

News Release October 1, 2011

ISO/IEC17025:2005 Certification Scope Revision of Testing Center (Located in Ichinoseki Hirose Electric Co., Ltd.), Hirose Electric Co., Ltd.

Testing Center (Located in Ichinoseki Hirose Electric Co., Ltd.) of Hirose Electric Co., Ltd. has been certified according to ISO/IEC17025:2005 as Testing Laboratory and Calibration Laboratory by Japan Accreditation Board (JAB), Public Interest Incorporated Foundations on November 24, 2004, and then revised on September 2, 2011.

We will continuously maintain ISO/IEC17025:2005 and attempt to improve the quality of testing and calibration furthermore.

For those customers who ask us testing and calibration, we will support your audit of work performed, if you wish to.

Accreditation Certificate

[Testing laboratory]

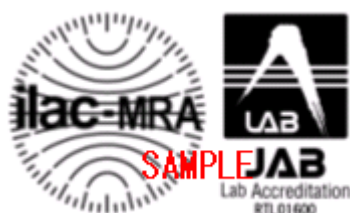


[Calibration laboratory]

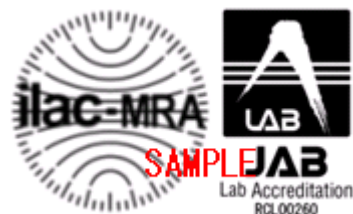


Accreditation Symbol

[Testing laboratory]



[Calibration laboratory]



[Scope of applied accreditation Electrical tests PDF](#)

[Scope of applied accreditation Geometric measurement PDF](#)

*Accreditation: The Japan Accreditation Board for Conformity Assessment

ISO/IEC 17025:2005 Scope of applied accreditation(Electrical test)

