

HP 3458A - Feature #1285

Measure stability per SN 18

11/16/2015 05:04 AM - tin

Status:	In Progress	Start date:	11/16/2015
Priority:	Normal	Due date:	11/26/2015
Assignee:	tin	% Done:	0%
Category:		Estimated time:	0.00 hour
Target version:			

Description
 **Computation of the drift rate of calibration constant 72 (will take 1 week to complete):
 $C = [(A - B) * 1000000] / [A * D]$ ppm per day
 A = the value of the calibration constant 72 (following an ACAL on day 1 of the test)
 B = the value of calibration constant 72 (following an ACAL on the last day of the test)
 C = the drift rate of calibration constant 72 in ppm per day
 D = the number of test days where the instrument was powered on during the test interval
 (See Note # 1)
 If the absolute value of C is > 0.43 ppm per day, then the A3 assembly in your instrument needs to be replaced.

Complete an ACAL just prior to obtaining the present value of Calibration Constant 72

Date	CAL 72 after ACAL	ppm Deviation	TEMP?
11/16	981.648769E-3	Initial	+41.3° C
11/16 +3h	981.652110E-3	+0.334	+35.5° C
11/17	981.652541E-3	+0.043	+37.0° C
11/17 7PM	981.665868E-3	+1.333	+40.1° C
11/18			

Date	CAL 72 after ACAL	ppm Deviation	TEMP?	Deviation from day 0, ppm
1/18	997.711415e-03	0	32.5	0
1/19	997.711486E-03	+0.0712	31.9	+0.0712
1/20	997.711441E-03	-0.0451	33.8	+0.0261
1/21	997.711391E-03	-0.0501	31.5	-0.0241
1/24	997.711709E-03	+0.3187	30.6	+0.2947
1/25	997.711798E-03	+0.0892	31.9	+0.3839
1/26	997.712097E-03	+0.2997	29.9	+0.6836
1/28	997.711577E-03	-0.5212	32.3	+0.1624
1/29	997.711566E-03	-0.0110	33.0	+0.1513
2/02	997.711546E-03	-0.0200	32.7	+0.1313
2/03	997.711203E-03	-0.3438	34.6	-0.2125
2/04	997.711465E-03	+0.2626	33.4	+0.0501
2/07	997.712158E-03	+0.6946	35.2	+0.7447
2/08	997.712250E-03	+0.0922	34.8	+0.8369
2/09	997.712179E-03	-0.0712	36.4	+0.7658
2/10	997.711496E-03	-0.6846	37.6	+0.0812
2/12	997.711259E-03	-0.2375	40.7	-0.1564
2/13	997.711034E-03	-0.2255	42.2	-0.3819
2/14	997.711229E-03	+0.1954	41.1	-0.1864
2/16	997.711666E-03	+0.4380	36.9	+0.2516
2/17	997.711682E-03		35.0	
2/24	997.711203E-03		35.7	
2/26	997.710995E-03		35.6	
2/28	997.710960E-03		37.9	
3/01	997.710894E-03		37.8	
3/05	997.710730E-03		40.8	
3/06	997.710628E-03		44.7	
3/08	997.711302E-03		37.4	
3/15	997.711152E-03		31.7	

Drift rate : -0.01623 ppm/day
Drift rate 2 : -0.03329 ppm/day (D = 23)
Drift rate 2 : -0.00839 ppm/day (D = 30)

Recalibrated DCV to 7V MM

CAL? 2,1 : 7.18067804
 CAL? 1,1 : 39.9996932E+3

Date	CAL 72 after ACAL	ppm Deviation	TEMP?	Deviation from day 0, ppm
3/22	997.700746E-3	0	36.5	0

History

#1 - 11/16/2015 05:06 AM - tin
 - Description updated

#2 - 11/16/2015 11:38 AM - tin
 - Description updated

#3 - 11/16/2015 02:03 PM - tin
 - Description updated

#4 - 11/16/2015 05:28 PM - tin
 - Description updated

#5 - 11/17/2015 11:10 AM - tin
 - Description updated

#6 - 01/18/2016 11:50 AM - tin
 Cal 72
 997.711415e-03
 Cal 2
 7.18075438
 TEMP? : 32.5

