Gmail **Steve Nixon <steve.nixon.viamed@googlemail.com>**

Re: Connections required for pressure pot cap

1 message

Axel Solbach <axel.solbach@ecsense.de> 26 February 2018 at 09:53
To: Steve Nixon <steve.nixon@viamed.co.uk>
Cc: "peter.koller" <peter.koller@ecsense.de>, Bernd Lindner <b.lindner@bluepoint-medical.com>, Jens Schwarz <j.schwarz@sensatronic.com>, John Lamb <john.lamb@viamed.co.uk>

Dear Steve,
I try to sum up all three mails together:

1) Electrical contact for the Sensors: We need 3 wires/contacts for each sensor. We discussed 3 Sensors but I guess it may be possible to use the 3x (2 Pin Molex) Cap for 2 Sensors. This is not what I would use for performance tests but I guess it will be good enough to see what we have to expect at pO2 = 2 Bar and p_abs ~ 10Bar. If a 3x3 wire cap is easy to build then this would be definitely the better choice. I would avoid Coax cable. Maybe this "stacking straight pin headers" will work - if they have the 2.54mm grid they will fit to our sensors and many kind of standard connectors. Their long blank pins should help to make a good sealing.

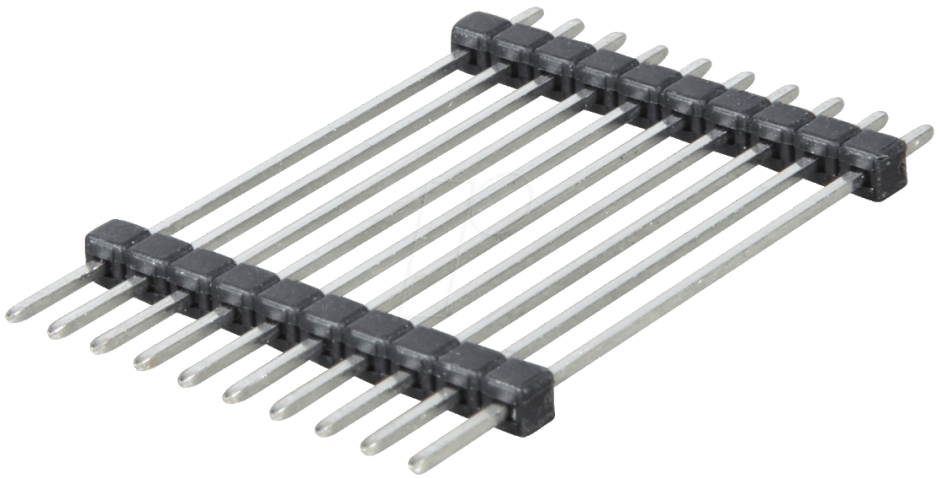
2) Mounting - I do not know what the benefit of the variable height may be - thus I would think we do not need that as long the sensor support is fixed somewhere else.

3) Pressure Pot / Testing Unit. We need to pick the sensor raw signals directly to our equipment since we measure a current instead of a voltage and use a control circuit to operate the sensor. Thus the choice of the test unit would be a question of the pressure range available. We have gas bottles with 100% O2 and N2 which we can apply up to 12 Bar. The we have clean dry air which we could apply up to 4 Bars. We could use our compressor directly - then we have 6-8 Bars... oilfree but with the typical amount of moisture.
I guess all of them will be working as long as the cap with the sensors fits inside. I would prefere the "custom cell tester" since it will give us the opportunity to test up to 10 bars. Thus we can check the whole relevant range (p_abs = 1 - 10 Bars, pO2 = (0) 0.2 .. 2 Bars)

4) connecting hose - if you do have something establish the connection to the testing unit that would be great. Typically we use 6mm Swagelok but we have also some 1/4 Swagelok, G1/4 connectors in use.

If you have further questions call me or drop me a mail.

Best regards,
Axel



2018-02-23 15:58 GMT+01:00 Steve Nixon <steve.nixon@viamed.co.uk>:

> Hi Peter / Axel
>
> Further to our discussions, we either need to adapt an existing version of the pressure pot cap or make a new one.
>
> We have three existing types:
>
> 3 connectors - mono 3.5mm jack (picture on previous email)
> 3 connectors - SMB co-ax (see attached picture)
> 3 connectors - 3 way Molex , just the two outer pins connected (see attached picture)
>
> Each of the above are connected to a four pin connector, signal pins for each sensor plus a shared ground connection (see attached picture).
>
> How many pins of your PCB need to be connected, 2 or 3? I believe that two are usually used, but you also have a third gating pin?

> Pin S
> Pin R
> Pin C
>
> How many sensors would you wish to test at a time?
>
> For a custom made pressure pot cap we could either mount directly to the cap or on a variable height threaded platter (see attached picture).
>
> Regards
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> --
> Steve
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> Steve Nixon
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