CH0X0 series is an IMU/VRU/AHRS sensor composed of array MEMS-IMU, magnetometer and barometer, and is equipped with self-developed adaptive extended Kalman filter, IMU noise dynamic analysis algorithm, and carrier motion state analysis algorithm, which can meet the accuracy of attitude angle under high dynamic and reduce the drift of heading angle. Each sensor is finely compensated before leaving the factory, including temperature, bias, scale factor, and cross-axis.

Document：CH0X0 Test Report

Time: July 5, 2024

Property: Public

Tester: Vincent

CH0X0 **Test Report**
IMU/VRU/AHRS Module

Contents

1 Pitch/Roll rotation accuracy

1.1 Test conditions

1)   Test equipment :2-axis rate table

2)   Number of samples :10pcs CH010 and CH040

3)   Angular rate : 100°/sec

4)   Roll angle step:±30°、±60°、±90°、±120°、±150°、±180°

5)   Pitch angle step: :±30°、±60°、±90°

1.2 Test sequence

1）Maintain a horizontal state

2） power on

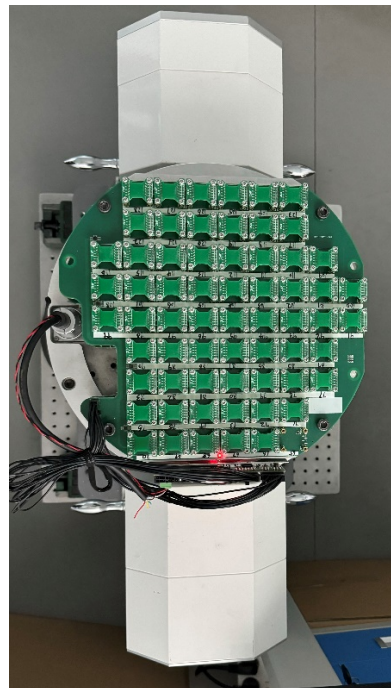3）Rotating roll angle and pitch angle

4）Record angle data

5）power off

Figure 1: 2-axis rate table

1.3 CH010Test result

1.3.1 Roll angle

Table 1: Roll angle test result

Angle	1	2	3	4	5	6	7	8	9	10
+30°	30.17°	29.92°	30.24°	29.89°	29.96°	29.84°	30.22°	29.87°	29.9°	29.82°
-30°	-29.96°	-29.93°	-30.01°	-29.97°	-29.94°	-29.92°	-29.97°	-29.96°	-30.03°	29.99°
+60°	60.21°	59.94°	60.23°	60.02°	60.07°	59.83°	60.21°	59.92°	60°	59.85°
-60°	-60.06°	-59.94°	-60.09°	-60.05°	-59.99°	-59.85°	-60.06°	-59.95°	-60.02°	-59.92°
+90°	89.91°	89.97°	89.96°	89.91°	89.98°	89.96°	90.01°	89.94°	90.03°	89.92°
-90°	-89.93°	-89.94°	-89.94°	-89.97°	-89.93°	-89.96°	-89.92°	-90.02°	-89.89°	-90.09°
+120°	120.02°	119.98°	120.02°	120°	120.04°	119.96°	120.01°	120.01°	120.08°	120.01°
-120°	-120.09°	-119.91°	-120.15°	-120.03°	-120°	-119.86°	-120.18°	-119.87°	-119.93°	-119.86°
+150°	150.02°	150.04°	149.91°	150.05°	150.07°	150.01°	149.91°	150.09°	150.15°	150.07°
-150°	-150.07°	-149.96°	-150.15°	-150.04°	-150.02°	-149.89°	-150.16°	-149.93°	-149.97°	-149.87°
+180°	-179.95°	179.96°	-179.95°	-179.98°	180°	179.99°	-179.92°	179.92°	179.9°	179.9°
-180°	-179.97°	179.94°	-179.95°	179.99°	179.97°	-180°	-179.91°	179.91°	179.92°	179.99°

1.3.2 Pitch angle

Table 2: Pitch angle test result

angle	1	2	3	4	5	6	7	8	9	10
+30°	30.04°	29.97°	30.1°	30.08°	29.95°	29.82°	29.99°	29.99°	29.98°	29.82°
-30°	-30°	-29.96°	-30.04°	-29.92°	-30.08°	-29.98°	-30.14°	-29.89°	-30.08°	-30.05°
+60°	60.12°	59.94°	60.18°	60.09°	60.07°	59.8°	60.09°	59.94°	60°	59.89°
-60°	-60.06°	-59.92°	-60.08°	-59.97°	-60.06°	-59.89°	-60.15°	-59.9°	-60.06°	-59.97°
+90°	89.9°	89.93°	89.92°	90°	89.95°	90°	89.91°	89.91°	89.88°	89.9°
-90°	-89.92°	-89.93°	-89.93°	-89.97°	-89.9°	-89.97°	-89.87°	-89.92°	-89.85°	-89.92°

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1.3.3 Pitch/Roll rotation accuracy:Conclusion

Table 3: Roll angle accuracy

Average (Absolute error)			Maximum(Absolute error)		
Theoretical values	Average values	Average error	Theoretical values	Maximum values	Maximum error
+30°	30.02	0.02°	+30°	30.24°	0.24°
-30°	-29.96°	0.04°	-30°	-30.03°	0.03°
+60°	60.02°	0.02°	+60°	60.23°	0.23°
-60°	-59.9°	0.01°	-60°	-60.09°	0.09°
+90°	89.95°	0.05°	+90°	90.03°	0.03°
-90°	-90.05°	0.05°	-90°	-90.09°	0.09°
+120°	120.01°	0.01°	+120°	120.08°	0.08°
-120°	1200°	0°	-120°	-120.18°	0.18°
+150°	150.03°	0.03°	+150°	150.15°	0.15°
-150°	150°	0°	-150°	-150.16°	0.16°
+180°	180.01°	0.01°	+180°	180.08°	0.08°
-180°	-180.01°	0.01°	-180°	180.09°	0.09°