#7 - 01/19/2016 06:07 PM - tin
 CAL 72?
 997.711486E-03
 CAL 2
 7.18075438
 TEMP : 31.9

+0.0712 ppm

#8 - 01/20/2016 03:03 PM - tin

CAL 72?
997.711441E-03

CAL 2,1?
7.18075438

TEMP?
33.8

-0.0451 ppm

#9 - 01/21/2016 03:43 PM - tin

CAL 72?
997.711391E-3

TEMP?
31.5

-0.0501ppm

#10 - 01/23/2016 07:29 PM - tin

+997.711709E-3

TEMP?
30.6

+0.3187 ppm

#11 - 01/24/2016 04:26 PM - tin

TEMP?
31.9

CAL72?

997.711798E-3

+0.0892 ppm

#12 - 01/25/2016 01:56 PM - tin

TEMP?
29.9

CAL72?
+997.712097E-3

+0.2997 ppm

#13 - 01/28/2016 08:58 AM - tin

TEMP?

32.3

CAL 72?
997.711577E-03

-0.5212 ppm

#14 - 01/28/2016 09:08 AM - tin

- Description updated

#15 - 01/28/2016 09:08 AM - tin

- Description updated

#16 - 01/29/2016 11:56 AM - tin

TEMP?
33.0

CAL 72?
997.711566E-03

-0.0110 ppm

#17 - 02/02/2016 12:07 AM - tin

TEMP?
32.7

CAL? 72
997.711546E-03

#18 - 02/03/2016 02:45 PM - tin

TEMP?

34.6

CAL? 72
997.711203E-03

#19 - 02/04/2016 02:17 PM - tin

TEMP?

33.4

CAL? 72
997.711465E-03

#20 - 02/07/2016 02:15 AM - tin

TEMP?

