

OBAC

Ósrodek Badań, Atestacji i Certyfikacji Sp. z o.o.
44-121 Gliwice, ul. Łabędzka 21

(1) **QUALITY ASSURANCE NOTIFICATION** (Translation)

- (2) Equipment, components and protective systems intended for use in potentially explosive atmospheres. Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014.
- (3) Certificate No: **OBAC 18 ATEXQ 010**
- (4) Scope: **Equipment/ protective systems listed in the Annex/ Annexes is/ are an integral part of this notification**
- (5) Manufacturer: **Fabryka Silników Elektrycznych „BESEL” S.A.**
- (6) Address: ul. Elektryczna 8, 49-300 Brzeg
- (7) OBAC Institute for Research and Certification, Ltd., Notified Body No. 1461 in the scope of the Appendix IV and VII, in compliance with article No. 17 of the European Parliament and of the Council Directive 2014/34/EU dated 26 February 2014 hereby certifies that the quality system of the Producer fulfils the requirements specified in the appendix IV and/or VII to the Directive 2014/34/EU.
- (8) This notification is issued on the basis of an audit report No. OBAC/010/ATEXQ/RAPC/18 dated 1st October 2018, evaluating the compliance of the quality system with the requirements of the standard PN-EN ISO/IEC 80079-34:2011, harmonized with the Directive 2014/34/UE and pertains to the equipment listed in the appendix constituting an integral part of this certificate. This certificate can be withdrawn in the event of a failure to fulfil the requirements of the standard PN-EN ISO/IEC 80079-34:2011. The results of periodical evaluations of the quality system constitute a component of this notification.
- (9) The Quality Assessment Notification is valid in the period from **03.10.2018** until **02.10.2021** and can be withdrawn if the producer fails to fulfil the requirements of the periodical evaluations of the quality system.
- (10) Under Article 16 of the Directive 2014/34/UE and chapter 3 of the aforementioned regulation, there must be an identification number of 1461 of the notified body participating in the production control phase, placed to the right from the CE mark.
- (11) First issue of the notification: 18.09.2015.



**by proxy of Certification Body
Manager**

Zbigniew Tarnawski M. Sc.

Date of issue: 3 October 2018



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Ósrodek Badań, Atestacji i Certyfikacji Sp. z o.o.
44-121 Gliwice, ul. Łabędzka 21

(12)

Schedule No. 1
to the Quality Assurance Notification
No. OBAC 18 ATEXQ 010

(13) Types/ groups of devices covered by the Quality Assurance Notification:

- Three-phase low-power motors

(14) The types of explosion protection covered by the Quality Assurance Notification:

- Ex e, Ex t

(15) Basis for Schedule:

- Audit Report No. OBAC/010/ATEXQ/RAPC/18 of 01.10.2018.





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Ośrodek Badań, Atestacji i Certyfikacji Sp. z o.o.
44-121 Gliwice, ul. Łabędzka 21

(1) EU-TYPE EXAMINATION CERTIFICATE

(Translation)

- (2) Equipment, components and protective systems intended for use in potentially explosive atmospheres. Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014.
- (3) EU type examination certificate No: **OBAC 14 ATEX 0048X**
- (4) Product: **Explosion-protected three-phase cage induction motor of ExS(K,L)h 56-** type**
- (5) Manufacturer: **Fabryka Silników Elektrycznych „BESEL” S.A.**
- (6) Address: **ul. Elektryczna 8, 49-300 Brzeg**
- (7) This equipment, component or protective system and any of its approved version is specified in this certificate and in documents listed in p. 19.
- (8) The Institute for Research and Certification „OBAC” Ltd., notified body No.1461 in accordance with Article 13 of the European Council Directive 2014/34/EU of February 26, 2014, certifies that this equipment, component or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment, component or 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 report No. OBAC/14/ATEX/0048.
- (9) Compliance with the Safety Requirements has been assured by conformity with:
PN-EN 60079-0:2013 (EN 60079-0:2012) PN-EN 60079-7:2016 (EN 60079-7:2015)
PN-EN 60079-31:2014 (EN 60079-31:2014)
- (10) If the sign „X” is placed after the certificate number, it indicates that the product concerned is subject to special conditions for safe use specified in the schedule to this certificate.
- (11) This EU-type examination certificate relates only to the design, evaluation and tests of the specified equipment, component or protective system according to the Directive 2014/34/EU. The certificate does not apply to further requirements of the Directive relating to the manufacture and placing on the market of this equipment, component or protective system.
- (12) The marking of the equipment, component or protective system must include the following:

 **II 2G Ex eb II Tx Gb**

 **II 2D Ex tb IIIC T125°C Db**

Gliwice, 29th November 2016
Rev. 2



**Certification Body
Manager**

Piotr Tarnawski M.Com.



OBAC



Ośrodek Badań, Atestacji i Certyfikacji Sp. z o.o.
44-121 Gliwice, ul. Łabędzka 21

(13)

SCHEDULE

(14)

to the EU-Type Examination Certificate
No. OBAC 14 ATEX 0048X

(15) Ex Product description:

The increased-safety three-phase cage induction motors of ExS(K, L)h 56-** type are low-power motors of closed structure. The rotor cage and the frame elements such as the body, bearing hubs and the terminal box are made of aluminium. The fan cover is made of steel while the fan itself is made of plastic, aluminium or cast iron. The motor shaft is supported by rolling bearings. The junction box provided with screw-type terminals and a cover, and located on the body, is used for external electrical connections. Depending on its version the motor includes two or four pairs of poles and is suitable for lug-type, flange or lug-flange installation. The flange is available in three sizes. A part from the cable entry the equipment includes the following components holding their own EC-type examination certificates.

- Terminal board 2,5mm² – 6mm² certificate no. KDB 06 ATEX 150U
- Miniature terminals of 07-9702-0... type (version with PTC) certificate no. PTB 99 ATEX 3117U

Marking:

Explosion-protected three-phase cage induction motor of **Ex S (K,L) h 56 - * * (*)** type

Increased safety motor _____

Three-phase motor _____

Type of installation: _____
(without marking) – lug-type installation

K – flange installation

L – lug-flange installation

Series _____

Height of shaft axis: [mm] _____

Number of pair poles: **2, 4** _____

Length of stator: _____

A - 29 mm

B - 37 mm

Flange size: _____

(without marking) –IM B5 flange (large)

1 –IM B14/1 flange (middle)

2 –IM B14/2 flange (small)





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Ośrodek Badań, Atestacji i Certyfikacji Sp. z o.o.
44-121 Gliwice, ul. Łabędzka 21

(13)

SCHEDULE

(14)

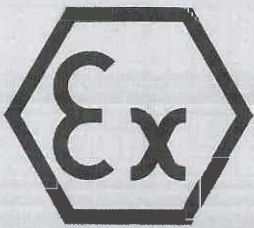
to the EU-Type Examination Certificate
No. OBAC 14 ATEX 0048X

Rated data:

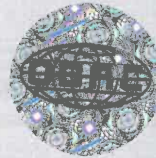
Version	ExS(K,L)h56-2A(*)		ExS(K,L)h56-2B(*)		ExS(K,L)h56-4A(*)		ExS(K,L)h56-4B(*)	
Rated power [kW]	0,09		0,12		0,06		0,09	
Rated voltage* [V], ±5%	230/400	266/460	230/400	266/460	230/400	266/460	230/400	266/460
Rated current* [A]	0,70/0,40	0,65/0,38	0,70/0,40	0,70/0,40	0,54/0,31	0,52/0,30	0,64/0,37	0,64/0,37
Frequency [Hz]	50	60	50	60	50	60	50	60
Power factor	0,60	0,55	0,70	0,64	0,57	0,50	0,59	0,53
Efficiency [%]	54,0	55,0	62,0	64,0	48,5	51,0	60,0	60,0
Rotational speed [rpm]	2760	3440	2750	3390	1380	1700	1370	1690
Type of operation	S1							
Class of insulation	F							
I _A /I _N	3,1	3,9	3,6	3,8	2,7	3,0	2,8	3,0
t _E [s] for T3 temp. class	45,0		40,0		64,0		64,0	
t _E [s] for T4 temp. class	18,0		17,0		24,0		27,0	
Thermistor rated temperature (version Ex t)	120°C							
Protection degree	IP66							
Ambient temperature	-20°C ≤ Ta ≤ +40°C							

* parameters for delta-star stator connections (see also special conditions of safe use)





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Ośrodek Badań, Atestacji i Certyfikacji Sp. z o.o.
44-121 Gliwice, ul. Łabędzka 21

(13)

SCHEDULE

(14)

**to the EU-Type Examination Certificate
No. OBAC 14 ATEX 0048X**

(16) Report:

- Number LL/173-1/2013/A of 11.02.2014.
- Number LL/173-2/2013/A of 11.02.2014.
- Number LL/173-3/2013/A of 17.03.2014.
- Number LL/173-4/2013/A of 03.04.2014.

The Explosion-protected three-phase cage induction motor of ExS(K,L)h 56- type** meets the requirements for explosion-protected equipment and may be used as the device of equipment group II category 2G and/or 2D.

(17) Special conditions for safe operation:

- The application of voltage of 190V to 690V inclusive is permissible provided that the electric and thermal loads are equal to those the motor was subjected to during the EC-type examination (with the same or lower current and magnetic flux density).
- Adequately selected and installed certified cable entries shall be used in order to ensure protection degree of IP66.
- The motor shall be provided with adequate overload protection the current-time characteristic of which ensures that the motor will be switched off from the supply voltage earlier than the t_E time specified for the motor, at the current equal to the motor starting current.
- Temperature class of the equipment relates to the t_E value – see the rated data.
- The PTC thermistors built into the winding, if they are required, together with the overload protection, shall be connected with the motor circuit so that the action of the thermistors results in the motor switching off.

(18) The compliance with Safety Requirements has been assured by compliance with standards shown in p.9 of this certificate.

(19) List of agreed documentation:

- Documentation of increased-safety explosion-protected „ExS(K,L)h56-...” motors, December 2013.
- Instructions no. ITR/HR/4/07 – “Operating and Technical Instructions of explosion-protected three-phase cage induction motors of 56, 63, 71, 80 shaft axis height”, March 2014.





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Ósrodek Badań, Atestacji i Certyfikacji Sp. z o.o.
44-121 Gliwice, ul. Łabędzka 21

(1) **Schedule No. 1**
to
the certificate No. OBAC 14 ATEX 0048X

(2) Equipment, components and protective systems intended for use in potentially explosive atmospheres.
Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014.

(3) Product: **Explosion-protected three-phase cage induction motor
of ExS(K,L)h 56-** type**

(4) Manufacturer: **Fabryka Silników Elektrycznych „BESEL” S.A.**

(5) Address: **ul. Elektryczna 8, 49-300 Brzeg**

(6) Compliance with the safety requirements has been assured by compliance with:

EN IEC 60079-0:2018+AC:2020-02

EN 60079-7:2015+A1:2018

EN 60079-31:2014

(7) Description of changes:
– Marking correction (addition of the gas subgroup symbol "IIC")
– Standards update

Rated data:

Unchanged.

Marking:

Unchanged.

(8) Results of the examinations performed:

Explosion proof design is confirmed in the confidential product assessment report:
OBAC/20/ATEX/0174.

The introduced changes meet the requirements for equipment of group II category 2GD.

Explosion-proof marking:

Ex II 2G Ex eb IIC Tx Gb

Ex II 2D Ex tb IIIC T125°C Db



**Certification Body
Manager**

Piotr Tarnawski M.Com.

Gliwice, 09th September 2020



OBAC

Ósrodek Badań, Atestacji i Certyfikacji Sp. z o.o.
44-121 Gliwice, ul. Łabędzka 21

Schedule No. 1
to
the certificate No. OBAC 14 ATEX 0048X

(9) Specific conditions of use:

Unchanged.

(10) Technical documentation:

- Documentation of increased-safety explosion-protected „ExS(K,L)h56-...” motors, December 2013.
- Instructions no. ITR/HR/4/07 – “Operating and Technical Instructions of explosion-protected three-phase cage induction motors of 56, 63, 71, 80 shaft axis height”, March 2014.
- „Comparative analysis of standards PN-EN IEC 60079-0:2018-09 and PN-EN 60079-0:2013 in relation to motors ExS(K,L)h56 of the BESEL’s S.A. production” 31.08.2020.





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Ośrodek Badań, Atestacji i Certyfikacji Sp. z o.o.
44-121 Gliwice, ul. Łabędzka 21

(1) EU-TYPE EXAMINATION CERTIFICATE

(Translation)

- (2) Equipment, components and protective systems intended for use in potentially explosive atmospheres. Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014.
- (3) EU type examination certificate No: **OBAC 14 ATEX 0047X**
- (4) Product: **Explosion-protected three-phase cage induction motor of ExS(K,L)h 63-** type**
- (5) Manufacturer: **Fabryka Silników Elektrycznych „BESEL” S.A.**
- (6) Address: **ul. Elektryczna 8, 49-300 Brzeg**
- (7) This equipment, component or protective system and any of its approved version is specified in this certificate and in documents listed in p. 19.
- (8) The Institute for Research and Certification „OBAC” Ltd., notified body No.1461 in accordance with Article 13 of the European Council Directive 2014/34/EU of February 26, 2014, certifies that this equipment, component or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment, component or 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 report No. OBAC/14/ATEX/0047.
- (9) Compliance with the Safety Requirements has been assured by conformity with:
PN-EN 60079-0:2013 (EN 60079-0:2012) PN-EN 60079-7:2016 (EN 60079-7:2015)
PN-EN 60079-31:2014 (EN 60079-31:2014)
- (10) If the sign „X” is placed after the certificate number, it indicates that the product concerned is subject to special conditions for safe use specified in the schedule to this certificate.
- (11) This EU-type examination certificate relates only to the design, evaluation and tests of the specified equipment, component or protective system according to the Directive 2014/34/EU. The certificate does not apply to further requirements of the Directive relating to the manufacture and placing on the market of this equipment, component or protective system.
- (12) The marking of the equipment, component or protective system must include the following:

 **II 2G Ex eb II Tx Gb**

 **II 2D Ex tb IIIC T125°C Db**



**Certification Body
Manager**


Piotr Tarnawski M.Com.

