

**ENERGY COMMISSION (ENERGY EFFICIENCY STANDARDS  
AND LABELLING) (ELECTRIC MOTORS)  
REGULATIONS, 2022**

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IN exercise of the power conferred on the Minister responsible for Energy by subparagraph (i) of paragraph (a) of subsection (1) of section 56 of the Energy Commission Act, 1997 (Act 541) and on the advice of the Board, these Regulations are made this 28<sup>th</sup> day of June, 2022.

*Preliminary Provisions*

**Purpose of Regulations**

1. The purpose of these Regulations is to promote the efficient use and conservation of energy in the country and mitigate related climate change by

- (a) providing for
  - (i) the enforcement of Standards set out in the First Schedule and the minimum energy performance standards set out in Part One of the Second Schedule;
  - (ii) the labelling of electric motors;
  - (iii) supplementary product information on electric motors; and
  - (iv) the registration of models of electric motors in the Appliance Energy Efficiency Register; and
- (b) prohibiting the manufacture, importation, offer for sale, sale, storage, donation, disposal, installation or use of an electric motor that does not meet the minimum energy performance standards set out in Part One of the Second Schedule.

**Application of Regulations**

2. (1) These Regulations apply to an induction electric motor whether sold separately or partly integrated in other products, that

- (a) has two, four, six or eight poles;
- (b) has a rated voltage above 50 V but not more than 1000 V;
- (c) has a rated power output of 0.12 kW up to 1000 kW;
- (d) is rated to operate at a frequency of 50 Hz;
- (e) is rated on the basis of continuous duty operation; and

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(f) is rated for direct on-line operation manufactured in the country or imported into the country for display, sale or use.

- (2) These Regulations do not apply to an
- (a) electric motor that is completely integrated into a product and whose energy performance cannot be tested independently from the product, even with the provision of a temporary end-shield and drive-end bearing;
  - (b) electric motor with an integrated variable speed drive or compact drive whose energy performance cannot be tested independently from the variable speed drive;
  - (c) electric motor with an integrated brake which forms an integral part of the inner motor construction and can neither be removed nor powered by a separate power source during the testing of the motor efficiency;
  - (d) electric motor that is specifically designed and specified to operate exclusively
    - (i) at an altitude exceeding 4000 metres above sea-level;
    - (ii) where ambient air temperature exceeds 60 °C;
    - (iii) at a maximum operating temperature above 400°C;
    - (iv) where ambient air temperature is less than 30°C; or
    - (v) where the water coolant temperature at the inlet to a product is below 0 °C or above 32 °C;
  - (e) electric motor specifically designed and specified to operate wholly immersed in a liquid;
  - (f) electric motor that is specifically qualified for the safety of nuclear installations;
  - (g) electric motor which is explosion-protected, specifically designed and certified for mining;
  - (h) electric motor in a cordless or battery-operated equipment;
  - (i) electric motor in a hand-held equipment whose weight is supported by hand during operation;

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- (j) electric motor in a hand-guided mobile equipment that can be moved while in operation;
- (k) electric motor with mechanical commutators;
- (l) electric motor which is Totally Enclosed Non-Ventilated (TENV);
- (m) electric multi-speed motor with multiple windings or with a switchable winding, providing a different number of poles and speeds; and
- (n) electric motor designed specifically for the traction of electric vehicles.

*Duties and Requirements*

**Duty to comply with requirements**

3. (1) A person who manufactures, imports, offers for sale, sells, stores, supplies, distributes, donates or otherwise disposes of an electric motor for use in the country shall ensure that each model of the electric motor

- (a) is registered with the Commission; and
- (b) meets the

- (i) Standards set out in the First Schedule;
- (ii) minimum energy performance standards set out in Part One of the Second Schedule;
- (iii) labelling requirements set out in the Third Schedule; and
- (iv) information requirements set out in the Fourth Schedule.

(2) A person who advertises an electric motor shall comply with the provisions of Part Five of the Fourth Schedule.

**Prohibition of manufacture, importation, offer for sale, sale, storage, donation, disposal, installation or use of electric motor**

4. (1) A person shall not manufacture, import, offer for sale, sell, store, donate, or otherwise dispose of, install or use an electric motor in the country unless the electric motor

- (a) has the minimum energy performance standard set out in Part One of the Second Schedule; and

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- (b) meets the requirements
  - (i) set out in the Second Schedule; and
  - (ii) of the Standards.
- (2) An enforcement authority shall
  - (a) detain, cause to be re-exported or seize and destroy an electric motor imported for use in the country contrary to subregulation (1); or
  - (b) seize and destroy an electric motor manufactured for use in the country contrary to subregulation (1).

**Category of electric motor**

5. The category of an electric motor shall be determined in accordance with the categories set out in Part Two of the Fourth Schedule.

**Energy efficiency star rating of electric motor**

6. The energy efficiency star rating of an electric motor shall be determined in accordance with the ratings specified in Part One of the Second Schedule.

**Voltage, input power or wattage of electric motor**

7. The manufacturer of an electric motor shall ensure that the rated voltage, input power or wattage of the electric motor is printed conspicuously and displayed on the back or side of the electric motor.

**Measurement methods**

8. The information to be provided pursuant to regulations 10 and 11 shall be obtained by

- (a) a reliable, accurate and reproducible measurement which takes into account recognised state-of-the-art measurements; and
- (b) calculation methods

in accordance with the Standards and Part Three of the Second Schedule.

**Use of circumvention device**

9. (1) A manufacturer, an importer or an authorised representative of the manufacturer shall not use a circumvention device during the conduct of a test of an electric motor.

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(2) A person shall not manufacture, import, offer for sale, sell, store, donate, or otherwise dispose of, install or use an electric motor which is designed to

- (a) detect that the electric motor is being tested by recognising the test conditions or test cycle; or
- (b) react specifically by automatically altering the performance of the electric motor during the test with the aim of reaching a more favourable level for any of the parameters declared by the manufacturer, importer or authorised representative of the manufacturer, in the technical documentation or included in any other documentation provided.

(3) The energy consumption of an electric motor and any of the other declared parameters shall not deteriorate after a

- (a) software; or
- (b) firmware

update, when measured with the same test standard originally used for the declaration of conformity, except with the consent of the Commission and the Standards Authority, before the update.

(4) A manufacturer, an importer or an authorised representative of the manufacturer shall inform the Commission and the Standards Authority in writing, with reasons, prior to an update of the software or firmware.

**Technical documentation**

10. (1) A person shall not manufacture, import, offer for sale, sell, store, distribute, donate or otherwise dispose of an electric motor for use in the country, unless that person has provided the Commission with sufficient technical documentation to enable the Commission

- (a) ascertain the accuracy of the information contained
  - (i) in the Product Information Sheet; or
  - (ii) on the label; and
- (b) register each model of the electric motor in the Appliance Energy Efficiency Register.



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- (2) The technical documentation referred to in subregulation (1) shall
- (a) be in the English language;
  - (b) include the Product Information Sheet set out in Part One of the Fourth Schedule; and
  - (c) contain the information set out in Part Three of the Fourth Schedule marked "Technical Documentation".
- (3) The technical documentation shall
- (a) be prepared for each model of an electric motor placed on the market; and
  - (b) include
    - (i) the name and address of the supplier;
    - (ii) the description of the electric motor, for purposes of identification;
    - (iii) the model identifier of the manufacturer;
    - (iv) the relevant drawings on the main design features of the model and parameters of the electric motor that affect the energy consumption of the electric motor;
    - (v) reports of relevant measurement tests carried out in compliance with the Standards;
    - (vi) details of calculations, extrapolations and tests carried out to verify the accuracy of calculations;
    - (vii) the installation and operating instructions; and
    - (viii) the period within which the model of the electric motor was manufactured.

