

FREQUENTLY ASKED QUESTIONS

MAGX2 Modular Design Flowmeter

QUESTION ANSWER

What are the main differences between MAGX2 and MAGX1?

0.2 % accuracy, real time clock is included in motherboard without any extra price. Memory card is replaced for a standard SD card, new pulse module which combines MAGX1 binary and frequency modules, new connection between sensor and transmitter.

QUESTION ANSWER

What are MAGX2 advantages?

The modular design allows you to create your own configuration, customized to each application. It also offers the latest communication options as USB, TCP/IP or GPRS, all via MODBUS RTU communication. Data-logger free of charge (SD card), internal relays for PULSE output, RTC clocks

QUESTION ANSWER

What is MAGX2 warranty life?

2 years

QUESTION ANSWER

What sizes is the MAGX2 available in?

From DN10 to DN1000 on request

QUESTION ANSWER

What features has the MAGX2?

Outputs available are pulse and current output.

One communication from RS232, RS485, USB, Bluetooth, TCP/IP, GPRS or GSM-SMS can be selected

QUESTION ANSWER

How many communication modules can be used at the same time?

Only one communication module can be used/installed at the same time.

QUESTION ANSWER

Which information can be and which cannot be sent via GPRS from the flowmeter:

GPRS module can send:

- Instantaneous flow on real time measurement
- Fluid temperature
- Alarms

GPRS module cannot send:

- Average flow be sent in a given time interval
- Total flow for a given interval
- Historic values

GPRS communication also allows:

- To connect online and see the equipment in real time
- To change parameters online

QUESTION ANSWER

How many analogue outputs modules can be used at the same time?

MAGX2 offers 2 different output modules, 4-20mA current loop module and Pulse module. They are compatible and can be used at the same time.

QUESTION ANSWER

Does the MAGX2 installation require any special technical knowledge?

For correct installation and performance a minimum knowledge about electromagnetic flowmeter technology is required.

QUESTION

Is the MAGX2 available in compact and remote versions? What is the maximum length of the cable for the remote version?

ANSWER

Yes. MAGX2 is available in both versions. Due to intelligent sensor we can offer maximum cable length up to 500 meters depending on the application.

QUESTION

What applications, are recommended for the MAGX2?

ANSWER

MAGX2 is suitable for any application for magnetic flowmeters, from the simplest ones to the most technologically demanding ones.

QUESTION

What liner and electrodes materials are available for the MAGX2?

ANSWER

PTFE, hard rubber, soft rubber, hygienic rubber and E-CTFE are available for the liner. Other materials can be supplied on request. Stainless steel, hastelloy C, tantalum, titanium and platinum are available for electrodes materials.

QUESTION

What is electrode cleaning and how does auto-electrode cleaning work?

ANSWER

If mechanical cleaning is not possible, MAGX2 has an electrolytic method to clean electrodes. An electrolytic method is advantageous for its simplicity; however it can only be applied for the contamination that can be removed by electrolysis (Low contamination and deposit).

24VAC voltage is applied directly to sensor electrodes to clean them. The time that the voltage is applied, is selectable for user from 1 to 9999 seconds.

It is possible to set it on User settings>Electrode cleaning>

There are three possibilities

- It is possible to set the flowmeter for automatic cleaning of the electrodes for a selected time at any time that the unit is powered on. Go to User settings>Electrode cleaning>clean time and set the time required for cleaning, in seconds. Then go to User settings>Electrode cleaning>power and set "on start".
- It is possible to start and stop manually the cleaning process: go to User settings>Electrode cleaning>power and set "on" for the cleaning to start and "off" to stop the cleaning.
- It is possible to set the time that cleaning will last, and then start the cleaning manually. The cleaning will stop automatically once the cleaning time is past. Go to User settings>Electrode cleaning>clean time and set the time that the cleaning should last. Then go to User settings>Electrode cleaning>Start now and click "yes".

QUESTION

Is it possible to set the electrodes cleaning at a predefined time, for example, to activate cleaning every 10 days or 100 hours?

ANSWER

It is not possible to set it periodically.

QUESTION

How many electrodes have MAGX2 and which functions have these electrodes?

ANSWER

MAGX2 has 4 electrodes (2 electrodes for measurement and 2 electrodes for earthing).

QUESTION

What sensor material and sensor connections are available for MAGX2?