Table 4: Pitch angle accuracy

Average (Absolute error)			Maximum(Absolute error)		
Theoretical values	Average values	Average error	Theoretical values	Maximum values	Maximum error
+30°	29.97°	0.03°	+30°	30.1°	0.1°
-30°:	-30.01°	0.01°	-30°	-30.14°	0.14°
+60°	60.12°	0.12°	+60°	60.18°	0.18°
-60°	-60°	0°	-60°	-60.15°	0.15°
+90°:	89.93°	0.07°	+90°	90. 13°	0.13°
-90°	-89.91°	0.09°	-90°	-89.97°	0.03°

2 Heading confomance test

2.1 Test conditions

1) 2-axis rate table
2) 100pcs CH010 and CH040
3) Rotational angular rate 100°/s
4) Hipnuc GUI and other tools

2.2 Test method

1) CH010 and CH040 power on
2) Rotate 360° clockwise
3) Hold still for 1s
4) Rotate 360° counterclockwise
5) Hold still for 1s
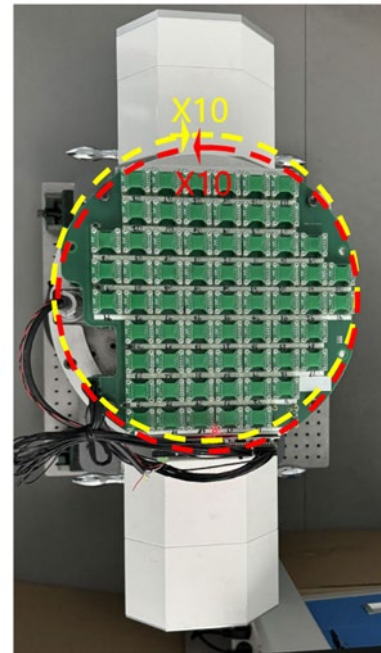6) Record heading angle data
7) Repeat 2)-6) 10 times
8) Power off

Figure 2: 2-axis rate table

2.3 Test result

2.3.1 CH010 test result

2.3.1.1 CH010 heading confommance test : Table display

Table 5: CH010 test result(table)

No.	Heading	No.	Heading	No.	Heading	No.	Heading	No.	Heading
1	-0.29°	21	-1.18°	41	-0.58°	61	0.66°	81	0.44°
2	-0.23°	22	0.16°	42	0.33°	62	0.03°	82	0.41°
3	0.26°	23	-0.08°	43	0.13°	63	-0.54°	83	0.16°
4	0.16°	24	-0.12°	44	-0.38°	64	0.01°	84	0.42°
5	0.80°	25	-0.24°	45	-0.05°	65	1.10°	85	-0.18°
6	-0.51°	26	-0.08°	46	0.31°	66	-0.23°	86	0.56°
7	-0.32°	27	-0.12°	47	0.06°°	67	-0.49°	87	0.34°
8	0.03°	28	-0.24°	48	-0.64°	68	-0.45°	88	0.27°
9	-0.09°	29	-0.19°	49	-0.39°	69	0.54°	89	0.06°
10	-0.32°	30	0.02°	50	-0.40°	70	0.06°	90	-0.43°
11	0.29°	31	-0.58°	51	-0.14°	71	0.32°	91	-0.27°
12	0.00°	32	-0.41°	52	-0.37°	72	-0.46°	92	0.01°
13	-0.98°	33	0.22°	53	0.22°	73	-0.18°	93	0.75°
14	-0.20°	34	0.19°	54	-0.38°	74	0.06°	94	0.36°
15	-0.25°	35	0.56°	55	-0.18°	75	-0.52°	95	-0.55°
16	0.41°	36	-0.05°	56	-0.38°	76	-0.51°	96	0.02°
17	0.38°	37	0.32°	57	-0.21°	77	-1.12°	97	-1°
18	-0.11°	38	0.54°	58	-0.62°	78	0.13°	98	0.53°
19	-0.26°	39	0.11°	59	0.50°	79	0.33°	99	0.20°
20	-0.32°	40	0.06°	60	-0.12°	80	0.41°	100	-0.37°

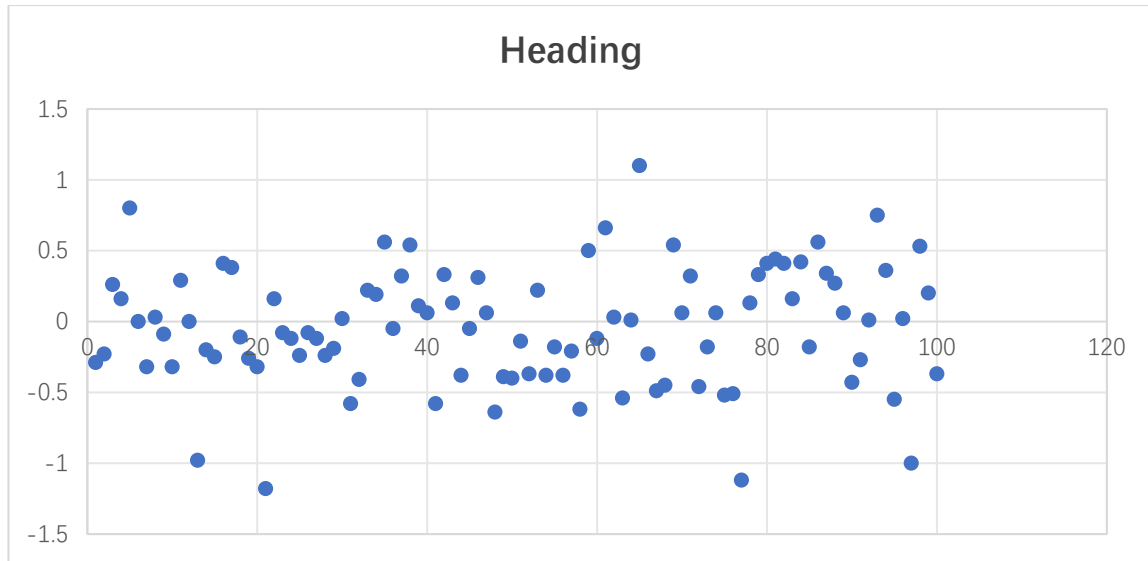## 2.3.1.2 CH010 heading confommance test : Graph display

Figure 3: CH010 heading confommance test

2.3.1.3 CH010 heading confommance test : Conclusion

1) DAverage (Absolute eror):0.04°

2) Maximum (Absolute eror):-1.012°

3) Standard deviation (Absolute error):0.41°

2.3.2 CH040 test result

2.3.2.1 CH040 heading confommance test : Table display

Table 6: CH040 test result(table)