35.2

CAL? 72
997.712158E-03

#21 - 02/08/2016 03:53 AM - tin

TEMP?
34.8

CAL 72?
997.712250E-03

#22 - 02/09/2016 12:51 AM - tin

TEMP?
36.4

CAL? 72
997.712179E-03

#23 - 02/09/2016 01:04 AM - tin

- Description updated

#24 - 02/10/2016 06:11 AM - tin

temp?
37.6

cal? 72
997.711496E-3

#25 - 02/12/2016 05:04 AM - tin

TEMP? 40.7

CAL? 72

997.711259E-3

#26 - 02/12/2016 07:52 PM - tin

temp?
39.6

cal? 72
997.711453e-3

#27 - 02/13/2016 07:45 AM - tin

temp?
42.2

CAL? 72
997.711034E-03

#28 - 02/13/2016 01:26 PM - tin

temp? 41.1
cal
997.711229e-3

#29 - 02/15/2016 06:19 PM - tin

TEMP?
36.9

CAL? 72
997.711666E-3

#30 - 02/17/2016 05:20 AM - tin

- Description updated

#31 - 02/17/2016 01:24 PM - tin

TEMP?
35.0

CAL?
997.711682E-03

#32 - 02/24/2016 11:25 AM - tin

TEMP?
35.7

CAL? 72
997.711203E-03

#33 - 02/25/2016 08:59 PM - tin

TEMP? 35.6

CAL? 72
997.710995E-03

#34 - 02/28/2016 12:19 PM - tin

TEMP> 37.9

CAL? 72 - 997.710960E-3

#35 - 03/01/2016 12:11 AM - tin

TEMP? 37.8

CAL? 72 = 997.710894E-03

#36 - 03/04/2016 10:58 PM - tin

TEMP?
40.8

CAL 72?
997.710730E-3

#37 - 03/06/2016 10:01 AM - tin

TEMP?
44.3

CAL? 72:
997.710628E-03

#38 - 03/07/2016 05:30 PM - tin

TEMP?
37.4

CAL 72? : 997.711302E-03

#39 - 03/15/2016 02:55 PM - tin

TEMP? = 31.7

CAL? 72 = 997.711152E-03

#40 - 03/22/2016 04:44 AM - tin

TEMP? 36.5
CAL? 2,1 : 7.18067804
CAL? 1,1 : 39.9996932E+3
CAL? 72: 997.700746E-3

#41 - 03/22/2016 09:08 AM - tin

- Description updated

#42 - 03/23/2016 01:24 PM - tin

TEMP: 35.8
CAL? 72: 997.700556E-03

#43 - 03/23/2016 05:27 PM - tin

TEMP? 35.5
CAL? 72: 997.700650E-03

#44 - 03/24/2016 03:03 PM - tin

TEMP? 33.9

CAL? 72
997.700700E-03

#45 - 03/25/2016 11:05 AM - tin

TEMP: 32.5

CAL? 72: 997.700717E-03

#46 - 03/27/2016 02:41 AM - tin

TEMP:
33.3

CAL: 997.700654E-03

#47 - 04/04/2016 02:17 AM - tin

TEMP?
42.3

CAL?
997.699913E-3

#48 - 04/04/2016 05:27 PM - tin

TEMP? 41.5
CAL? 72: 997.699898E-03

#49 - 04/09/2016 06:33 PM - tin

TEMP?
39.7

CAL 72? 997.700689E-03

#50 - 04/10/2016 03:23 PM - tin

TEMP? 36.1

CAL 72: 997.700957E-03

#51 - 04/12/2016 04:23 PM - tin

TEMP? 38.1

CAL? 997.701051E-3

#52 - 04/15/2016 04:38 PM - tin

TEMP? 35.5

CAL? 997.701010E-3

#53 - 04/18/2016 04:48 PM - tin

TEMP? 34.2

CAL? 72:

997.701191E-03

#54 - 04/19/2016 12:26 AM - tin

root@pi2:/repo/3458# python ./sn18.py

Temp?

36.6

ID = HP3458A

CAL? 1,1
39.9996932E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.701099E-03

#55 - 05/01/2016 04:06 AM - tin

root@pi3:/repo/3458# python ./sn18.py

Temp?

38.8

CAL? 1,1
39.9996932E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.701098E-03

#56 - 05/15/2016 11:32 PM - tin

root@pi2:/repo/3458# python ./sn18.py

Temp?

40.7

ID = HP3458A

CAL? 1,1
39.9996932E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.700590E-03

#57 - 05/17/2016 04:02 PM - tin

root@pi2:/repo/3458# python ./sn18.py

Temp?

38.1

ID = HP3458A

CAL? 1,1
39.9996932E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.700868E-03

#58 - 05/19/2016 05:37 PM - tin

root@pi2:/repo/3458# python ./sn18.py

Temp?

35.3

ID = HP3458A

CAL? 1,1
39.9996932E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.701128E-03

#59 - 05/21/2016 06:50 PM - tin

root@pi2:/repo/3458# python sn18.py

Temp?

35.0

ID = HP3458A

CAL? 1,1
39.9996932E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.700983E-03

#60 - 05/24/2016 02:21 PM - tin

root@pi2:/repo/3458# python sn18.py

Temp?

40.1

ID = HP3458A

CAL? 1,1
39.9996932E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.700720E-03

#61 - 05/27/2016 05:22 PM - tin

root@pi2:/repo/3458# python sn18.py

Temp?

37.8

ID = HP3458A

CAL? 1,1
39.9996932E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.700819E-03

#62 - 05/29/2016 06:30 AM - tin

root@pi2:/repo/3458# python sn18.py

Temp?

