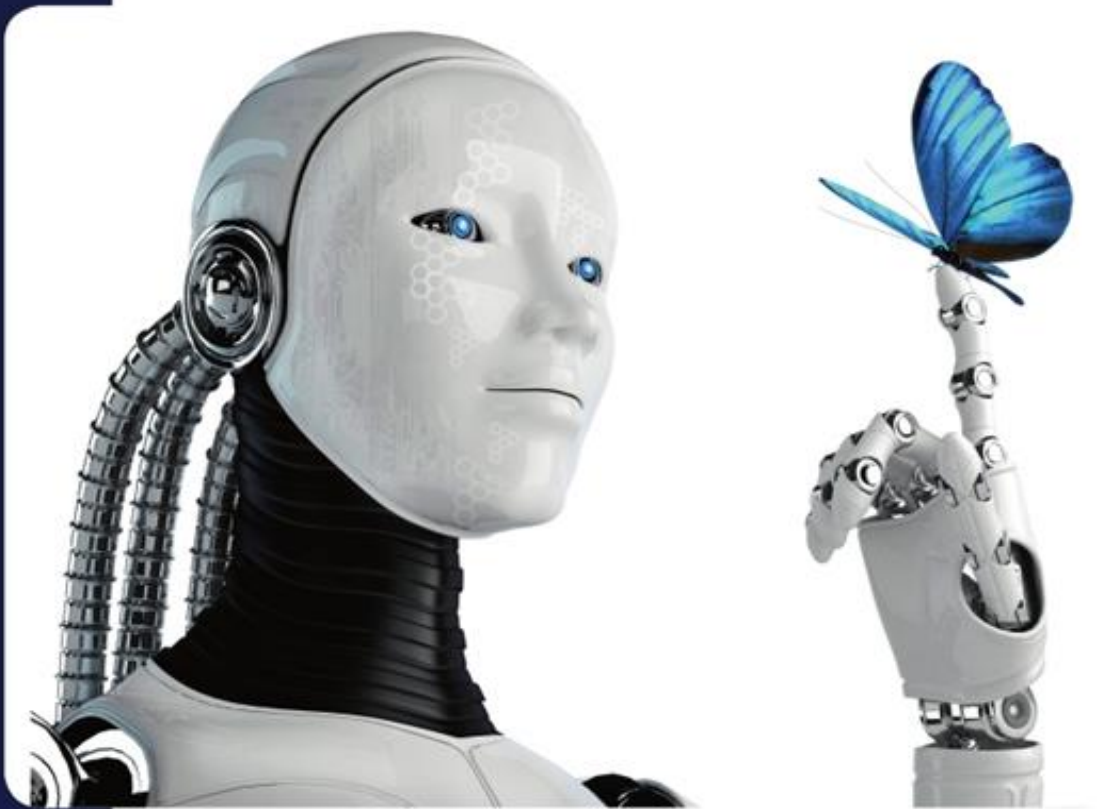


Newsletter December, 2023



ICR



Hot Issue

1. The annual meeting of the IECEx system
 2. 2023 4th Auditor Training Course Plan
 3. KORMARINE 2023 Exhibition Participation
 4. Revision of Common technical standards for machinery and equipment (electromagnetic) (S2-W-5)
-
5. Conformity assessment of wireless modules



The annual meeting of the IECEx system



■ We are pleased to inform, that **the annual meeting of the IECEx system** held in Edinburgh, Scotland UK 18-22nd September 2023 has been successful and **ICR delegate has participated on-site.**

The annual meeting of the IECEx system



- May it be known, that **ICR is authorized testing laboratory and certification body for IECEx system** which is an international system for certification of equipment for use in explosive atmospheres and its quality assessment specifications are based on standards prepared by the International Electrotechnical Commission (IEC).
- IECEx system is worldwide recognized assessment scheme and the annual meeting agenda is designed in purpose to constantly raise the level of knowledge and service, that is provided to manufacturers to create safety products.
- We kindly invite to inquire ICR to get more detail on possible cooperation”

 **Inquiries**

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2023 4th Auditor Training Course Plan

- ICR International Certification Registrar Ltd. is an auditor training provider directly registered to Exemplar Global.
- ICR plans to **hold an auditor training course in Dec 2023.**
- Through **the AU, TL, QM, EM, OH, and MD courses**, all the trainees will be conducted so that the one's can be qualified for each module.
- Our training teaches auditors how to provide impartial audits based on objective evidence.