【Testing laboratory】

No.	Title of applied accreditation	Standard/ specification number	Principal Test Condition
1	Cold resistance	JIS C 5402 7.9	Temperature:-65 to -5°C Duration2,16,72,96h
		JIS C 60068-2-1:1995 JIS C 5402-11-10 IEC 60068-2-1:1990	Test Aa (except 5, 6, 8, 10, 11) Test Ab (except 16, 17, 19, 21, 22) Temperature:-65 to -5°C
2	Heat resistance	JIS C 5402 7.8	Temperature:+30 to +200°C Duration2,16,72,96h
		JIS C 60068-2-2:1995 JIS C 5402-11-9 IEC 60068-2-2:1974	Test Ba (except 5, 6, 8, 10, 11) Temperature:30 to 100°C Test Bb (except 16, 17, 19, 21, 22) Temperature:30 to 200°C
3	Change of temperature	JIS C 5402-11-4	Test Nb (except 3.5, 3.8, 3.9) Temperature:-65 to 200°C
		JIS C 0025:1988	Test Nb (except 3.5, 3.8, 3.9) Temperature:-65 to 200°C
		IEC 60068-2-14:1984	Test Na (except 2.5, 2.8, 2.9) Temperature:-65 to 200°C
	Thermal shock	JIS C 5402 7.2	Temperature:-65 to +200°C Number of cycles:5 cycles~
		JIS C 0025:1988	Test Nb (except 3.5, 3.8, 3.9) Temperature:-65 to 200°C
		JIS C 5402-11-4 IEC 60068-2-14:1984	Test Na (except 2.5, 2.8, 2.9) Temperature:-65 to 200°C
4	Damp heat,steady state	JIS C 5402 7.3	Temperature:40 °C Humidity: 90 to 95% RH Duration96,240,504,1344h
		JIS C 60068-2-3:1987	(except 3.1, 5,6) Temperature:40 °C Humidity: 90 to 95% RH
		JIS C 60068-2-78 IEC 60068-2-78	(except 6, 8, 10, 11) Temperature:40±2 °C, Humidity: 93±3% RH
		JIS C 5402-11-3	Temperature:40±2 °C, Humidity: 85±3% RH
5	Test under combination cycle of temperature and humidity	JIS C 5402 7.4.1	Temperature: -10 to +65°C Humidity:90-95% RH Number of cycles:10 cycles
		JIS C 60068-2-38 IEC 60068-2-38:1974	(except 6.2, 6.4, 7) Temperature: -10 to +65°C Humidity:90-95% RH
6	Temperature humidity cycle (12 + 12 hour cycle) test	JIS C 5402 7.4.2	Temperature:25-55°C Humidity:90-95% RH
		JIS C 60068-2-30	(except 5, 7, 9, 10)
		JIS C 5402-11-12 IEC 60068-2-30:1980	Temperature:25-55°C Humidity:90-95% RH
7	Test of spraying salty water test	JIS C 5402 7.1	Temperature:+35□ Concentration of salt solution:5% Duration48,96h
		JIS C 60068-2-11	(except 5, 9, 11)
		JIS C 5402-11-6 IEC 60068-2-11:1981	Temperature:35□ Concentration of salt solution:5%
8	Sealing (air tightness) test	JIS C 5402 7.5.1	Head of water: 0.15 m to 1.5m Duration0.5,2,24,48h
9	Sealing (air tightness) test	JIS C 5402 7.6	Pressure range: ambient pressure ~17.6 kPa Duration 20S
10	Vibration test	JIS C 5402 6.1	Frequency:10-2000Hz Halt amplitude:0.35mm-1.5mm Acceleration:49m/s ² -196m/s ²
		JIS C 60068-2-6:1999 JIS C 5402-6-4 IEC 60068-2-6:1995	(except 6, 7, 9, 10, 11, 12) Frequency 10 Hz to 2000 Hz Halt amplitude 0.35mm to 1.5mm Acceleration 50m/s ² to 200m/s ²
		JIS C 60068-2-64 IEC 60068-2-64:1993	Frequency:5-2000Hz Control acceleration spectral density: 0.5~10(m/s ²) ² /Hz Method 1 only
11	Wide band random vibration test(Method 1 only)	JIS C 5402 6.2	Half sine wave:294m/s ² ~981m/s ²
		JIS C 60068-2-27:1995 JIS C 5402-6-3 IEC 60068-2-27:1987	(except 6, 7, 9, 10, 11) Acceleration 300m/s ² to 1000m/s ²