43.6

ID = HP3458A

CAL? 1,1
39.9996932E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.700477E-03

#63 - 05/29/2016 02:48 PM - tin

root@pi2:/repo/3458# python sn18.py
Temp?
37.2

ID = HP3458A

CAL? 1,1
39.9996932E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.700852E-03

#64 - 05/29/2016 05:22 PM - tin

RECAL OHMF ZERO and OHM 10K

python sn18.py
Temp?
37.6

ID = HP3458A

CAL? 1,1
39.9985977E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.700852E-03

#65 - 05/30/2016 01:52 PM - tin

root@pi2:/repo/3458# python sn18.py
Temp?
37.2

ID = HP3458A

CAL? 1,1
39.9985977E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.700983E-03

#66 - 05/31/2016 12:28 AM - tin

root@pi2:/repo/3458# python sn18.py
Temp?
44.6

ID = HP3458A

CAL? 1,1
39.9985977E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.700402E-03

#67 - 06/05/2016 04:00 PM - tin

root@pi2:/repo/3458# python ./sn18.py
Temp?
42.2

ID = HP3458A

CAL? 1,1
39.9985977E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.699773E-03

#68 - 06/07/2016 04:39 PM - tin

root@pi2:/repo/3458# python ./sn18.py
Temp?
36.7

ID = HP3458A

CAL? 1,1
39.9985977E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.700540E-03

#69 - 06/10/2016 07:50 AM - tin

root@pi2:/repo/3458# python ./sn18.py
Temp?
36.2

ID = HP3458A

CAL? 1,1
39.9985977E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.700289E-03

#70 - 06/13/2016 06:08 PM - tin

Temp?
42.2

ID = HP3458A

CAL? 1,1
39.9985977E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.699524E-03

#71 - 06/14/2016 05:09 PM - tin

root@pi2:/repo/3458# python ./sn18.py
Temp?
35.6

ID = HP3458A

CAL? 1,1
39.9985977E+03

CAL? 2,1

7.18067804E+00

CAL? 72
997.700094E-03

#72 - 06/19/2016 02:18 PM - tin

root@pi2:/repo/3458# python ./sn18.py
Temp?
41.3

ID = HP3458A

CAL? 1,1
39.9985977E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.699730E-03

#73 - 06/22/2016 06:32 PM - tin

root@pi2:/repo/3458# python ./sn18.py
Temp?
35.5

ID = HP3458A

CAL? 1,1
39.9985977E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.700065E-03

#74 - 06/23/2016 05:33 PM - tin

root@pi2:/repo/3458# python ./sn18.py
Temp?
35.8

ID = HP3458A

CAL? 1,1
39.9985977E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.700054E-03

#75 - 06/25/2016 06:52 PM - tin

Temp?
35.5

ID = HP3458A

CAL? 1,1
39.9985977E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.699999E-03

#76 - 06/28/2016 07:57 PM - tin

Temp?
36.0

ID = HP3458A

CAL? 1,1
39.9985977E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.699949E-03

#77 - 07/09/2016 05:00 PM - tin

Temp?
37.1

ID = HP3458A

CAL? 1,1
39.9985977E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.700085E-03

#78 - 07/10/2016 12:40 AM - tin

Temp?
35.4

ID = HP3458A

CAL? 1,1
39.9985977E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.700342E-03

#79 - 07/10/2016 03:23 PM - tin

Temp?
36.6

ID = HP3458A

CAL? 1,1
39.9985977E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.700394E-03

#80 - 07/11/2016 02:01 PM - tin

Temp?
36.4

ID = HP3458A

CAL? 1,1
39.9985977E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.700292E-03

#81 - 07/11/2016 02:36 PM - tin

Temp?
35.5

ID = HP3458A

CAL? 1,1

39.9985977E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.700452E-03

#82 - 07/17/2016 05:11 PM - tin

Temp?
36.3

ID = HP3458A

CAL? 1,1
39.9985977E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.700165E-03

#83 - 07/19/2016 06:09 PM - tin

Temp?
37.6

ID = HP3458A

CAL? 1,1
39.9985977E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.700105E-03
Temp?
37.6

ID = HP3458A

CAL? 1,1
39.9985977E+03

CAL? 2,1
7.18067804E+00

CAL? 72
997.700105E-03