※ **The detailed schedule of the auditor training course in Dec 2023 is as follows.**

Curriculum	Training period	Training hours
AU/TL	Dec 18~20 (3days)	8hours/1day, total 24hours (3 days)
QM	Dec 21~22 (2days)	8hours/1day, total 16hours (2 days)
EM	Dec 11~12 (2days)	8hours/1day, total 16hours (2 days)
OH	Dec 13~14 (2days)	8hours/1day, total 16hours (2 days)
MD	Dec 26~27 (2days)	8hours/1day, total 16hours (2 days)

※ *Please note that the training schedule and location may change depending on circumstances and each training may be held or not depending on the number of applicants.*

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KORMARINE 2023 Exhibition Participation



- ICR attended the KORMARINE 2023 , which was held from October 24 to 27, 2023, and successfully concluded the event.
- At a large-scale exhibition with 900 participating companies and 27,136 visitors, **ICR was introduced** and we were able to inform visiting customers about **Ex certification(IECEx & ATEX)** and **Korea Register of Shipping (KR) certification**.



KORMARINE 2023 Exhibition Participation



■ On October 25, 2023, KORMARINE held the second **ICR-KExT Ex certification seminar**. It was a good harmonious place to exchange information with customers in various fields, including information on **Ex certification and type of protection, installation inspection, intrinsic safety design, and register of shipping certification for 26 organizations**.

This seminar was an opportunity to provide information on Ex certification and Ex technology, and we look forward to seeing ICR develop in the future so that we can reward our customers with better services.



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KORMARINE 2023 Exhibition Participation



< ICR's booth at the KORMARINE 2023 >



< Ex certification seminar held at the KORMARINE 2023 >



Revision of Common technical standards for machinery and equipments [electromagnetics] (S2-W-5)

■ 01 January, 2024, the common technical standards for machinery and equipment were revised and implemented. ICR will focus on the equipment used in the industrial environment and inform it

■ S2-W-5

- It is a technical standard established to prevent industrial accidents by preventing malfunction of various industrial facilities installed in the workplace due to electromagnetic interference.
- In order to obtain the **S mark and KCs certification**, the common technical standards (**Electromagnetic**) (S2-W-5) for machinery and equipment must be satisfied



<S-MARK>



<KCs MARK>



Revision of Common technical standards for machinery and equipments [electromagnetics] (S2-W-5)

■ Revision of test criteria

- Some of the standards for permitting conduction emission tests in industrial environments have been changed

Before the revision

	Test items	Frequency range(MHz)	Class 2 appliance	Limits (dB μ V)
Electromagnetic compatibility in industrial environment	Conducted emission	5 or more and less than 30	Quasi-peak	90 ~ 70



After the revision

	Test items	Frequency range(MHz)	Class 2 appliance	Limits (dB μ V)
Electromagnetic compatibility in industrial environment	Conducted emission	5 or more and less than 30	Quasi-peak	90 ~ 73

Revision of Common technical standards for machinery and equipments [electromagnetics] (S2-W-5)

■ Establishment of test criteria

- Radiated emission test acceptance criteria for frequencies above 1 GHz in industrial environments have been added.

Before the revision					
Class 1 appliance	Test items	Frequency range(MHz)	Limits Quasi-peak(dBμV)		
			Measurement distance		
			3 m	10 m	30 m
Electromagnetic compatibility in industrial environment	Radiated emission	< New >			
		< New >			



After the revision					
Class 1 appliance	Test items	Frequency range(MHz)	Limits Quasi-peak(dBμV)		
			Measurement distance		
			3 m	10 m	30 m
Electromagnetic compatibility in industrial environment	Radiated emission	1000 or more and less than 3000	Peak 76	-	-
		3000 to 6000	Peak 80	-	-

Revision of Common technical standards for machinery and equipments [electromagnetics] (S2-W-5)

■ Establishment of test criteria

- Radiated emission test acceptance criteria for frequencies above 1 GHz in industrial environments have been added.