ANSWER

Standard sensor material is carbon steel. For some sizes Stainless steel 1.4301 is available for flanges or sensor body. DIN, ANSI, JIT, Tri-clamp, wafer, DIN 11851, table E and table D connections are available on request.

QUESTION

What is the MAGX2 accuracy?

ANSWER

0.2% of actual values for a velocity of 0.5-10 m/s.

QUESTION

What is the accuracy below 0,5m/s?

ANSWER

0.33l/s-0.50/s will still be $\pm 0.2\%$. 0.1m/s-0.330/s might be higher but will not exceed $\pm 1\%$. Below 0.1 is unspecified. The fact is, lower velocity means worse accuracy.

QUESTION

What types of mounting kits are available for MAGX2?

ANSWER

We offer the same types of mounting kits as we used to offered for the type MAGX1. 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 is the difference between PS90-250VAC, PS12VDC and PS24VDC?

It is physically 3 different modules - each with another option. You just need to know which power you have in the installation and you pick-up the right power supply module.

**QUESTION
ANSWER**

Is the 4-20mA current output factory set?

No, you need to set the current output in flowmeter's menu yourself:

Go to User settings->Current Loop->Setting Signal and set "Direct driving"

Then go to User settings->Current Loop->Direct driving and specify needed range (note that it is independent of the min. and max. flows of the flowmeter).

**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 have MAGX2 display? How many decimals can be showed?

MAGX2 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 MAGX2 electrodes?

Stainless steel 1.4571 (316Ti).

**QUESTION
ANSWER**

Is the current 4-20mA output module delivered calibrated from factory?

Current 4-20mA is pre-calibrated from factory however is possible to trim the calibration it by customer according to his needs.

First we recommend to check if the accuracy of the module is enough for you applications:

The flowmeter posses a possibility of flow simulator. Service settings (pass2426)->Flow

simulation->ON; Service settings (pass2426)->simulated flow - set value according to expected flows.

Then connect your device that is reading 4-20mA - PLC or any other loop reader. If the accuracy is enough for you - you do not have to calibrate the output.

In the case you need to calibrate it:

Lets imagine that you need an output according to Qn of 5m3/hr

you set the Current output for Direct Driving and constants as:

4mA - 0m3/hr

20mA - 5m3/hr

then when the flow is 2,5m3/hr you should get 12mA.

Set simulator to 2,5m3/hr and check the output.

You may measure i.e. 12,071mA - the calibration serves you to trim the output to 12mA

(0,591% different than calculated). Depends on sensitivity of connected device you can leave it as it is or you can calibrate it .

(user guide page 17).

**QUESTION
ANSWER**

Which temperatures can resist MAGX2?

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 MAGX2 version approved for Hazardous Area?

No, currently Arkon does not offer any flowmeter approved for Hazardous Area.

**QUESTION
ANSWER**

Is there any MAGX2 version which includes HART?

No, currently Arkon does not offer any flowmeter including HART protocol.

**QUESTION
ANSWER**

Is the totalizer of the MAGX2 always counting?

No, in the menu is possible to select if the totalizer should count or not.

Also when the cleaning electrodes function is activated the totalizer is not counting.

QUESTION
ANSWER

How many totalizers has MAGX2 and how do they work?

It has 4 totalizers:

- *Positive volume*: It only counts the flow going in the direction set as “flow direction”. It can only be reset to zero using the service settings password.
- *Negative volume*: It only counts the flow going in the opposite direction to the “flow direction” set. It can only be reset to zero using service settings password.
- *Total volume*: it counts any flow regardless of the direction. So that value will be the addition of - *Total+* and *Total-*. It can only be reset to zero using service settings password.
- *Auxiliary volume*: It counts as *Total volume* but it can be reset to zero in user settings.

QUESTION
ANSWER

Is the MAGX2 suitable for use with all liquids?

No, as all electromagnetic flowmeter, MAGX2 is only suitable to be use with liquids with a minimum conductivity of 5µS.

QUESTION
ANSWER

Where are MAGX2 calibrated?

All MAGX2 are calibrated on external calibration rigs traceable to international standards.

QUESTION
ANSWER

Why is MAGX2 calibrated externally?

To guarantee the impartiality of the calibrations.

QUESTION
ANSWER

Is it possible to order a MAGX2 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 the MAGX2 needs to be calibrated?

All MAGX2 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

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.