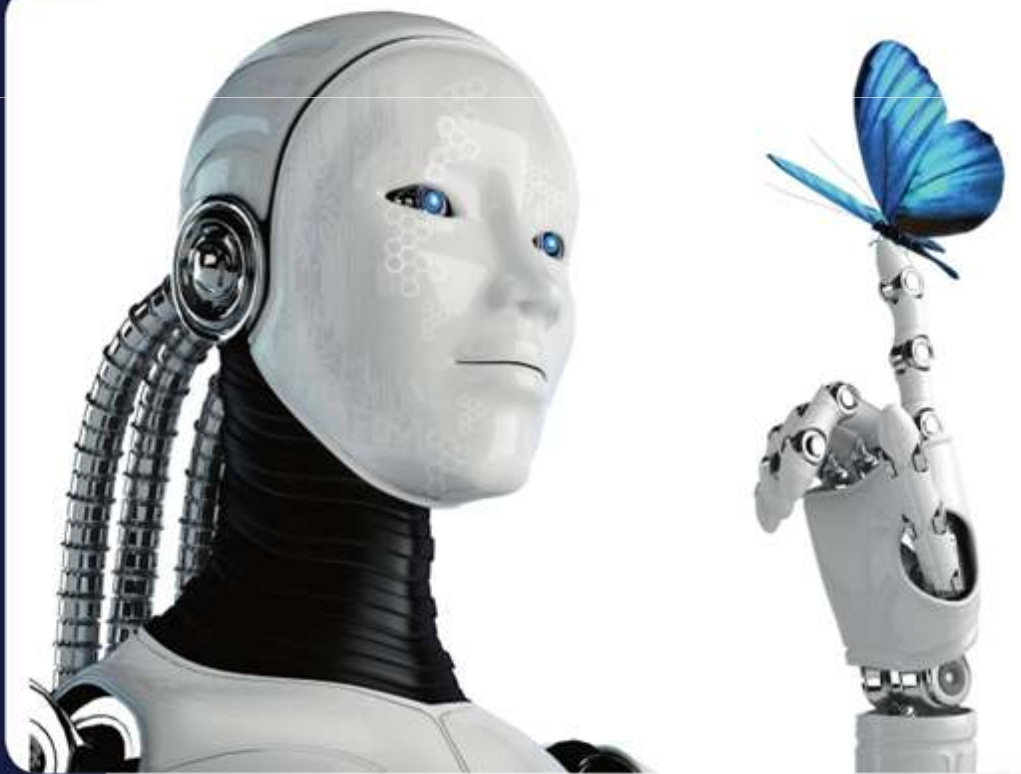




# ICR

# Newsletter Apr, 2017



## Hot issue

- **ANTI-BRIBERY MANAGEMENT SYSTEM**
- **Reliability Test**
- **Set up the Explosive Atmosphere Test Room**
- **IEC 61169-11 : 2017 Published for Radio- Frequency Connectors**
- **Product Categories**



All companies are always advancing towards  
for better development and brighter future.

However, in order to go further in the fast-changing times, corporate efforts are absolutely needed. In response to that, ICR constantly studies with pride that customer satisfaction is the best objective. In addition, ICR has been reminded that the best competitiveness is "Increasing mutual trust". ICR is the nation's first one-stop service certification body as your specialized partner can locally and internationally provide testing, verification, inspection and certification services. Be with ICR's trusted change and innovation, ICR will promise your smart and rich future.

# ANTI-BRIBERY MANAGEMENT SYSTEM



ISO 37001:2016, anti-bribery management system, is established and published by ISO, in October 2016.

■ The standard defined the 'bribery' as following.

- Direct or indirect bribery
- Bribery to accelerate business
- Non-financial advantage or favor (ex: Advantage or favor for family member)
- Conflict of interest

■ By applying the standard, the organization can prevent, detect, and respond to bribery and comply with anti-bribery laws and voluntary commitments.



# Reliability Test[1]



ICR Test & Inspection Division has established the Reliability Laboratory & IP Test Facility to provide the reliability test

## ■ Reliability Laboratory

### ▪ Purpose of Test

The mechanical stress of vibration or external force generated during use or transportation of the product is simulated to check the appearance and operation status of the product

### ▪ Test Equipment

Equipment	Equipment Name	Model Name	Manufacturer	Specification
	<b>Medium Complex Vibration Equipment</b>	J260 / SA7M	IMV	<ul style="list-style-type: none"> <li>- Frequency range : 5 ~ 2600 Hz</li> <li>- Max Acc. : 830 m/s<sup>2</sup> (Sine wave) 581 m/s<sup>2</sup> rms (Random wave) 1661 m/s<sup>2</sup> peak (Shock wave)</li> <li>- Max Vel. : 2.4 m/s</li> <li>- Max Disp. : 100 mm (peak -peak)</li> <li>- Max Payload : 1000 kg</li> <li>- Slip table size: 1000 * 1000 mm</li> </ul>
	<b>Small Complex Vibration Equipment</b>	i250 / SA5M	IMV	<ul style="list-style-type: none"> <li>- Frequency range : 5 ~ 2500 Hz</li> <li>- Max Acc. : 1081 m/s<sup>2</sup> (Sine wave) 6 m/s<sup>2</sup> rms (Random wave) 2162 m/s<sup>2</sup> peak (Shock wave)</li> <li>- Max Vel. : 2.2 m/s</li> <li>- Max Disp. : 51 mm (peak -peak)</li> <li>- Max Payload : 600 kg</li> <li>- Slip table size : 800 * 800 mm</li> </ul>

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# Reliability Test[2]

## ■ IP Test Facility

### ▪ Purpose of Test

To determine the personnel protection against access to hazardous areas of the product enclosure and penetration and performance against external dust.