No.	Heading	No.	Heading	No.	Heading	No.	Heading	No.	Heading
1	-0.04°	21	0.21°	41	-0.44°	61	0.12°	81	0.24°
2	-0.08°	22	0.4°	42	0.21°	62	-0.13°	82	-0.14°
3	-0.3°	23	-0.03°	43	-0.25°	63	-0.02°	83	0°
4	-0.16°	24	0.12°	44	0.12°	64	0.27°	84	0.22°
5	-0.12°	25	0.11°	45	0.12°	65	0.41°	85	0.28°
6	0.08°	26	0.02°°	46	0.03°	66	-0.8°	86	0.02°
7	-0.14°	27	0.21°	47	0.09°	67	-0.01°	87	-0.16°
8	0.23°	28	0.17°	48	-0.01°	68	0.14°	88	0.27°
9	0.08°	29	0.15°	49	-0.43°	69	-0.38°	89	-0.04°
10	0.14	30	-0.2°°	50	-0.2°	70	0.03°	90	0.13°
11	0.22°	31	-0.19°	51	0.06°	71	-0.29°	91	-0.18°
12	0.39°	32	0.09°	52	0.03°	72	-0.66°	92	0°
13	-0.02°	33	-0.09°	53	0.18°°	73	0.15°	93	0.08
14	-0.29°	34	0°	54	0.08°	74	0.43°	94	0.07°
15	0.37°	35	0.01°	55	-0.16°	75	-0.39°	95	0.01°
16	0.24°	36	-0.31°	56	0.37°	76	-0.33°	96	0.13°
17	0.32°	37	-0.06°	57	0.4°	77	-0.23°°	97	0.05
18	-0.02°	38	-0.09°	58	-0.52°	78	0.04°	98	-0.06°
19	-0.18°	39	0.07°	59	-0.07°	79	-0.18°	99	-0.1°
20	0.08°	40	0.12°	60	0.17°	80	-0.12°	100	0.08°

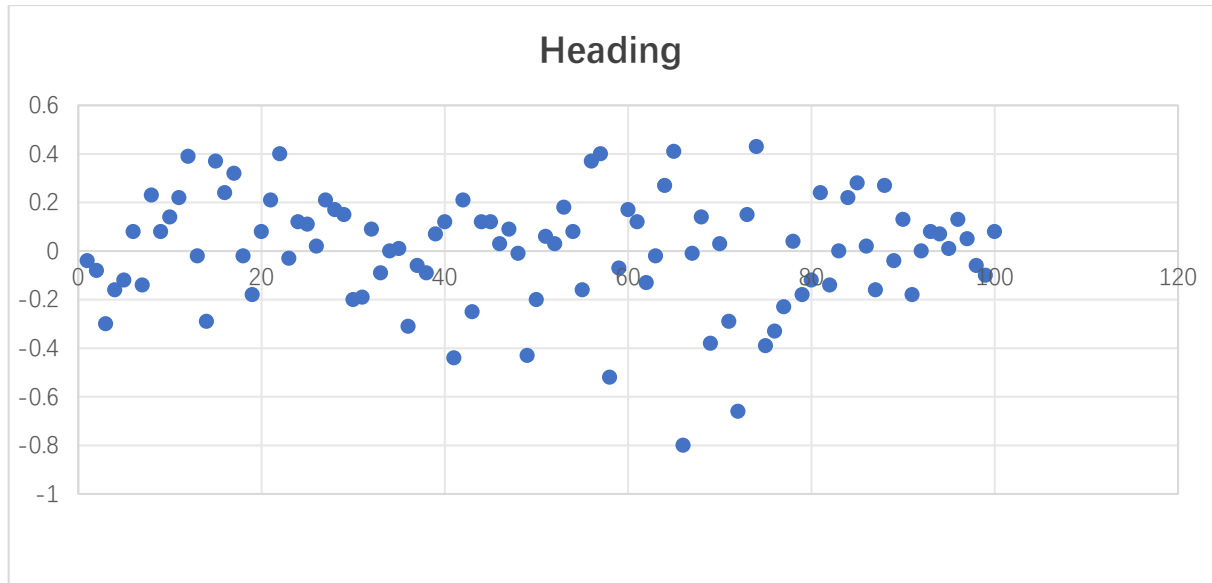### 2.3.2.2 CH040 heading confommance test : Graph display

Figure 4: CH040 heading confommance test

2.3.2.3 CH040 heading confommance test : Conclusion

1)   DAverage (Absolute eror):0.02°

2)   Maximum (Absolute eror):-0.8°

3)   Standard deviation (Absolute error):0.22°

3 Effect of temperature test (Scale factor)

3.1 Test conditions

1) Test equipment :2-axis incubator rate table

2) Number of samples :8pcs

3) Angular rate : 100°/sec

4) Temperature step:-10,0,10,20,30,40,50,60,70℃

3.2 Test method

1) Maintain a constant temperature

2) CH010/CH040 power on

3) Turn CW(clockwise) 360°

4) Record the angle data

5) Turn CCW(counterclockwise) 360°

6) Record the angle data

7) CH010/CH040 power off

Figure 5: 2-axis incubator rate table

3.3 Test result

3.3.1 CH010 test result

3.3.1.1 CH010 Effect of temperature(Scale factor): Table display

Table 7: CH010 Effect of temperature(Scale factor)

