



(1) EC-TYPE-EXAMINATION CERTIFICATE (Translation)

(2) Equipment and Protective Systems Intended for Use in
Potentially Explosive Atmospheres - **Directive 94/9/EC**

(3) EC-type-examination Certificate Number:

PTB 13 ATEX 3015 X



- (4) Equipment: Three-phase synchronous motor for low voltage,
type .../S.X..08...
- (5) Manufacturer: Bauer Gear Motor GmbH
- (6) Address: Eberhard-Bauer-Straße 36-60, 73734 Esslingen, Germany
- (7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- (8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 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 the confidential test report PTB Ex 13-32081.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2012, EN 60079-7:2007, EN 60079-31:2009
- (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 in accordance 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 G Ex e IIC T1 - T4 Gb and II 2 D Ex tb IIIC T160 °C - T 120 °C Db

Zertifizierungssektor Explosionsschutz
On behalf of PTB:

Braunschweig, August 09, 2013


Dr.-Ing. F. Lienesch
Regierungsdirektor



SCHEDULE

(13)

(14) **EC-TYPE-EXAMINATION CERTIFICATE PTB 13 ATEX 3015 X**

(15) Description of equipment

The three-phase synchronous motors of the types .../S.X..08 are designed to Increased Safety "e" and Protection by Enclosure "t" type of protection. They are size 80 motors. Their enclosures are made from aluminium or grey cast iron, with or without cooling ribs, and with the possibility to attach terminal boxes. The rotor is designed as a permanent magnet rotor with magnets that are glued in place in internal grooves of the laminated rotor core.

The shaft rotates in rolling bearings. An additional backstopping device may alternatively be provided at the non-drive end. Another alternative is a version with a free shaft end at the non-drive end.

Cooling is achieved by heat exchange, using the cooling ribs of the enclosure wall and an external fan made from plastic, which has been separately tested, or from aluminium or grey cast iron.

For dust explosion protection, only external fans made from aluminium or grey cast iron are used. The external fan is rotationally locked with two straight pins / a parallel key, and the shaft shoulder and a retaining ring provide for axial locking. An alternative (non-ventilated) version without external fan is possible.

Electrical connection is made with separately tested terminal boxes, which are designed to Increased Safety "e" type of protection and which are specified in a separate Test Report.

The range of ambient temperatures is 40 °C down to -20 °C. This temperature range may be extended to 60 °C down to -20 °C with a special electrical or thermal design in which suitable terminal boxes, materials and attached or installed components are used, or with the data sheet for the electrical ratings.

The electrical motor data, including the specifications for compliance with the temperature class, are defined in a data sheet that is attached to the EC Type Examination Certificate.

(16) Test Report PTB Ex 13-32081

(17) Special conditions for safe use

Conditions are specified in the corresponding data sheets.

Notes for manufacturing and operation

Measures shall be taken to ensure that the temperatures permitted for the components used will not be exceeded.

Components attached or installed (e.g. bushings, cable glands, connectors) shall be of a technical standard that complies with the specifications on the cover sheet. They must be suited for the operating conditions and come with a separate examination certificate. The special conditions have to be observed and included in the type test, if necessary.

The motors shall be attached to gearbox housings so that enclosure protection IP66 is ensured and the requirements in EN 60079-0:2012 are complied with.

(18) Essential health and safety requirements

Met by compliance with the afore-mentioned Standards.

Zertifizierungssektor Explosionsschutz
On behalf of PTB:

Braunschweig, August 09, 2013



Dr.-Ing. F. Lienesch
Regierungsdirektor





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(2) Equipment and Protective Systems Intended for Use in
Potentially Explosive Atmospheres - **Directive 94/9/EC**

(3) EC-type-examination Certificate Number:

PTB 13 ATEX 3016 X



- (4) Equipment: Three-phase synchronous motor for low voltage,
type .../S.X..09...
- (5) Manufacturer: Bauer Gear Motor GmbH
- (6) Address: Eberhard-Bauer-Straße 36-60, 73734 Esslingen, Germany
- (7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- (8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 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.
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EN 60079-0:2012, EN 60079-7:2007, EN 60079-31:2009
- (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 in accordance 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 G Ex e IIC T1 - T4 Gb and II 2 D Ex tb IIIC T160 °C - T 120 °C Db

Zertifizierungssektor Explosionsschutz
On behalf of PTB:

Braunschweig, August 09, 2013


Dr.-Ing. F. Lienesch
Regierungsdirektor



(13)

SCHEDULE

(14)

EC-TYPE-EXAMINATION CERTIFICATE PTB 13 ATEX 3016 X

(15) Description of equipment

The three-phase synchronous motors of the types .../S.X..09 are designed to Increased Safety "e" and Protection by Enclosure "t" type of protection. They are size 90 motors. Their enclosures are made from aluminium or grey cast iron, with or without cooling ribs, and with the possibility to attach terminal boxes. The rotor is designed as a permanent magnet rotor with magnets that are glued in place in internal grooves of the laminated rotor core.