**Labelling and information requirements**

11. (1) A person shall not manufacture, import, offer for sale, sell, store, supply, distribute, donate or otherwise dispose of an electric motor for use in the country, unless the electric motor and the packaging of the electric motor meet the following requirements:

- (a) the electric motor shall bear a label
  - (i) in the form set out in the Third Schedule; and

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- (ii) placed on the back of the electric motor;
- (b) the information in respect of the electric motor indicated on the packaging of the electric motor shall be in the English language;
- (c) the Product Information Sheet in respect of the electric motor shall be as set out in Part One of the Fourth Schedule;
- (d) the label on a packaging containing an electric motor shall
  - (i) contain the information set out in the Third Schedule; and
  - (ii) be printed in colour;
- (e) the labels on the electric motor and the packaging of the electric motor shall include the following information:
  - (i) the Quick Response Code;
  - (ii) the name or trade mark of the manufacturer;
  - (iii) the model identifier of the manufacturer;
  - (iv) the type of electric motor;
  - (v) the number of poles of the electric motor;
  - (vi) the annual total energy consumption ( $E_{TEC}$  in kWh/year) or the weighted power consumption ( $P_{TEC}$  in Watt) of the electric motor;
  - (vii) the input power or wattage of the electric motor, measured in accordance with the test procedures specified in the Standards;
  - (viii) nominal efficiency ( $\eta$ ) at the full seventy-five per cent and fifty per cent rated load and voltage;
  - (ix) a one-star to five-star energy efficiency rating in which the ascending number of stars represents a higher energy efficiency as prescribed in Table 2 under Part One of the Second Schedule and determined in accordance with International Efficiency classification Code requirements specified in Part Two of the Second Schedule;
  - (x) a one-star to five-star energy efficiency rating in which the ascending number of stars represents a higher energy efficiency as prescribed in Table 2

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under Part One of the Second Schedule and determined in accordance with test procedures and measurements specified in the Standards;

- (xi) the year of manufacture and expiry of the electric motor; and
  - (xii) the country of origin or manufacture;
- (f) the label on the electric motor shall be printed in colour on a waterproof material and pasted conspicuously on the electric motor;
- (g) the background of a label printed or pasted on each packaging containing the electric motor shall be gold in colour;
- (h) all the stars on the label of the electric motor shall be shaded in black; and
- (i) the text on the label of the electric motor shall be black in colour.

(2) Despite regulation 21, an update to the Standards shall take precedence over the requirements specified in paragraph (e) of subregulation (1) and Part Three of the Second Schedule.

(3) Where

- (a) a side of the packaging is not large enough to contain a label and the blank border; or
- (b) a label would cover more than fifty per cent of the surface area of the largest side of a packaging

the label and the blank border shall be reduced to not less than forty per cent of the largest side of the packaging and pasted on the largest side of the packaging.

(4) A person shall not remove the label on an electric motor or the packaging containing an electric motor before the first retail purchase of the electric motor.

(5) For the purposes of this regulation, “first retail purchase” means the purchase of an electric motor by an end user.

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*Registration of Electric Motors*

**Appliance Energy Efficiency Register**

12. (1) The Commission shall establish, keep and maintain an Appliance Energy Efficiency Register.

(2) The Appliance Energy Efficiency Register shall contain the information specified in subregulation (5) of regulation 13.

**Application for registration**

13. (1) A person who

(a) manufactures an electric motor in the country; or

(b) imports an electric motor into the country

for use in the country shall, prior to the manufacture or importation, ensure that each model of the electric motor is registered with the Commission.

(2) A person who

(a) manufactures an electric motor in the country; or

(b) imports an electric motor into the country

for use in the country shall apply to the Commission for registration of the electric motor.

(3) An application for registration under subregulation (2) shall be made in writing or electronically on the website of the Commission and accompanied with the prescribed fee.

(4) An application for registration shall be accompanied with a test report from an accredited test laboratory that demonstrates that

(a) the electric motor meets the minimum energy performance standards set out in the Second Schedule; and

(b) the test report corresponds with the energy consumption that is provided on the energy efficiency label of the electric motor.

(5) The following information shall be provided for each registration of a model of an electric motor:

(a) the brand or trademark, if any, used in connection with a supply of the model;

(b) the model identifier issued by the manufacturer for each model covered by the registration;

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- (c) the Product Information Sheet of the model;
- (d) the date the registration takes effect;
- (e) a unique identifier for the registration issued by the Commission;
- (f) the names and contact details of the applicant and contact person in relation to the registration;
- (g) if the model is to be registered as a replacement model of an earlier registered model, that fact and details to identify the replaced model, including the date the replacement was made;
- (h) if a model to be registered is affected by a replacement, that fact and details to identify the replaced model and replacement model, including the date the replacement was made;
- (i) any information specified in these Regulations in relation to that model of electric motor; and
- (j) any other information the Commission may consider appropriate.

**Consideration of application**

14. (1) The Commission shall, on receipt of an application for registration of an electric motor, consider the application.

(2) The Commission shall, in considering the application, have regard to the requirements specified in subregulation (5) of regulation 13.

**Grant of application**

15. (1) The Commission may, within fourteen days after receipt of an application, grant or refuse an application.

(2) Where the Commission decides to grant an application, the Commission shall

- (a) within three days after the date of the decision inform the applicant, in writing or electronically as the case may be, of the decision; and
- (b) enter the information specified in subregulation (5) of regulation 13 in the Appliance Energy Efficiency Register.

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(3) Where the Commission refuses to grant an application, the Commission shall within three days after the date of the decision communicate to the applicant, in writing or electronically as the case may be,

- (a) the reason for the refusal; and
- (b) the applicable Standards the model of the electric motor is required to meet.

*Duties of Dealers and Suppliers of Electric Motors*

**Duty of dealer to keep, maintain and provide technical documentation**

16. (1) A dealer shall keep and maintain technical documentation in respect of an electric motor for a period of not less than two years after the date of manufacture or importation.

(2) A dealer shall, within two days after a request by an enforcement authority, provide the enforcement authority with technical documentation in respect of an electric motor for inspection.

(3) Where a dealer fails to provide technical documentation in respect of an electric motor within two days after the request, the enforcement authority shall detain the electric motor.

(4) A dealer shall ensure that

- (a) each electric motor, at the point of sale, including at trade fairs, bears the label provided by a supplier in accordance with regulation 3, with the label being displayed conspicuously on the face of the electric motor;
- (b) in the event of distance selling, the label and Product Information Sheet are provided in accordance with the Third and Fourth Schedules;
- (c) an audio advertisement, including radio and local information broadcast network, on a specific model of an electric motor where the brand, capacity, size, category or price is mentioned, contains information on the energy efficiency class and the range of energy efficiency classes of the electric motor available in accordance with Part Five of the Fourth Schedule;

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- (d) a visual advertisement for a specific model of electric motor, including an advertisement on the internet, contains information on the energy efficiency class and the range of energy efficiency classes of the electric motor available on the label in accordance with Part Five of the Fourth Schedule; and
- (e) a technical promotional material concerning a specific model of electric motor, including technical promotional material on the internet, which describes the specific technical parameters of the electric motor includes
  - (i) the energy efficiency class; and
  - (ii) the range of energy efficiency classes of the electric motor available on the label,in accordance with Part Five of the Fourth Schedule.

**Duty of supplier to keep, maintain and provide technical documentation**

17. (1) A supplier shall keep and maintain technical documentation in respect of each model of an electric motor for a period of not less than two years after the date of manufacture or importation.

(2) A supplier shall, on request by an enforcement authority, provide the enforcement authority with technical documentation of the electric motor for inspection.

(3) Where a supplier fails to provide technical documentation in respect of an electric motor within two days after the request, the enforcement authority shall detain the electric motor.

**Duty of supplier to keep, maintain and provide Product Information Sheet**

18. (1) A supplier shall keep and maintain in the possession of the supplier a Product Information Sheet in respect of each electric motor in the form set out in Part One of the Fourth Schedule.

(2) A supplier shall, on request by an enforcement authority, provide the enforcement authority with a Product Information Sheet which shall be in the

- (a) English language; and

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(b) form set out in Part One of the Fourth Schedule.

**Duty of supplier to provide information for statistical purposes**

19. (1) A person who manufactures in the country, imports into the country or exports out of the country an electric motor or an assembly of components that incorporates an electric motor shall provide the Commission with the following information not later than four months after the end of each year:

- (a) the number of electric motors of each model that the person manufactured, exported or imported into the country in the relevant year;
- (b) the number of electric motors of each model that the person sold in the country in the relevant year;
- (c) the number of electric motors of each model that the person exported from the country in the relevant year;
- (d) the name of each model that the person discontinued
  - (i) manufacturing in the relevant year;
  - (ii) exporting in the relevant year; or
  - (iii) importing in the relevant year; and
- (e) a copy of any existing test report, or other energy performance data specified by the Commission, for each model specified under paragraph (d).

(2) Upon a written request by the Commission, a person who manufactures an electric motor for use in the country or imports an electric motor into the country shall provide the following information to the Commission not later than forty days after receiving the request:

- (a) the number of electric motors in each product class specified by the Commission that the person sold to a purchaser in the country in each of the preceding three years; and
- (b) the energy performance characteristics of the electric motors as specified in the request.

