DAN SYSTEM CALIBRATION PROCEDURE
TEMPERATURE

BACKGROUND

Any single probe connected to a Data Acquisition Networks (DAN) system is able to measure one variable, and for this application the variable being measured is temperature.. While each probe used may be stable, it is wise to make calibration checks regularly. The time between calibration checks is as laid down in your standard operating procedures. To check the calibration of the system, the DAN product has an inbuilt simple procedure as detailed below.

In order to calibrate temperature, an ice slurry method will be used.

IMPORTANT - PRELIMINARY

AT LEAST 40 MINUTES BEFORE COMMENCING THE CALIBRATION PROCEDURE SET THE REPORTING INTERVAL TO 3 MINUTES AND CHECK BEFORE PROCEDING THAT DATA IS BEING RECEIVED AT 3 MINUTE INTERVALS.

PREPARATION - You will need:

A container (plastic cup or similar) that is sufficiently large to fit over the stainless steel probe to be calibration checked. Each probe protrudes from beneath a plastic case, and a piece of cord attached to the top of the container and able to link over the top of the plastic case will facilitate holding the probe in the ice slurry. Adjust the cord so that when in place, the probe is 1 to 2 cm from the bottom of the container.

An adequate amount (minimum of one cup per probe to be calibrated) of CRUSHED ice (not ice cubes)

Access to cold water

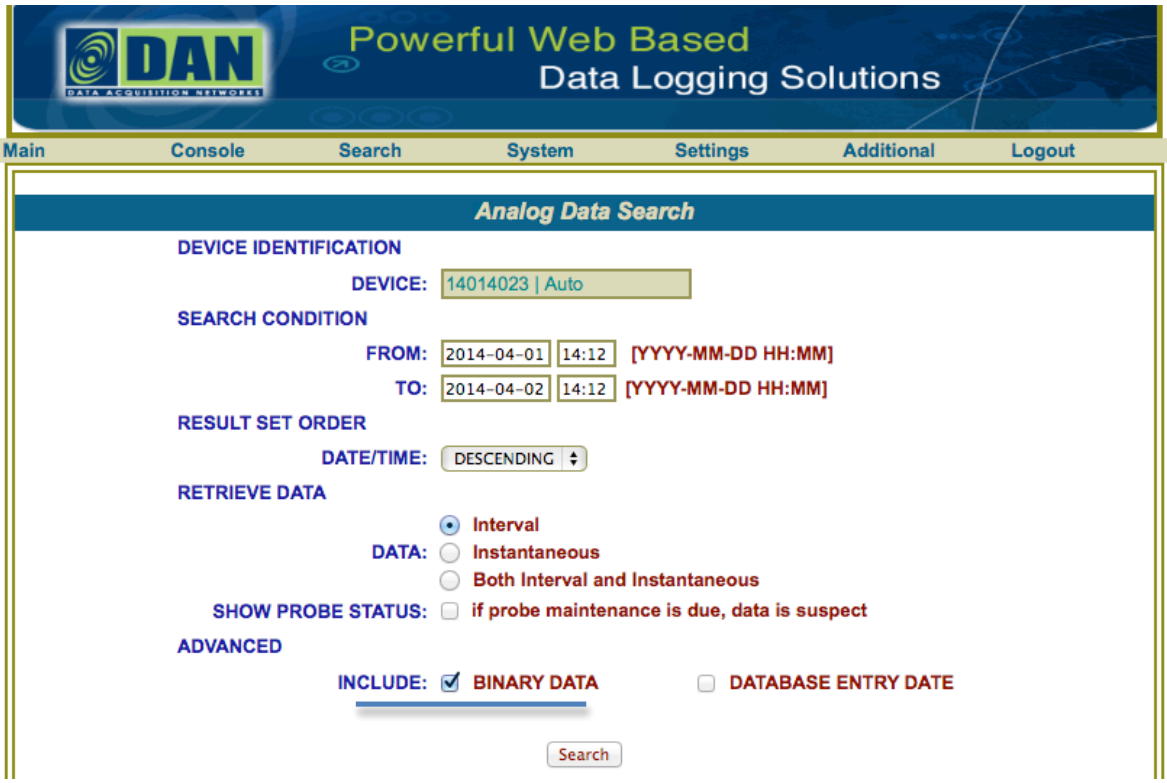
PREPARE AND LOCATE THE ICE SLURRY

Fill the container with crushed ice (ice cubes will not be effective)
Fill the container with cold water to the same level or slightly higher than the crushed ice
Add additional crushed ice, the solution should be thick with ice
Insert the probe into the container and stir the slurry
Hook the cord over the top of the plastic case and leave
Note the time