NO.	1		2		3		4		5		6		7		8	
℃	CW	CCW	CW	CCW	CW	CCW	CW	CCW	CW	CCW	CW	CCW	CW	CCW	CW	CCW
-10	0.28°	-0.03°	-0.85°	0.75°	-0.66°	0.53°	-0.62°	0.57°	-0.36°	0.32°	0.38°	0.11°	-1.07°	1.24°	0.09°	0.27°
0	0.16°	0.11°	-0.58°	0.63°	-0.35°	0.4°	-0.29°	0.24°	-0.33°	0.18°	0.14°	0.06°	-0.89°	0.98°	-0.18°	0.22°
10	-0.11°	-0.03°	-0.03°	-0.22°	-0.03°	0°	-0.02°	0.41°	-0.28°	0.12°	0.18°	0.15°	-0.35°	0.27°	-0.11°	0.05°
20	-0.07°	0.09°	-0.1°	0.08°	0.27°	0.03°	-0.22°	-0.01°	-0.08°	0.24°	-0.01	0.13°	-0.27°	0.18°	0.12°	0.19°
30	-0.14°	0.04°	0.1°	0.08°	0.27°	0.02°	-0.21°	-0.22°	-0.11°	0.07°	-0.1°	0°	-0.03°	-0.06°	-0.16°	-0.03°
40	-0.16	0.23°	0.02°	0.13°	0.34°	-0.3°	0.26°	0.24°	-0.15°	0.17°	-0.2°	0.31°	0.11°	-0.02°	-0.24°	0.02°
50	-0.34°	0.52°	-0.17°	0.21°	0.15°	-0.31°	-0.08°	0.2°	0.01°	0.11°	-0.33°	0.75°	0.16°	-0.14°	-0.1°	0.13°
60	-0.61°	0.87°	-0.29°	0.58°	0.29°	-0.19°	-0.1°	0.13°	-0.14°	0.22°	-0.67°	0.86°	0.04°	-0.17°	-0.07°	0.26°
70	-0.82°	0.89°	-1.06°	1.23°	-0.12°	-0.04°	-0.67°	0.59°	-0.17°	0.21°	-0.92°	1.42°	-0.17°	-0.14°	-0.16°	0.26°

3.3.1.2 CH010 Effect of temperature(Scale factor): Graph display
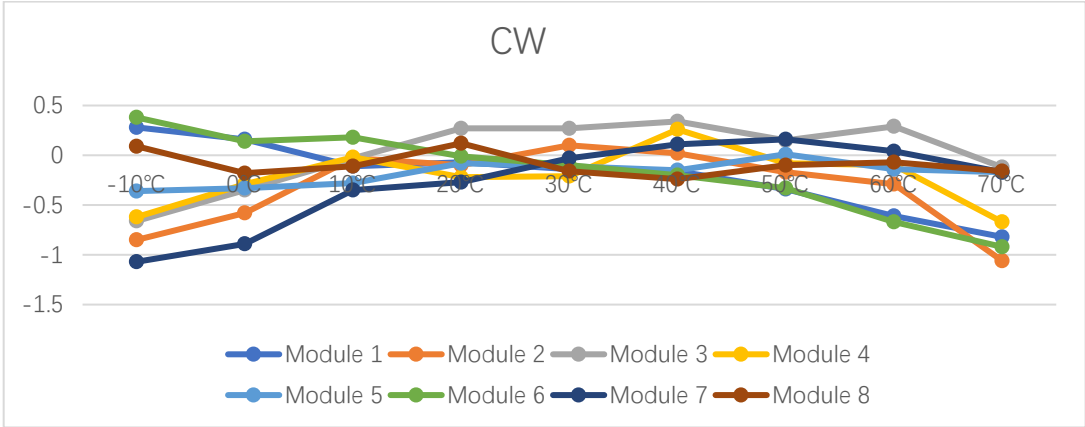

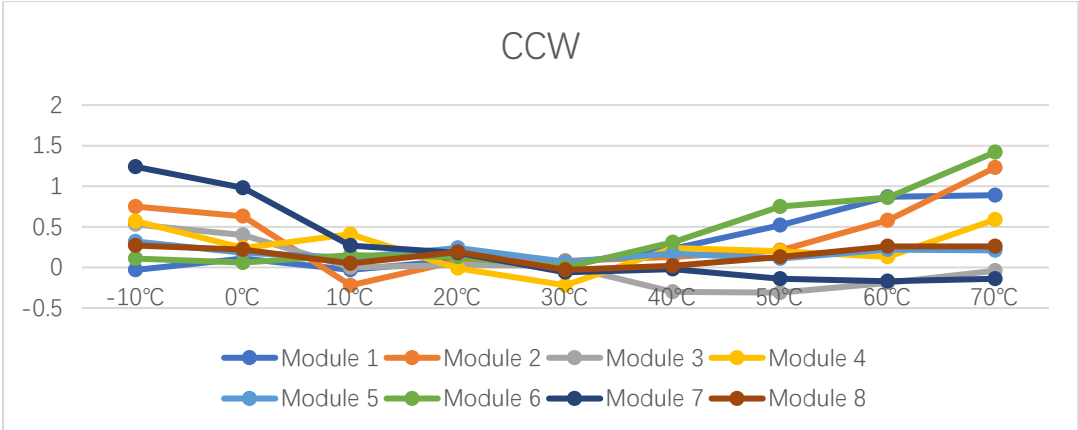*Figure 6: CH010 Effect of temperature CW*

Figure 7: CH010 Effect of temperature CCW

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3.3.1.3 CH010 Effect of temperature(Scale factor):Conclusion

Table 8: CH010 effect of temperature(Scale factor)

No.	Average(Absolute eror)		Max(Absolute eror)	
Temp.(℃)	CW	CCW	CW	CCW
-10	-0.35°	0.47°	-1.07°	1.24°
0	-0.29°	0.35°	-0.89°	0.98°
10	-0.09°	0.14°	-0.35°	0.27°
20	-0,45°	0.11°	-0.27°	0.24°
30	-0.04°	-0.01°	0.27°	-0.22°
40	-0.007°	0.09°	0.34°	0.31°
50	-0.08°	0.18°	-0.34°	0.52°
60	-0.19°	0.32°	-0.67°	0.87°
70	-0.51°	0.55°	-1.06°	1.42°

3.3.2 CH040 test result

3.3.2.1 CH040 Effect of temperature(Scale factor): Table display

Table 9: CH040 Effect of temperature(Scale factor)

