

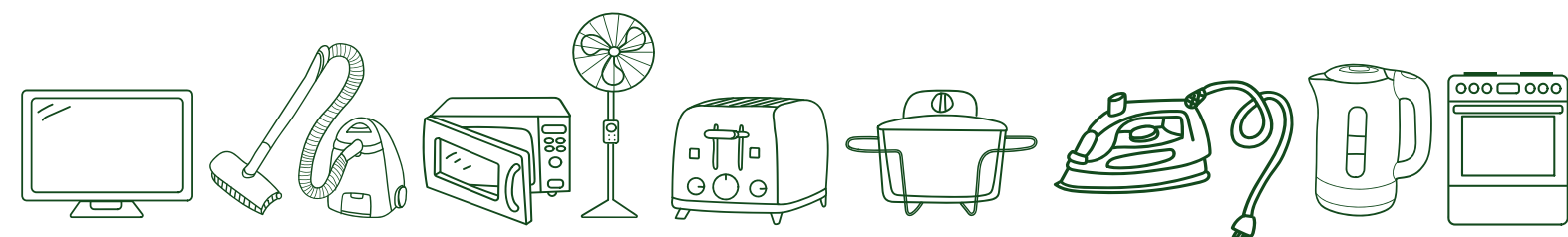
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DEPARTMENT OF ENERGY

PRIME MINISTER'S OFFICE | BRUNEI DARUSSALAM

AUTORITI ELEKTRIK NEGARA BRUNEI DARUSSALAM

ELECTRICAL APPLIANCE AND PRODUCT (SAFETY REQUIREMENT) GUIDELINE FOR GENERAL PUBLIC



Revision Record

Revision No.	Revised by:	List of Changes	Issued Date
1.0	AENBD		11/2024

Disclaimer:

This guideline aims to inform the public about the safe use of Electrical Appliances and Products (EAP), including safety mark features, main plug configurations, and a checklist to consider before purchasing EAP. While reasonable care has been taken to ensure the accuracy of the information provided, we, as the Authority in this matter, do not make any representations, warranties, or undertakings, express or implied, regarding the completeness or accuracy of this information.

This guideline is intended to raise awareness on electrical safety requirements based on the current standards. Information in this guidelines are subject to amendments from time to time. For the most accurate and up-to-date information, please refer to relevant authoritative sources or consult with a qualified professional.

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ABBREVIATIONS

Abbreviations	Descriptions
ACCSQ	ASEAN Consultative Committee for Standard and Quality
AENBD	Autoriti Elektrik Negara Brunei Darussalam
AHEEER	ASEAN Harmonized Electrical and Electronic Equipment Regulatory Regime
ASEAN EE MRA	ASEAN Electrical and Electronic Mutual Recognition Arrangement
CAB	Conformity Assessment Body
EAP	Electrical Appliances and Product
EAPSR	Electrical Appliances and Product (Safety Requirement)
EEE	Electrical and Electronic Equipment
JSCEEE	Joint Sectoral Committee on Electrical and Electronic Equipment

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1. BACKGROUND INFORMATION

The increasing number of fire incidents which likely attributed to faulty Electrical Appliances and Product (**EAP**) which can result in severe safety incidences, including loss of life, injuries and damage to assets. According to the fire cases reports in the year 2023, 41% of fire cases in Brunei were likely caused by faulty EAP related incident. The incident shows an increasing trend over recent years. This alarming statistic underscored the urgent need for stringent safety measures to mitigate risks and protect public safety. This emphasizes the importance of public awareness and adherence to safety guidelines. The development of the EAPSR Guideline is a proactive initiative by AENBD to ensure the safety of electrical appliances and products purchased and used within Brunei Darussalam

This Electrical Appliances and Product (Safety Requirement) (**EAPSR**) Guideline for the General Public aims to raise awareness on safety requirements before purchasing and using electrical appliances. AENBD is also a member of the Joint Sectoral Committee on Electrical and Electronic Equipment (**JSC EEE**) which overseeing the implementation of ASEAN Harmonized Electrical and Electronic Equipment Regulatory Regime (**AHEEERR**) and the ASEAN Electrical and Electronic Mutual Recognition Arrangement (**ASEAN EE MRA**) in this country. This includes in the harmonization of EAP standards between Brunei Darussalam and the ASEAN Member states.

Overall, the EAPSR Guideline represents a significant step towards improving the public safety of using EAP in Brunei Darussalam.

2. OBJECTIVE OF THIS GUIDELINE

Electrical Appliances and Products (EAP) play a pivotal role in modern society, serving various functions for household essentials. With increased reliance on electricity, ensuring the safety and reliability of EAPs is crucial to protect the public, properties, and the environment. This guideline aims to ensure the safe EAP supplied in the country.