**Duty of supplier to ensure accuracy of information**

20. (1) A supplier shall ensure that the information indicated on a

- (a) Product Information Sheet; or
- (b) label

in respect of an electric motor is accurate.



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(2) The duty imposed on a supplier under subregulation (1) does not affect any other right of action which a person may have by law against a person with respect to the inaccuracy of information on a Product Information Sheet or on a label.

**Access to information on technical documentation and Product Information Sheet**

21. (1) The information required under regulations 10, 11, 16, 17 and 18 shall be obtained in accordance with the test procedures required by the Standards.

(2) Information obtained in a manner other than in accordance with subregulation (1) shall, for the purposes of these Regulations, be invalid.

**Product brochure in respect of electric motor**

22. Where a supplier provides a product brochure in respect of an electric motor, the brochure shall contain a Product Information Sheet which shall be in the

- (a) English language; and
- (b) form set out in Part One of the Fourth Schedule.

*Information*

**Public information**

23. (1) The information provided by a supplier on the Product Information Sheet or on a label of an electric motor is deemed public information.

(2) A supplier is deemed to have consented to the publication of the information indicated on a Product Information Sheet or label in respect of an electric motor.

**Information in respect of mail order and other distance selling**

24. (1) Where a person offers an electric motor for sale to another person in the country through a medium of communication including a mail order or any other distance selling medium, that person shall provide information in respect of the electric motor.

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- (2) The information referred to in subregulation (1) shall
- (a) be in the English language,
  - (b) include the product registration number assigned by the Commission upon registration in the Appliance Energy Efficiency Register;
  - (c) include the information set out in Part Four of the Fourth Schedule; and
  - (d) be written in a manner that is legible.

**Obligations of audio or audio-visual broadcasting service provider**

25. Where an audio or audio-visual broadcasting service provider advertises an electric motor, and the information in the advertisement includes the brand, model, size, price and any other information that is specific to a particular model, that service provider shall ensure that

- (a) the advertisement has been vetted and approved by the Commission; and
- (b) the advertisement includes
  - (i) information on the energy performance standard of the electric motor;
  - (ii) a statement that the advertisement has been vetted and approved by the Commission; and
  - (iii) any other information required under Part Five of the Fourth Schedule.

**Obligations of e-commerce platform**

26. (1) A person shall not offer for sale, sell, supply, distribute, donate or otherwise dispose of an electric motor through a promotion on the internet, unless

- (a) the energy efficiency rating of the electric motor is posted next to the price of the electric motor; and
- (b) the label of the electric motor is made available to consumers in the same medium of communication.

(2) Where an e-commerce service provider allows the direct sale of an electric motor through the website of the service provider, the service provider shall

- (a) enable the display of the

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- (i) electronic label; and
  - (ii) electronic Product Information Sheet provided by the dealer on the display mechanism in accordance with Part Six of the Fourth Schedule; and
- (b) inform the dealer of the obligation to display the electronic label and electronic Product Information Sheet.

**Misleading information**

27. (1) A person shall not display a label, mark, symbol or inscription which relates to the energy consumption of an electric motor, if the display is likely to be

- (a) deceptive;
- (b) misleading; or
- (c) false.

(2) A person shall not broadcast an advertisement relating to the energy performance of an electric motor if the information in the advertisement is likely to be

- (a) deceptive;
- (b) misleading; or
- (c) false.

(3) Subregulations (1) and (2) do not apply to

- (a) a label;
- (b) a mark;
- (c) a symbol; or
- (d) an inscription

displayed under an environmental labelling scheme or endorsement labelling scheme.

**Restriction on disclosure of information**

28. (1) An enforcement authority shall not disclose any information which consists of a

- (a) secret manufacturing process; or
- (b) trade secret

that was obtained by that enforcement authority in the course of the exercise of a power or duty conferred on the enforcement authority by these Regulations.

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(2) Despite subregulation (1), an enforcement authority may disclose information if

- (a) the information is public information; or
- (b) the disclosure is made
  - (i) for the purpose of facilitating the exercise of power by an enforcement authority under these Regulations or any other enactment;
  - (ii) in connection with the investigation of an offence; or
  - (iii) for the purpose of a civil or criminal proceeding.

*Powers of Enforcement*

**Power of enforcement authority to require technical documentation**

29. Where an enforcement authority suspects that the information given

- (a) in a Product Information Sheet; or
- (b) on a label,

in respect of an electric motor is incorrect, that enforcement authority may, by notice served on the supplier or importer of the electric motor, require the supplier or importer to furnish the enforcement authority with the technical documentation referred to in regulation 10 within the period stipulated in the notice.

**Power of enforcement authority to inspect electric motor**

30. An enforcement authority may, at any reasonable time, enter any premises to inspect an electric motor if the enforcement authority has reason to believe that the premises are being used for a purpose in contravention of these Regulations.

**Power of enforcement authority to detain or seize record or electric motor**

31. (1) Subject to these Regulations, where an enforcement authority has reasonable cause to suspect that an offence has been committed or is being committed, that enforcement authority may

- (a) at any reasonable time enter premises other than a dwelling place, and conduct an inspection in accordance with subsection (3) of section 52 of the Act;

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- (b) require a person engaged in a business or employed in connection with a business to produce a record in respect of an electric motor;
- (c) detain or seize an electric motor that is
  - (i) not labelled;
  - (ii) not properly labelled; or
  - (iii) labelled in a deceptive or misleading manner;
- (d) detain or seize an electric motor that is imported without technical documentation which justifies the label affixed on the electric motor;
- (e) detain or seize an electric motor to enable tests to be carried out;
- (f) detain or seize a record to be used as evidence in proceedings in respect of an offence under these Regulations;
- (g) cause a container to be opened for the purpose of inspection;
- (h) break open a container, where implementation of paragraph (g) is not practicable; and
- (i) detain or seize an electric motor if the model is not registered in the Appliance Energy Efficiency Register.

(2) For the purposes of paragraphs (b) and (f) of subregulation (1), the enforcement authority may request for information stored electronically to be made available to the enforcement authority in printed form.

**Power of enforcement authority to test electric motor**

32. (1) An enforcement authority may

- (a) obtain, remove and test an electric motor; or
- (b) order the testing of an electric motor

to ascertain whether a provision of these Regulations has been contravened.

(2) A person who suspects that an electric motor offered for sale does not comply with the provisions of these Regulations may lodge a complaint with an enforcement authority.

(3) The enforcement authority may, upon receipt of a complaint under subregulation (2), detain and test the electric motor.

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(4) The test to be conducted in respect of an electric motor purchased, obtained or detained under regulation 31 shall be carried out in accordance with the test procedures required by the Standards.

*Detention, Re-Exportation and Seizure*

**Procedure for market surveillance and verification**

33. (1) Despite regulation 32, the Commission and the Standards Authority shall conduct market surveillance to ascertain whether an electric motor on the market conforms to these Regulations.

(2) The Commission and the Standards Authority shall apply the verification procedure specified in the Fifth Schedule to conduct the market surveillance.

**Order to access premises to inspect, detain or seize electric motor or record**

34. Where

- (a) an enforcement authority is refused entry to premises;
- (b) a notification to enter premises would defeat the purpose of the entry;
- (c) the premises to be entered are unoccupied; or
- (d) the occupier of premises to be entered is temporarily absent,

the enforcement authority may apply to a court for an order to enter the premises to inspect, detain or seize an electric motor or record, if the enforcement authority has reasonable grounds to believe that an electric motor or record on the premises may assist in the disclosure of evidence of the commission of an offence under these Regulations.

**Procedure for detention of electric motor**

35. (1) An enforcement authority that exercises a power of detention under these Regulations shall immediately give a written notice to the person against whom the power has been exercised.

(2) The written notice shall state

- (a) the electric motor that has been detained; and
- (b) the reason for the detention.

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(3) Where an enforcement authority detains an electric motor, that electric motor may be kept in a warehouse or other secure location reserved for the purpose.

**Procedure for re-labelling of detained electric motor**

36. (1) Subject to these Regulations, where an enforcement authority detains an electric motor under paragraph (e) of subregulation (1) of regulation 31, the enforcement authority shall

- (a) within two days after the detention, submit a sample of the electric motor for testing; and
- (b) within two days after receipt of the test results, give notice in writing to the supplier of the electric motor to properly label the electric motor if the minimum energy performance standards have been complied with.