Gliwice, 29th November 2016
Rev. 2



OBAC



Ósrodek Badań, Atestacji i Certyfikacji Sp. z o.o. 44-121 Gliwice, ul. Łabędzka 21

(13)

SCHEDULE

(14)

to the EU-Type Examination Certificate
No. OBAC 14 ATEX 0047X

(15) Ex Product description:

The increased-safety three-phase cage induction motors of ExS(K, L)h 63-** type are low-power motors of closed structure. The rotor cage and the frame elements such as the body, bearing hubs and the terminal box are made of aluminium. The fan cover is made of steel while the fan itself is made of plastic, aluminium or cast iron. The motor shaft is supported by rolling bearings. The junction box provided with screw-type terminals and a cover, and located on the body, is used for external electrical connections. Depending on its version the motor includes two or four pairs of poles and is suitable for lug-type, flange or lug-flange installation. The flange is available in three sizes. A part from the cable entry the equipment includes the following components holding their own EC-type examination certificates.

– Terminal board 2,5mm² – 6mm²

certificate no. KDB 06 ATEX 150U

– Miniature terminals of 07-9702-0... type (version with PTC)

certificate no. PTB 99 ATEX 3117U

Marking:

Explosion-protected three-phase cage induction motor of **Ex S (K,L) h 63 - * * (*)** type

Increased safety motor _____

Three-phase motor _____

Type of installation
(without marking) – lug-type installation

K – flange installation

L – lug-flange installation

Series _____

Height of shaft axis: [mm] _____

Number of pair poles: **2, 4, 6** _____

Length of stator: _____

A - 45mm

B - 60mm

Flange size: _____

(without marking) – IM B5 flange (large)

1 –IM B14/1 flange (middle)

2 –IM B14/2 flange (small)





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Ośrodek Badań, Atestacji i Certyfikacji Sp. z o.o. 44-121 Gliwice, ul. Łabędzka 21

(13)

(14)

SCHEDULE to the EU-Type Examination Certificate No. OBAC 14 ATEX 0047X

Rated data:

Version	ExS(K,L)h63-2A(*)		ExS(K,L)h63-2B(*)		ExS(K,L)h63-4A(*)		ExS(K,L)h63-4B(*)		ExS(K,L)h63-6B(*)	
Rated power [kW]	0,18		0,25		0,12		0,18		0,06	
Rated voltage* [V], ±5%	230/400	266/460	230/400	266/460	230/400	266/460	230/400	266/460	230/400	266/460
Rated current* [A]	1,05/0,60	0,95/0,55	1,55/0,90	1,40/0,80	1,15/0,65	1,05/0,60	1,20/0,70	1,15/0,65	0,55	0,55
Frequency [Hz]	50	60	50	60	50	60	50	60	50	60
Power factor	0,70	0,67	0,60	0,60	0,47	0,44	0,57	0,53	0,39	0,34
Efficiency [%]	63,0	63,0	68,0	68,0	57,0	57,0	65,0	65,0	40,0	40,0
Rotational speed [rpm]	2820	3440	2870	3480	1415	1725	1390	1700	940	1140
Type of operation	S1									
Class of insulation	F									
I _A /I _N	4,8	5,6	5,9	7,0	3,5	4,1	3,75	4,25	2,4	2,5
t _E [s] for T3 temp. class	26,0		17,0		55,0		45,0		110,0	
t _E [s] for T4 temp. class	12,0		8,0		22,0		20,0		40,0	
Thermistor rated temperature (version Ex t)	120°C									
Protection degree	IP66									
Ambient temperature	-20°C ≤ Ta ≤ +40°C									

* parameters for delta-star stator connections (see also special conditions of safe use)





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Ośrodek Badań, Atestacji i Certyfikacji Sp. z o.o.
44-121 Gliwice, ul. Łabędzka 21

(13)

SCHEDULE

(14)

to the EU-Type Examination Certificate
No. OBAC 14 ATEX 0047X

(16) Report:

- Number LL/173-1/2013/A of 11.02.2014.
- Number LL/173-2/2013/A of 11.02.2014.
- Number LL/173-3/2013/A of 17.03.2014.
- Number LL/173-4/2013/A of 03.04.2014.

The Explosion-protected three-phase cage induction motor of ExS(K,L)h 63- type** meets the requirements for explosion-protected equipment and may be used as the device of equipment group II category 2G and/or 2D.

(17) Special conditions for safe operation:

- The application of voltage of 190V to 690V inclusive is permissible provided that the electric and thermal loads are equal to those the motor was subjected to during the EC-type examination (with the same or lower current and magnetic flux density).
- Adequately selected and installed certified cable entries shall be used in order to ensure protection degree of IP66.
- The motor shall be provided with adequate overload protection the current-time characteristic of which ensures that the motor will be switched off from the supply voltage earlier than the t_E time specified for the motor, at the current equal to the motor starting current.
- Temperature class of the equipment relates to the t_E value – see the rated data.
- The PTC thermistors built into the winding, if they are required, together with the overload protection, shall be connected with the motor circuit so that the action of the thermistors results in the motor switching off.

(18) The compliance with Safety Requirements has been assured by compliance with standards shown in p.9 of this certificate.

(19) List of agreed documentation:

- Documentation of increased-safety explosion-protected „ExS(K,L)h63-...” motors, April 2014.
- Instructions no. ITR/HR/4/07 – “Operating and Technical Instructions of explosion-protected three-phase cage induction motors of 56, 63, 71, 80 shaft axis height”, March 2014.





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Ośrodek Badań, Atestacji i Certyfikacji Sp. z o.o.
44-121 Gliwice, ul. Łabędzka 21

(1) **Schedule No. 1**
to
the certificate No. OBAC 14 ATEX 0047X

(2) Equipment, components and protective systems intended for use in potentially explosive atmospheres.
Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014.

(3) Product: **Explosion-protected three-phase cage induction motor
of ExS(K,L)h 63-** type**

(4) Manufacturer: **Fabryka Silników Elektrycznych „BESEL” S.A.**

(5) Address: **ul. Elektryczna 8, 49-300 Brzeg**

(6) Compliance with the safety requirements has been assured by compliance with:

EN IEC 60079-0:2018+AC:2020-02

EN 60079-7:2015+A1:2018

EN 60079-31:2014

(7) Description of changes:

- Marking correction (addition of the gas subgroup symbol "IIC")
- Standards update

Rated data:

Unchanged.

Marking:

Unchanged.

(8) Results of the examinations performed:

Explosion proof design is confirmed in the confidential product assessment report:
OBAC/20/ATEX/0174.

The introduced changes meet the requirements for equipment of group II category 2GD.

Explosion-proof marking:

Ex II 2G Ex eb IIC Tx Gb

Ex II 2D Ex tb IIC T125°C Db



**Certification Body
Manager**

Piotr Tarnawski M.Com.

Gliwice, 09th September 2020



OBAC

Ośrodek Badań, Atestacji i Certyfikacji Sp. z o.o.
44-121 Gliwice, ul. Łabędzka 21

Schedule No. 1 **to** **the certificate No. OBAC 14 ATEX 0047X**

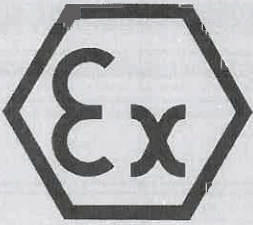
(9) Specific conditions of use:

Unchanged.

