 g	Loaded resin 250 g	Loaded resin 250 g	Loaded resin 350 g
Standard cable lengths (serie) (other lengths on request)	0,40 - 0,50 - 1, 3, 5, 10 and 20 m	1, 3, 5, 10 and 20 m	1, 3, 5, 10 and 20 m	5, 10, 15, 20 and 25m

* See « Advantages of external ballasts »

ADVANTAGES OF EXTERNAL BALLASTS

- They fix the rotation point of the float switch.
- They allow the float switch to adapt to eventual liquid turbulences.
- They allow the float switch to work in a wide range of densities. For higher densities, other than the ones indicated on the technical data sheets, please contact us.
- They are easily adjustable on the cable, especially the removable and «clip» ballasts that can be added at any time in pre-existing installations.
- The external ballasts ensure a very accurate level measurement.



TILT LEVEL SWITCHES FOR SOLIDS

FOR BULK SOLIDS LEVEL MEASUREMENT

The huge success of these devices is essentially due to the reliability and the simplicity of their installation. To stop the filling of storing areas or silos, three models of SOLIBA are available for applications in both non-hazardous and hazardous areas. The offered prices are notably low. All SOLIBA level switches work by tilting in connection with the filling system circuit. This method is obviously very simple, reliable, and inexpensive.

For high-risk areas, our SOLIBA Ex ATEX certified models «P» (dust) and «GP» (Gas and Dust) have a double housing and have been specially designed to withstand major explosion risks.

These 2 easy-to-install, economical devices stop the filling of silos in a very safe way and can also be used as high level «alarm», something which is often ignored but very useful ! We highly advise you to use our SOLIBA Ex tilt level switches.



ATEX

The Ex proof devices ATEX certified are now compulsory in the majority of silos. They allow in total security the stopping of the silos' filling and the installation of high level "alarms" as a complement of other level measurement systems. They are inexpensive and easy to install.

For further information, please refer to the individual technical sheets.

Operation mode

Use

Important specification

Allowed temperature

Protection index

Power supply

Cut-out power

Reverser microswitch

Housing material

Cable 3 cond. 1mm²

Size

Weight without cable

Cable weight

Adjustable ballast on cable (option)

Standard cable lengths (series)

(other lengths on request)

	SOLIBA	SOLIBA Ex (SF2000 ECO)	
			
	CE	CE	CE
Switching angle	$\pm 10^\circ$	$\pm 10^\circ$	$\pm 10^\circ$
	Non certified	"P" version	"GP" version
By tilting	By tilting	By tilting	By tilting
Bulk solids high level measurement	Bulk solids high level measurement	Bulk solids high level measurement	Bulk solids high level measurement
Only in "non explosive" areas	ATEX certified device for hazardous areas 20, 21, 22	ATEX certified device for hazardous areas 0, 1, 2 and 20, 21, 22	ATEX certified device for hazardous areas 0, 1, 2 and 20, 21, 22
From -40°C to 85°C	T6 i.e. from -20°C to $+70^\circ\text{C}$ idem for storage	T6 i.e. from -20°C to $+70^\circ\text{C}$ idem for storage	T6 i.e. from -20°C to $+70^\circ\text{C}$ idem for storage
IP 6X	IP 6X	IP 6X	IP 6X
250 VAC - 50/60 Hz	240 VAC - 50/60 Hz	24 VAC/VDC - 10 mA or 12 VAC/VDC 100 mA	10 (4) A / Protection with an intrinsic safety relay
20 (8) A (20 A resistive - 8 A inductive)	10 (4) A / Protection by means of a 1 A calibrated fuse	Gold plated contacts	Copolymer polypropylene + HR HY vulcanized
Silver / Cd oxide contacts	Silver / silver contacts	Copolymer polypropylene + HR HY vulcanized	HR HY
Copolymer polypropylene	Copolymer polypropylene + HR HY vulcanized	HR HY	Height 200 mm \varnothing 92 mm
Neoprene	HR HY	HR HY	495 g
Height 152 mm \varnothing 95 mm	Height 200 mm \varnothing 92 mm	Height 200 mm \varnothing 92 mm	495 g
462 g	495 g	495 g	HR HY 110 g/m
Neoprene 115 g/m	HR HY 110 g/m	HR HY 110 g/m	Loaded resin 250 g or 350 g
Loaded resin 250 g or 350 g	Loaded resin 250 g or 350 g	Loaded resin 250 g or 350 g	Adjustable 220 g / "clip" ballast 275 g
Adjustable 220 g / "clip" ballast 275 g	Adjustable 220 g / "clip" ballast 275 g	Adjustable 220 g / "clip" ballast 275 g	5, 10, 15, 20, 25 and 30 m
5, 6, 10, 13, 15, 20 and 30 m	5, 10, 15, 20, 25 and 30 m	5, 10, 15, 20, 25 and 30 m	

IMPORTANT

The SOLIBA Ex tilt level switch must be installed at the opposite side of the arrival of grain and at a certain distance from the silo wall in order to ensure an optimal tilting operation. The manual filling of the silo can affect the proper operation of the switch.



Please note that it is the customer's sole responsibility to determine whether or not its facility is located in a hazardous area. The ATEX hazardous environments are classified as follows: 0, 1, 2 for explosive gas atmospheres and 20, 21, 22 for explosive dust atmospheres. For this reason, it is highly recommended not to take any risks in this domain in order to avoid disastrous consequences.

