

FREQUENTLY ASKED QUESTIONS

MAGB1 BATTERY POWERED FLOWMETER

**QUESTION
ANSWER**

What are MAGB1 advantages?

Up to 5 years battery life, MODBUS RTU communication, battery conservation when the pipe is empty, 0.5% accuracy.

**QUESTION
ANSWER**

What is MAGB1 warranty life?

2 years.

**QUESTION
ANSWER**

What sizes is the MAGB1 available in?

From 20 to 250 mm. (other sizes on request)

**QUESTION
ANSWER**

What is the maximum battery life for MAGB1?

5 years.

**QUESTION
ANSWER**

Is it possible to exchange the battery? How?

Yes. Very simple, only opening the transmitter, unplugging the old one and plug in the new battery pack. The battery pack can be purchased as a spare part.

**QUESTION
ANSWER**

Is it possible to use a different battery type for MAGB1?

We strongly recommend using the battery supplied and approved by the manufacturer to keep the guaranteed specifications of MAGB1 as declared in our manual. Battery can be ordered as Arkon Battery Pack 39000.

**QUESTION
ANSWER**

What features has the MAGB1?

USB communication using MODBUS RTU and an isolated binary output as standard. GSM-SMS communication extra module available

**QUESTION
ANSWER**

Is the MAGB1 available in compact and remote versions? What is the maximum length of the cable for the remote version?

Yes. MAGB1 is available in both versions. Maximum cable length is 6 meters.

**QUESTION
ANSWER**

What applications are recommended for the MAGB1?

It is suitable for any application where power supply is not available and needed accuracy is 0.5% or worse. Some example could be irrigation applications.

**QUESTION
ANSWER**

What is the MAGB1 accuracy?

For sizes 20 to 150mm: 0.5% from reading values for a velocity of, 0.5-10 m/s.
For sizes 200-250mm: 2% from reading values for a velocity of, 0.5-10 m/s.

**QUESTION
ANSWER**

What types of mounting kits are available for MAGB1?

We offer the same types of mounting kits as for the type MAGX2. It means – Wall, Panel, DIN rail. Nevertheless from year 2010 we offer mounting kits made of polyamide with 30% part of glass.

**QUESTION
ANSWER**

What factors affect the MAGB1 battery life?

The battery consumption is determined by pulse output usage (if this is high), connection to the computer (if connected for long periods, the consumption is higher), excitation frequency - the faster the excitation the more consumption, having the display switched on consumes the battery faster. The highest consumption is in the excitation frequency:

Excitation frequency	Battery life in months
1/60	60
1/30	60
1/15(from factory)	48
1/5	36
1,5625	8

**QUESTION
ANSWER**

Is the battery life affected by the flowmeter size?

No, battery life is the same for all flowmeter sizes.

**QUESTION
ANSWER**

Which solution can ARKON offer for GPRS communication for battery powered MAGB1?

Arkon can develop a customised solution for each installation according to end user requirements. Some examples are:

- Bidirectional SMS communication. The flowmeter sends flow and totalizers by SMS at specified intervals and the user can also request information from the flowmeter via SMS.
- SMS communication from the flowmeter: The flowmeter sends flow and totalizers by SMS at specified intervals

**QUESTION
ANSWER**

Does the use of the GSM module influence the battery life?

Yes, all GSM modules are battery consuming. Consumption levels of the battery depend on the selected solution. For the solutions with the highest consumption Arkon can develop an external battery system.

**QUESTION
ANSWER**

Is Arkon currently offering GPRS module for MAGB1?

GPRS modules can be offered as a custom made solution. However, due to high power consumption we would not recommend this solution. We strongly recommend GSM-SMS communication modules, which has a much lower consumption and makes it more suitable for battery powered flowmeter applications

**QUESTION
ANSWER**

Is any extra software needed for GSM-SMS solution?

No, you can use your mobile phone or SMS server

**QUESTION
ANSWER**

How does MAGB1 measure? Is just one measurement every X seconds? It makes an average of measurements? Which are conditions for 5 years life of batteries?