(10) Technical documentation:

- Documentation of increased-safety explosion-protected „ExS(K,L)h63-...” motors, April 2014.
- Instructions no. ITR/HR/4/07 – “Operating and Technical Instructions of explosion-protected three-phase cage induction motors of 56, 63, 71, 80 shaft axis height”, March 2014.
- „Comparative analysis of standards PN-EN IEC 60079-0:2018-09 and PN-EN 60079-0:2013 in relation to motors ExS(K,L)h63 of the BESEL’s S.A. production” 31.08.2020.





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Ośrodek Badań, Atestacji i Certyfikacji Sp. z o.o.
44-121 Gliwice, ul. Łabędzka 21

(1) **EU-TYPE EXAMINATION CERTIFICATE**

(Translation)

- (2) Equipment, components and protective systems intended for use in potentially explosive atmospheres. Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014.
- (3) EU type examination certificate No: **OBAC 15 ATEX 0114X**
- (4) Product: **Explosion protected three-phase cage induction motor of ExS(K,L)h 71-** type**
- (5) Manufacturer: **Fabryka Silników Elektrycznych „BESEL” S.A.**
- (6) Address: **ul. Elektryczna 8, 49-300 Brzeg**
- (7) This equipment, component or protective system and any of its approved version is specified in this certificate and in documents listed in p. 19.
- (8) The Institute for Research and Certification „OBAC” Ltd., notified body No.1461 in accordance with Article 13 of the European Council Directive 2014/34/EU of February 26, 2014, certifies that this equipment, component or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment, component or 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 report No. OBAC/15/ATEX/0114
- (9) Compliance with the Safety Requirements has been assured by conformity with:
- | | | |
|--|--|--|
| PN-EN 60079-0:2013
(EN 60079-0:2012) | PN-EN 60079-7:2016
(EN 60079-7:2015) | PN-EN 60079-31:2014
(EN 60079-31:2014) |
|--|--|--|
- (10) If the sign „X” is placed after the certificate number, it indicates that the product concerned is subject to special conditions for safe use specified in the schedule to this certificate.
- (11) This EU-type examination certificate relates only to the design, evaluation and tests of the specified equipment, component or protective system according to the Directive 2014/34/EU. The certificate does not apply to further requirements of the Directive relating to the manufacture and placing on the market of this equipment, component or protective system.
- (12) The marking of the equipment, component or protective system must include the following:



II 2G Ex eb II Tx Gb



II 2D Ex tb IIC T125°C Db



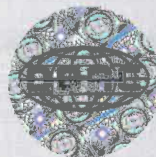
**Certification Body
Manager**

Piotr Tarnawski M.Com.

Gliwice, 29th November 2016
Rev. 2



OBAC



Ośrodek Badań, Atestacji i Certyfikacji Sp. z o.o. 44-121 Gliwice, ul. Łabędzka 21

(13)

SCHEDULE

(14)

to the EU-Type Examination Certificate
No. OBAC 15 ATEX 0114X

(15) Ex Product description:

The increased-safety explosion protected three-phase cage induction motors of ExS(K, L)h 71-** type are the low-power enclosed motors. The rotor cage and enclosure elements like the frame, bearing housings and the terminal box are made of aluminium. The fan cover is made of steel, the fan itself being manufactured of plastic, aluminium or cast iron. The motor shaft is supported by anti-friction bearings. The external connections are performed using the frame-mounted junction box provided with screw terminals and a cover. Depending on version the motor includes two, four or six pole pairs, and is suited for base, flange or base-flange installation. The flange is in three sizes. The equipment, excluding the cable entry, includes the following components holding the EC-type examination certificates:

- Terminal plate 2,5mm² – 6mm² certificate no.: KDB 06 ATEX 150U
- Miniature terminals of 07-9702-0... type (version with PTC) certificate no.: PTB 99 ATEX 3117U

Designation:

Explosion protected three-phase cage induction motor of **Ex S (K,L) h 71 - * * (*)** type

Explosion protected motor

Three-phase

Type of installation:

(without symbol) – base support

K – flange installation

L – base + flange installation

Series

Height of shaft axis [mm]

Number of pole pairs (2p): **2, 4, 6**

Stator length:

A - 50mm (2p = 2, 4); 43mm (2p = 6)

B - 62mm (2p = 2, 4); 80mm (2p = 6)

Flange size:

(without symbol) –IM B5 flange (large)

1 –IM B14/1 flange (mid)

2 –IM B14/2 flange (small)





OBAC



Ośrodek Badań, Atestacji i Certyfikacji Sp. z o.o.
44-121 Gliwice, ul. Łabędzka 21

(13)

(14)

SCHEDULE

to the EU-Type Examination Certificate
No. OBAC 15 ATEX 0114X

Rated data:

Version	ExS(K,L)h71 -2A(*)		ExS(K,L)h71 -2B(*)		ExS(K,L)h71 -2B(*)		ExS(K,L)h71 -4A(*)		ExS(K,L)h71 -4B(*)	
	Rated power [kW]	0,37		0,55		0,37		0,25		0,37
Rated voltage* [V], ±5%	230/ 400	265/ 460	230/ 400	265/ 460	230/ 400	265/ 460	230/ 400	265/ 460	230/ 400	265/ 460
Rated current* [A]	1,75/ 1,00	1,55/ 0,90	2,60/ 1,50	2,25/ 1,30	2,25/ 1,30	1,90/ 1,10	1,50/ 0,85	1,30/ 0,75	2,00/ 1,15	1,75/ 1,00
Frequency [Hz]	50	60	50	60	50	60	50	60	50	60
Power factor	0,83	0,80	0,75	0,73	0,62	0,61	0,65	0,55	0,70	0,65
Efficiency [%]	68,0	69,0	71,5	73,0	68,0	68,0	65,0	68,0	67,0	70,0
Rotational speed [obr/min]	2780	3410	2800	3430	2880	3490	1370	1690	1350	1680
Type of operation	S1									
Class of insulation	F									
I _A /I _N	4,75	5,6	5,3	6,4	6,1	7,6	3,9	4,7	3,6	4,5
t _E [s] for temp. class T3	24,0		14,0		-		43,0		25,0	
t _E [s] for temp. class T4	9,0		-		6,0		15,0		-	
Thermistor rated temperature (version Ex t)	120°C									
Degree of protection	IP66									
Ambient temperature	-20°C ≤ Ta ≤ +40°C									

* parameters applicable for delta (star connections of stator windings (see also: special conditions for safe use)).





