

OPERATING INSTRUCTIONS

EMPTY ENCLOSURE EBE (ATEX)



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APPLICATION

Empty boxes type EBE is explosion-protected. They can be used as basic for certifying terminal- and control boxes.

They are manufactured from sheet or stainless steel in a range of sizes. They can be combined to provide more extensive systems.

PURPOSE OF THESE INSTRUCTIONS

Working in hazardous areas, the safety of personnel and plant depends on complying with all relevant safety regulations.

Assembly and maintenance staff working on installations therefore have a particular responsibility. They require precise knowledge of the applicable standards and regulations.

These instructions give a brief summary of the most important safety measures. They supplement the corresponding regulations which the staff responsible must study.

Subject to alteration.

1 SAFETY INSTRUCTIONS

Use the boxes only for its permitted purpose.

Incorrect or impermissible use or non-compliance with these instructions invalidates our warranty provision.

Any alterations and modifications to the box impairing its explosion protection are not permitted.

Observe the following during setting-up and operation:

- national safety regulations;
- national accident prevention regulations;
- national installation regulations (e.g. IEC 60079-14);
- generally recognized technical regulations;
- safety guidelines in these operating instructions;
- characteristic values and rated operating conditions on the rating and data plates;
- additional instruction plates fixed directly to the device.

Any damage can invalidate the Ex-protection.



If required, we will provide a copy of the Type-Test Certificate with the relevant annex.

1.1 CONFORMITY TO STANDARDS

Each box complies with the following standards and regulations:

Directive 94/9/EC

EN 50014, EN 50019

The boxes type EBE is suitable for use in hazardous areas zones 1, 2, 21 and 22.

2 TECHNICAL DATA

Explosion protection

 II 2GD EExe II

Test certificate

KEMA 02 ATEX 2271U

Material

Sheet or stainless steel

Temperature range

Standard:

- 20 °C ... + 40 °C

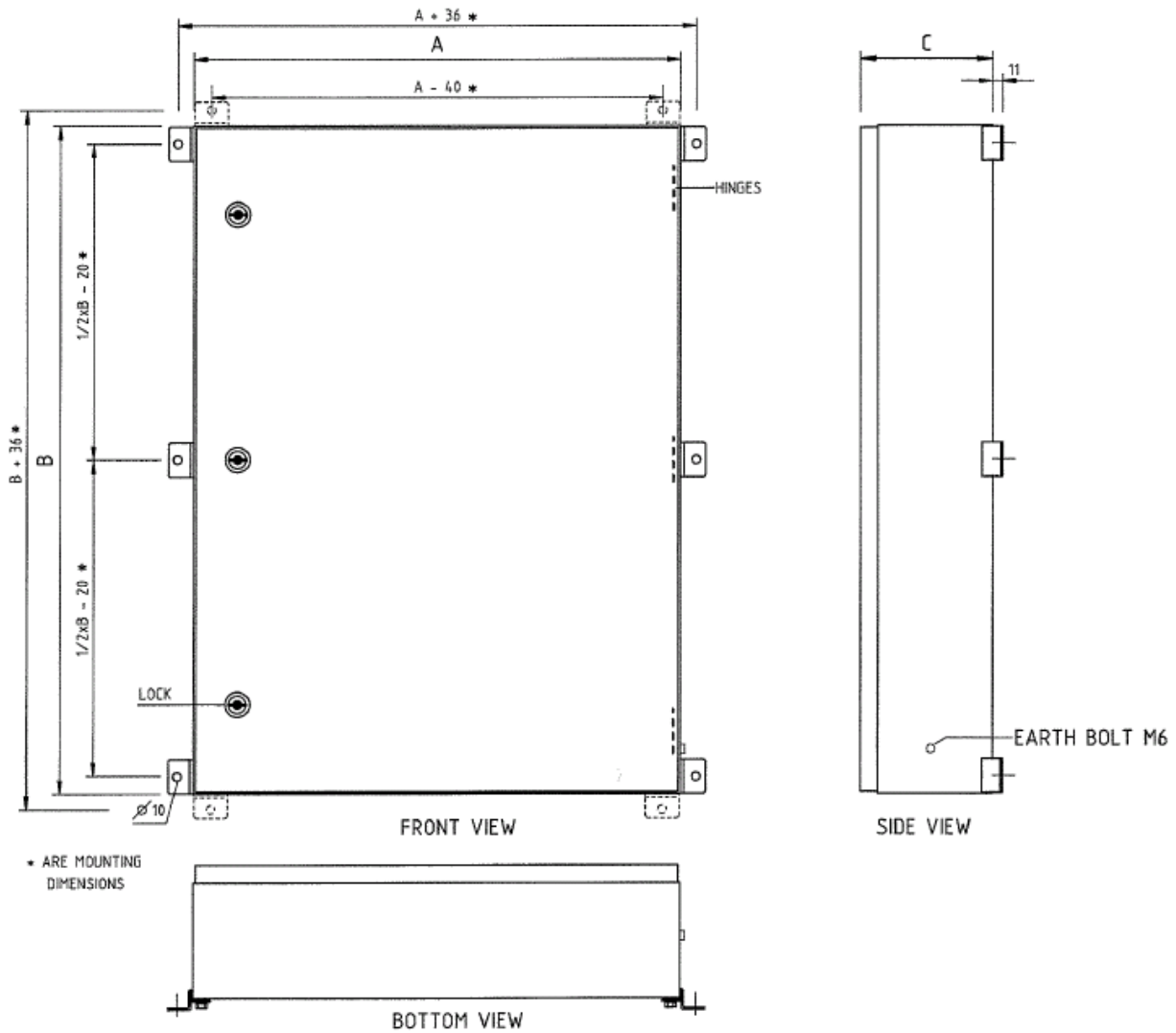
Special:

