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Ministry of Electronics and Information technology
IPHW Division

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Circular

Subject: Series Guidelines for product falling under "IS/IEC 62368 : Part 1: 2023-reg

MeitY has notified the "Migration of standards IS 13252 Part 1: 2020 and IS 616: 2017 to "IS/IEC 62368 : Part 1 : 2023" vide Gazette Notification S.O. No 4997(E) dated 29th October, 2025. Accordingly the revised guidelines for formation of series of products falling under the aforesaid standard are as under:

1. Definition of Product Family

A product family can be defined by the maximum configuration of components / sub-assemblies plus a description of how the models are constructed from the maximum configuration using these components and sub-assemblies. All models which are included in the family typically have common design, construction, parts, or assemblies essential to ensure conformity with applicable requirements. If a product standard does not define a product family, this definition takes over.

2.Common Criteria Applicable to All Products in a Series

2.1 Maximum Number of Models in a Series

- a. A maximum of 10 models can be included in a series for all product categories, unless a higher limit is specifically prescribed for a particular product category.
- b. Number of samples selected for testing from a series shall be one for every ten models. The worst-case configuration from Safety Design consideration must be selected for testing in all cases.

2.2 IP Rating

- a. All models in a series should have same IP rating.
- b. The IP marked on the product has to be tested as per IS/IEC 60529 at BIS recognized laboratories. No marking is required, if it is not protected.
- c. If IP construction is used as safeguard for the product, the safeguard shall be in accordance with IEC 60529; and the IP code shall be declared in the instruction manual or on the equipment.

2.3 Enclosure Requirements

a. Enclosure Material and Surface Treatment:

- (i) The material of all enclosure forming the fire enclosure, electrical insulation barrier, or mechanical protection shall be the same across all models in the series.

- (ii) The overall shape and general design of the enclosure (i.e. fundamental form, and method of joining enclosure components) shall be the similar across all models in a series. Minor dimensional variations are permitted provided that the safety distances (creepage/clearance), ventilation restrictiveness, and fire enclosure integrity are not less favourable than the lead model. Product with worst case dimension can be tested as the lead model in the series.
 - (iii) The size and arrangement of ventilation openings in the enclosure shall be the same or more restrictive than that of the lead model across all models in the series.
- b. **Apertures for Connectors, Controls and Displays:** The design and dimensions of enclosure apertures provided for connectors, controls, and displays shall maintain the required creepage and clearance distances to internal live parts and shall not compromise the fire enclosure integrity relative to the lead model.
- c. **Position of Buttons and Controls**
 - (i) The change in aesthetics, location / positioning of buttons and controls across models within a series is permitted, subject to the testing laboratory confirming that the change in location does not impact safety of the product.
 - (ii) The laboratory shall specifically verify and mention that the relocated buttons or controls do not reduce creepage or clearance distances, do not compromise the enclosure integrity, and do not introduce new risk of inadvertent operation under foreseeable use conditions.
- d. **Permitted Variations:** Differences in colour, surface finish, and non-structural aesthetic overlays that do not affect any of the above safety criteria are permitted across models within the series.

2.4 Class of Construction (Electrical Insulation Class)

- a. All models in a series shall be of the same class of construction: Class I (basic insulation plus protective earth), Class II (double or reinforced insulation, no earth) or Class III (SELV supply).

2.5 Same Energy Source and Safeguard System

- a. All models in a series shall use the same type and sub-type of energy source and safeguard system.
- b. All models in a series must have the same energy source like ES1/ES2/ES3 (Electrical), PS1/PS2/PS3 (Power), and TS1/TS2/TS3 (Thermal) classifications for all equivalent ports and functions.
- c. All models in a series must maintain the same Energy Source Classifications for all accessible ports. A model with ES1/PS1 outputs cannot be grouped with a model containing ES2/PS2 or higher energy levels due to the fundamental change in required safeguards.
- d. Models with active cooling (fans) and passive cooling (heatsinks only) shall not be grouped in the same series.
- e. All models in a series must use same type of safety-critical components such as Y-capacitors, optocouplers, and varistors (MOV) that serve as basic, supplementary, or reinforced safeguards (ratings will depend on battery capacity) i.e. If Y-capacitor is used as protection device, additional series models should also have Y-capacitors as protection device. The worst-case model needs to be tested.

- f. **The following combinations (External Energy Source, mains operated with Internal Power supply and Battery (internal) operated) shall not be grouped in the same series:**

(i) External Energy Source (Power Adapter / Power Bank / Other Input Devices):

- a) A registered power adapter / power bank shall be provided with a power greater than or equal to the rated power of the product.
- b) For devices supporting dynamic power negotiation (e.g., USB-PD, PPS), models sharing the same maximum negotiated power envelope may be grouped in the same series. PCB layout and design of the power management and charging circuit (i.e., the safety-critical circuit interfacing with the external energy source) shall be the same across all models in the series. The Battery Management System (BMS) must utilize identical safety-logic parameters (Over-Voltage Cut-off, Under-Voltage Cut-off, and Thermal Shutdown limits) across all models to ensure consistent safeguard performance.

(ii) Mains Operated with Internal Power Supply:

- a) The mains PCB layout or the SMPS (Switched Mode Power Supply) board layout must be the same across all models.
- b) The power transformer, if applicable, must have the same design and insulation system.

(iii) Battery (Internal) Operated:

- a) Models with different battery capacities may be used in a series, provided that the lead / representative model is tested with the highest battery capacity.
- b) Battery across all models in a series shall be of same chemistry (e.g., Li-ion and Ni configurations cannot be grouped).
- c) For rechargeable batteries, the PCB layout and design of the charging and battery protection circuit shall be the same across all models in the series.
- d) In case of non-rechargeable battery also the PCB layout and design shall be the same across all models in the series.

- g. All models in the series shall have the same rated input voltage.
- h. In cases where an external energy source is not supplied with the product, the specifications and ratings of the external energy source (e.g., power adapter, power bank, etc.) shall be clearly stated on the product/packaging/e-labelling/product-manual.

2.6 Other Form Factors, wherever applicable:

All product models in a series should have -

- a. Same Form factors, e.g. in case of HDDs, SDDs.
- b. Same type of Microphone and Earphone, e.g. Clip-type, Hand-held, Over-the-ear etc.
- c. Same type of charging (Docking/Contact Charging, USB / Charging Case / wireless etc.).
- d. Smart Watches with/without SIM to be in different series.
- e. Devices with/without display to be in different series.
- f. Devices with-touch or without-touch, to be in different series.
- g. Same number of output ratings, number of outputs, component ratings, wherever applicable, e.g. in case of SMPS, Power adaptor with multiple output ports.
- h. Same frequency and number of phases at Input/Output and same bus voltage, e.g. in UPS Inverters.

- i. Same largest paper size in machines, if applicable, e.g. in Copying machines.
- j. Same type of display (LCD, LED etc.), if applicable.
- k. The IP ratings of the transmitter and receiver to be same e.g. in Wireless Microphone
- l. Same type of mounting, e.g. Handheld, Tripod wherever applicable, of Video cameras.
- m. Multiple processors can be used in a series, the lead model selected for testing must be the configuration with the highest Thermal Design Power (TDP) in Watts to represent the worst-case thermal load on the enclosure and power circuitry.
- n. Multiple processors can be used in a product if they are within the same enclosure of product.

Note:

- 1. For Power Adapters, UPS/Inverters and Power Banks devices up to a range of output power/capacity rating can be clubbed in a series.
- 2. All the components which are notified under the Order and are used in the finished notified products must be independently registered under CRO.

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To

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