(2) The notice under paragraph (b) of subregulation (1) shall require an electric motor to be re-labelled in the required manner or exported out of the country within twenty-eight days.

(3) Where a supplier is required under subregulation (2), to re-label an electric motor, the supplier shall re-label the electric motor under the supervision of an officer authorised for the purpose by the Commission or the Standards Authority.

- (4) Where a supplier fails to
  - (a) re-label the electric motor; or
  - (b) export the electric motor

within twenty-eight days after the notice given under paragraph (b) of subregulation (1), the Commission shall, in consultation with the Standards Authority, destroy the electric motor in a manner that the Commission may determine.

**Procedure for re-exportation of imported electric motor**

37. (1) An enforcement authority that exercises a power of detention or seizure under these Regulations shall, within seven days after the detention or seizure, give an order in writing to the person against whom the power has been exercised to re-export the electric motor.

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- (2) The order referred to in subregulation (1) shall state
  - (a) the electric motor to be re-exported;
  - (b) the reason for the order;
  - (c) the period within which the electric motor is to be re-exported; and
  - (d) the fact that the supplier shall be responsible for the cost associated with the re-export.

(3) Where an electric motor is kept within premises that are under the control of the owner of the electric motor, the owner shall pay a security deposit against any breach of the re-exportation order.

(4) A security deposit under subregulation (3) shall be forfeited in the event of a breach of the re-exportation order, including the sale or destruction of an electric motor which has been ordered to be re-exported.

(5) Where a person fails to pay a security deposit imposed under subregulation (3), the Commission may recover the amount imposed as a civil debt.

**Procedure for seizure of electric motor**

**38.** (1) An enforcement authority that exercises a power of seizure under these Regulations shall, within seven days after the seizure, give a written notice to the person against whom the power has been exercised.

- (2) The written notice under subregulation (1) shall state
  - (a) the electric motor that has been seized;
  - (b) the reason for the seizure; and
  - (c) the venue and the period within which a petition against the seizure may be brought under regulation 39.

(3) Where an enforcement authority seizes an electric motor, that electric motor may be kept in a warehouse or other secure location reserved for the purpose.

(4) The owner of the electric motor may be required to pay a deposit to cover the cost of destruction if the electric motor does not meet the minimum energy performance standards.

(5) Where an electric motor is kept within premises that are under the control of the owner of the electric motor, the owner shall pay a security deposit against any breach of the seizure order.



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(6) A security deposit under subregulation (5) shall be forfeited in the event of a breach of the seizure order, including the sale or destruction of an electric motor which has been seized.

(7) Where a person fails to pay a security deposit imposed under subregulation (5), the Commission may recover the amount imposed as a civil debt.

*Petition and Compensation*

**Petition against seizure**

39. (1) Subject to these Regulations, a person whose electric motor is seized may, within seven days after receipt of the written notice specified in subregulation (1) of regulation 38, petition the Executive Secretary for the release of the seized electric motor.

(2) The Executive Secretary shall, within seven days after the receipt of a petition under subregulation (1),

(a) confirm the seizure; or

(b) order the release of the seized electric motor to the petitioner on a specific day.

(3) A person who is dissatisfied with a decision of the Executive Secretary under subregulation (2) may appeal to the Board within seven days after the receipt of the decision.

(4) The Board shall within thirty days after the receipt of an appeal under subregulation (3)

(a) consult the Standards Authority; and

(b) take a decision on the appeal.

(5) The Board may release the seized electric motor to the petitioner only if the Commission and the Standards Authority fail to prove that an offence under these Regulations has been committed.

(6) A person who is dissatisfied with

(a) a decision of the Board under subregulation (4) may, within fourteen days after the decision; or

(b) the failure of the Board to make a decision within thirty days after receipt of the appeal may, within fourteen days after the failure

apply to the court.

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**Forfeiture and destruction of seized electric motor**

40. (1) Where an appeal to the Board under subregulation (3) of regulation 39 is not successful, the enforcement authority shall, within twenty-eight days after the decision of the Board, notify the owner of the electric motor of the forfeiture and date of destruction of the seized electric motor.

(2) The Commission may, in consultation with the Standards Authority, destroy a forfeited electric motor in a manner that the Commission may determine.

(3) Where under subregulation (6) of regulation 39, the court upholds or affirms the decision of the Board to forfeit and destroy the electric motor, the Commission shall destroy the electric motor within the period given by the court.

**Compensation for loss of electric motor or record seized**

41. (1) Where an enforcement authority exercises power under these Regulations to seize an electric motor or record, that enforcement authority is liable to pay compensation to the owner of the electric motor or record for a loss or damage caused by the exercise of the power, if

- (a) these Regulations have not been contravened in relation to the electric motor or record; and
- (b) the loss or damage is not attributable to the neglect or the fault of the owner but an official of the Commission.

(2) Paragraph (b) of subregulation (1) does not apply in a case of *force majeure*.

(3) The compensation payable under subregulation (1) for loss or damage shall not exceed the value of the electric motor or record.

(4) A dispute as to the

- (a) right to compensation; or
- (b) amount of compensation payable to a person under subregulation (1),

shall be determined in the first instance by arbitration in accordance with the Alternative Dispute Resolution Act, 2010 (Act 798).

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**Recovery of expenses by enforcement authority**

42. (1) Where an enforcement authority

(a) seizes;

(b) tests; or

(c) supervises the re-labelling or destruction of

an electric motor, that enforcement authority may surcharge the dealer or supplier of the electric motor for the expenses incurred for the seizure, testing or supervision.

(2) Despite subregulation (1), where a court convicts a person of an offence in respect of the contravention of a provision of these Regulations, the court may, in addition to any order that the court may make as to costs and expenses, order the person convicted to reimburse the enforcement authority for the expenditure incurred by the enforcement authority in connection with the seizure.

*Miscellaneous Provisions*

**Offences and penalties**

43. (1) A person who

(a) manufactures, imports, offers for sale, sells, stores, advertises, distributes, or otherwise disposes of an electric motor that

(i) does not meet a requirement in respect of the minimum energy performance standards contrary to regulation 3;

(ii) is not accompanied by the required technical documentation contrary to regulation 10;

(iii) is not labelled or properly labelled contrary to regulation 11; or

(iv) is labelled in a deceptive or misleading manner contrary to regulation 27;

(b) uses a circumvention device contrary to regulation 9;

(c) fails to comply with a labelling requirement contrary to regulation 11;

(d) fails to provide technical documentation contrary to regulation 10, 16 or 17;

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- (e) fails to register a model of an electric motor contrary to regulation 13;
  - (f) fails to provide a Product Information Sheet contrary to regulation 18;
  - (g) fails to provide information on an electric motor contrary to regulation 19;
  - (h) provides inaccurate information contrary to regulation 20;
  - (i) advertises an electric motor without providing accurate information on the energy performance standard of the electric motor contrary to regulation 25;
  - (j) offers for sale or sells an electric motor over the internet or other distance selling medium without providing the information required contrary to regulation 24 or 26;
  - (k) provides misleading information contrary to regulation 27;
  - (l) obstructs or interferes with an enforcement authority in the exercise of the powers of that enforcement authority contrary to regulation 31;
  - (m) fails to comply with the requirements for re-labelling contrary to regulation 36; or
  - (n) violates a seizure order or notice contrary to regulation 38
- commits an offence and is liable on summary conviction to a fine of not less than one hundred and twenty-five penalty units and not more than two hundred and fifty penalty units or to a term of imprisonment of not less than six months and not more than twelve months or to both.

(2) A person who commits a second or subsequent offence under subregulation (1) after an earlier conviction under subregulation (1) is liable on summary conviction to a fine of not less than two hundred and fifty penalty units and not more than five hundred penalty units or to a term of imprisonment of not less than twelve months and not more than twenty-four months or to both.

(3) Where an offence under these Regulations is committed by a body corporate or by a member of a partnership or other firm, every director or officer of the body corporate or any member of the partnership or any other person concerned with the management of the firm shall be

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deemed to have committed that offence and is liable, on summary conviction, to a fine of not less than five hundred penalty units and not more than one thousand penalty units, and is in addition liable to the payment of compensation for the damage resulting from the breach.

(4) A person shall not be convicted of an offence under subregulation (3), if it is proved that

- (a) the person exercised due diligence to secure compliance with the provisions of these Regulations, and
- (b) the offence was committed without the knowledge, consent or connivance of that person.