ADVANTAGES OF THE SOLIBA TILT LEVEL SWITCHES

- **Enhanced resistance to dust**
IP 6X. The operation of the SOLIBA tilt level switch is not affected even when the device is completely covered with dust, unlike other types of level measurement devices.
- **No maintenance needed**
Thanks to their particular shape, no burial or clogging risk, no matter the density of the grain.
- **Energy saving**
The SOLIBA tilt level switches only operate when the high level is reached, which represents considerable energy and costs savings !

APPLICATION EXAMPLES

- **Grains and cereals**
Oat, soybean, rice, wheat, corn...
- **Animal food**
For pets, for birds and poultry, for cattle...
- **Powders**
Flour, sugar, cement...
- **Others**
Granules, stones, minerals, sawdust, pellets...

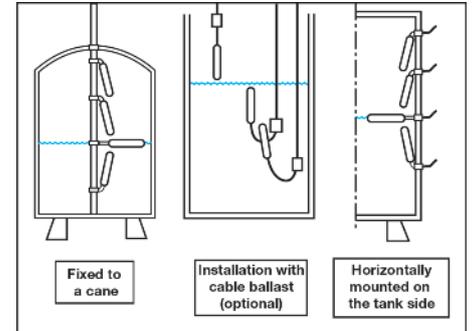
FLOAT SWITCHES FOR NARROW-ACCESS TANKS

FOR TANKS & CISTERNS HAVING SMALL-DIAMETER OPENINGS

The shape of the TUBA has been studied to allow its installation in small capacity and narrow access tanks and cisterns having narrow openings such as 1" or 1"1/4. Its small diameter enables the passing through the tank intake holes. The TUBA can be equipped with a gland on the electrical cable to ensure watertightness.

Generally speaking, they are used for the detection of several levels, for pump control, for alarm level detection, and other applications. Moreover, the Tuba are fitted with extra flexible high quality cable resistant to most liquid mixtures used in the industry.

Depending on the problem to solve, never forget to use a float level switch as a high level "alarm". Sometimes, it is also necessary to use Ex proof floats, ATEX certified, if your installation is located in a hazardous area.



IMPORTANT

Please refer to the "Accessories" section for intrinsic safety relays, different types of ballasts, and cable clamps. All the SOBA float switches including the ACS certified model come with appropriate ballasts. For the BIP STOP, AT and TUBA float switches, the ballasts are optional.

For further information, please refer to the individual technical sheets.

Operation mode	
Allowed fluid density	
Maximum pressure	
Allowed temperature	
Protection index	
Power supply	
Cut-out power	
Reverser microswitch	
Housing material	
Cable 3 cond. 0,75 mm ²	
Size	
Weight without cable	
Cable weight	
Adjustable ballast on cable (option)*	
Standard cable lengths (serie) (other lengths on request)	



Operation mode	Omnidirectional
Allowed fluid density	0,75 to 1,50
Maximum pressure	5,5 bars
Allowed temperature	85°C
Protection index	IP 68 \square
Power supply	250 VAC - 50/60 Hz
Cut-out power	12 (6) A (12 A resistive - 6 A inductive)
Reverser microswitch	Silver / Nickel contacts
Housing material	Copolymer polypropylene
Cable 3 cond. 0,75 mm ²	Neoprene
Size	Height 180 mm Ø 29 mm
Weight without cable	60 g
Cable weight	Neoprene 66 g/m
Adjustable ballast on cable (option)*	Loaded resin 175 g
Standard cable lengths (serie) (other lengths on request)	2, 3, 5, 10 and 20 m



Operation mode	Omnidirectional
Allowed fluid density	0,75 to 1,50
Maximum pressure	5,5 bars
Allowed temperature	85°C
Protection index	IP 68 \square
Power supply	250 VAC - 50/60 Hz
Cut-out power	12 (6) A (12 A resistive - 6 A inductive)
Reverser microswitch	Silver / Nickel contacts
Housing material	Copolymer polypropylene
Cable 3 cond. 0,75 mm ²	Neoprene
Size	Height 160 mm Ø 36 mm
Weight without cable	75 g
Cable weight	Neoprene 66 g/m
Adjustable ballast on cable (option)*	Loaded resin 175 g
Standard cable lengths (serie) (other lengths on request)	2, 3, 5, 10 and 20 m

INFORMATION

For further information about ATMI products, you can download several documents from our website

www.atmi.fr

GLOSSARY

- ACS: drinking water certification
- Switching angle: angle from the cable fastening point to the low and high level
- CE: European Community
- Ex : certification for hazardous areas
- GP: "Gas and Dust" version
- P: "Dust" version
- HR HY: High resistance
- VR: Emptying/Filling (3 wires)
- VS: Emptying + multifunction plug (2 wires + Ground)
- VT: Emptying (2 wires + Ground)

* See « Advantages of external ballasts »

ACCESSORIES

-  Plastic ballast 200 g
-  Loaded resin ballast 250 g and 350 g
-  Loaded resin ballast 175 g
-  Stainless steel ballast 230 g
-  "Clip" ballast 275 g
-  Removable ballast 220 g

IMPORTANT



The cable clamp is a cheap accessory highly recommended to prevent the cable from being damaged.

Distributor stamp:

Intrinsic safety relays are obligatory with the installation of ATEX certified Ex devices, as it is the case of our models SOBA Ex and SOLIBA Ex GP.