NO.	1		2		3		4		5		6		7		8	
℃	CW	CCW	CW	CCW	CW	CCW	CW	CCW	CW	CCW	CW	CCW	CW	CCW	CW	CCW
-10	-0.88°	-1.16°	-1.21°	1°	-0.88°	0.87°	-0.86°	0.89°	-0.89°	0.94°	-1.11°	1.2°	-0.83°	0.97°	0.09°	1.21°
0	-0.7°	0.81°	-0.91°	0.94°	-0.35°	0.64°	-0.7°	0.77°	-0.67°	0.75°	-0.81°	0.94°	-0.56°	0.64°	0.11°	0.93°
10	-0.49°	0.54°	-0.69°	0.61°	-0.45°	0.5°	-0.45°	0.53°	-0.45°	0.51°	0.18°	0.57°	-0.35°	0.43°	-0.24°	0.72°
20	-0.3°	0.43°	-0.39°	0.41°	-0.18°	0.3°	-0.27°	0.37°	-0.25°	-0.27	-0.27°	0.4°	0.23°	0.2°	0.03°	0.23
30	-0.21°	0.21°	-0.13°	0.2°	-0.22°	0.27°	-0.11°	0.25°	-0.12°	0.25°	-0.13°	0.23°	-0.2°	0.18°	-0.18°	0.33°
40	-0.09°	0.12°	-0.03°	0.02°	-0.18°	0.23°	0.12°	0.12°	-0.1°	0.22°	-0.11°	0.09°	-0.14°	0.18°	-0.13°	0.14°
50	0.05°	-0.02°	0.14°	-0.02°	-0.13°	0.35°	0.06°	0.04°	-0.07°	0.05°	-0.02°	0.15°	-0.12°	0.13°	-0.3°	0.09°
60	0.15°	0.02°	0.13°	-0.1°	-0.16°	0.3°	0.02°	0.08°	0.02°	0.09°	-0.1°	0.15°	-0.1°	0.17°	0.19°	-0.02°
70	0.09°	-0.04°	0.11°	-0.05°	-0.24°	0.4°	0.03°	0.03°	-0.18°	0.24°	-0.13°	0.31°	-0.3°	0.45°	0.09	-0.04°

3.3.2.2 CH040 Effect of temperature(Scale factor): Graph display
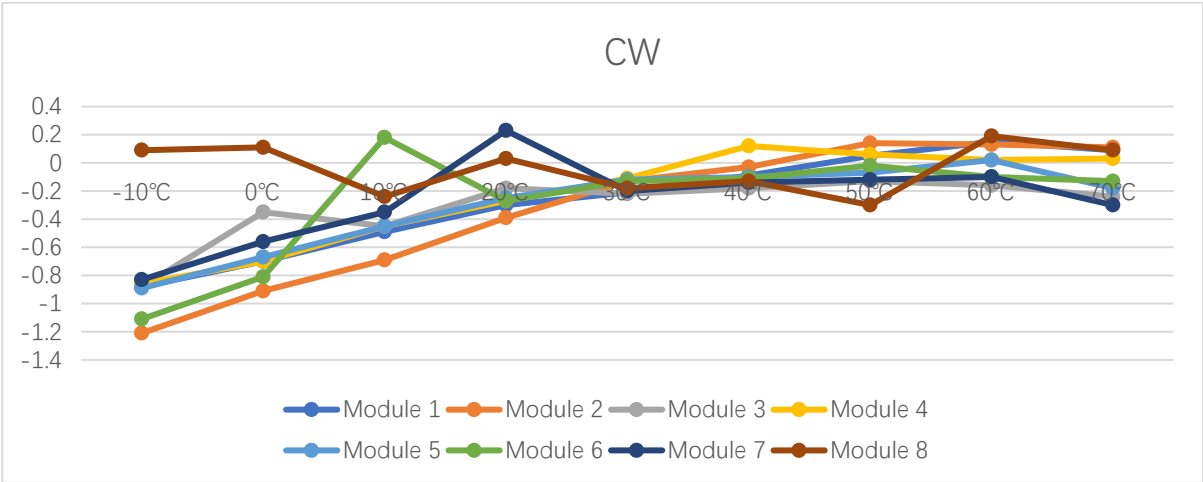
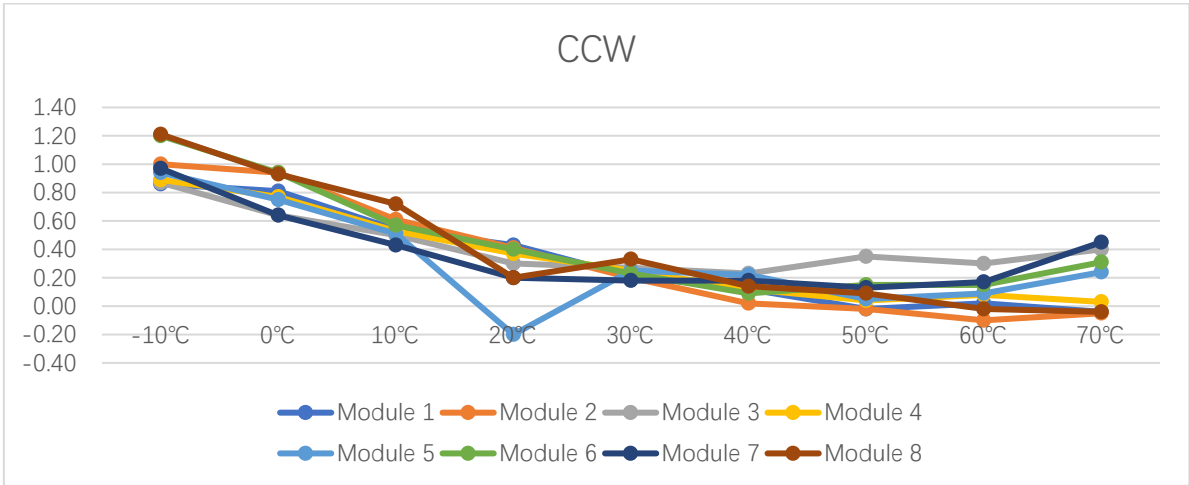

Figure 8: CH040 Effect of temperature CW

Figure 9: CH040 Effect of temperature CCW

3.3.2.3 CH040 Effect of temperature(Scale factor):Conclusion

Table 10: CH040 Effect of temperature(Scale factor): Table display

No.	Average(Absolute eror)		Max(Absolute eror)	
Temp.(℃)	CW	CCW	CW	CCW
-10	-0.69°	0.81	-1.21°	1.21°
0	-0.35°	0.8	-0.91°	0.94°
10	-0.14°	0.55	-0.69°	0.72°
20	-0.16°	0.25	-0.39°	0.43°
30	-0.08°	0.24	-0.22°	0.33°
40	-0.01	0.14	-0.18°	0.23°
50	-0.01	0.09	-0.13°	0.35°
60	-0.01	0.08	-0.16°	0.3°
70	-0.05	0.16	-0.3°	0.45°