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Ośrodek Badań, Atestacji i Certyfikacji Sp. z o.o.
44-121 Gliwice, ul. Łabędzka 21

(13)

SCHEDULE

(14)

to the EU-Type Examination Certificate
No. OBAC 15 ATEX 0114X

Version	ExS(K,L)h71-6A(*)		ExS(K,L)h71-6B(*)	
Rated power [kW]	0,18		0,25	
Rated voltage* [V], ±5%	230/400	265/460	230/400	265/460
Rated current * [A]	1,20/0,70	1,15/0,65	1,50/0,85	1,35/0,80
Frequency [Hz]	50	60	50	60
Power factor	0,70	0,60	0,67	0,62
Efficiency [%]	55,0	57,5	64,0	66,0
Rotational speed [obr/min]	880	1110	900	1120
Type of operation	S1			
Class of insulation	F			
I _A /I _N	2,9	3,35	3,0	4,0
t _E [s] for temp. class T3	40,0		60,0	
t _E [s] for temp. class T4	-		23,0	
Thermistor rated temperature (version Ex t)	120°C			
Degree of protection	IP66			
Ambient temperature	-20°C ≤ Ta ≤ +40°C			

* parameters applicable for delta (star connections of stator windings (see also: special conditions for safe use).

(16) Report:

- Number LL/173-1/2013/A of 11.02.2014
- Number LL/173-2/2013/A of 11.02.2014
- Number LL/173-3/2013/A of 17.03.2014
- Number LL/173-4/2013/A of 03.04.2014
- Number LL/070/2015 of 29.04.2015

The explosion protected three-phase cage induction motor of ExS(K,L)h 71- type meets the requirements for explosion protected equipment and may be used as the device of equipment group II, category 2G and/or 2D.**





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44-121 Gliwice, ul. Łabędzka 21

(13)

SCHEDULE

(14)

to the EU-Type Examination Certificate
No. OBAC 15 ATEX 0114X

(17) Special conditions for safe operation:

- It is permissible to apply voltages of 190V to 690V inclusive, provided that electric and terminal loads are equal to those the motor was subjected to during the type examination (the same or lower current and magnetic-flux density).
- To ensure IP66 protection degree, adequately selected and installed certified cable entries shall be used.
- The motor shall be provided with overload protection of adequate time-current characteristics ensuring that the motor will be disconnected from the supply voltage in time shorter from t_E specified for the motor at current value equal to its starting current.
- The equipment temperature class is related to the t_E value – see rated data.
- If required the winding in-built PTC thermistors shall be, in connection with the protection device, so connected in the motor circuit that the action of PTC thermistors results in the motor switching off.

(18) The compliance with Safety Requirements has been assured by compliance with standards shown in p.9 of this certificate.

(19) List of agreed documentation:

- Explosion protected increased-safety ExS(K,L)h71-... motors documentation, April 2015.
- Technical and Operational Instructions no. ITR/HR/4/07 – “Technical and Operational Instructions of explosion protected increased-safety three-phase cage induction motors of 56, 63, 71, 80 shaft-axis height”, April 2015.





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Ósrodek Badań, Atestacji i Certyfikacji Sp. z o.o.
44-121 Gliwice, ul. Łabędzka 21

(1) **Schedule No. 1**
to
the certificate No. OBAC 15 ATEX 0114X

(2) Equipment, components and protective systems intended for use in potentially explosive atmospheres.
Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014.

(3) Product: **Explosion-protected three-phase cage induction motor
of ExS(K,L)h 71-** type**

(4) Manufacturer: **Fabryka Silników Elektrycznych „BESEL” S.A.**

(5) Address: **ul. Elektryczna 8, 49-300 Brzeg**

(6) Compliance with the safety requirements has been assured by compliance with:

EN IEC 60079-0:2018+AC:2020-02

EN 60079-7:2015+A1:2018

EN 60079-31:2014

(7) Description of changes:

- Marking correction (addition of the gas subgroup symbol "IIC")
- Standards update

Rated data:

Unchanged.

Marking:

Unchanged.

(8) Results of the examinations performed:

Explosion proof design is confirmed in the confidential product assessment report:
OBAC/20/ATEX/0174.

The introduced changes meet the requirements for equipment of group II category 2GD.

Explosion-proof marking:



II 2G Ex eb IIC Tx Gb



II 2D Ex tb IIC T125°C Db



**Certification Body
Manager**

Piotr Tarnawski M.Com.

Gliwice, 09th September 2020



OBAC

Ósrodek Badań, Atestacji i Certyfikacji Sp. z o.o.
44-121 Gliwice, ul. Łabędzka 21

Schedule No. 1

to

the certificate No. OBAC 15 ATEX 0114X

(9) Specific conditions of use:

Unchanged.

(10) Technical documentation:

- Explosion protected increased-safety ExS(K,L)h71-... motors documentation, April 2015.
- Technical and Operational Instructions no. ITR/HR/4/07 – “Technical and Operational Instructions of explosion protected increased-safety three-phase cage induction motors of 56, 63, 71, 80 shaft-axis height”, April 2015.
- „Comparative analysis of standards PN-EN IEC 60079-0:2018-09 and PN-EN 60079-0:2013 in relation to motors ExS(K,L)h71 of the BESEL’s S.A. production” 31.08.2020.





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Ośrodek Badań, Atestacji i Certyfikacji Sp. z o.o.
44-121 Gliwice, ul. Łabędzka 21

(1) **EU-TYPE EXAMINATION CERTIFICATE**

(Translation)

- (2) Equipment, components and protective systems intended for use in potentially explosive atmospheres. Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014.
- (3) EU type examination certificate No: **OBAC 16 ATEX 0118X**
- (4) Product: **Three-phase, explosion-proof squirrel-cage induction motor, ExS(K,L)h 80-** type**
- (5) Manufacturer: **Fabryka Silników Elektrycznych „BESEL” S.A.**
- (6) Address: ul. Elektryczna 8, 49-300 Brzeg
- (7) This equipment, component or protective system and any of its approved version is specified in this certificate and in documents listed in p. 19.
- (8) The Institute for Research and Certification „OBAC” Ltd., notified body No.1461 in accordance with Article 13 of the European Council Directive 2014/34/EU of February 26, 2014, certifies that this equipment, component or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment, component or 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 report No. OBAC/16/ATEX/0118.
- (9) Compliance with the Safety Requirements has been assured by conformity with:
- | | | |
|--|--|--|
| PN-EN 60079-0:2013
(EN 60079-0:2012) | PN-EN 60079-7:2016
(EN 60079-7:2015) | PN-EN 60079-31:2014
(EN 60079-31:2014) |
|--|--|--|
- (10) If the sign „X” is placed after the certificate number, it indicates that the product concerned is subject to special conditions for safe use specified in the schedule to this certificate.
- (11) This EU-type examination certificate relates only to the design, evaluation and tests of the specified equipment, component or protective system according to the Directive 2014/34/EU. The certificate does not apply to further requirements of the Directive relating to the manufacture and placing on the market of this equipment, component or protective system.
- (12) The marking of the equipment, component or protective system must include the following:

II 2G Ex eb II Tx Gb

II 2D Ex tb IIIC T125°C Db



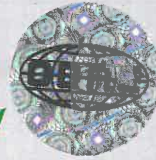
**Certification Body
Manager**

Piotr Tarnawski M.Com.

