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# **EU-Type Examination Certificate** Supplement 1

Change to Directive 2014/34/EU

- Equipment intended for use in potentially explosive atmospheres 2 Directive 2014/34/EU
- 3 EU-Type Examination Certificate Number: BVS 15 ATEX E 037 X
- Flameproof electric motors type 4 KTCR \*\*\* \*\* \*/\*-\*\* Product: 4
- BARTEC VARNOST, d.o.o. 5 Manufacturer:
- Cesta 9. avgusta 59, 1410 Zagorje ob Savi, Slovenia 6 Address:
- This supplementary certificate extends EC-Type Examination Certificate No. BVS/15 ATEX E 037 X to apply to products designed and constructed in accordance with the specification set out in the appendix of the said certificate but having any acceptable variations specified in the appendix to this certificate and the documents referred to therein
- DEKRA EXAM GmbH, Notified Body number 0158, in accordance with Article 17 of Directive 8 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential Report No BVS PP 15.1008 EU

Compliance with the Essential Health and Safety Requirements has been assured by compliance with: 9

EN 60079-0:2012 + A11:2013 General requirements Flameproof enclosure "d" EN 60079-1:2014 EN 60079-7:2015 Increased Safety "e"

- If the sign "X" is placed after the certificate number, it indicates that the product is subject to the 10 Special Conditions for Use specified in the appendix to this certificate
- This EU-Type Examination Certificate relates only to the design and construction of the specified 11 product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
- The marking of the product shall include the following: 12



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**DEKRA EXAM GmbH** Bochum, 2018-02-19

Signed: Jörg Koch

Signed: Dr Franz Eickhoff

Approver

Certifier



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- 13 Appendix
- 14 EU-Type Examination Certificate

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- 15 **Product description**
- 15.1 Subject and type

Flameproof electric motors type 4 KTCR \*\*\* \*\* \*/\*-\*\*

Type designation to 4 KTCR \*1)\*1) \*2)\*2) \*3)/\*3)-\*4)-\*4)

1): Frame size

71	71 mm
80	80 mm
90	90 mm
100	100 mm
112	112 mm
132	132 mm
160	160 mm
180	180 mm
200	200 mm
225	225 mm

<sup>2):</sup> Length of stator assembly

### 15.2 **Description**

With this supplement the certificate is changed to Directive 2014/34/EU.

(Annotation: In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination
Certificates referring to 94/9/EC that were in existence prior to the date of application of
2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive
2014/34/EU. Supplementary Certificates to such EC-Type Examination Certificates, and new
issues of such certificates, may continue to bear the original certificate number issued prior to
20 April 2016.)

## Reasons for this supplement:

- Change to directive 2014/34/EU
- Update to the current standard
- New type with swan neck

## **Description of Product:**

The enclosure of the flameproof electric motor is made of cast iron and has a mounting place for terminal boxes.

The shaft will be fixed with ball bearings.

A terminal compartment in type of protection Flameproof Enclosure "d" or Increased Safety "e" is used. For electric power input into the motor compartment, separately certified bushings are used.

The terminal compartment is not directly mounted on the motor enclosure, but an additional metal tube is used to connect the terminal compartment with the motor. (Swan neck)

The cooling of the motor is realised by an external fan that is made of steel. The fan can be driven by the electrical machine itself or by a separately certified forced ventilation motor.



<sup>3):</sup> Quantity of poles

<sup>4):</sup> Version with swan neck

Optionally a space heater can be mounted inside the stator housing.

For direct temperature monitoring the winding of the motor is equipped with temperature sensors (thermistors according DIN 44081 respectively DIN 44082). The sensors are connected in series. Insulated bimetal switches can be mounted inside the windings as well.

Optionally the temperature at the bearings could be monitored separately certified resistance thermometers (Pt100).

The thermometers will be connected to a trigger unit which is certified for this purpose.

#### 15.3 Parameters

### Electrical parameters

Circuits of the flameproof electric motors				
Rated voltage			1100	VAC
Frame size		up to	225	
Rated rotational speed	500	up to	3600	min <sup>-1</sup>
Rated rotational speed (with converter) 48		up to	6000	min
Frequency (mains)			50/60	Hz
Frequency (converter)	5/////5	///up/to////	100	Hz
Duty type	S1///	///up/to///	///// S9	

Frame size		///////50/Hz//////		60 Hz	
71	up to///	/////0/55/	/kW////	0.66	kW
80	//////////////////////////////////////	V////N/N///	/kW/////	1.3	kW
90	//////////////////////////////////////	////2/2////	/k\\\/////	/////2.6///	kW
100	//////////////////////////////////////	V///3/////	/k\\\/////////////////////////////////	3.6	kW
112	//////////////////////////////////////	1///4/////	/kW/////	4.8	kW
132	//////////////////////////////////////	///7/5///	/KVN/////	/////9////	kW
160 ////////	//////////////////////////////////////	///18/5///	/kw/////	////21///	kW
180	//////////////////////////////////////	1/22/////	/kW/////	////26///	/kW
200	//////////////////////////////////////	1/37/////	/kW////	V///A2///	kW
225	//////////////////////////////////////	45.5///	/kW////	////52///	kW

The electrical data of the respective version is determined by a routine test carried out by the manufacturer.

Monitoring circuit	//////////////////////////////////////
Temperature sensors (ptc thermistors)	According to the specifications given in the certificate of the trigger unit and the electrical design.
Circuits of the resistance thermometer (Pt100)	According to the specifications given in the certificate of the trigger unit and the electrical design.

#### 16 Report Number

BVS PP 15.1008 EU, as of 2018-02-19



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## 17 Special Conditions for Use

- The lengths of the flameproof joints are in parts longer and the gaps of the flameproof
  joints are in parts smaller than the values of table 2 of EN 60079-1:2014. For information
  of the dimensions of the flameproof joints contact the manufacturer.
- Fasteners with a minimum yield stress of 640 N/mm<sup>2</sup> must be used for the closing of the flameproof enclosure.
- Motors which have to be equipped with a direct temperature control must be monitored by a separately certified trigger unit.
- If the electrical machine will be cooled by forced ventilation, it has to be assured that the electrical machine can only run if the ventilation is running.

## 18 Essential Health and Safety Requirements

The Essential Health and Safety Requirements are covered by the standards listed under item 9.

## 19 **Drawings and Documents**

Drawings and documents are listed in the confidential report.

We confirm the correctness of the translation from the German original.

In the case of arbitration only the German wording shall be valid and binding.

DEKRA EXAM GmbH Bochum, dated 2018-02-19 BVS-Wlo/Mu A 20161084

Certifier

Approver