4 Effect of temperature test (Bias)

4.1 Test conditions

1) Test equipment :2-axis incubator rate table

2) Number of samples :8pcs

3) Static heating

4) Temperature step:
   -40,-30,-20,-10,0,10,20,30,40,50,60,70,80℃

4.2 Test method

1) CH010 power on

2) Maintain a constant temperature -40℃

3) Keep still and record the bias data

4) Adjust the temperature upwards by 10℃

5) Keep still and record the bias data

6) Repeat steps 2)to 5), until the temperature reaches 80℃

7) CH010 power off

Figure 10: 2-axis incubator rate table
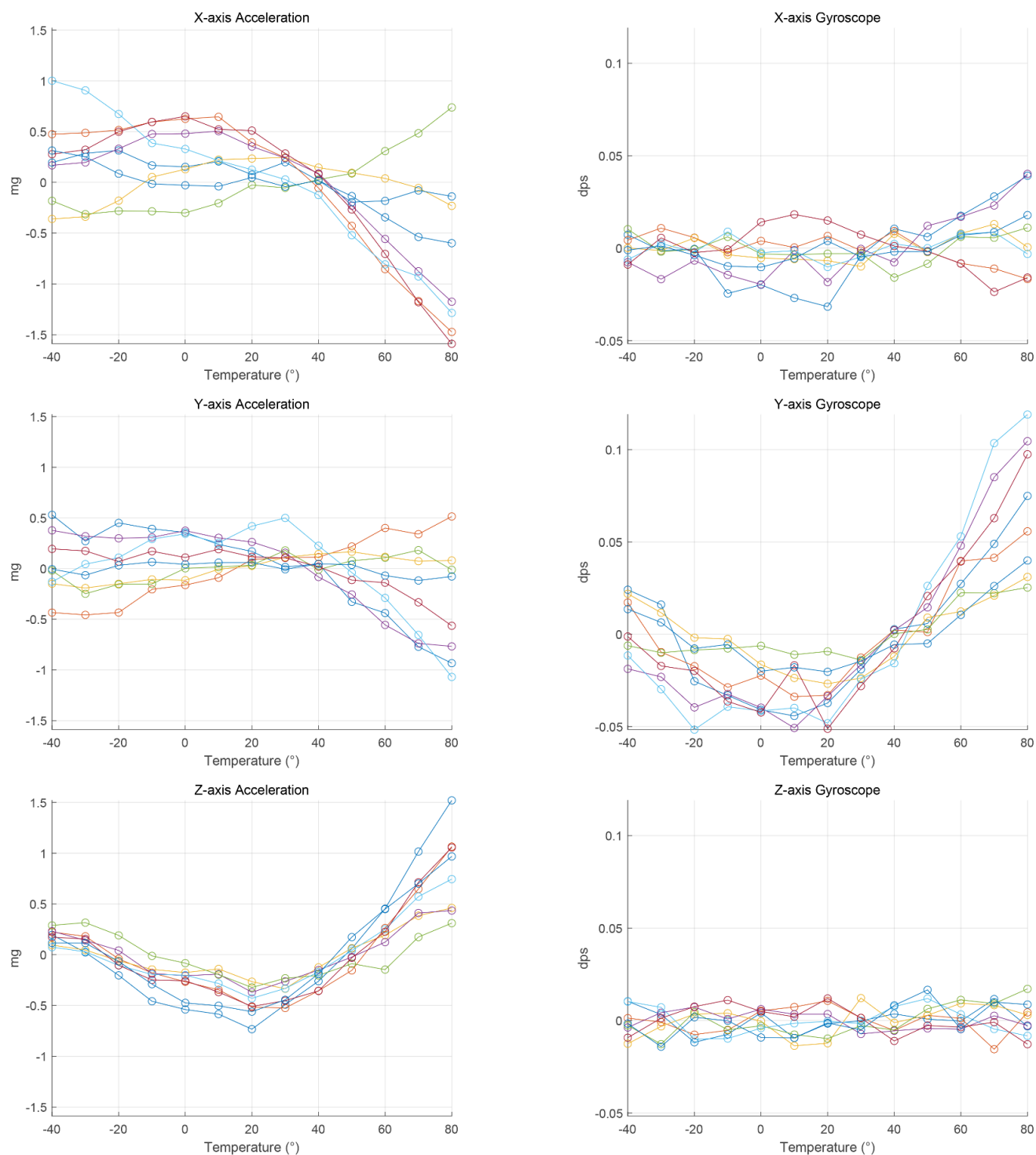
4.3 Test result

Figure 11: Zero bias curve with temperature

4.4 Conclusion

From the data, it can be seen that after zero bias compensation, the accelerometer's zero bias full temperature change can be within 4mg, the gyroscope's zero bias full temperature change can be within 0.15 °/s, and the Z-axis can be within 0.05 °/s

5 Robot test

5.1 Test conditions

1) Test time : 60min.

2) Number of samples :10pcs

3) Test area :5 x 4meter

4) Obstacles:Walls, shelves, tables, chairs, water dispensers

5.2 Test sequence

1) Positioning the robot on the lines of floor.

2) Run the robot for 10minutes.

3) Stop and repositioning the robot.

4) Record the angle data.

5) Run the robot again and repeat 6 times.