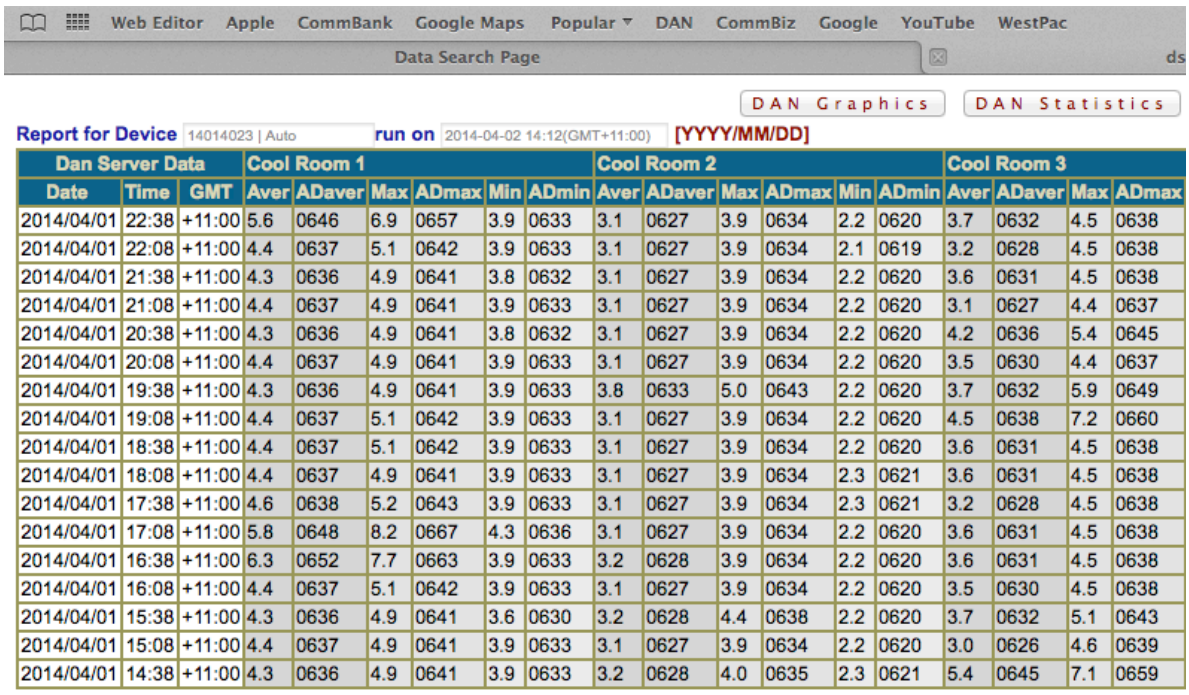
ABN 92 125 999 868
12/4A Meridian Place BELLA VISTA NSW 2153
T: 1300 326 328 **E:** sales@danmonitoring.com **International T:** +61 415 180 818
W: www.danmonitoring.com

CHECK TEMPERATURE READING

Log onto the DAN website and under the tab ‘Search’ enter the ‘Analogue Data’ search mode. Request ‘BINARY DATA’ to be included in the search and activate the search.



Note the search results for the time period following the time noted above.