- 20 °C ... + 55 °C

Degree of protection to IEC/CEI 60529

max. \geq IP 66

3 DIMENSION SKETCH



- A : MIN. 200mm MAX. 800mm
- B : MIN. 200mm MAX. 1600mm
- C : MIN. 100mm MAX. 800mm

- 1) BLIND RIVETED NUTS M6 ON REARSIDE CAN ALSO BE USED FOR FRAMEMOUNTING.
- 2) ALTERNATIVE : WELDED MOUNTING STRIPS.
- 3) LOCK DOUBLE BEARD (3mm)

When explosion-protected equipment is exposed to the weather, it is advisable to provide a protective cover or wall.

- 1) WELDSTUDS M8x15 ON REARSIDE CAN BE USED FOR FRAMEMOUNTING.

4 DISPOSAL

Observe the national standards for refuse disposal.



We are pleased to answer any special questions you may have.

Should you require the operating instructions in one of the other European Community languages, please feel free to contact Electromach.



5 EC-TYPE EXAMINATION CERTIFICATE



- (1) **EC-TYPE EXAMINATION CERTIFICATE**
- (2) **Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC**
- (3) EC-Type Examination Certificate Number: **KEMA 02ATEX2271 U** Issue Number: **2**
- (4) Equipment: **Enclosure, series EBE....**
- (5) Manufacturer: **Electromach b.v., Member of the R. STAHL Technology Group**
- (6) Address: **Jan Tinbergenstraat 193, 7559 SP Hengelo, The Netherlands**
- (7) This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- (8) KEMA Quality B.V., notified body number 0344 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the directive.

The examination and test results are recorded in confidential test report number 212646600-1.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 50014 : 1997 EN 50019 : 2000 EN 50281-1-1 : 1998
- (10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.
- (11) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment according to the Directive 94/9/EC. Further requirements of the directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.
- (12) The marking of the equipment shall include the following:



II 2 GD EEx e II

This certificate is issued on August 6, 2009 and, as far as applicable, shall be revised before the date of cessation of presumption of conformity of (one of) the standards mentioned above as communicated in the Official Journal of the European Union.

KEMA Quality B.V.

C.G. van Es
Certification Manager

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⁹ Integral publication of this certificate and adjoining reports is allowed. This Certificate may only be reproduced in its entirety and without any change.