Figure 12: Indoor test

5.3 Test result

5.3.1 CH010 test result

5.3.1.1 CH010 Robot test : Table display

Table 11: CH010 Robot test

Time	10min	20min	30min	40min	50min	60min
1	1.2°	-3.23°	-3.55°	-5.4°	-5.4°	-5.43°
2	2.03°	-2.4°	1.1°	1.23°	1.23°	3.74°
3	-1.12°	2.93°	4.32°	4.67°	4.67°	7.16°
4	1.39°	1.43°	5.01°	4.6°	4.6°	6.29°
5	0.09°	1.63°	3.66°	3.51°	3.51°	5.09°
6	1.12°	1.54°	3.78°	3.14°	3.14°	3.99°
7	4.95°	3.68°	6.92°	6.07°	6.07°	7.98°
8	0.94°	-1.4°	1.3°	1.08°	2.08°	2.11°
9	0.21°	-4.32°	-4.85°	-5.85°	-5.85°	-3.56°
10	-2.99°	-1.91°	-0.79°	-0.42°	-0.42°	1.12°

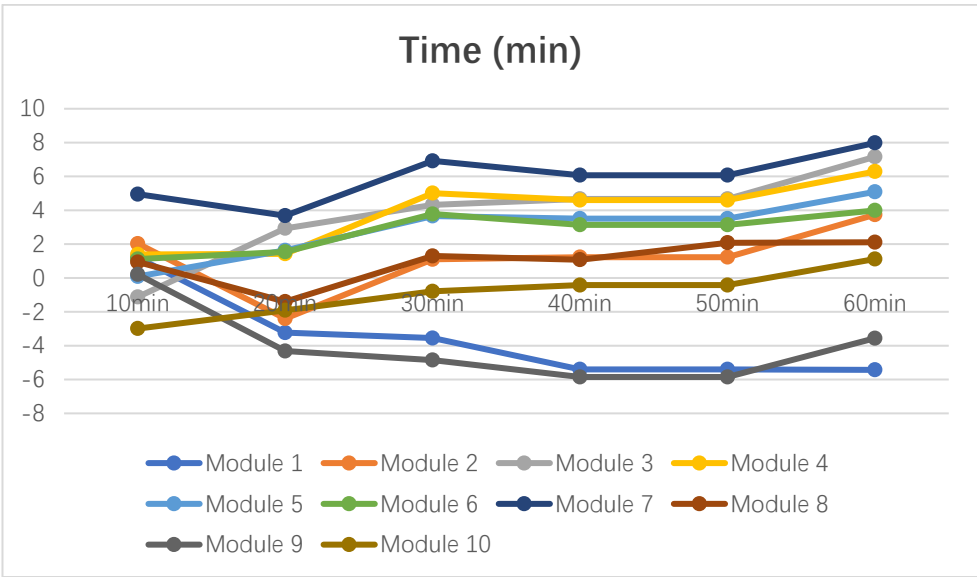### 5.3.1.2 CH010 Robot test : Graph display

Figure 13: CH010 Robot test

5.3.1.3 CH010 Robot test : Conclusion

Table 12: CH010 Robot test

Average (Absolute error)	Maximum(Absolute error)
10min: 0.78°	10min: 4.95°
20min: -0.2°	20min: -4.32°
30min: 1.69°	30min: 6.92°
40min: 1.26°	40min: 6.07°
50min: 1.36°	50min: 6.07°
60min: 2.84°	60min: 7.89°

5.3.2 CH040 test result

5.3.2.1 CH040 Robot test : Table display

Table 13: CH040 Robot test

Time	10min	20min	30min	40min	50min	60min
1	1.33°	0.02°	0.14°	-0.27°	0.15°	-1.98°
2	1.97°	0.36°	0.15°	-0.58°	-0.14°	-1.82°
3	0.07°	-0.02°	0.03°	-0.17°	0.55°	-1.23°
4	1.74°	-1.62°	-1.63°	-1.54°	-1.18°	-2.45°
5	-0.84°	-0.73°	-1.87°	-3.12°	-2.22°	-4.04°
6	-1.1°	-2.23°	-2.93°	-3.82°	-2.77°	-4.71°
7	-0.81°	-0.63°	-1.09°	-1.27°	-0.48°	-2.34°
8	0.18°	-1.19°	-2.04°	-2.5°	2.4°	-0.7°
9	-0.52°	-2.75°	-3.13°	-2.62°	2.35°	-0.42°
10	0.68°	0.65°	1.32°	2.32°	2.36°	-0.68°

5.3.2.2 CH040 Robot test : Graph display
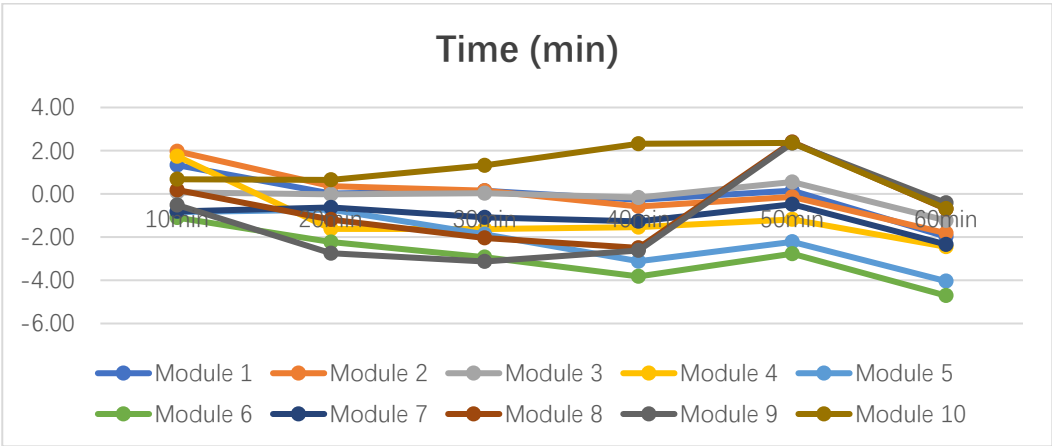
Figure 14: CH040 Robot test

5.3.2.3 CH040 Robot test : Conclusion

Average (Absolute error)	Maximum(Absolute error)
10min:0.27°	10min:1.97°
20min:-0.8°	20min:-2.75°
30min:-1.1°	30min:-3.13°
40min:-1.35°	40min:-3.82°
50min:0.1°	50min:-2.77°
60min:-2.03°	60min:-4.71°

6 Mower test

6.1 Test conditions

1) Test time : 60min.

2) Number of samples :10pcs

3) Test area :10 x 10meter

4) Obstacles：Pothole、Uphill and downhill。Max slope about 25°

6.2 Test sequence

1) Positioning the lawn mower on the grass

2) Run the robot for 10minutes.

3) Stop and reposition the lawn mower

4) Record the angle data.

5) Run the robot again and repeat 6 times.