### ▪ Test Equipment

Equipment	Equipment Name	Model Name	Manufacturer	Specification
	Test Probe Kit	-	ED&D	© Test Standard - IEC 60529 : 2013, IP1X to IP4X - KS C IEC 60529 : 2006, IP1X to IP4X - ISO 20653 : 2013, IP1X to IP4X
	Dust testing machine (#1)	JFMD -004	JFM TECH	- Inner Size : [1000*1000*1000]mm (W*D*H) - Max Weight : 100kg - Test Area Capacity : 1000L - Test Equipment Type : Vertical - Test Dust : A2 Fine Test Dust or Talc
	Dust Testing Machine (#2)	JFMD -005	JFM TECH	- Inner Size : [1900*900*1000]mm (W*D*H) - Max Weight : 200kg - Test Area Capacity : 2000L - Test Equipment Type : Vertical - Test Dust : A2 Fine Test Dust or Talc





# Reliability Test[3]

## IP Test Facility

### Purpose of Test

To check the water penetration and performance from the outside of the product to the inside.

### Test Equipment

Equipment	Equipment Name	Model Name	Manufacturer	Specification
	IP Tester (#1)	JFMB-008-IPX	JFM Tech	<ul style="list-style-type: none"> <li>⊙ IPX1,X2               <ul style="list-style-type: none"> <li>- Nozzle diameter : 0.5 mm in diameterx</li> <li>- Nozzle spacing : 20 mm</li> <li>- Wind velocity : 1 to 30 m/s</li> <li>- Flow rate : 1 to 10 mm/min</li> </ul> </li> <li>⊙ IPX3,X4               <ul style="list-style-type: none"> <li>- Oscillating tube size and nozzle diameter : R-200, R-400, R-600, R-800, R-1000, R-1200, R-1400, R-1600</li> <li>- Mean flow rate per nozzle : 0.07 L/min</li> <li>- Test angle : about 360°</li> </ul> </li> <li>⊙ IPX4K               <ul style="list-style-type: none"> <li>- Oscillating tube size and nozzle diameter : R-200, R-400</li> </ul> </li> <li>⊙ IPX5               <ul style="list-style-type: none"> <li>- Nozzle diameter : 6.3 mm in diameterx</li> <li>- Flow rate : 12.5 L/min ± 5 %</li> </ul> </li> <li>⊙ IPX6               <ul style="list-style-type: none"> <li>- Nozzle diameter : 12.5 mm in diameterx</li> <li>- Flow rate : 100 L/min ± 5 %</li> </ul> </li> </ul>
	IP Tester (#2)	JFMB-008-9K	JFM Tech	<ul style="list-style-type: none"> <li>⊙ Test Standard               <ul style="list-style-type: none"> <li>- IEC 60529 : 2013, IPX9K</li> <li>- Inner Size : [1000*1000*1000]mm (W*D*H)</li> <li>- Test Table Size : Ø 500mm</li> <li>- Spray Nozzle Angle : 0°, 30°, 60°, 90°</li> <li>- Water Pressure : 80 to 100 bar</li> <li>- Water Temperature : Max 90 °C</li> </ul> </li> </ul>
	IP Tester (#3)	JFMB-008-R	JFMTec	<ul style="list-style-type: none"> <li>⊙ Test Standard               <ul style="list-style-type: none"> <li>- IEC 60529 : 1994, R1/R2/S1/S2</li> <li>- Inner Size : [1000*1000*1000]mm (W*D*H)</li> <li>- Test Table Size : Ø 500mm</li> </ul> </li> </ul>



# Set up the Explosive Atmosphere Test Room

## ■ Set up the explosive atmosphere test room at Gimpo-building

The explosive atmosphere test room was set up on March 2017.