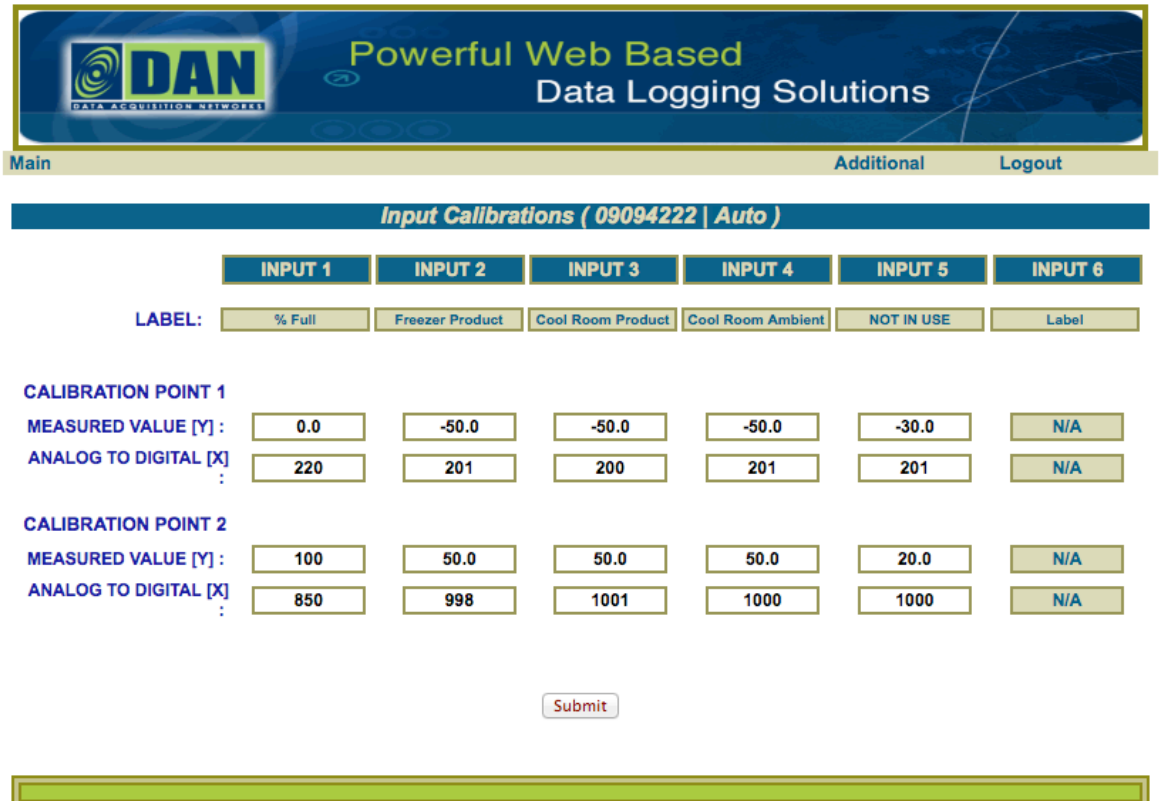
Dan Server Data			Cool Room 1						Cool Room 2						Cool Room 3			
Date	Time	GMT	Aver	ADaver	Max	ADmax	Min	ADmin	Aver	ADaver	Max	ADmax	Min	ADmin	Aver	ADaver	Max	ADmax
2014/04/01	22:38	+11:00	5.6	0646	6.9	0657	3.9	0633	3.1	0627	3.9	0634	2.2	0620	3.7	0632	4.5	0638
2014/04/01	22:08	+11:00	4.4	0637	5.1	0642	3.9	0633	3.1	0627	3.9	0634	2.1	0619	3.2	0628	4.5	0638
2014/04/01	21:38	+11:00	4.3	0636	4.9	0641	3.8	0632	3.1	0627	3.9	0634	2.2	0620	3.6	0631	4.5	0638
2014/04/01	21:08	+11:00	4.4	0637	4.9	0641	3.9	0633	3.1	0627	3.9	0634	2.2	0620	3.1	0627	4.4	0637
2014/04/01	20:38	+11:00	4.3	0636	4.9	0641	3.8	0632	3.1	0627	3.9	0634	2.2	0620	4.2	0636	5.4	0645
2014/04/01	20:08	+11:00	4.4	0637	4.9	0641	3.9	0633	3.1	0627	3.9	0634	2.2	0620	3.5	0630	4.4	0637
2014/04/01	19:38	+11:00	4.3	0636	4.9	0641	3.9	0633	3.8	0633	5.0	0643	2.2	0620	3.7	0632	5.9	0649
2014/04/01	19:08	+11:00	4.4	0637	5.1	0642	3.9	0633	3.1	0627	3.9	0634	2.2	0620	4.5	0638	7.2	0660
2014/04/01	18:38	+11:00	4.4	0637	5.1	0642	3.9	0633	3.1	0627	3.9	0634	2.2	0620	3.6	0631	4.5	0638
2014/04/01	18:08	+11:00	4.4	0637	4.9	0641	3.9	0633	3.1	0627	3.9	0634	2.3	0621	3.6	0631	4.5	0638
2014/04/01	17:38	+11:00	4.6	0638	5.2	0643	3.9	0633	3.1	0627	3.9	0634	2.3	0621	3.2	0628	4.5	0638
2014/04/01	17:08	+11:00	5.8	0648	8.2	0667	4.3	0636	3.1	0627	3.9	0634	2.2	0620	3.6	0631	4.5	0638
2014/04/01	16:38	+11:00	6.3	0652	7.7	0663	3.9	0633	3.2	0628	3.9	0634	2.2	0620	3.6	0631	4.5	0638
2014/04/01	16:08	+11:00	4.4	0637	5.1	0642	3.9	0633	3.1	0627	3.9	0634	2.2	0620	3.5	0630	4.5	0638
2014/04/01	15:38	+11:00	4.3	0636	4.9	0641	3.6	0630	3.2	0628	4.4	0638	2.2	0620	3.7	0632	5.1	0643
2014/04/01	15:08	+11:00	4.4	0637	4.9	0641	3.9	0633	3.1	0627	3.9	0634	2.2	0620	3.0	0626	4.6	0639
2014/04/01	14:38	+11:00	4.3	0636	4.9	0641	3.9	0633	3.2	0628	4.0	0635	2.3	0621	5.4	0645	7.1	0659

If the values presented are 0.0 DegC, or within the allowed tolerance, there is no need to continue past this step. Should the values be unsatisfactory, continue.

ADJUSTING THE DAN READING

Note the binary reading shown against the unsatisfactory value.

Return to the ‘Main Index’ and under the tab ‘Additional’ enter the ‘Calibration’ mode. Existing calibration detail will be displayed for inputs in use (Maximum is 5).



For the input being calibrated, insert into CALIBRATION POINT 1, the actual MEASURED VALUE (0.0) and into the ANALOGUE TO DIGITAL box the binary data as noted from the search of data above.

‘Submit’ the data and confirm ‘OK’. Value is now calibrated.

Note: If more than one input is to be calibration checked, they can both be conducted at the same time.