Figure 15: Outdoor test

6.3 Test result

6.3.1 CH010 test result

6.3.1.1 CH010 Mower Test:Table display

Table 14: Mower test result

Time	10min	20min	30min	40min	50min	60min
1	0.87°	0.3°	1.4°	0.48°	2.15°	3.01°
2	-0.01°	0.44°	-1.55°	-4.54°	-2.56°	-3.32°
3	2.21°	3.14°	1.64°	0.84°	2.57°	2.79°
4	1.46°	2.03°	2.65°	2.15°	3.62°	4.83°
5	1.7°	4.22°	2.36°	2.27°	3.82°	2.72°
6	3.6°	4.73°	6.22°	7.16°	9.54°	10.79°
7	3°	5.1°	4.62°	4.33°	5.93°	5.52°
8	1.12°	1.9°	-0.06°	-1.79°	-1.52°	-1.81°
9	2.74°	4.11°	3.65°	2.94°	3.07°	5.41°
10	0.79°	2.21°	-1.39°	-2.55°	-1.52°	-3.75°

6.3.1.2 CH010 Mower test result(Graph display)
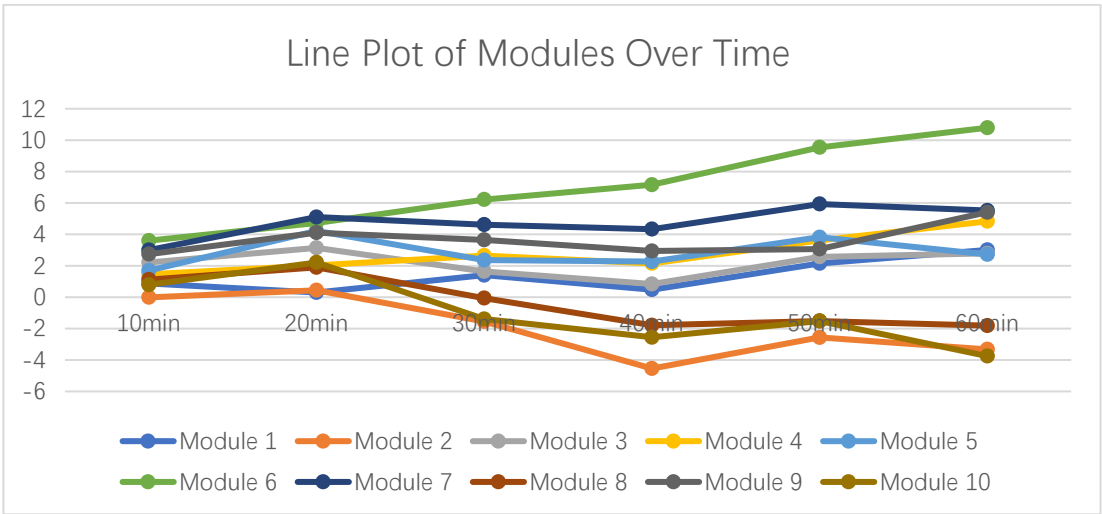
Figure 16: Mower test result

6.3.1.3 CH010 Mower Test: Conclusion

Average (Absolute error)	Maximum(Absolute error)
10min: 1.74°	10min: 3.6°
20min: 2.81°	20min: 5.1°
30min: 1.95°	30min: 6.22°
40min: 1.12°	40min: 7.16°
50min: 2.51°	50min: 9.54°
60min: 2.61°	60min: 10.79°

6.3.2 CH040 test result

6.3.2.1 CH040 Mower Test:Table display

Table 15: Mower test result

Time	10min	20min	30min	40min	50min	60min
1	0.83°	-0.13°	0.1°	-0.91°	-0.1°	-0.98°
2	0.8°	-0.12°	0.32°	0.76°	0.48°	-0.15°
3	-0.11°	-0.69°	0.03°	0.58°	1.46°	1.84°
4	0.3°	-0.5°	-0.82°	-0.46°	0.27°	0.6°
5	-1.08°	-2.13°	-3.29°	-4.52°	-3.96°	-4.57°
6	-0.95°	-1.8°	-1.65°	-2.14°	-1.95°	-2.49°
7	0.39°	-0.27°	-0.05°	-0.13°	-0.46°	-2.15°
8	-0.22°	-0.49°	-0.75°	-1.87°	-1.55°	-2.56°
9	-0.04°	-0.58°	0.05°	-1.29°	-1.39°	-1.17°
10	-0.25°	-0.43°	-0.52°	-0.53°	-0.18°	0.23°

Unit: °ree

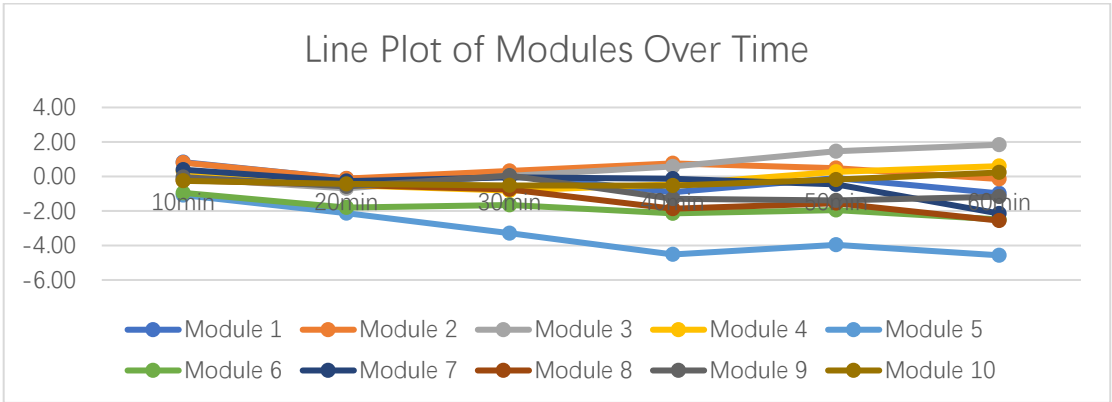**6.3.2.2 CH040 Mower test result(Graph display)**

Figure 17: Mower test result

6.3.2.3 CH040 Mower Test: Conclusion

Average (Absolute error)	Maximum(Absolute error)
10min:-0.03°	10min:-1.08°
20min:-0.71°	20min:-2.13°
30min:-0.65°	30min:-3.29°
40min:-1.05°	40min:-4.52°
50min:-0.73°	50min:-3.96°
60min:-1.14°	60min:-4.57°

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