The objectives of this guideline are:

- To increase awareness and instill safety practices on the use of EAP amongst the general public
- To emphasize the importance of purchasing EAP with safety requirements

3. ELECTRICAL APPLIANCES AND PRODUCTS (EAP)

EAP is define as any device or apparatus that operates on electrical power and is designed for household use. This includes a wide range of products such as dishwashers, washing machines, and lightings. These appliances typically have voltage rating is 400V, 50Hz, 3-phase, 4-wire AC or 230V single-phase, 2-wire AC.

Example of EAP includes				
				
Hair-care appliance	iron	Heating kettle	refrigerator	Rice cooker
				
Air conditioner	Standing fan	Washing machine	Lamps	Toaster
				
AC adaptor	Coffeee machine	Mixers	Air cooler	Decorative lights
				
Multiway adapter	Instantaneous water heater	Mains pressure electric storage water heater	Domestic electric wall switch	Vacuum Cleaner
				
Tumble dryer	Plugs and socket outlet	Cord extension set	Audio and video products	Microwaves

4. REQUIREMENTS FOR SAFE USE OF EAP

Ensuring the safe use of electrical appliances and products (EAP) involves adhering to several key criteria. Here are the essential requirements for safe use of EAP:

4.1. SAFETY CERTIFICATION MARK

Safety Certification Mark is a certification mark that acts as evidence that an EAP conforms to applicable safety standards. The Safety Certification Mark ensures, indicates and confirms that the EAP has been tested by a Conformity Assessment Body (CAB).

4.1.1. WHERE CAN A SAFETY CERTIFICATION MARK BE FOUND?

The Safety Certification Mark can be found on the following:

- affixed to **the EAP itself** or affixed on **its packaging and/or its container** where the EAP is of a size that prevents the safety certification mark to be affixed onto it.
- Electrical Products and Appliances with a 3-pin plug should also have a Safety Certification Mark affixed to the **plug itself** as well as the **EAP**.



Figure 1. Safety Certification Marks affixed to mains plug (Type G) of a laptop charger























Figure 2. Safety Certification Marks affixed to a laptop charger

4.1.2. SAFETY CERTIFICATION MARK FROM ASEAN MEMBER STATES

These are the acceptable Electrical and Electronic Equipment (EEE) Safety certification marks in Brunei Darussalam from the ASEAN Member States.







Note: The table below is from Appendix C – National Registration/Licensing Mark of the AHEEERR Information Booklet endorsed by ASEAN Consultative Committee for Standard and Quality (“ACCSQ”).





No.	Member State	National Registration/ Licensing Mark
1.	Brunei Darussalam	(Not Yet Developed)
2.	Cambodia (ISC Mark)	Affixing ISC Product Safety Mark:  XXXXXYY XXXX : Cambodia Safety Mark Number YY : Year
3.	Indonesia (SNI Mark)	 0 0 . 0 0 0 0 . 0 0 0 0 NRP/NPB 0 0 0 - 0 0 0 - 0 0 0 0 0 0
4.	Lao PDR (Q Mark)	<u>Q Mark</u> Low Risk Normal Risk High Risk   
5.	Malaysia (SIRIM Certification Mark)	<u>Imported</u> <u>Manufactured</u>  
6.	Myanmar (Myanmar Safety Mark)	

No.	Member State	National Registration/ Licensing Mark
7.	Philippines (PS Mark)	<p>Straight view Tilted view THE NEW ICC MARK (December 28, 2020 to present)</p>     <p>Straight view Tilted view</p>    
8.	Singapore (S Mark)	
9.	Thailand (TISI Mark)	  <p>Standards mark - voluntary Standards mark - voluntary</p>
10.	Viet Nam (CR Mark)	<p><u>Safety Products</u> <u>EMC Products</u> <u>EMC and Safety</u></p>   

4.1.3. OTHER REGIONAL SAFETY CERTIFICATION MARK

These are the acceptable Electrical and Electronic Equipment (EEE) Safety certification marks or equivalent in Brunei Darussalam from the International Regions

No.	Region	National Registration/ Licensing Mark
1.	European Union	 <p>CE Mark (Conformité Européenne)</p>
2.	North America	 <p>UL Mark (Underwriters Laboratories)</p>
3	Canada and North America	 <p>CSA Mark (Canadian Standards Association)</p>
4	Germany	 <p>GS Mark (Geprüfte Sicherheit)</p>
5	Germany	 <p>TÜV (Technischer Überwachungsverein)</p>
6	United Kingdom	 <p>BSI Kitemark (British Standard Institution)</p>



No.	Region	National Registration/ Licensing Mark
7	Japan	 <p>PSE Mark (Product Safety Electrical Appliance and Material)</p>
8	Australia and New Zealand	 <p>SAA Mark (Standards Australia International)</p>
9	China	 <p>CCC Mark (China Compulsory Certificate)</p>
10	United States	 <p>FCC Mark (Federal Communications Commission)</p>

4.2. MAIN PLUG CONFIGURATION AND SOCKET OUTLETS

It is important to ensure that the correct main plug is used with a local socket to avoid hazards and minimize risks such as fires and electrocution. The main plug configuration refers to the standardized design and arrangement of pins in electrical plugs includes specifications for pin arrangement, size, and shape to accommodate the electrical standards and safety requirements of the region. It ensures compatibility with the electrical outlets and provides a safe and reliable connection for appliances.

