

## **IEC TC 23 revised scope:**

To coordinate between the different subcommittees of TC 23 and with other technical bodies within and outside IEC, aspects concerning safety, EMC, coordination, performance, compatibility interoperability, interchangeability, energy efficiency and terminology for electrical accessories contributing to the global management of the electrical energy.

To prepare standards for electrical accessories and related systems, for AC and DC, for household and similar purposes, the word “similar” including locations such as offices, commercial and industrial premises, hospitals, public buildings, etc.

These accessories and related systems are:

- Intended for fixed installations or for use in or with appliances and other electrical or electronic equipment, and may include electronic components, and related software and digital interfaces.
- normally installed by instructed or skilled persons and are normally used by ordinary persons.

It includes in particular the following products, systems and aspects, handled by the Technical Committee or Subcommittees depending on their nature:

- adaptors
- appliance couplers
- automatic reclosing devices
- cable reels
- cable trunking systems
- cable ducting systems
- cable support systems
- circuit breakers for overcurrent protection
- conduit systems
- connecting devices
- contactors
- cord extension sets and cord sets
- Devices for the Connection of Luminaires (DCLs)
- devices mitigating the risk of fire due to the effect of arc fault currents
- devices protecting against electric shock
- electrical Energy Efficiency products
- enclosures for accessories
- guidance for additional functions for protection devices
- HBES switches and related accessories for use in Home and Building Electronic Systems (HBES)
- Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS)
- plugs and socket-outlets
- Power frequency overvoltage protection devices.
- switches (mechanical and electronic)

Note 1: For the terms "skilled persons", "instructed persons" and "ordinary persons", see Publication IEC 61140; 3.30, 3.31 and 3.32

A lot of standards for the above-mentioned products are handled by the subcommittees of TC 23. But some products are under the direct responsibility of TC 23 due to their nature, such as:

a) Standards for single phase and multiphase installation couplers intended for permanent connection in fixed installations with a rated voltage up to and including 500 V a.c. and a rated connecting capacity up to and including 10 mm<sup>2</sup> in indoor electrical installations.

b) Standards for sound signalling devices with integral enclosures or sound signalling devices intended to be fitted into or supplied with enclosures according to IEC 60670 intended for household and similar purposes with rated voltages greater than 50 V a.c. or 75 V d.c. and not exceeding 250 V a.c. or 250 V d.c., and with rated power inputs not exceeding 100 VA.

c) Standards for clamping units for connecting devices for the connection of electrical conductors having a cross-sectional area of 0,2 mm<sup>2</sup> up to and including 35 mm<sup>2</sup> copper conductors and up to and including 50 mm<sup>2</sup> aluminium conductors with a rated voltage not exceeding 1000 V a.c. and 1500 V d.c. intended for household and similar purposes.

d) Standards for connecting devices as separate entities for the connection of two or more electrical conductors having a cross-sectional area of 0,2 mm<sup>2</sup> up to and including 35 mm<sup>2</sup> copper conductors and up to and including 50 mm<sup>2</sup> aluminium conductors with a rated voltage not exceeding 1000 V a.c. and 1500 V d.c. intended for household and similar purposes.

e) Standards for male and mating female flat quick-connect terminations for use as either an incorporated or an integrated part of an equipment or of a component, or as a separate entity, for connecting electrical copper conductors up to and including 6 mm<sup>2</sup> with a rated voltage not exceeding 1000 V a.c. and 1500 V d.c. intended for household and similar purposes.

f) Standards for Safety, EMC and installation aspects of Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS), in relation to TC23 electrical accessories.

- Electrical safety of HBES/BACS.
- Environmental Conditions and Requirements for HBES/BACS,
- Functional safety of HBES/BACS.
- EMC requirements and tests of HBES/BACS.
- Installation of HBES/BACS
- Use of HBES/BACS to manage electrical energy and to relate to external systems enabling smart grids, Active Assisted Living (AAL), security, entertainment and other applications

g) Guidelines for safety requirements and standards for electrical accessories for household and similar purposes intended for use in d.c. circuits, the word "similar" includes locations such as offices, commercial and industrial premises, hospitals, public buildings.

Note. This work is of interest for information technology applications, renewable energy applications etc.

h) Standards for Energy Efficiency Management systems, functions or solutions to be integrated or implemented in equipment products or devices of TC23 and its SCs either used in existing or new electrical installation - for optimizing the overall efficiency of a.c. or d.c. electrical energy for household and similar use.

The work on these publications also include considerations on system electrical energy performance, energy supply, procurement practices for energy using equipment and systems, and energy use as well as measurement of current electrical energy usage.

The work covers the general principles, requirements and testing procedures for Energy Efficiency Management systems resulting from stand-alone products or from any type of combination of devices and accessories aiming to manage, to monitor and to optimise the use of electrical energy within an electrical installation supplying energy to loads, either from the grid or from local energy production and/or storage (ILP&S).

It will take into account all technical and economic inputs and the overall interconnection and communication influencing the design and algorithms leading to managing, reducing, measuring, optimizing and monitoring the efficiency of electrical energy usage.

The work does not cover the drafting of product standards in hands of SC23K.

Note: The work covers combination of sensors, detectors, effectors, loads, control units, etc. aiming to optimize the efficiency of an electrical service from an energy point of view. For example a combination of sensors, control unit and heating/cooling devices for temperature control.

i) A technical report in view of the harmonisation of the general rules applied by TC 23 and its subcommittees

New standards for new products, systems or aspects as mentioned under section C of the TC 23 SBP are already included in the present scope.

Due to the need for these new standards and as electrical accessories and related systems are fundamental parts of the building infrastructure, this will definitely require coordination/cooperation with TCs, such as TC 21, TC 22, TC 34, TC 57, TC 61, TC 64, TC 72, TC 82 and TC 108.

For Lighting Systems within Building premises, TC23 is responsible for Electrical Accessories, such as control devices and certain aspects of dedicated networks.

Details of work on **control devices and** Lighting Systems are currently under consideration in IEC SEG9/WG5 "Advisory Group on Lighting Systems".

New trends in technology and in the market as mentioned in the TC 23 SBP under section E are not yet covered by the present scope.

TC 23 has Group Safety Function for:

Connecting devices, either as separate entities or as integral parts of an end product, primarily for connecting external electrical supply conductors, for use with conductor cross-sectional area of 0,2 mm<sup>2</sup> up to and including 35 mm<sup>2</sup> copper conductors and up to and including 50 mm<sup>2</sup> aluminium conductors, but excluding connecting devices intended for data and signal circuits.