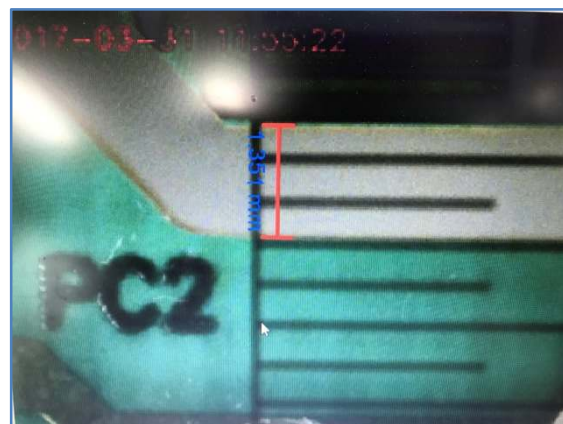
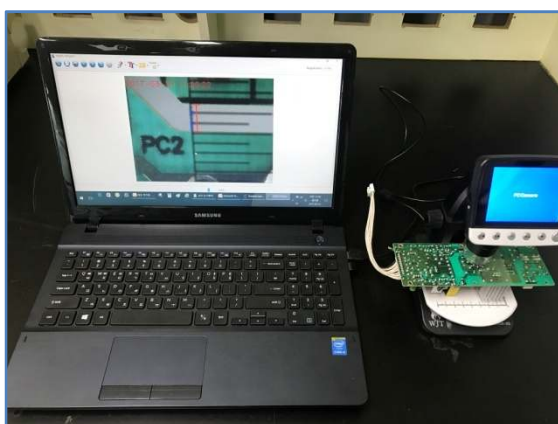
We are capable to perform the tests for IEC/EN 60079-0 (General requirements) and IEC/EN 60079-11 (intrinsic safety).

From the role to reduce cost and time of manufacturer by proceeding pre-testing at development step of product, furthermore we have a plan to resister domestic accreditation laboratory (KOLAS, Middle category 03.006, industrial electrical equipment) on the second half 2017.

## ■ View of test room



## ■ Measurement of insulation distance for IEC/EN 60079-11



# IEC 61169-11 : 2017

## Published for Radio-Frequency Connectors



- The [International Electrotechnical Commission](#) (IEC) has released **IEC 61169-11:2017**. This includes “Radio-frequency connectors – Part 11: Sectional specification for [RF](#) coaxial connectors with inner diameter of outer conductor 9,5 mm with threaded coupling – characteristic impedance 50 ohms (Type 4,1-9,5).”



This standard is now available on the IEC [webstore](#).

- Description: “**IEC 61169-11:2017(E)**, which is a sectional specification (SS), provides information and rules for the preparation of detail specifications (DS) for RF coaxial connectors with threaded coupling, typically for use in 50 Ohms cable networks (type 4,1-9,5).

- The [International Electrotechnical Commission](#) (IEC) has released IEC 61169-11:2017. This includes “Radio-frequency connectors – Part 11: Sectional specification for [RF](#) coaxial connectors with inner diameter of outer conductor 9,5 mm with threaded coupling – characteristic impedance 50 ohms (Type 4,1-9,5).”

This standard is now available on the IEC [webstore](#).

- This document prescribes mating face dimensions for general purpose connectors – grade 2, dimensional details of standard test connectors-grade 0, gauging information and tests selected from IEC 61169-1, applicable to all detail specifications relating to series 4,1-9,5 RF connectors.

This specification indicates recommended performance characteristics to be considered when writing a detail specification and it covers test schedules and inspection requirements for assessment levels M and H

- The 4,1-9,5 types RF coaxial connectors with nominal impedance 50 Ohms are threaded coupling units which are used with all kinds of RF cables and microstrips in [microwave](#) transmission systems. And the working frequency is up to 14 GHz.”





# Product Categories

EMI				
Product and environment	International	Europe	Korea	U.S.
Industrial, scientific and medical equipment	CISPR 11	EN 55011	KN 11	FCC Part 18
Sound and television broadcast receivers and associated equipment	CISPR 13	EN 55013		FCC Part 15
Household appliances, electric tools and similar apparatus	CISPR 14-1	EN 55014-1	KN 14-1	
Information technology equipment	CISPR 22	EN 55022		FCC Part 15
Residential, commercial and light-industrial	IEC 61000-6-3	EN 61000-6-3	KN 61000-6-3	
Industrial environments	IEC 61000-6-4	EN 61000-6-4	KN 61000-6-4	
Harmonic current emissions (equipment input current $\leq$ 16 A per phase)	IEC 61000-3-2	EN 61000-3-2	KN 61000-3-2	
Voltage changes, voltage fluctuations and flicker in public low-voltage	IEC 61000-3-3	EN 61000-3-3	KN 61000-3-3	
Multimedia equipment	CISPR 32	EN 55032	KN 32	
General lighting purposes	CISPR 15	EN 55015	KN 15	FCC Part 18

EMS			
Product and environment	International	Europe	Korea
Medical electrical equipment	IEC 60601-1-2	EN 60601-1-2	KN 60601-1-2
Sound and television broadcast receivers and associated equipment	CISPR 20	EN 55020	
Household appliances, electric tools and similar apparatus	CISPR 14-2	EN 55014-2	KN 14-2
Information technology equipment	CISPR 24	EN 55024	
Residential, commercial and light-industrial	IEC 61000-6-1	EN 61000-6-1	KN 61000-6-1
Industrial environments	IEC 61000-6-3	EN 61000-6-3	KN 61000-6-3
Multimedia equipment			KN 35
General lighting purposes	IEC 61547	EN 61547	KN 61547

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ICRO-31/R20161125 본 문서는 법률 제 14088호 저작권법의 보호대상이며, ICR의 지적 자산으로 불법 편집 및 복사를 금합니다.

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