Gliwice, 29th November 2016
Rev. 2



OBAC



Ośrodek Badań, Atestacji i Certyfikacji Sp. z o.o.
44-121 Gliwice, ul. Łabędzka 21

(13)

SCHEDULE

(14)

to the EU-Type Examination Certificate
No. OBAC 16 ATEX 0118X

(15) Ex Product description:

Three-phase squirrel-cage induction motors with strengthened design ExS(K, L)h 80-** are low power motors with closed design. Rotor cage and housing components such as body, bearing plates and terminal box are made of aluminum alloy. Ventilator cover is made of steel and the ventilator is made of plastic, aluminum or cast iron. Motor shaft is mounted on roller bearings. External electric connections are made via connection box located on the housing and equipped with a cover and screw terminals. Motor depending on a design version, it is equipped with two, four or six pairs of poles and is prepared for lug, flange or lug and flange mounting. Flange is available in three sizes.

Apart from the cable entry, the device consists also of the following components which have their own CE-type examination certificates:

- Clamping plate 2,5mm² – 6mm² certificate no. KDB 06 ATEX 150U
- Miniature terminals type 07-9702-0... (version with PTC) certificate no. PTB 99 ATEX 3117U

Marking:

Three-phase, explosion-proof squirrel-cage induction motor **Ex S (K,L) h 80 - * * (*) type**

Motor with explosion proof design

Three-phase

Way of mounting:

(no marking) – lug

K – flange

L – lug + flange

Series

Shaft axis height in [mm]

Number of pole pairs (2p): **2, 4, 6**

Stator length:

A - 60mm (2p=2,4,6)

B - 80mm (2p=2,4,6)

Flange size:

(no marking) – IM B5 flange (large)

1 – IM B14/1 flange (medium)

2 – IM B14/2 flange (small)





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Ośrodek Badań, Atestacji i Certyfikacji Sp. z o.o.
44-121 Gliwice, ul. Łabędzka 21

(13)

(14)

SCHEDULE

to the EU-Type Examination Certificate
No. OBAC 16 ATEX 0118X

Rated data:

Version	ExS(K,L)h80-2A(*)				ExS(K,L)h80-2B(*)			
	0,75		0,55		1,10		0,75	
Rated power [kW]	0,75		0,55		1,10		0,75	
Rated voltage* [V], ±5%	230/400	265/460	230/400	265/460	230/400	265/460	230/400	265/460
Rated current* [A]	3,10/1,80	2,60/1,50	2,45/1,40	2,20/1,25	4,20/2,40	3,65/2,10	3,10/1,80	2,80/1,60
Frequency [Hz]	50	60	50	60	50	60	50	60
Power factor	0,86	0,85	0,79	0,78	0,88	0,85	0,80	0,78
Efficiency [%]	72,0	75,0	74,0	73,0	75,0	78,0	78,0	78,0
Speed [rpm]	2710	3370	2830	3450	2730	3380	2850	3470
Type of operation	S1							
Insulation class	F							
I _A /I _N	4,85	6,1	6,2	7,35	5,25	6,3	7,0	8,25
t _E [s] for temp. class T3	14,0		-		8,0		-	
t _E [s] for temp. class T4	-		10,0		-		8,0	
Thermistor rated temp. (version Ex t)	120°C							
Protection class	IP66							
Ambient temperature	-20°C ≤ Ta ≤ +40°C							

* parameters for triangle/star winding connections of the stator (see also special operating conditions)





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Ośrodek Badań, Atestacji i Certyfikacji Sp. z o.o.
44-121 Gliwice, ul. Łabędzka 21

(13)

SCHEDULE

(14)

to the EU-Type Examination Certificate
No. OBAC 16 ATEX 0118X

Version	ExS(K,L)h80-6A(*)		ExS(K,L)h80-6B(*)			
Rated power [kW]	0,37		0,55		0,37	
Rated voltage* [V], ±5%	230/400	265/460	230/400	265/460	230/400	265/460
Rated current* [A]	2,25/1,30	2,10/1,20	2,70/1,55	2,35/1,35	2,20/1,25	2,00/1,15
Frequency [Hz]	50	60	50	60	50	60
Power factor	0,66	0,60	0,75	0,69	0,60	0,55
Efficiency [%]	64,0	67,0	69,0	75,0	72,0	74,0
Speed [rpm]	920	1140	890	1120	940	1150
Type of operation	S1					
Insulation class	F					
I _A /I _N	3,35	3,9	3,5	4,1	4,35	4,85
t _E [s] for temp. class T3	30,0		36,0		-	
t _E [s] for temp. class T4	-		-		20,0	
Thermistor rated temp. (version Ex t)	120°C					
Protection class	IP66					
Ambient temperature	-20°C ≤ Ta ≤ +40°C					

* parameters for triangle/star winding connections of the stator (see also special operating conditions)

(16) Report:

- Number LL/173-1/2013/A of 11.02.2014
- Number LL/173-2/2013/A of 11.02.2014
- Number LL/173-3/2013/A of 17.03.2014
- Number LL/173-4/2013/A of 03.04.2014
- Number LL/070/2015 of 29.04.2015





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Ośrodek Badań, Atestacji i Certyfikacji Sp. z o.o.
44-121 Gliwice, ul. Łabędzka 21

(13)

SCHEDULE

(14)

**to the EU-Type Examination Certificate
No. OBAC 16 ATEX 0118X**

Three-phase, explosion-proof squirrel-cage induction motor, ExS(K,L)h 80- type** meets the requirements for devices with explosion proof design and may be used as a device in group II, category 2G and/or 2D.

(17) Special conditions for safe operation:

- Using the voltage in the range from 190V to 690V is allowed only provided that the electrical and temperature loads are equal to the loads to which the motor was subject during type examination (current and magnetic flux density the same or lower).
- In order to ensure IP66 protection, correctly selected and installed certified cable entries shall be used.
- The motor should be equipped with suitable overload protection with time and current characteristics ensuring that the motor will be disconnected from the supply voltage in a time shorter than the t_E time calculated for it with the current equal to the motor start up current.
- Device temperature class is connected with the value of time t_E – see rated data.
- If required, PTC thermistors built-in in the winding together with the protective device should be included in the motor circuit so that tripping of PTC thermistors leads to shutting off of the motor.

(18) The compliance with Safety Requirements has been assured by compliance with standards shown in p.9 of this certificate.

(19) List of agreed documentation:

- Documentation of explosion proof motors with strengthened design “ExS(K,L)h80-...”, December 2015.
- Manual no. ITR/HR/4/07 - “Technical and operational manual for three-phase, explosion-proof squirrel-cage induction motors with strengthened design, shaft axis height 56, 63, 71, 80”, January 2016





OBAC

Ośrodek Badań, Atestacji i Certyfikacji Sp. z o.o.
44-121 Gliwice, ul. Łabędzka 21

(1) **Schedule No. 1**
to
the certificate No. OBAC 16 ATEX 0118X

(2) Equipment, components and protective systems intended for use in potentially explosive atmospheres. Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014.

(3) Product: **Explosion-protected three-phase cage induction motor of ExS(K,L)h 80-** type**

(4) Manufacturer: **Fabryka Silników Elektrycznych „BESEL” S.A.**

(5) Address: **ul. Elektryczna 8, 49-300 Brzeg**

(6) Compliance with the safety requirements has been assured by compliance with:

EN IEC 60079-0:2018+AC:2020-02 EN 60079-7:2015+A1:2018 EN 60079-31:2014

(7) Description of changes:

- Marking correction (addition of the gas subgroup symbol "IIC")
- Standards update

Rated data:

Unchanged.

