

BUSINESS PLAN	Secretariat	Date
CENELEC/TC or SC		
TC 36A	Belgium	2018-04-20

TC title: INSULATED BUSHINGS

A Background

Insulated bushings, mounted on electrical apparatus, were and are made from porcelain to connect bare current carrying structures like overhead lines. This type of porcelain bushings started to be complemented by plug-in type bushings to connect screened power cables in 1970, such a shielded connection system was introduced in Europe to connect a cable to an electrical apparatus. This connection is made by two products. One part named separable connector is mounted on the cable. The other part is a plug-in type bushing foreseen from a cone, mounted on the electrical apparatus. The electrical connection of the two parts is made with the cone of the bushing and based on other performance standards. It was decided to standardize the plug-in type bushing. The first standards on European level came out in 1997.

B Business Environment

B.1 General

The use of shielded connectors on distribution networks in Europe came over from the US. The European standardisation work has been based on the IEEE standards from US.

B.2 Market demand

The market requested standards to assure the interchangeability of plug-in type bushings from different manufacturers for specified rated voltages and rated currents and the interchangeability of mating plug-in separable connectors of equivalent ratings. The standard should establish essential dimensions for this interface, to ensure adequate mounting of the bushing to apparatus and the bushing to the connector to pass tests according the relevant performance standards.

B.3 Trends in technology

The transition from not screened type cable connections on devices as motors, switchgears and transformers to screened type cable connections in the last decades increased. It is today so that European utilities are making internal standards where only this technique of screened connections for plug-in type bushings is allowed.

B.4 Market trends

The market trend is using this plug-in type bushings and connectors which are factory tested before installation. These are also relatively small compared to other indoor or outdoor bushings and can reduce the weight and volume of the electrical apparatus. The increased demand for higher voltages and current ratings is observed.

B.5 Ecological environment

It is recommended to take as reference for the environmental issues the guide lines of the "Environmental standardization for electrical and electronic products and systems".

B.6 Involvement of societal stakeholders

TC 36A is open to the participation of all interested parties, which includes as main actors manufactures of electrical apparatus, such as transformers, motors and connectors.

B.7 Involvement of SMEs

Several enterprises are SMEs, They are participating into the development process and standardisation activity. They are also active in other technical committees at national and European level.

C System approach aspects

It is a system approach view in term of standards. The standard of the bushings affect not only the devices but also the connectors that come on the cables, in terms of requirements and characteristics. We are dealing with a system where one must take account of the standardization of cables, transformers and switches, which are not always in line.

D Objectives and strategies (3 to 5 years)

To review, adapt and issue existing national bushing standards on CENELEC level for all type of bushings as defined in IEC 60137.

To change the existing standards according the market evolution.

To collaborate with other committees having an influence on the bushing standard.

To continue to collaborate closely with consumers and SMEs.

To try to incorporate European standards at international level.

E Action plan

To complete the actual approved work program.

To incorporate new market trends and needs.

Looking for interest of European standards at international level.

F Useful links to CENELEC web site

TC home page giving access to Membership, TC/SC Officers, Scope, Publications, Work program.

https://www.cenelec.eu/dyn/www/f?p=104:7:429117303132701:::FSP_ORG_ID:1257235

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