(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 02ATEX2271 U** Issue No. 2

(15) **Description**

Enclosure series EBE..., for fixed installation, made of stainless or sheet steel, for mounting of electrical apparatus having a type of protection in accordance with clause 1.2 of EN 50014, or in case of application in an atmosphere endangered by the presence of combustible dust, electrical apparatus complying with the relevant standards.

Ambient temperature range -20 °C ... +55 °C.

Electrical data

The allowed power dissipation for temperature classes T6, T5 or T4 is to be taken from the following table:

Enclosure Type	D mensions LxWxH (mm)	Max. power dissipation (W) / Temperature class (maximum surface temperature)		
		T6 (T 80°C)	T5 (T 95°C)	T4 (T 130°C)
202010	200x200x100	23	32	53
203010	200x300x100	32	44	73
303010	300x300x100	44	61	99
203015	200x300x150	39	54	89
303015	300x300x150	53	73	119
304015	300x400x150	66	91	149
404015	400x400x150	82	113	186
406015	400x600x150	115	158	259
606015	600x600x150	159	219	359
608015	600x800x150	204	280	459
808015	800x800x150	260	358	586
8010015	800x1000x150	316	435	712
304021	300x400x210	79	108	177
404021	400x400x210	97	133	218
406021	400x600x210	133	183	299
606021	600x600x210	181	249	407
608021	600x800x210	229	315	515
808021	800x800x210	288	397	650
8010021	800x1000x210	348	479	784
608040	600x800x400	307	423	692
808040	800x800x400	378	520	852
8010040	800x1000x400	449	618	1012
608060	600x800x600	307	423	692
808060	800x800x600	473	651	1065
8010060	800x1000x600	556	765	1252
6012080	600x1200x800	639	879	1438
6014080	600x1400x800	722	993	1625
6016080	600x1600x800	805	1107	1811
8012080	800x1200x800	757	1041	1704
8014080	800x1400x800	852	1172	1918
8016080	800x1600x800	947	1302	2131

+ intermediate dimensions with belonging maximum power dissipation.

The maximum surface temperature "T" is based on an ambient temperature of +55°C.



(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 02ATEX2271 U** Issue No. 2

Installation instructions

The clearance and creepage distances of the mounted electrical apparatus in type of protection increased safety "e" shall satisfy the requirements stated in clause 4.3. (table 1) and clause 4.4. of EN 50019. If components in other types of explosion protection are used, the clearance and creepage distances of the relevant standards shall be met.

The degree of protection of at least IP 66 and/or IP 54 according to EN 60529 is only achieved if certified cable entries and blanking elements are used that are suitable for the application and correctly installed.

(16) **Test Report**

KEMA No. 212646600-1.

(17) **Special conditions for safe use**

None.


(18) **Essential Health and Safety Requirements**

Covered by the standards listed at (9).

(19) **Test documentation**

As listed in Test Report No. 212646600-1.

6 DECLARATION OF CONFORMITY



ELECTROMACH member of the R.STAHL Technology Group



EC-Declaration Of Conformity (acc. 94/9/EC / ATEX 95)

We
electromach B.V., Jan Tinbergenstraat 193, 7559 SP Hengelo
 hereby declare in our sole responsibility, that the product: **Empty Box Type EBE**
 which is the subject of this declaration, is in conformity with the following standard(s)
 or normative documents

Terms of the directive	Titel and/or No. and date of issue of the standard
94/9/EC: Equipment and protective systems intended for use in potentially explosive atmospheres	EN 50014 (1997) EN 50019 (2000) EN 50281-1-1 (1998)
89/336/EEC: Electromagnetic compatibility	-

EC-Type Examination Certificate: **KEMA 02 ATEX 2271 U**

Production Quality Assessment: **KEMA 01 ATEX Q3201**
 Issued by: KEMA Quality, 6612 AR, Arnhem
 Identification number: 0344

Hengelo, 22-10-2009 Place and date	 <hr/> J.F.W. Wijnen Managing Director	 <hr/> C.L.L. Cameron Quality Manager
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 conditions of sale.