**Interpretation**

44. In these Regulations, unless the context otherwise requires,

“accredited test laboratory” means a test laboratory that is recognised by the Standards Authority for laboratory testing and product certification;

“airborne acoustical noise emission” means the sound power level of an electric motor, expressed in dB(A);

“annual total energy consumption” means the electricity consumed by a product over specified periods of time across defined power modes and states;

“Appliance Energy Efficiency Register” means an official record, kept and maintained by the Commission on energy efficiency information in respect of models of electrical appliances that have been certified by the Commission and Standards Authority for use in Ghana;

“audio or audio-visual broadcasting service provider” means a person who provides a service which delivers radio programmes or programmes with hearing and sight components to persons with equipment appropriate for receiving that service, whether the delivery is effected by means of or uses the radio frequency spectrum, cable, optical fibre, satellite, internet radio via streaming media on the internet, or any other means or a combination of those means intended to reach a wide audience;

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- “circumvention device” means any control, control device, software, component or part that alters the operating characteristics of an electric motor during any test procedure, resulting in measurements that are unrepresentative of the true characteristics of the electric motor that may occur during normal use under comparable conditions;
- “container” means a receptacle or enclosure for holding a product for storage, packaging and shipping;
- “court” means a court of competent jurisdiction;
- “dealer” means a retailer or other person who displays, offers for sale or sells an electric motor to an end user;
- “distance selling” means the sale of goods or services without the buyer and seller being physically present simultaneously;
- “dwelling place” means place of residence;
- “electric motor” means an induction electrical machine that converts electrical energy into mechanical energy;
- “electronic Product Information Sheet” means a document containing the following information in electronic format:
- (a) basic product information;
  - (b) energy label information; and
  - (c) special features and characteristics;
- “end user” means the first user of an electric motor;
- “endorsement labelling scheme” includes a voluntary labelling scheme that guarantees the performance standards of an electric motor that are equal to or exceed the minimum threshold established by a recognised advisory body;
- “energy efficiency of an electric motor” means the ratio of the mechanical output power of the electric motor to the electrical active input power of the electric motor;
- “enforcement authority” means
- (a) an authorised officer of the Commission;
  - (b) an authorised officer of the Standards Authority;
  - (c) an authorised officer of the Customs Division of the Ghana Revenue Authority;
  - (d) an authorised officer of the Police Service; or

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- (e) any other authorised person designated by the Customs Division of the Ghana Revenue Authority, the Commission or the Standards Authority to carry out inspections for the purposes of these Regulations;
- “environmental labelling scheme” means a voluntary labelling scheme that provides detailed information on the environment in respect of the performance characteristics of an electric motor;
- “GS” means Ghana Standards;
- “importer” means a person who places an electric motor from a foreign country on the Ghanaian market and supplies that electric motor for use;
- “label” means a material attached to an electric motor the inscription of which contains information on the energy consumption of the electric motor;
- “minimum energy performance standards” mean a set of procedures and regulations that prescribe the minimum allowable values of energy efficiency or energy performance of manufactured products;
- “model identifier” means the code, usually alphanumeric, which distinguishes a specific product model from other models with the same trademark or the same name of the manufacturer, importer or authorised representative;
- “point of sale” means the place at which a retail transaction is carried out;
- “premises” means land and any building, store, shop, apartment, or other structure on the land used for the storage of an electric motor;
- “product brochure” includes a pamphlet or booklet that contains introductory information about a product;
- “Product Information Sheet” means a standard table of information related to an electric motor;
- “Quick Response Code” means a matrix barcode included on the energy label of a product model that links to the information of the model in the public part of the product database;

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“rated voltage” means the voltage marked on an electric motor in volts;

“rating plate” means a name plate that indicates the measurable performance capability of an electric motor;

“record” includes a book, document, label, mark, symbol, inscription or information in electronic form;

“sale” means the exchange of a product for consideration, including hire purchase, credit sale and purchase by instalment;

“Standards” means quality specifications for electric motors as stipulated in the First Schedule;

“Standards Authority” means the Standards Authority established under the Standards Authority Act, 1973 (N.R.C.D. 173);

“supplier” means a person or organisation that provides a product and includes

(a) a manufacturer or the authorised representative of a manufacturer resident in the country; and

(b) an importer or the person who introduces an electric motor on the Ghanaian market;

“supply” includes an offer to supply, contract to supply and an advertisement for supply of an electric motor but excludes the exhibition at a trade fair of an electric motor that is prohibited by these Regulations;

“trade secret” means a secret device or technique used by a company in manufacturing a product of the company;

“wattage” means the power marked on an electric motor, in watts (W); and

“year” means the period from 1<sup>st</sup> January to 31<sup>st</sup> December.

**Transitional provision**

45. A person who, before the coming into force of these Regulations, has

(a) manufactured in the country; or

(b) imported into the country

an electric motor that does not comply with these Regulations, shall, within one year after the coming into force of these Regulations, sell, distribute, donate or otherwise dispose of that electric motor.



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**SCHEDULES**

**FIRST SCHEDULE**

**STANDARDS**

*(regulations 1(a)(i), 3(1)(b)(i), 11(1)(e)(x), 44)*

1. GS IEC 60034-30-1:2014 Rotating electrical machines- Part 30-1: Efficiency classes of line operated AC motors (IE-code).
2. GS IEC 60034-2-1 :2014 Rotating electrical machines-Part 2-1: Standard methods for determining losses and efficiency from tests (excluding machines for traction vehicles).
3. GS IEC 60034-2-2: 2010 Rotating electrical machines- Part 2-2: Specific methods for determining separate losses of large machines from tests - Supplement to IEC 60034-2-1.
4. GS IEC 60034-1: 2017 Rotating electrical machines- Part 1: Rating and performance.
5. GS IEC 60034-31:2010 Rotating electrical machines- Part 31: Selection of energy-efficient motors including variable speed applications - Application guide.
6. GS IEC 60034-9+AMD1 CSV: 2007 Rotating Electrical Machines – Part 9: Noise limits.

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**SECOND SCHEDULE**

**MINIMUM ENERGY PERFORMANCE STANDARDS**  
(regulations 1(a)(i), 1(b), 3(1)(b)(ii), 4(1)(a) and (b)(i), 6, 8, 11(1)(e)(ix) and (x), 11(2))

**PART ONE**

*(regulations 1(a)(i), 1(b), 3(1)(b)(ii), 4(1)(a), 6 and 11(1)(e)(ix) and (x))*

**1. Motor efficiency classifications**

The efficiency specifications of an electric motor are determined in terms of Minimum Energy Performance Standards based on the international accepted system efficiency classification referred to as IE-codes. The IE-code class is shown in Table 1.

**Table 1: IE Classification of motors**

Class Type	Class Number
Standard efficiency (50Hz)	IE1
High efficiency (50Hz)	IE2
Premium efficiency (50Hz)	IE3
Super premium efficiency (50Hz)	IE4
Ultra-premium efficiency 50Hz)	IE5
<i>IE5 represents the highest energy efficiency whilst IE1 represents the least energy efficiency</i>	

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**2. Minimum Energy Performance Requirements**

- (1) All poly-phase electric motors with a rated output of between 0.12kW to 1000kW under these Regulations shall
- (a) not be less efficient than the IE2 efficiency level, as defined in Part Two of this Schedule; or
  - (b) meet the IE2 efficiency level as defined in Part Two of this Schedule and be equipped with a variable speed drive.
- (2) All single-phase electric motors with a rated output of between 0.12kW to 1000kW under these Regulations shall meet at least the IE1 efficiency level, as defined in Part Two of this Schedule.

**3. Energy Efficiency Star rating**

The energy efficiency star rating of an electric motor under these Regulations shall be a 5-star rating classification as shown in Table 2 based upon the International Efficiency Classification Code established in accordance with the Standards in the First Schedule.

An induction electric motor appliance shall be rated as *5-Star to 1-Star* as shown in Table 2 where the efficiency of the (2-pole, 4-pole, 6-pole and 8-pole) electric motor ( $\eta_m$ ) is within the International Efficiency (IE) classification levels specified in Tables 3, 4 and 5 of Part Two of this Schedule.