4.2.1. DIFFERENT TYPE OF MAIN PLUG CONFIGURATION AND SOCKET OUTLETS

There are 2 main type of plug configurations that are acceptable to be used in Brunei Darussalam, which are Plug Type G and Type M.

TYPE OF MAINS PLUG	FEATURES
<p>TYPE G</p>  The image shows a Type G plug on the left, which is black with three rectangular prongs (two red, one black). To its right is a white Type G socket with three corresponding rectangular slots and a small rectangular switch on the right side.	<p>Shape: Rectangular Pins: Three rectangular prongs Amp Rating: 13 Amps Usage outside Brunei Darussalam: United Kingdom, Ireland, Malaysia, Singapore</p>
<p>TYPE M</p>  The image shows a Type M plug on the left, which is black with three large round prongs arranged in a triangular pattern. To its right is a white Type M socket with three corresponding large round slots and a small rectangular switch on the right side.	<p>Shape: Round Pins: Three large round prongs in a triangular pattern Amp Rating: 15 Amps Usage outside Brunei Darussalam: South Africa, Eswatini, Lesotho</p>

The standard plug type used in Brunei is **Type G**, this aligns with the UK's electrical standards which ensures compatibility and safety across the majority of household and commercial electrical outlets. **Type M** plugs are used in Brunei for specific high-power appliances like high-power oven and air-conditioner. However, it is not advisable to use other types of mains plug that does not fit Brunei socket outlet.

5. GENERAL PUBLIC SAFETY ADVICE FOR USING EAP

Other than the two essential requirements to ensure the safe use of EAP, the public is also encouraged to follow established safety guidelines. By following these guidelines, you can help prevent electrical hazards and ensure the reliable operation of your EAP. Below is a list of recommendations that the general public to follow when using EAP.

- **Read the Instruction Manual**
Always read and follow the manufacturer's instructions before using any electrical appliance or product. This includes setup, usage, and maintenance guidelines.
- **Plug and Unplug Safely**
Ensure that the mains plug of the EAP matches the socket. Do not force a plug into an incompatible socket, and avoid using adapters that are not rated for the EAP. When not in use, unplug EAP to prevent any potential hazards.
- **Keep Appliances Away from Water**
Water and electricity are a dangerous combination. Keep EAP away from sinks, bathtubs, and other wet areas to avoid the risk of electrical shock.
- **Avoid Overloading Sockets**
Do not overload electrical sockets with multiple adapters or extension cords. Spread out the use of EAP across different outlets to prevent overheating and potential fires.
- **Regular Maintenance and Safety Inspections**
Before using an EAP, check for visible damage like frayed cords, broken plugs, or cracks. Do not use damaged appliances. Periodically inspect and clean EAP to ensure they function properly, such as removing lint from dryer vents, cleaning filters in air conditioners, and descaling coffee makers.
- **Child Safety Precaution**
Keep EAP out of reach of children, especially those that are hot or have sharp parts. Use child safety locks on ovens and other appliances when necessary.

6. CHECK LIST BEFORE PURCHASING EAP

Before purchasing an electrical appliances and products (EAP), it's crucial to perform a thorough check to ensure its safety and suitability. This involves:

No.	Checklists
1	Check if there are visible damage on the EAP as well as cords/cable, and plugs
2	Check if appliance's voltage and frequency specifications match for local usage
3	Check if there are safety certification mark on the EAP/Packaging/Plug
4	Check if the main plug configuration is for local use; Type G and Type M
5	Check if the instruction manual is provided

7. ENQUIRIES

If you encounter any safety issues regarding EAP such as suspicious safety certification mark or have other concerns regarding the safety of EAP, please contact us immediately. Your vigilance is crucial in maintaining a safe market and protecting public safety. You may reach out to us through our official contact channels below:

Email: aenbd@energy.gov.bn

Tel: (+673) 747 4617 (WhatsApp)

Working hours

Monday to Thursday & Saturdays

7.45am - 12.15pm & 1.45pm - 4.30pm

8. OTHER REFERENCES

- Electrical Installation Requirements
- Guidelines and Best Practices for Low Voltage (LV) Wiring and Electrical Appliances Safety, ESCOM/2024/03, Revision 1.0