The shaft rotates in rolling bearings. An additional backstopping device may alternatively be provided at the non-drive end. Another alternative is a version with a free shaft end at the non-drive end.

Cooling is achieved by heat exchange, using the cooling ribs of the enclosure wall and an external fan made from plastic, which has been separately tested, or from aluminium or grey cast iron.

For dust explosion protection, only external fans made from aluminium or grey cast iron are used. The external fan is rotationally locked with two straight pins / a parallel key, and the shaft shoulder and a retaining ring provide for axial locking. An alternative (non-ventilated) version without external fan is possible.

Electrical connection is made with separately tested terminal boxes, which are designed to Increased Safety "e" type of protection and which are specified in a separate Test Report.

The range of ambient temperatures is 40 °C down to -20 °C. This temperature range may be extended to 60 °C down to -20 °C with a special electrical or thermal design in which suitable terminal boxes, materials and attached or installed components are used, or with the data sheet for the electrical ratings.

The electrical motor data, including the specifications for compliance with the temperature class, are defined in a data sheet that is attached to the EC Type Examination Certificate.

(16) Test Report PTB Ex 13-32081

(17) Special conditions for safe use

Conditions are specified in the corresponding data sheets.

Notes for manufacturing and operation

Measures shall be taken to ensure that the temperatures permitted for the components used will not be exceeded.

Components attached or installed (e.g. bushings, cable glands, connectors) shall be of a technical standard that complies with the specifications on the cover sheet. They must be suited for the operating conditions and come with a separate examination certificate. The special conditions have to be observed and included in the type test, if necessary.

The motors shall be attached to gearbox housings so that enclosure protection IP66 is ensured and the requirements in EN 60079-0:2012 are complied with.

(18) Essential health and safety requirements

Met by compliance with the afore-mentioned Standards.

Zertifizierungssektor Explosionsschutz
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(3) EC-type-examination Certificate Number:

PTB 13 ATEX 3017 X



- (4) Equipment: Three-phase synchronous motor for low voltage,
type .../S.X..11...
- (5) Manufacturer: Bauer Gear Motor GmbH
- (6) Address: Eberhard-Bauer-Straße 36-60, 73734 Esslingen, Germany
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SCHEDULE

(13)

(14) **EC-TYPE-EXAMINATION CERTIFICATE PTB 13 ATEX 3017 X**

(15) Description of equipment

The three-phase synchronous motors of the types .../S.X..11 are designed to Increased Safety "e" and Protection by Enclosure "t" type of protection. They are size 112 motors. Their enclosures are made from aluminium or grey cast iron, with or without cooling ribs, and with the possibility to attach terminal boxes. The rotor is designed as a permanent magnet rotor with magnets that are glued in place in internal grooves of the laminated rotor core.

The shaft rotates in rolling bearings. An additional backstopping device may alternatively be provided at the non-drive end. Another alternative is a version with a free shaft end at the non-drive end.

Cooling is achieved by heat exchange, using the cooling ribs of the enclosure wall and an external fan made from plastic, which has been separately tested, or from aluminium or grey cast iron.

For dust explosion protection, only external fans made from aluminium or grey cast iron are used. The external fan is rotationally locked with two straight pins / a parallel key, and the shaft shoulder and a retaining ring provide for axial locking. An alternative (non-ventilated) version without external fan is possible.

Electrical connection is made with separately tested terminal boxes, which are designed to Increased Safety "e" type of protection and which are specified in a separate Test Report.

The range of ambient temperatures is 40 °C down to -20 °C. This temperature range may be extended to 60 °C down to -20 °C with a special electrical or thermal design in which suitable terminal boxes, materials and attached or installed components are used, or with the data sheet for the electrical ratings.

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Measures shall be taken to ensure that the temperatures permitted for the components used will not be exceeded.

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