**Table 2: Electric motor energy efficiency star-rating classification**

Star Rating	Motor efficiency( $\eta_m$ ) class
5-star	$IE4 < \eta_m$
4-star	$IE3 < \eta_m \leq IE4$
3-star	$IE2 < \eta_m \leq IE3$
2-star	$IE1 < \eta_m \leq IE2$
1-star	$\eta_m = IE1$

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**PART TWO**  
*(regulation 11(1)(e)(ix))*

**Motor Efficiency Requirements**

1. The nominal minimum efficiency requirements for electric motors at the IE2 efficiency level are set out in Table 3.

**Table 3: Nominal minimum efficiencies ( $\eta\%$ ) for IE2 efficiency level (50 Hz)**

Rated output power (kW)	Number of poles			
	2/3000	4/1500	6/1000	8/750
0.12	53.6	59.1	50.6	39.8
0.18	60.4	64.7	56.6	45.9
0.20	61.9	65.9	58.2	47.4
0.25	64.8	68.5	61.6	50.6
0.37	69.5	72.7	67.6	56.1
0.40	70.4	73.5	68.8	57.2
0.55	74.1	77.1	73.1	61.7
0.75	77.4	79.6	75.9	66.2
1.1	79.6	81.4	78.1	70.8
1.5	81.3	82.8	79.8	74.1
2.2	83.2	84.3	81.8	77.6
3	84.6	85.5	83.3	80.0
4	85.8	86.6	84.6	81.9
5.5	87.0	87.7	86.0	83.8
7.5	88.1	88.7	87.2	85.3
11	89.4	89.8	88.7	86.9
15	90.3	90.6	89.7	88.0
18.5	90.9	91.2	90.4	88.6

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22	91.3	91.6	90.9	89.1
30	92.0	92.3	91.7	89.8
37	92.5	92.7	92.2	90.3
45	92.9	93.1	92.7	90.7
55	93.2	93.5	93.1	91.0
75	93.8	94.0	93.7	91.6
90	94.1	94.2	94.0	91.9
110	94.3	94.5	94.3	92.3
132	94.6	94.7	94.6	92.6
160	94.8	94.9	94.8	93.0
200 up to 1000	95.0	95.1	95.0	93.5

2. The nominal minimum efficiency requirements for electric motors at the IE3 efficiency level are set out in Table 4.

**Table 4: Nominal minimum efficiencies ( $\eta$ ) for IE3 efficiency level (50 Hz)**

Rated output power (kW)	Number of poles/synchronous speed ( $\text{min}^{-1}$ )			
	2/3000	4/1500	6/1000	8/750
0.12	60.8	64.8	57.7	50.7
0.18	65.9	69.9	63.9	58.7
0.20	67.2	71.1	65.4	60.6
0.25	69.7	73.5	68.6	64.1
0.37	73.8	77.3	73.5	69.3
0.40	74.6	78.0	74.4	70.1

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0.55	77.8	80.8	77.2	73.0
0.75	80.7	82.5	78.9	75.0
1.1	82.7	84.1	81.0	77.7
1.5	84.2	85.3	82.5	79.7
2.2	85.9	86.7	84.3	81.9
3	87.1	87.7	85.6	83.5
4	88.1	88.6	86.8	84.8
5.5	89.2	89.6	88.0	86.2
7.5	90.1	90.4	89.1	87.3
11	91.2	91.4	90.3	88.6
15	91.9	92.1	91.2	89.6
18.5	92.4	92.6	91.7	90.1
22	92.7	93.0	92.2	90.6
30	93.3	93.6	92.9	91.3
37	93.7	93.9	93.3	91.8
45	94.0	94.2	93.7	92.2
55	94.3	94.6	94.1	92.5
75	94.7	95.0	94.6	93.1
90	95.0	95.2	94.9	93.4
110	95.2	95.4	95.1	93.7
132	95.4	95.6	95.4	94.0
160	95.6	95.8	95.6	94.3
200 up to 1000	95.8	96.0	95.8	94.6

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3. The nominal minimum efficiency requirements for electric motors at the IE4 efficiency level at 50Hz are set out in Table 5.

**Table 5: Nominal minimum efficiencies ( $\eta$ ) for IE4 efficiency level (50 Hz)**

Rated output power (kW)	Number of poles			
	2/3000	4/1500	6/1000	8/750
0.12	66.5	69.8	64.9	62.3
0.18	70.8	74.7	70.1	67.2
0.20	71.9	75.8	71.4	68.4
0.25	74.3	77.9	74.1	70.8
0.37	78.1	81.1	78.0	74.3
0.40	78.9	81.7	78.7	74.9
0.55	81.5	83.9	80.9	77.0
0.75	83.5	85.7	82.7	78.4
1.1	85.2	87.2	84.5	80.8
1.5	86.5	88.2	85.9	82.6
2.2	88.0	89.5	87.4	84.5
3	89.1	90.4	88.6	85.9
4	90.0	91.1	89.5	87.1
5.5	90.9	91.9	90.5	88.3
7.5	91.7	92.6	91.3	89.3
11	92.6	93.3	92.3	90.4
15	93.3	93.9	92.9	91.2

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18.5	93.7	94.2	93.4	91.7
22	94.0	94.5	93.7	92.1
30	94.5	94.9	94.2	92.7
37	94.8	95.2	94.5	93.1
45	95.0	95.4	94.8	93.4
55	95.3	95.7	95.1	93.7
75	95.6	96.0	95.4	94.2
90	95.8	96.1	95.6	94.4
110	96.0	96.3	95.8	94.7
132	96.2	96.4	96.0	94.9
160	96.3	96.6	96.2	95.1
200	96.5	96.7	96.3	95.4
250	96.5	96.7	96.5	95.4
315 up to 1000	96.5	96.7	96.6	95.4

**PART THREE**

*(regulations 8 and 11(2))*

**Measurements and Calculations**

For the purpose of compliance and verification of compliance with the requirements of these Regulations, measurements and calculations shall be made using a reliable, accurate and reproducible method, which takes into account the generally recognised state-of-the-art methods, and whose results are deemed to be of low uncertainty, including methods set out in the Standards provided in the First Schedule.



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Measurements and calculations shall fulfil the following technical parameters:

- (a) The energy efficiency is the ratio of mechanical output power to the electrical input power;
- (b) The efficiency level of the electric motor, as specified in the Second Schedule, shall be determined at rated output power ( $P_N$ ), rated voltage ( $U_N$ ), and rated frequency ( $f_N$ );
- (c) The difference between the output mechanical power and the input electrical power is due to losses occurring in the electric motor; and
- (d) The determination of total losses shall be carried out by one of the following methods:
  - (i) measurement of total losses; or
  - (ii) determination of separate losses for summation.

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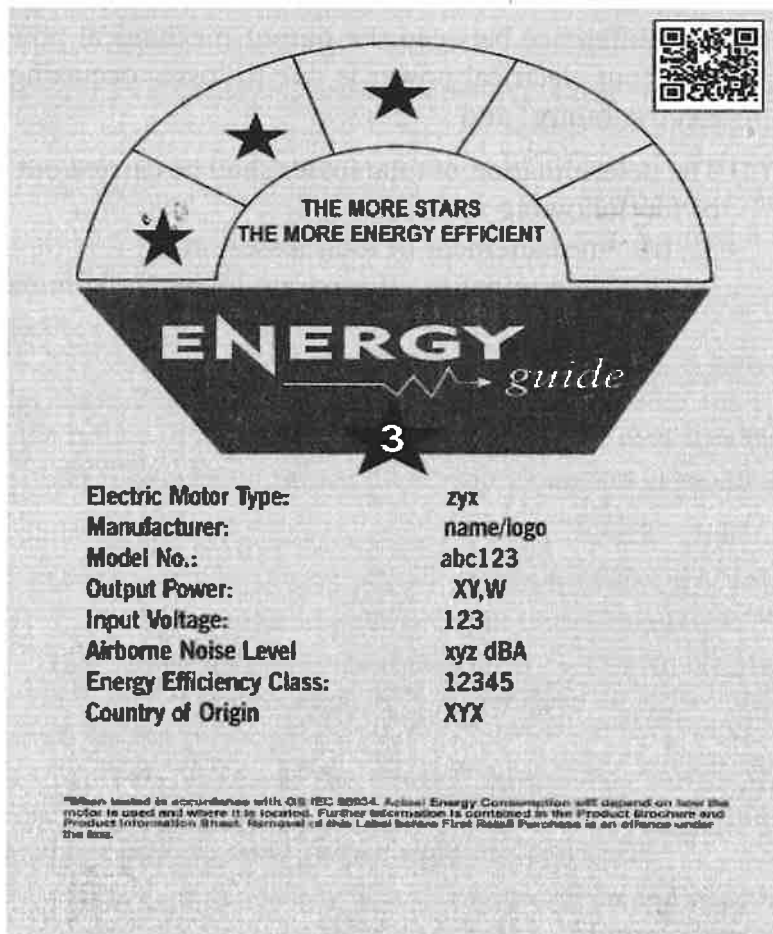
**THIRD SCHEDULE**

**THE LABEL**

*(regulations 3(1)(b)(iii), 11(1)(a)(i), 11(1)(d)(i), 16(4)(b))*

**1. Label design**

The design of the label shall be in accordance with Figure 1 and shall include the information required by the notes.