The flowmeter takes a sample every X seconds. This sample time is selectable (60s, 30s, 15s, 5s, 1,5625Hz, 3,125Hz, 6,25Hz). Default setting for sample time is 15 seconds.

To get the flow rate the flowmeter does the average of the last Y samples. The number of samples used for the average is selectable from 1 to 30 samples. Default setting for number of samples used to get the flow rate is 1 sample.

**QUESTION
ANSWER**

How many electrodes have MAGB1 and which functions have these electrodes?

MAGB1 has 4 electrodes (2 electrodes for measurement and 2 electrodes for earthing)

**QUESTION
ANSWER**

What is the maximal totalizer value?

The max value of the totalizer is 999 999 999 m3. After that the totalizer will be zero and it starts count from zero again.

**QUESTION
ANSWER**

How many digits has the MAGB1 display? How many decimals can be shown?

MAGB1 display has 10 digits for totalizer and for flowrate.

Totalizer can show from 3 to 0 decimals, depending on the total value. Number of decimals showed is not possible to be set by user.

Flowrate can show from 3 to 0 decimals. Number of decimals showed can be set by user

**QUESTION
ANSWER**

Which is the standard material for MAGB1 electrodes?

Stainless steel 1.4571 (316Ti)

**QUESTION
ANSWER**

What are the conditions for 5 years life of batteries?

- Excitation frequency 30 or 60 sec
- Display on time set to 60 sec
- Fast excitation button: off
- Not connected to computer.
- Pulse output not used.
- Temperature 20 deg C

**QUESTION
ANSWER**

What temperatures can the MAGB1 accept?

For ambient temperature: -20° to +60°

For medium temperature: 0° to +70°

For high medium temperature: PTFE liner and transmitter on remote version: 0° to 130°

QUESTION
ANSWER

Is the totalizer of the MAGB1 always counting?
No, in the menu it is possible to select if the totalizer should count or not.

QUESTION
ANSWER

How many totalizers has MAGB1 and how do they work?
It has 4 totalizers:
- *Positive volume*: It counts only the flow going on the direction set as "flow direction". It can only be reset to zero using factory settings password
- *Negative volume*: It counts only the flow going on the opposite direction to the "flow direction" set. Only can be reset to 0 using factory settings password
- *Total volume*: it counts any flow regardless of the direction. So that value will be the addition of *Total+* and *Total-*. Only can be reset to 0 using factory settings password
- *Auxiliary volume*: It counts as *Total volume* but it can be reset to 0 in user settings

QUESTION
ANSWER

Is it MAGB1 suitable to be use with all liquids?
No, as all electromagnetic flowmeter, MAGB1 is only suitable for use with liquids with a minimum conductivity of 5µS

QUESTION
ANSWER

Where are MAGB1 calibrated?
All MAGB1 are calibrated on external calibration rigs traceable to international standards.

QUESTION
ANSWER

Why is MAGB1 calibrated externally?
To guarantee the impartiality of the calibrations

QUESTION
ANSWER

Is it possible to order a MAGB1 without calibration?
No, calibration has to be made as a quality control and verification of meters functionality. The calibration certificate is the proof of accuracy of the flowmeter and it is also the last verification of the flowmeter.

QUESTION
ANSWER

What does Arkon recommend to do when a MAGB1 needs to be calibrated?
All MAGB1 are delivered calibrated and does not need to be calibrated again. However if you want to calibrate them again Arkon has available an explanatory video. Please contact Arkon sales office for more details

QUESTION
ANSWER

How is it possible to know when the batteries are close to their lifetime?
MAGB1 will show an alert with the shape of a empty battery on the screen.

QUESTION
ANSWER

How can the MAGB1 be switched off?
By disconnecting the battery.

QUESTION
ANSWER

How is the MAGB1 delivered (Switched on or off)?
The flowmeter is delivered with the battery connected. However if customer knows the meter is going to stay on stock for a long time it is possible to send the flowmeter with the battery disconnected.

QUESTION
ANSWER

For which installations is it necessary to use earthing rings?
It is necessary to use them for all installations in plastic pipes.

QUESTION
ANSWER

Which is the most common cause of fluctuations on the readings?
A bad earthing of the flowmeter, when there are different potentials between the units part of the loop.