Marking:

Unchanged.

(8) Results of the examinations performed:

Explosion proof design is confirmed in the confidential product assessment report: OBAC/20/ATEX/0174.

The introduced changes meet the requirements for equipment of group II category 2GD.

Explosion-proof marking:

 **II 2G Ex eb IIC Tx Gb**

 **II 2D Ex tb IIC T125°C Db**



**Certification Body
Manager**

Piotr Tarnawski M.Com.

Gliwice, 09th September 2020



OBAC

Ósrodek Badań, Atestacji i Certyfikacji Sp. z o.o.
44-121 Gliwice, ul. Łabędzka 21

Schedule No. 1
to
the certificate No. OBAC 16 ATEX 0118X

(9) Specific conditions of use:

Unchanged.

(10) Technical documentation:

- Documentation of explosion proof motors with strengthened design "ExS(K,L)h80-...", December 2015
- Manual no. ITR/HR/4/07 - "Technical and operational manual for three-phase, explosion-proof squirrel-cage induction motors with strengthened design, shaft axis height 56, 63, 71, 80", January 2016
- „Comparative analysis of standards PN-EN IEC 60079-0:2018-09 and PN-EN 60079-0:2013 in relation to motors ExS(K,L)h80 of the BESEL's S.A. production" 31.08.2020.





Quality Assurance Notification

(1)

(2)

Equipment or Protective Systems or Components Intended for use
in Potentially Explosive Atmospheres
Directive 2014/34/EU

(3) Notification number:

FTZÚ 04 ATEX Q 011

(7th Edition)

(4) Group of products:

Electrical motors, Cable entries, Bushings with type of explosion protection – Flameproof enclosure “d”, Increased safety “e”, Protection by enclosure “t”

(5) Manufacturer:

CELMA INDUKTA S.A., ul. 3 Maja 19, 43-400 Cieszyn, Poland

(6) Manufacturing location:

CELMA INDUKTA S.A., ul. 3 Maja 19, 43-400 Cieszyn, Poland
CELMA INDUKTA S.A., ul. Chochołowska 21, 43-300 Bielsko-Biała, Poland

(7) The Physical-Technical Testing Institute, Notified Body number 1026 in accordance with Article 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26.02.2014, notifies that the manufacturer has a quality system which complies with Annex IV of the Directive „Conformity to type based on quality assurance of the production process“ and VII of the Directive „Conformity to type based on product quality assurance“.

(8) This notification is based upon Audit Report No. FTZÚ 04/ATEXQ/011 issued the 31.05.2022 and extends validity of previous notification, issued on 01.07.2019.

This notification can be withdrawn if the manufacturer no longer satisfies the requirements of Annex IV and VII of the Directive.

Results of periodical re-assessment of the quality system are part of this notification.

(9) This notification is valid until **30.06.2025** and can be withdrawn if manufacturer does not satisfy the quality assurance surveillance.

(10) According to Article 16 (3) of the Directive 2014/34/EU the CE marking shall be followed by the identification number 1026 identifying the notified body involved in the production control stage.

Responsible person:


Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 29.06.2022

Page: 1/3

This Notification is granted subject to the general conditions of the FTZÚ, s.p.
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Physical-Technical Testing Institute
Ostrava - Radvanice

Schedule

(11)

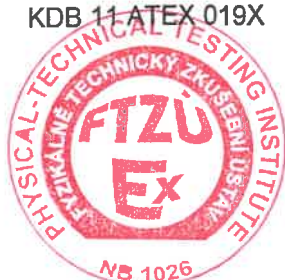
(12) **Quality Assurance Notification No. FTZÚ 04 ATEX Q 011**
(7th Edition)

(13) The following certificate(s) are included within the scope of this Quality Assurance Notification:

FTZÚ 03 ATEX 0396U	KDB 05 ATEX 096X	FTZÚ 12 ATEX 0088X
FTZÚ 04 ATEX 0096X	KDB 05 ATEX 183X	KDB 12 ATEX 0049X
FTZÚ 04 ATEX 0201X	KDB 05 ATEX 185X	KDB 12 ATEX 0063X
FTZÚ 04 ATEX 0202X	KDB 05 ATEX 241X	FTZÚ 12 ATEX 0194X
FTZÚ 04 ATEX 0300X	KDB 05 ATEX 457X	FTZÚ 12 ATEX 0213X
FTZÚ 04 ATEX 0341X	KDB 06 ATEX 016X	FTZÚ 13 ATEX 0073X
FTZÚ 04 ATEX 0375X	KDB 06 ATEX 083X	FTZÚ 13 ATEX 0074X
FTZÚ 05 ATEX 0015U	KDB 06 ATEX 201X	FTZÚ 13 ATEX 0182X
FTZÚ 05 ATEX 0016X	KDB 06 ATEX 213X	KDB 12 ATEX 0098X
FTZÚ 05 ATEX 0077X	KDB 06 ATEX 353	KDB 12 ATEX 0099X
FTZÚ 05 ATEX 0148X	KDB 07 ATEX 054U	KDB 12 ATEX 0112
FTZÚ 05 ATEX 0158X	KDB 07 ATEX 084X	KDB 12 ATEX 0149X
FTZÚ 05 ATEX 0186X	KDB 07 ATEX 085X	KDB 12 ATEX 0153X
FTZÚ 05 ATEX 0283X	KDB 07 ATEX 111X	KDB 13 ATEX 0114X
FTZÚ 05 ATEX 0284X	KDB 07 ATEX 124X	KDB 13 ATEX 0115X
FTZÚ 05 ATEX 0351X	KDB 07 ATEX 200X	KDB 14 ATEX 0012X
FTZÚ 06 ATEX 0205X	KDB 07 ATEX 306X	KDB 14 ATEX 0075X
FTZÚ 07 ATEX 0025X	KDB 08 ATEX 077X	KDB 10 ATEX 091X
FTZÚ 08 ATEX 0278X	KDB 08 ATEX 161X	FTZÚ 14 ATEX 0133X
FTZÚ 09 ATEX 0132X	KDB 08 ATEX 252X	FTZÚ 14 ATEX 0146X
FTZÚ 10 ATEX 0063X	KDB 08 ATEX 289X	FTZÚ 14 ATEX 0173X
KDB 04 ATEX 050X	KDB 09 ATEX 080X	KDB 14 ATEX 0114X
KDB 04 ATEX 052X	KDB 09 ATEX 088X	KDB 15 ATEX 0029X
KDB 04 ATEX 053X	KDB 09 ATEX 104X	KDB 15 ATEX 0082X
KDB 04 ATEX 054X	KDB 09 ATEX 151X	KDB 15 ATEX 0105X
KDB 04 ATEX 209	KDB 09 ATEX 156X	KDB 15 ATEX 0094X
KDB 04 ATEX 277X	FTZÚ 11 ATEX 0031U	KDB 16 ATEX 0010X
KDB 04 ATEX 310X	KDB 10 ATEX 027X	FTZÚ 17 ATEX 0037X
KDB 04 ATEX 311X	KDB 10 ATEX 125X	KDB 18 ATEX 0016X
KDB 04 ATEX 333X	KDB 11 ATEX 019X	FTZÚ 18 ATEX 0097X

