



IEC/TC 66	SECRETARIAT: UNITED KINGDOM	DATE: OCTOBER 2016
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Please ensure this form is annexed to the Report to the Standardization Management Board if it has been prepared during a meeting, or sent to the Central Office promptly after its contents have been agreed by the committee.

**A. TITLE AND SCOPE OF IEC/TC 66**

**Title**

Safety of measuring, control and laboratory equipment

**Scope**

To prepare safety standards for test and measurement equipment, industrial-process control equipment, and laboratory equipment wherever they are used.

Such equipment includes:

a) equipment and systems to measure, test, generate, and analyse, simple and complex electromagnetic quantities and equipment that by electromagnetic means measure physical quantities.

Note: Aspects of this equipment other than safety are covered by other technical committees.

b) equipment and systems for industrial-process measurement and control.

Note: Aspects of this equipment other than safety are covered by TC 65 except that SC 65A has a Horizontal Safety Function relating to the functional safety of electrical/electronic/ programmable electronic systems and SC 65B is responsible for the functional safety of programmable controllers.

c) laboratory equipment for analysis, handling and preparation of materials.

Note: This equipment includes measuring instruments, systems and their accessories, for preparation, treatment and analysis of materials in the fields of research, medicine, industry and education, and for environmental monitoring.

TC 66 has a Group Safety Function in accordance with IEC Guide 104 for the equipment in categories a) to c) above.

## **B. MANAGEMENT STRUCTURE OF THE TC**

### **Working Groups:**

WG 1 General requirements

WG 2 Safety requirements for electrical measuring and test equipment

### **Maintenance Teams:**

MT 10 Specific Laboratory equipment

MT 13 Revision of IEC 61010-2-020

MT 14 Maintenance of IEC 61010-2-091

MT 15 Maintenance of IEC 61010-2-040

MT 16 Maintenance of IEC 61010-2-120

MT 17 Maintenance of IEC 61010-2-010, -011 and -012

### **Joint Working Groups:**

JWG 13 Safety requirements for industrial-process measurement, control and automation equipment, excluding functional safety Managed by TC 65.

## **C. BUSINESS ENVIRONMENT**

The market for equipment within the scope of TC 66 and IEC 61010 is large and growing. The equipment is used in a wide range of industry and educational establishments and by users with very different levels of technical knowledge. Manufacturers rely on the IEC 61010 series both to ensure that their products are safe and to be able to demonstrate that they meet national safety regulations, while users rely on them for assurance.

## **D. MARKET DEMAND**

- Customers are manufacturers and users of equipment, test houses, and national authorities responsible for safety at work.
- The level of representation of manufacturers and test houses on TC 66 WG is satisfactory but the work of the committee would greatly benefit from representation by users of equipment.
- Standards produced by TC 66 have been adopted by the majority of industrialized countries.
- There are no competing standards developed by other organizations.
- It will be necessary to maintain current standards and to prepare new standards as necessary to deal with future equipment developments.
- For most sectors of industry, the level of representation of manufacturers and test houses on TC 66 WG is satisfactory. Although it is recognised the TC 65 deals with process control TC 66 would like to encourage National Committees to nominate more industrial process control experts to come forward as working group experts particularly for WG 1.

#### **E. TRENDS IN TECHNOLOGY AND IN THE MARKET**

- Wireless devices and Internet of Things are becoming more common including remote control and display which could cause safety problems
- With increase digitization software is becoming more relevant in the control of safety functions and hence there is a need for requirements for functional safety.
- Electromagnetic phenomena are becoming sufficiently prevalent to cause safety hazards with the equipment in the scope of TC 66.
- Work place safety regulations are evolving to require greater attention to usability, common user interface, and ergonomics.
- Systems aspects including external communications are becoming more relevant in the control of safety functions and hence there is a need for requirements for functional safety.
- Electricity still is a major factor in our energy-supply. The need to measure and control the supply sources is continuously growing, where the tendency to increase the used voltages is noticeable. The risks related to these increased voltages are growing, where the need for safety requirements will become more important. Also e-mobility is a new trend; here the need for special control and measuring equipment and its safety requirements will increase also.

#### **F. SYSTEMS APPROACH ASPECTS (REFERENCE - AC/33/2013)**

The scope of TC 66 is very wide but at the same time so fragmented and dedicated to safety that there is no clear system where TC 66 could belong.

However, especially the measurement and process control equipment are an integral part of the scope of SEG 7, smart manufacturing.

At safety standardization level, TC 66 interacts with the following Technical Committees:

##### **IEC TC 66 as customer:**

- TC 44 - Safety of machinery - Electrotechnical aspects
- SC 61C - Safety of refrigeration appliances for household and commercial use
- TC 64 - Electrical installations and protection against electric shock
- SC 65A – System aspects
- ISO/TC 86 - Refrigeration and air-conditioning
- TC 89 – Fire hazard testing
- TC 96 - Transformers, reactors, power supply units, and combinations thereof
- TC 99 - System engineering and erection of electrical power installations in systems with nominal voltages above 1 kV a.c. and 1,5 kV d.c., particularly concerning safety aspects
- TC 108 - Safety of electronic equipment within the field of audio/video, information technology and communication technology
- TC 109 - Insulation co-ordination for low-voltage equipment

##### **IEC TC 66 as supplier: other system Committees:**

- TC13 - Electrical energy measurement and control
- SC 22E - Stabilized power supplies
- TC 38 - Instrument transformers
- TC 44 – Safety of machinery – Electrotechnical aspects
- SC 62A - Common aspects of electrical equipment used in medical practice
- TC 65 - Industrial-process measurement, control and automation
- SC 65B – Measurement and control devices
- TC 78 - Live working
- TC 85 - Measuring equipment for electrical and electromagnetic quantities

#### **G. CONFORMITY ASSESSMENT**

With reference to clause 33 of Part 2 of the ISO/IEC Directives all publications are in line with the requirements related to conformity assessment aspects.

TC/SC publications are used for IEC Conformity Assessment Systems (IECEE).

Standards include test specifications, reproducible test requirements, and test methods.

There are no special conformity assessment requirements generated by any standards projects.

**H. 3-5 YEAR PROJECTED STRATEGIC OBJECTIVES, ACTIONS, TARGET DATES**

STRATEGIC OBJECTIVES 3-5 YEARS	ACTIONS TO SUPPORT THE STRATEGIC OBJECTIVES	TARGET DATE(S) TO COMPLETE THE ACTIONS
Update Part 2 standards for IEC 61010-1 to accord with the 1 <sup>st</sup> amendment to the 3rd edition		2018
Take account of changes in technology that impact on TC 66 standards		Ongoing
Update IEC 61010-2-011 and IEC 61010-2-012 to accommodate alternate natural refrigerants to support the F-gas regulations that are applicable in 2020.	Start the work in MT17	2020
Update the structure and contents of IEC 61010-1 to reflect the updates in IEC guides and horizontal/basic safety publications	Start the work on the rewrite of IEC 61010-1 4 <sup>th</sup> Edition	2020
Include functional safety aspects in IEC 61010-1	Start the work on the rewrite of IEC 61010-1 4 <sup>th</sup> Edition	2020

Note: The progress on the actions should be reported in the RSMB.