Gmail Pascal Roobrouck <pascal.roobrouck@gmail.com>

Kemet web technical request WR#-101775

2 berichten

Ivana Ivanovska <Ivana.Ivanovska@yageo.com> 23 januari 2023 om 11:05
Aan: "pascal.roobrouck@gmail.com" <pascal.roobrouck@gmail.com>

Good afternoon,

Thank you for your web enquiry please let me attempt to provide some form of answers to your questions regarding our environmental sensors.

Our environmental sensors are just one part of a potential gas monitoring solution, they are not modules.

In order to create a gas analysis system you would be required to design and manufacture a gas cylinder of suitable gas path length to measure the gas or gases you are interested in.

Each one of these sensor has an optical wavelength which aligns with certain gases, these filters have very narrow bandwidths which means we can detect very accurately the difference between adjacent gases.

We have in the past outlined to some of our customers that they might consider protective windows in order to separate the sensor from potentially corrosive gases, you will hear the same advice from suppliers of IR black body devices (which you will also require for your design).

The system itself is very simple and easy to design, but some customers do not have the resources to make these steps.

You will require a sensor matched to the optical wavelength of the gas you want to measure

You will require an IR light source that provides light to encompass the optical wavelength of the gas

You will require a gas cylinder of suitable length to capture enough gas to make measurement possible

You may need protective windows to ensure the longevity of your sensor and IR light source

I also provide a PDF of the simple principles of NDIR gas measurement

Please find the link below to our engineering center where you can find many resources to help your design.

Environmental Sensors | Engineering Center (kemet.com)

Finally I provide a weblink to webbook.nist.gov, this site allows you to search for the chemical formulae or gas names, you can then inspect how those gases behave with regard to IR spectrum.

This will provide you the CWL “center wavelength” of the gases you are interested in.

After this you can view our datasheets and work out which sensors are best suited to your applications.

I also include our manual.

Please advise if additional help needed.

Please find the reference manual for the generic I2C interface.

All I2C chips “regardless of end function” use the same I2C interface since we use the same ASIC within the SMD package.

I also include some reference code that should also help you looking for working examples and some code samples and also a flow chart of setting up the device.

These should help

Also on the following link you can find some more useful information regarding our sensors.

https://ec.kemet.com/environmental-sensors/

I would kindly ask you to share with us more details regarding your project.

End Customer- _____

Project- _____

Application - _____

Start Operation Production (SOP) - _____

Estimated annual usage - _____

Can you please advise exactly how would you like to test the part?

Do you have the whole system already?

Thank you very much in advance for you corporation.

Ivana Ivanovska

Application Design Engineer

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KEMET's lead time quotes are real time and subject to change.

6 bijlagen

Sensor Reference Manual.pdf
1369K

USEQ.h
5K

Backplane_DD.txt
43K

SMD I2C code.txt
6K

SoftWire_Backplane.ino.txt
37K

Register Initialization.docx
329K

Pascal Roobrouck <pascal.roobrouck@gmail.com> 23 januari 2023 om 14:09
Aan: Ivana Ivanovska <Ivana.Ivanovska@yageo.com>

Hello Ivana,

Thank you for your extensive response.
I was only looking at the motion detection sensor, I think it can be used also for other applications than the gas monitoring solution you refer to.

The documents you provided look like what I need. So I'll investigate them, and if suitable I'll order some sensor samples to start prototyping.
If needed, I can contact you again for more information.

Have a nice day,

Pascal Roobrouck

Op ma 23 jan. 2023 om 11:05 schreef Ivana Ivanovska <Ivana.Ivanovska@yageo.com>:
[Tekst uit oorspronkelijke bericht is verborgen]

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Met vriendelijke groeten

Pascal Roobrouck

Instructables | **Hackster** | **Github** | **Twitter**