

Newsletter April, 2024



ICR



Hot Issue

1. Purchase of test equipment for Portable transmitters
2. ICR-KOMERI Signs explosion-proof Certification and Testing Agreement
3. China, Safety technical specification for E-Bicycle(GB 17761-2018)





Purchase of test equipment for Portable transmitters

■ Test equipment according to ISO11452-9 2nd edition revision

ICR completed a test equipment setup according to the revision because the portable transmitters test item of the **HMC specification(ES96200-00 21th)** was revised from 1st edition to 2nd edition.

Test equipment is according to the ISO standard and is used by all automotive companies around the world. It is a test equipment that can perform portable transmitters test.

The most important content in the revised standard is the definition of folded dipole antenna. **ICR introduced the corresponding folded dipole antenna and passed the revised standard test.**

Purchase of test equipment for Portable transmitters

■ Folded dipole antenna

- Input impedance: 50 Ω
- Balun transformation ratio: 1:1
- Frequency range: 142 MHz – 246 MHz
- Radiating element dimensions: 89 mm \times 240 mm
- Maximum power input 30 W
- Connector: type-N female





Purchase of test equipment for Portable transmitters

■ Test equipment according to ISO11452-9 2nd edition revision

❖ Before revision Ed 1.0 General

Simulated portable transmitters consist of

- radio frequency (RF) signal generating equipment, and
- RF power monitoring equipment and antennas.

❖ After revision Ed 2.0 General

The following equipment is used:

- ground plane;
- radio frequency (RF) generator with internal or external modulation capability;
- power amplifier;
- power measuring instrumentation to measure the forward and reverse power;
- dual directional coupler;
- low loss coaxial cables;
- vector network analyzer (VNA);
- transmit antenna;
- artificial networks (AN), and/or high voltage artificial networks (HV-AN), and/or artificial mains networks (AMN), and/or asymmetric artificial networks (AAN).

 **Inquiries**

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ICR-KOMERI Signs explosion-proof Certification and Testing Agreement



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한국조선해양기자재연구원
Korea Marine Equipment Research Institute

■ On March 4, 2024, **ICR and KOMERI** signed a memorandum of understanding (**MOU**) in the field of **explosion proof certification and testing**.

■ **KOMERI**, established in 2001, is a specialized production technology research institute under the Ministry of Trade, Industry and Energy. KOMERI provides comprehensive support for the technological development, testing and certification and technological innovation of new growth engines of shipbuilding and marine equipments. It contributes to enhancing the competitiveness of Korea's shipbuilding and marine industry through international cooperation.

ICR-KOMERI Signs explosion-proof Certification and Testing Agreement



- Matters related to joint research in **the basic and practical fields of explosion-proof**, as well as the discovery of new businesses, promotion of joint businesses, professional education, and joint technical seminars, are expected to **increase the technological competitiveness of companies**.
- The signing of the business agreement is expected to enhance the status of the industrial safety certification field related to explosion-proof certification and testing in Korea through the sharing of expertise and experience between ICR and KOMERI, and mutual exchange and cooperation of research and technical facilities, equipments, and personnel.
- Through this business agreement, **ICR will provide various and better services for certification and testing of explosion-proof equipments**.

 **Inquiries**

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China, Safety technical specification for E-Bicycle



- **The China Certification Center for Automotive Products (CCAP)** also announced their own CCAP-C11-16: 2023 Detailed Implementation Rules for China Compulsory Certification for Electric Bicycles in accordance with CNCA's to address the requirements for new applications, transition for existing certificates.
- **Starting from September 22, 2023**, entities seeking electric bicycle certification must follow the 2023 version of the rules and guidelines, with CCAP and China Quality Certification Centre (CQC) conducting certification assessments and issuing certificates accordingly.
- **The type testing of safety technical specification for electric bicycle(GB 17761-2018)** is as specified in the following.

China, Safety technical specification for E-Bicycle



Category	Safety	Requirement
Battery	Nameplate	Marking
	Electrical	Overcharge
		Overdischarge
		External short-circuit
	Environmental	Thermal abuse
Mechanical	Nail penetration	
Battery Pack	Nameplate	Marking
	Electrical	I2(A) Discharge
		Forced discharge
		Electrostatic discharge
		Overcurrent protection
		Overtemperature protection
		Overcharge protection
		External short-circuit
		Collaborative charging
	Mechanical	Isolation resistance
		Crush
		Mechanical impact
		Vibration
		Drop
Mold stress		
	Handlebar strength	

China, Safety technical specification for E-Bicycle



Category	Safety	Requirement
Battery Pack	Environmental	Flame resistance
		Low-pressure
		Thermal shock
		Immersion
		Salt spray
		Damp heat cycle
	Thermal	Thermal propagation

- Either heater or overcharge can be selected as trigger of cell heating.
- If you have any inquiry about **battery testing and certification service**, please feel free to contact our Battery Testing Center.

 **Inquiries**

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