

Printed on 15-Jul-2020 at 16:40:08 by User1

Temperature Logger U88A	-A	Verification 23-Jun-2020 by HTC_Admin1
Company: KAYE	Logger Firmware Version: 1.4.1	Software Version: 1.1.0.1
SOP / Protocol #: VS020BC-XS	Battery life: 30 %	Manual Verification
Temperature Std: Kaye IRTD	Serial No: J1129 Cal Date: 14-Oct-2019	

**Summary Verification Results: Failed** 

SP1: Passed SP2: Passed SP3: Passed SP4: Passed SP5: Failed SP6: Failed

Start Time: 10:55:39

Setpoint 1:	-2	5.00°C	Passed		
Stability Criteria:	IRTD Stability:	0.012°C for 3	minutes	Additional time of Stability:	5 minutes
Deviation Criteria:	0.50°C for 3 minu	tes			

**Stability Evaluation:** 

Time of Stability: 11:46:10 Sensor Temperature: -23.57°C IRTD Temperature: -23.859°C Sensor Deviation From IRTD: 0.29°C

Sensor Stability: 0.01°C IRTD Stability: 0.010°C

Deviation	n Evaluat	ion:		Criteria: 0.50°C for 3 minutes					Maximum Deviation: 0.30			
Time	IRTD(°C)	Sensor(°C)	Dev(°C)	Time	IRTD(°C)	Sensor(°C)	Dev(°C)	Time	IRTD(°C)	Sensor(°C)	Dev(°C)	
11:46:20	-23.860	-23.57	0.29	11:46:30	-23.861	-23.57	0.29	11:46:40	-23.862	-23.57	0.29	
11:46:50	-23.862	-23.57	0.29	11:47:00	-23.862	-23.57	0.29	11:47:10	-23.862	-23.57	0.29	
11:47:20	-23.862	-23.57	0.29	11:47:30	-23.862	-23.57	0.29	11:47:40	-23.864	-23.57	0.29	
11:47:50	-23.865	-23.58	0.28	11:48:00	-23.865	-23.58	0.28	11:48:10	-23.865	-23.57	0.30	
11:48:20	-23.867	-23.57	0.30	11:48:30	-23.868	-23.58	0.29	11:48:40	-23.868	-23.58	0.29	
11:48:50	-23.868	-23.57	0.30	11:49:00	-23.869	-23.57	0.30	11:49:10	-23.868	-23.57	0.30	

Setpoint 2:	-10	0.00°C	Passed		
Stability Criteria:	IRTD Stability:	0.012°C for 3	minutes	Additional time of Stability:	5 minutes
Deviation Criteria:	0.50°C for 3 minu	tes			

**Stability Evaluation:** 

Sensor Stability: 0.01°C IRTD Stability: 0.009°C

Deviation	Evaluat	ion:		Criteria: 0.50°C for 3 minutes					Maximum Deviation: 0.24			
Time	IRTD(°C)	Sensor(°C)	Dev(°C)	Time	IRTD(°C)	Sensor(°C)	Dev(°C)	Time	IRTD(°C)	Sensor(°C)	Dev(°C)	
12:22:00	-10.047	-9.81	0.24	12:22:10	-10.047	-9.81	0.24	12:22:20	-10.046	-9.81	0.24	
12:22:30	-10.045	-9.81	0.23	12:22:40	-10.044	-9.81	0.23	12:22:50	-10.044	-9.80	0.24	
12:23:00	-10.044	-9.80	0.24	12:23:10	-10.043	-9.80	0.24	12:23:20	-10.042	-9.80	0.24	
12:23:30	-10.043	-9.80	0.24	12:23:40	-10.041	-9.80	0.24	12:23:50	-10.041	-9.80	0.24	
12:24:00	-10.040	-9.80	0.24	12:24:10	-10.041	-9.80	0.24	12:24:20	-10.040	-9.80	0.24	
12:24:30	-10.040	-9.80	0.24	12:24:40	-10.039	-9.80	0.24	12:24:50	-10.039	-9.80	0.24	

Setpoint 3:	30	.00°C	Passed		
Stability Criteria:	IRTD Stability:	0.012°C for 3 m	ninutes	Additional time of Stability:	5 minutes
Deviation Criteria:	0.50°C for 3 minu	ites			

## **Stability Evaluation:**

Time of Stability:	12:43:20	Sensor Temperature:	29.98°C	IRTD Temperature:	30.008°C	Sensor Deviation From IRTD:	-0.03°C

Sensor Stability: 0.01°C IRTD Stability: 0.005°C

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Deviation	n Evaluat	ion:		Criteria:	0.50°C fo	r 3 minut	Maximum Deviation: -0.03				
Time	IRTD(°C)	Sensor(°C)	Dev(°C)	Time	IRTD(°C)	Sensor(°C)	Dev(°C)	Time	IRTD(°C)	Sensor(°C)	Dev(°C)
12:43:30	30.007	29.98	-0.03	12:43:40	30.007	29.99	-0.02	12:43:50	30.007	29.99	-0.02
12:44:00	30.006	29.99	-0.02	12:44:10	30.006	29.99	-0.02	12:44:20	30.006	29.99	-0.02
12:44:30	30.004	29.99	-0.01	12:44:40	30.005	29.99	-0.01	12:44:50	30.004	29.98	-0.02
12:45:00	30.004	29.98	-0.02	12:45:10	30.004	29.99	-0.01	12:45:20	30.004	29.99	-0.01
12:45:30	30.004	29.99	-0.01	12:45:40	30.003	29.99	-0.01	12:45:50	30.004	29.98	-0.02
12:46:00	30.004	29.99	-0.01	12:46:10	30.003	29.99	-0.01	12:46:20	30.003	29.99	-0.01