Before the revision

Class 2 appliance	Test items	Frequency range(MHz)	Limits Quasi-peak(dBμV)		
			Measurement distance		
			3 m	10 m	30 m
Electromagnetic compatibility in industrial environment	Radiated emission	< New >			
		< New >			
		< New >			



After the revision

Class 2 appliance	Test items	Frequency range(MHz)	Limits Quasi-peak(dBμV)		
			Measurement distance		
			3 m	10 m	30 m
Electromagnetic compatibility in industrial environment	Radiated emission	1000 or more and less than 2400	Peak 60	-	-
		2500 or more and less than 5725	Peak 60	-	-
		5875 or more and less than 18000	Peak 80	-	-

※ Application to equipment operating at frequencies greater than 400 MHz

Revision of Common technical standards for machinery and equipments [electromagnetics] (S2-W-5)

■ Revision of test conditions

- The test conditions for the immunity test have revision

Before the revision				
	Test items	Applied port	Test conditions	Test criteria
Criteria for electromagnetic immunity in industrial environment	Radiated susceptibility immunity	Enclosure	80~1,000 MHz, 3 V/m 1.4~2.0 GHz, 3 V/m 2.0~2.7 GHz, 1 V/m 80 % Am modulation (1 kHz)	A
	Electrical fast transient	AC, DC Power	±2 kV	B
< New >				



After the revision				
	Test items	Applied port	Test conditions	Test criteria
Criteria for electromagnetic immunity in industrial environment	Radiated susceptibility immunity	Enclosure	80~1,000 MHz, 3 V/m 1.4~6.0 GHz, 3 V/m 80 % AM modulation (1 kHz)	A
	Electrical fast transient	AC Power	±2 kV	B
DC Power		±1 kV		

Revision of Common technical standards for machinery and equipments [electromagnetics] (S2-W-5)

▣ Equipments & test photo



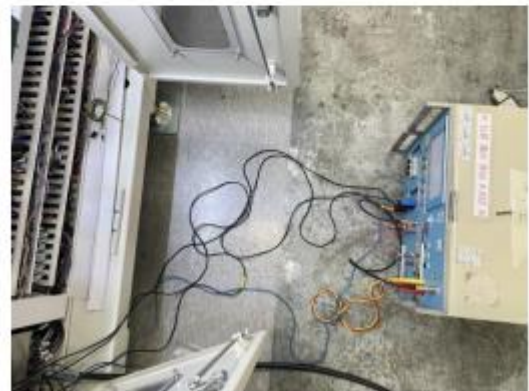
<Equipment photo>



<Equipment photo>



<Equipment photo>



<Test photo>



Revision of Common technical standards for machinery and equipments [electromagnetics] (S2-W-5)

- The ICR has equipments for the revised electrical fast **transient test**, which can be tested in the field by changing the value of ± 2 kV level to ± 1 kV during the DC power test.
- We can also has equipment for revision the acceptance criteria for radiated emission tests for class 1 and class 2 appliance used in industrial environments, so field tests are possible.
- **EMC Test and S-MARK, KCs (Autonomous Safety Verification Report) certification in the field of electromagnetic waves**, If you have any questions **about product certification**, please feel free to contact us.

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Conformity assessment of wireless modules



Certificate wireless module conformity, distinguish suitability registration, and whether it is subject to SA

■ Notification on the conformity evaluation of broadcasting and communication equipment, etc. Appended Table 1

Equipment subject to conformity evaluation Note 4

- Among wireless devices for wireless access systems, including wireless LANs, and wireless devices for wireless data communication systems, equipment not subject to the electromagnetic absorption rate standard can be evaluated for suitability by registration as a designated test institution.

■ What is a SAR Target Device?

- SAR target devices are those used within 20 cm of the human body or those used in excess of 20 mW

Conformity assessment of wireless modules



Certificate wireless module conformity, distinguish suitability registration, and whether it is subject to SA

■ whether it is subject to SAR

- In general, SAR target modules can be certified as appropriate, and SAR target modules can be registered as appropriate.
- If it is difficult to determine whether it is subject to SAR, it is possible to register appropriately.
(If it exceeds 20 mW, but it is unclear whether it is used in close proximity to the human body.)
- If a finished product using a module registered as suitable is subject to SAR, the product shall be certified as suitable. However, in the case of laptops, SAR test reports can be attached and registered as appropriate.

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