**Figure 1: The Label**

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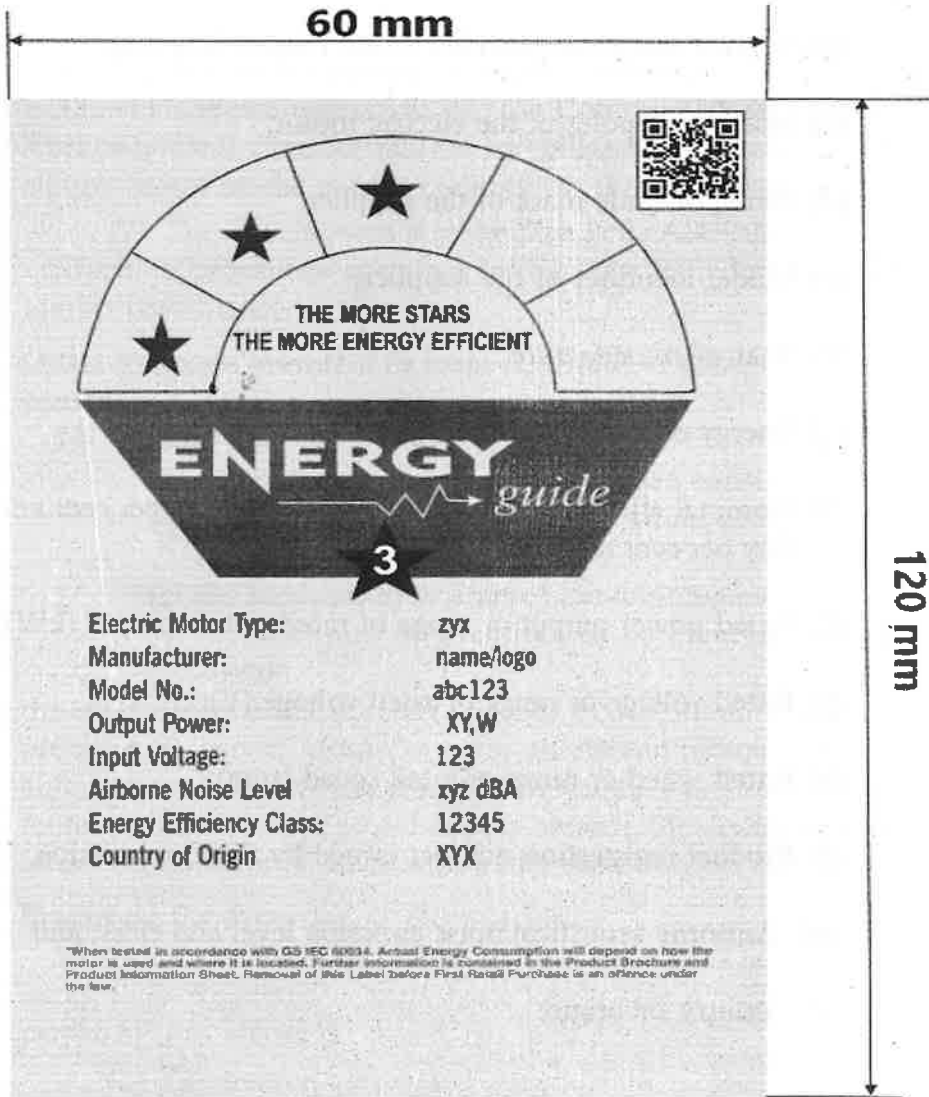
**2. Notes to Figure 1**

- (a) Quick Response (QR) Code;
- (b) Type of motor as provided in the Fourth Schedule;
- (c) Number of poles of the electric motor;
- (d) Name or trade mark of the supplier;
- (e) Model identifier of the supplier;
- (f) Year of manufacture;
- (g) Energy efficiency star rating of electric motor;
- (h) Nominal efficiency ( $\eta$ ) at the full, seventy-five per cent and fifty per cent rated load and voltage ( $U_N$ );
- (i) Rated power output or range of rated power output (kW);
- (j) Rated voltage or range of rated voltage (V);
- (k) Rated speed or range of rated speed (rpm);
- (l) Product registration number issued by the Commission;
- (m) Airborne acoustical noise emission level and class; and
- (n) Country of origin.

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**3. Label dimensions**

The dimensions of the label shall be in accordance with Figure 2 and shall include the information required by the notes.



**Figure 2: Dimensions of the Label**

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**4. Printing**

The dimensions of the label and aspects are shown in Figure 2. The label shall be placed in the terminal or junction box of the electric motor.

Colours are to be used on the label in accordance with the following:

- (a) All text shall be in black or gold as illustrated;
- (b) The background shall be gold;
- (c) All Stars shall be in black; and
- (d) Border line shall be in black.

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**FOURTH SCHEDULE**

**PRODUCT INFORMATION SHEET**

*(regulations 3(1)(b)(iv), 3(2), 5, 10(2)(b) and (c), 11(1)(c), 16(4)(b), (c), (d) and (e), 18(1) and (2)(b), 22(b), 24(2)(c), 25(b)(iii), 26(2)(a))*

**PART ONE**

*(regulations 10(2)(b), 11(1)(c), 18(1) and (2)(b), 22(b))*

1. The Product Information Sheet for each model of the electric motor shall contain the information specified below. The information may be given in the form of a table or in the description of the electric motor.

The information referred to in paragraphs (a) to (d), shall be durably marked on or near the rating plate of the electric motor.

- (a) Nominal efficiency ( $\eta$ ) at the full seventy-five per cent and fifty per cent rated load and voltage ( $U_N$ );
- (b) Efficiency level: 'IE1', 'IE2', 'IE3', 'IE4' or IE5;
- (c) Energy Efficiency star rating as determined in the Second Schedule;
- (d) Year of manufacture;
- (e) Name or trade mark of manufacturer, commercial registration number and place of manufacturer;
- (f) Model number of the product;
- (g) Number of poles of the motor;
- (h) Rated power output or range of rated power output (kW);
- (i) Rated input frequency of the motor (Hz);
- (j) Rated voltage or range of rated voltage (V);

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- (k) Rated speed or range of rated speed (rpm);
- (l) Information relevant for disassembly, recycling or destruction at end-of-life; and
- (m) Information on the range of operating conditions for which the motor is specifically designed:
  - (i) altitudes above sea-level;
  - (ii) ambient air temperatures, including for motors with air cooling;
  - (iii) water coolant temperature at the inlet to the product;
  - (iv) maximum operating temperature; and
  - (v) potentially explosive atmospheres.

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**PART TWO**  
*(regulation 5)*

**Electric Motor Category Description**

<i>Category</i>	<i>Description (Indicate what is applicable)</i>			
Type of motor	Single-phase		3-phase	
Category of motor	Split phase		Squirrel cage	
	Capacitor start			
	Capacitor start capacitor run		Slip ring	
	Shaded pole			
No. of poles (2,4,6 or 8)				
Type of duty cycle				
Method of cooling				



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**PART THREE**  
*(regulation 10(2)(c))*

**Technical documentation**

1. The technical documentation referred to in regulation 10 shall include the information on electric motors set out in Part One and shall be visibly displayed on:
  - (a) the technical documentation of electric motors;
  - (b) the technical documentation of products in which electric motors are incorporated;
  - (c) free access websites of manufacturers of electric motors; and
  - (d) free access websites of manufacturers of products in which electric motors are incorporated.
2. The information shall be provided in the order presented in Part Two. The exact wording used in the list does not need to be repeated. It may be displayed using graphs, figures, or symbols rather than text.
3. The information listed in Part Two does not need to be published on the electric motor manufacturer's free access website for tailor-made electric motors with special mechanical and electrical design manufactured on the basis of client request. Information on the mandatory requirement to equip electric motors, which do not meet the IE3 or IE4 efficiency levels with a variable speed drive, shall be visibly displayed on the rating plate, technical documentation of the electric motor.
4. Manufacturers shall provide information in the technical documentation on any specific precautions that must be taken when electric motors are assembled, installed, maintained or used with variable speed drives, including information on how to minimize electrical and magnetic fields from variable speed drives.