Setpoint 4:	45	.00°C	Passed		
Stability Criteria:	IRTD Stability:	0.012°C for 3 n	minutes	Additional time of Stability:	5 minutes
Deviation Criteria:	0.50°C for 3 minu	tes			

**Stability Evaluation:** 

Time of Stability: 12:59:30 Sensor Temperature: 44.92°C IRTD Temperature: 45.012°C Sensor Deviation From IRTD: -0.09°C

Sensor Stability: 0.01°C IRTD Stability: 0.008°C

Deviation	n Evaluat	ion:		Criteria:	r 3 minut	Maximum Deviation: -0.09					
Time	IRTD(°C)	Sensor(°C)	Dev(°C)	Time	IRTD(°C)	Sensor(°C)	Dev(°C)	Time	IRTD(°C)	Sensor(°C)	Dev(°C)
12:59:40	45.011	44.92	-0.09	12:59:50	45.010	44.93	-0.08	13:00:00	45.010	44.92	-0.09
13:00:10	45.010	44.93	-0.08	13:00:20	45.009	44.92	-0.09	13:00:30	45.008	44.92	-0.09
13:00:40	45.008	44.93	-0.08	13:00:50	45.007	44.92	-0.09	13:01:00	45.007	44.93	-0.08
13:01:10	45.006	44.92	-0.09	13:01:20	45.006	44.92	-0.09	13:01:30	45.006	44.92	-0.09
13:01:40	45.006	44.92	-0.09	13:01:50	45.005	44.92	-0.09	13:02:00	45.006	44.92	-0.09
13:02:10	45.005	44.93	-0.08	13:02:20	45.005	44.92	-0.09	13:02:30	45.004	44.92	-0.08

Setpoint 5:	90	0.00°C	Failed	Did Not Meet Calibra	ted Deviation Criteria
Stability Criteria:	IRTD Stability:	0.012°C for	3 minutes	Additional time of Stability:	5 minutes
Deviation Criteria:	0.50°C for 3 minu	utes			

**Stability Evaluation:** 

Time of Stability: 13:29:20 Sensor Temperature: 92.01°C IRTD Temperature: 89.997°C Sensor Deviation From IRTD: 2.01°C

Sensor Stability: 0.01°C IRTD Stability: 0.007°C

Deviation	า Evaluat	ion:		Criteria:	0.50°C fc	or 3 minute	es		Maximun	า Deviatio	n: 2.02
Time	IRTD(°C)	Sensor(°C)	Dev(°C)	Time	IRTD(°C)	Sensor(°C)	Dev(°C)	Time	IRTD(°C)	Sensor(°C)	Dev(°C)
13:29:30	89.997	92.01	2.01	13:29:40	89.997	92.01	2.01	13:29:50	89.996	92.01	2.01
13:30:00	89.996	92.01	2.01	13:30:10	89.995	92.01	2.01	13:30:20	89.994	92.00	2.01
13:30:30	89.994	92.00	2.01	13:30:40	89.993	92.00	2.01	13:30:50	89.993	92.00	2.01
13:31:00	89.993	92.01	2.02	13:31:10	89.993	92.01	2.02	13:31:20	89.992	92.01	2.02
13:31:30	89.991	92.00	2.01	13:31:40	89.992	92.00	2.01	13:31:50	89.991	92.01	2.02
13:32:00	89.991	92.00	2.01	13:32:10	89.990	92.00	2.01	13:32:20	89.990	92.01	2.02

Setpoint 6:	140.00°C		Failed	Did Not Meet Calibrated Deviation Criteria			
Stability Criteria:	IRTD Stability:	0.012°C for 3 minutes		Additional time of Stability:	5 minutes		
Deviation Criteria:	0.50°C for 3 minutes						

## **Stability Evaluation:**

Time of Stability: 14:07:30 Sensor Temperature: 144.62°C IRTD Temperature: 139.979°C Sensor Deviation From IRTD: 4.64°C

Sensor Stability: 0.01°C IRTD Stability: 0.007°C

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Deviation Evaluation:			Criteria: 0.50°C for 3 minutes					Maximum Deviation: 4.66				
Time	IRTD(°C)	Sensor(°C)	Dev(°C)	Time	IRTD(°C)	Sensor(°C)	Dev(°C)	Time	IRTD(°C)	Sensor(°C)	Dev(°C)	
14:07:40	139.979	144.62	4.64	14:07:50	139.978	144.62	4.64	14:08:00	139.978	144.63	4.65	
14:08:10	139.977	144.62	4.64	14:08:20	139.977	144.62	4.64	14:08:30	139.976	144.63	4.65	
14:08:40	139.976	144.62	4.64	14:08:50	139.975	144.62	4.64	14:09:00	139.975	144.62	4.64	
14:09:10	139.975	144.63	4.65	14:09:20	139.974	144.62	4.65	14:09:30	139.973	144.62	4.65	
14:09:40	139.974	144.62	4.65	14:09:50	139.973	144.62	4.65	14:10:00	139.972	144.63	4.66	
14-10-10	120 072	144.62	4.65	14-10-20	120 072	144.62	4 65	14-10-20	120 072	144.63	4 66	

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Reviewed by	