No.	Title of applied accreditation	Standard/ specification number	Principal Test Condition
13	Bumping test	JIS C 5402 6.32	Acceleration:98m/s ² ~390m/s ²
		JIS C 60068-2-29:1995 JIS C 5402-6-2 IEC 60068-2-29:1987	(except 6, 7, 9, 10, 11) Acceleration 100m/s ² to 250m/s ²
14	Freefall test(Method 1 only)	JIS C 60068-2-32 IEC 60068-2-32:1975	Dropping height:25mm to 1000mm Method 1 only
15	Solder wetting performance	JIS C 5402. 7. 11 IEC 60068-2-20	Soldering bath method1: 235°C Soldering iron method2: 350°C
16	Soldering heat resistance	JIS C 5402. 7. 12 IEC 60068-2-20	Soldering bath method1: 260, 350°C Soldering iron method2: 350°C
17	Sulfur dioxide gas test for contacts and terminal area	JIS C 60068-2-42 IEC 60068-2-42:1982	Temperature:25-40°C Humidity:75-80% RH Gas concentration:25 ppm
18	Hydrogen sulfide gas test for contacts and terminal area	JIS C 60068-2-43 IEC 60068-2-43:1976	Temperature:25-40°C Humidity:75-80% RH Gas concentration:10-15 ppm
19	Corrosion test under mixed gas flow	JIS C 5402-11-7	Temperature:25-30°C Humidity:70-75% RH Gas: CL ₂ , NO ₂ , H ₂ S, SO ₂
		JIS C 60068-2-60 JIS C 5402-11-7 IEC 60068-2-60:1995	(except 4, 5, 8, 9) Temperature:25-30°C Humidity:70-75% RH Gas: CL ₂ , NO ₂ , H ₂ S, SO ₂
20	External appearance, structure, and finish (1) (3) (4)	JIS C 5402 4. 1 JIS C 5402-1-1	Visual Check
21	Compatibility	JIS C 5402 4. 3	Compatibility Check
22	Denotation	JIS C 5402 4. 4	Visual Check
23	Withstand voltage	JIS C 5402 5. 1 JIS C 5402-4-1	AC: 0-5000V DC: 0-5000V
24	Insulation resistance	JIS C 5402 5. 2 JIS C 5402-3-1	Measurement range:1MΩ-50GΩ Impressed voltage:10, 100, 500, 1000V
25	Contact resistance	JIS C 5402 5. 3	DC resistance (Measurement range: 0.1 mΩ- 200Ω) (Test current: 1mA-3A)
		JIS C 5402-2-2	AC resistance (Measurement range: 0.1 mΩ - 200 Ω) One-way carrying of current is acceptable for DC.
26	Contact resistance under low voltage, low current	JIS C 5402 5. 4	DC resistance (Measurement range: 0.1mΩ-200 Ω) (Test current: 1mA-100mA)
		JIS C 5402-2-1	AC resistance (Measurement range: 0.1 mΩ-200 Ω) One-way carrying of current is acceptable for DC.
27	Chattering of contacts	JIS C 5402 5. 5 JIS C 5402-2-5	Electrical discontinuity ; 1μs,10μs,100μs,1ms,10ms
28	Electrical connectivity of the shells	JIS C 5402 5. 8	DC resistance (Measurement range: 0.1mΩ- 200 Ω) (Test current: 1mA-100mA)
			AC resistance (Measurement range: 0.1 mΩ-200 Ω) One-way carrying of current is acceptable for DC.
29	Repeating action (manual and automatic)	JIS C 5402 6. 3	Mechanical operation ; 50,100,250,500,1000,2000,5000,10000 times
30	Gauge holding force of the contacts	JIS C 5402 6. 4	Measurement range: MAX 49.00 N
31	Associative strength and removing force	JIS C 5402 6. 6	Measurement range: MAX 4900 N
32	Tensile strength of cable clamp	JIS C 5402 6. 7	Measurement range: MAX 4900 N Using weight is acceptable instead of pull force test machine.
33	Connecting strength of joints	JIS C 5402 6. 8	Measurement range: MAX 4900 N Using weight is acceptable instead of pull force test machine
34	Structures to avoid misconnection	JIS C 5402 6. 11	Measurement range: MAX 4900 N
35	Associative strength and removing force of the specimen including connecting structure	JIS C 5402 6. 12 JIS C 5402-13-1	Measurement range: MAX 4900 N
36	Tensile strength of the pressure contacts	JIS C 5402 6. 22	Measurement range: MAX 4900 N

**ISO/IEC 17025:2005 Scope of applied accreditation
(Geometric measurement)**

【Calibration laboratory】

No.	Name	Calibrated Item	CMC
1	Vernier caliper	Vernier caliper Digimatic caliper Dial caliper Constant Pressure caliper Inside caliper Depth Gauge	Range 0.01mm :0.02mm Range 0.02mm :0.03mm Range 0.05mm :0.07mm
2	Micrometer	External Micrometer Blade Micrometer Crimp Height Micrometer Cylinder Micrometer SP here Micrometer Point Micrometer	Range 0.001mm:(1.0+L/200 μ m) Range 0.01mm:(1.5+L/250 μ m) (L=Nominal dimension of gauge blocks)
3	Pin gauge	Pin gauge	1 mm to 10 mm : 1.3 μ m over 10 mm to 30 mm : 1.4 μ m

CMC:An expanded uncertainty using a coverage factor, k=2