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**PART FOUR**

*(regulation 24(2)(c))*

**Mail Order and Other Distance Selling**

1. Mail order catalogues and other communication shall contain the following information, given in the order specified below:
  - (a) the label of the electric motor as presented in the Third Schedule; and
  - (b) the information in Part One, Part Two and Part Three of this Schedule.
2. The size and font, in which all the information referred to in paragraph 1 is printed, shall be legible.

**PART FIVE**

*(regulations 3(2), 16(4)(c), (d) and (e), 25(b)(iii))*

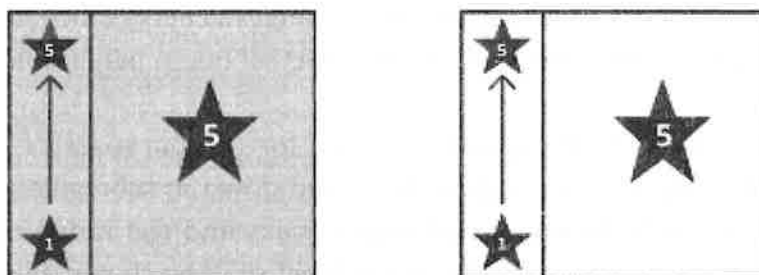
**Information to be provided in audio advertisements, visual advertisements, in technical promotional material, in distance selling, except distance selling on the internet**

1. In an audio advertisement, for the purposes of ensuring conformity with the requirements laid down in subregulation (2) of regulation 3, the energy efficiency class of the model of appliance being advertised and the range of energy efficiency classes available on the market shall be stated in the advertisement.
2. In a visual advertisement, for the purposes of ensuring conformity with the requirements laid down in subregulation (2) of regulation

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- 3, the energy efficiency class and the range of energy efficiency classes available on the label shall be shown as set out in paragraph 5 of this Part.
3. In technical promotional material, for the purposes of ensuring conformity with the requirements laid down in subregulation (2) of regulation 3 the energy efficiency class and the range of energy efficiency classes available on the label shall be shown as set out in paragraph 5 of this Part.
  4. Any paper-based distance selling must show the energy efficiency class and the range of energy efficiency classes available on the label as set out in paragraph 5 of this Part.
  5. The energy efficiency class and the range of energy efficiency classes shall be shown, as indicated in Figure 1, with
    - (a) an arrow, containing the letter of the energy efficiency class in hundred per cent white, Calibri Bold and in a font size at least equivalent to that of the price, when the price is shown;
    - (b) the colour of the box shall be gold;
    - (c) the range of available energy efficiency classes in hundred per cent black; and
    - (d) the size shall be such that the box is clearly visible and legible.

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**Figure 1: Coloured/Monochrome Star-Rating, with range of energy efficiency classes indicated.**

6. The number embedded in the black star corresponding with the energy efficiency class of the appliance star shall be in hundred per cent white and positioned in the center of the black star in the box, with a border of 0,5 pt in hundred per cent black placed around the box and the star showing the energy efficiency star rating class.
7. By way of derogation, if the visual advertisement, technical promotional material, or paper-based distance selling is printed in monochrome, the box can be in monochrome in that visual advertisement, technical promotional material, or paper-based distance selling.
8. Telemarketing-based distance selling must specifically inform the customer of the energy efficiency class of the product and of the range of energy efficiency classes available on the label, and that the customer can access the full label and the Product Information Sheet through a free access website, the public part of the Appliance Energy Efficiency Register of the Commission or by requesting a printed copy.
9. For all the situations mentioned in paragraphs 2 to 4 and paragraph 8, it shall be possible for the customer to obtain, on request, a printed copy of the label and the Product Information Sheet.

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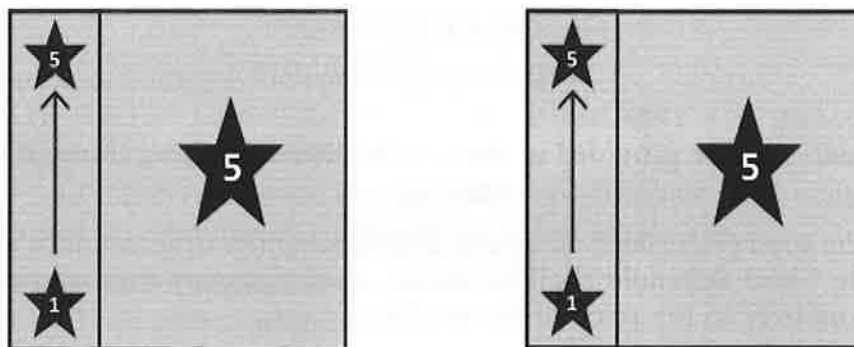
**PART SIX**

*(regulation 26(2)(a))*

**Information to be provided in the case of distance selling through the Internet**

1. The appropriate label made available by suppliers in accordance with the Third Schedule shall be shown on the display mechanism in proximity to the price of the product.
2. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in the Third Schedule.
3. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in paragraph 5 of this Part.
4. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.
5. The image used for accessing the label in the case of nested display, as indicated in Figure 2, shall
  - (a) be a box in gold colour with a black star and an embedded number corresponding to the energy efficiency star rating of the product on the label;
  - (b) indicate the energy efficiency star rating of the product in the box in hundred per cent black, Calibri Bold and in a font size equivalent to that of the price;
  - (c) have the range of available energy efficiency classes in hundred per cent black; and
  - (d) have one of the following two formats, and its size shall be such that the box is clearly visible and legible. The number showing the energy efficiency star rating shall be positioned in the centre of the box, with a visible border in hundred per cent black placed around the box and the number of the energy efficiency star rating.

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**Figure 2: Coloured Star Rating with range of energy efficiency ratings indicated.**

6. In the case of a nested display, the sequence of display of the label shall be as follows:
- (a) the image referred to in paragraph 5 of this Part shall be shown on the display mechanism in proximity to the price of the product;
  - (b) the image shall link to the label set out in the Third Schedule;
  - (c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;
  - (e) the label shall be displayed by pop up, new tab, new page or inset screen display;
  - (f) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;
  - (g) the label shall cease to be displayed by means of a close option or other standard closing mechanism; and
  - (h) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

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7. The electronic Product Information Sheet made available by suppliers in accordance with subregulation (2) of regulation 26 shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the Product Information Sheet is clearly visible and legible. The Product Information Sheet may be displayed using a nested display or by referring to the product database, in which case the link used for accessing the Product Information Sheet shall clearly and legibly indicate 'Product Information Sheet'. If a nested display is used, the Product Information Sheet shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

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**FIFTH SCHEDULE**

**VERIFICATION PROCEDURE FOR MARKET SURVEILLANCE**  
*(regulation 33(2))*

When performing the market surveillance checks referred to in subregulation (2) of regulation 33, the Commission and the Standards Authority shall apply the following verification procedure for the requirements set out in the Second Schedule:

1. The Commission and the Standards Authority shall test one single unit.
2. The model shall be considered to comply with the provisions set out in these Regulations, if in the nominal motor efficiency ( $\eta$ ), the losses ( $1-\eta$ ) do not vary from the values set out in the Second Schedule by more than fifteen per cent on power range 0.12-150 kW and ten per cent on power range > 150kW up to 1000 kW.
3. If the result referred to in paragraph 2 is not achieved, the market surveillance authority shall randomly test three additional units, except for electric motors that are produced in lower quantities of less than five per year.
4. The same model shall be considered to comply with the provisions set out in these Regulations, if in the average of the nominal efficiency ( $\eta$ ), the losses ( $1-\eta$ ) of the three units referred to in paragraph 3 do not vary from the values set out in the Second Schedule by more than fifteen per cent on power range 0.12 to 150 kW and ten per cent on power range greater than 150kW up to 1000 kW.



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5. If the results referred to in paragraph 4 are not achieved, the model shall be considered not to comply with these Regulations.

For the purposes of checking conformity with the requirements of these Regulations, the Commission and the Standards Authority shall apply the procedure referred to in Part Two of the Second Schedule and reliable, accurate and reproducible measurement methods, which take into account the generally recognised state-of-the-art measurements, including methods set out in the Standards provided for the purpose under the First Schedule.

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**HON. DR. MATTHEW OPOKU PREMPEH**

*Minister responsible for Energy*

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