

RH sensor troubleshooting**Originated by: Sonya Ruth Newell (UC Davis) on July 14, 2011****Originated by: Sonya Ruth Newell (UC Davis) on Thu, 14 Jul 2011**

Hello.

I am currently trying to troubleshoot some issues we've been having at Bodega Marine Lab with our Rotronic MP101A relative humidity/temp sensors, and I was wondering whether anyone on this list had encountered a similar set of problems, or had any suggestions for me.

We have had a recurring problem where after being deployed, the RH sensor operates correctly for a while (we have a NOAA met station nearby which I check readings against), but at some point the sensor starts reading over 100% (this time it was around 108-110%), and stays in that range, regardless of the met conditions. The temperature sensor continues to operate correctly throughout.

I removed the probe and swapped in another, more recently calibrated MP101A. The new probe operated correctly for a couple of days, and then suddenly started reading 101-102% RH, and has stayed in that range onwards. Again, the temperature readings continue to be correct. The filters on both probes were clean and intact.

Previous Marine Techs at BML have informed me that this has happened in the past as well. However, with the cost of servicing a Rotronics MP101A at \$600 (& \$1100 for a new one) I'm wondering whether it might make more sense to purchase an RM Young RH probe (\$800.)

I have taken apart the naturally aspirated shield in which the probe is mounted, but there wasn't anything inside or outside that would trap water & saturate the probe. There are motorized aspiration shields available, but they are quite costly (\$1500-\$2000 Rotronics, \$650 RM Young.)

If you have experience with this type of problem with RH sensors, or if you can offer a perspective on the relative merits of Rotronics vs. RM Young RH sensors, I would love to hear from you. Any information or advice would be greatly appreciated!

Thanks very much for your time!

Best wishes,
Sonya

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Reply from: Steven Hartz on 14 Jul 2011

Sonya

Vaisala sells a heated RH probe. <http://www.vaisala.com/Vaisala%20Documents/Application%20notes/WarmedProbeSensorTechnologyforCondensingConditions.pdf>

Coastal Environmental put a GoreTex shield over the RH sensor on my old Weather Pak.

Cheers

Steven Hartz
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