Responsible person:


Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 29.06.2022

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**Physical-Technical Testing Institute
Ostrava - Radvanice**

Schedule

(11)

(12) **Quality Assurance Notification No. FTZÚ 04 ATEX Q 011
(7th Edition)**

(14) The following certificate(s) are included within the scope of this Quality Assurance Notification:

KDB 19 ATEX 0050X

KDB 21 ATEX 0012X

KDB 21 ATEX 0024X

KDB 20 ATEX 0014X

KDB 21 ATEX 0013X

KDB 21 ATEX 0030X

KDB 20 ATEX 0034X

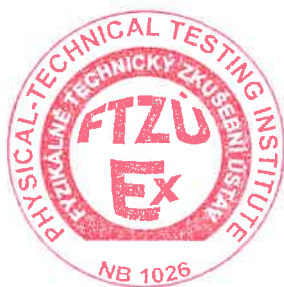
KDB 21 ATEX 0016X

KDB 21 ATEX 0035X

KDB 20 ATEX 0042X

Responsible person:


Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 29.06.2022

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AC 149

J.S. Hamilton Poland Sp. z o.o.

Notified Body No. 2057

ul. Wyzwolenia 14
41-103 Siemianowice Śląskie



(1) **EU-TYPE EXAMINATION CERTIFICATE**

(2) Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 2014/34/EU

(3) EU-Type Examination Certificate Number: **JSHP 23 ATEX 0005X** *issue 0*

(4) Product: **Three phase squirrel-cage induction motors
Ex 3SIE(K,L) 90÷180 series**

(5) Manufacturer: **CELMA INDUKTA S.A.**

(6) Address: **ul. 3maja 19, 43-400 Cieszyn, Poland**

(7) This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) J.S. Hamilton Poland Sp. z o.o., Notified Body no. 2057, in accordance with Article 17 of Directive 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 confidential Report No. JSHP/RW/51/22/GP.

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

EN IEC 60079-0:2018
(PN-EN IEC 60079-0:2018-09)

EN 60079-7:2015
(PN-EN 60079-7:2016-02)

EN 60079-31:2014
(PN-EN 60079-31:2014-10)



EN IEC 60079-7:2015/A1:2018
(PN-EN 60079-7:2016-02/A1:2018-3)

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the specific conditions of use specified in the schedule to this certificate.

(11) This EU-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

This certificate is valid in its entirety, schedule(s) included.

(12) The marking of the product shall include the following:

 II 2G Ex eb IIC T3 Gb
 II 2D Ex tb IIIC T125°C Db

or


Damian Wróbel
Kierownik
Jednostki Certyfikującej



HAMILTON

Siemianowice Śl., 31th March 2023

J.S. Hamilton Poland Sp. z o.o., ul. Chwaszczyńska 180, 81-571 Gdynia
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P-9.1.1/F5.8E z dnia 03.04.2023 r.



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(13)

SCHEDULE

(14)

CERTIFICATE No. JSHP 23 ATEX 0005X

(15)

Description of product:

Three phase squirrel-cage induction motors Ex 3SIE(K,L) 90+180 series are designed to drive devices in the industry. The stator enclosure and the junction box built on it are made of aluminium or cast iron.

Motor cooling is provided by a built-in fan on the NDE side. The fan is made of aluminium or polipropylen. The fan is protected by a steel cover.

Ex 3SIE(K,L)90+180 series motors can be equipped with thermal protections mounted in the winding ends:

- PTC 120 termistor temperature sensors (120°C response temperature) or PTC140 (140°C response temperature).
- and/or
- Temperature sensors KTY 84-1... - designed to be connected to a device that cuts off the power supply when the temperature exceeds 120°C or 140°C according to the user manual.
 - Pt100 or Pt1000 termometric elements for connection with a device that cuts off the power when the temperature exceeds 120°C or 140°C in accordance with the instruction manual.

Motors in version (-f) adapter for frequency converter supply and/or in the version for the dust hazard zone (2D) are equipped as standard with PTC or KTY-84-1 or PT100 or PT1000 temperature sensor mounted in the winding ends.

The follow explosion- proof components are used in the motors:

terminal connectors:

type .../750V manufacturer P.P.H.U. EL-BUD, certificate KDB 06ATEX150U,

type 07-9702 manufacturer BARTEC, certificate PTB 99ATEX3117U,

cable glands:

type ...EX manufacturer AGRO AG, certificate SEV 15ATEX0152X or other equivalent.



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SCHEDULE

(14)

CERTIFICATE No. JSHP 23 ATEX 0005X

Motors designation:

Ex 3SIE(K,L)90+180-(2G T3, 2G T3/2D, 2D)-(ELT)-(f)

No distinction- to be powered directly from the mains
-f- adapter for frequency converter supply

No distinction for standard ambient temperature:
 $-20^{\circ}\text{C} \leq T_{\text{amb}} \leq +40^{\circ}\text{C}$

- ELT- to work at low temperatures:
 $-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +40^{\circ}\text{C}$

Additional distinction of workmanship with a description:

2G T3- motor is designed to work in gas explosion areas,
temperature class T3

2G T3/ 2D- motor is designed to work in dust and gas explosion
areas

2D...- motor is designed to work in dust explosion areas

Shaft rise above the plane of the feet: 90mm,100mm,112mm, 132mm, 160mm, 180mm

Ex 3SIE- version on feet

Ex 3SIEK- flange version

Ex 3SIEL- flange version on feet

Technical parameters:

Ambient temperature

$-40^{\circ}\text{C} \dots -20^{\circ}\text{C} \leq T_{\text{amb}} \leq +40^{\circ}\text{C}$

Insulation class

F (155°C)

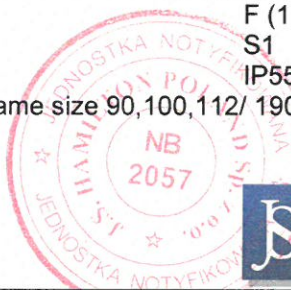
Duty type

S1

Ingress protection

IP55/ IP66

Rated voltage 190V...630VAC- frame size 90,100,112/ 190V...690VAC- frame size 132,160,180



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(13)

SCHEDULE

(14)

CERTIFICATE No. JSHP 23 ATEX 0005X

Na.	Motor type	Power P _N	Current I _N	Rated speed	Frequency	Maximum time t _e
		[kW]	[A]	[min ⁻¹]	[Hz]	[s]
1.	Ex 3SIE(K)90S2 -2G T3, -2G T3 / 2D	1,5/1,73	3,0/3,0	2925/3525	50/60	8,5
2.	Ex 3SIE(K)90L2 -2G T3, -2G T3 / 2D	2,2/2,53	4,3/4,2	2910/3510	50/60	9,5
3.	Ex 3SIE(K)90S4 -2G T3, -2G T3 / 2D	1,1/1,27	2,5/2,4	1450/1750	50/60	18,0
4.	Ex 3SIE(K)90L4 -2G T3, -2G T3 / 2D	1,5/1,73	3,3/3,2	1450/1750	50/60	21,0
5.	Ex 3SIE(K)90S6 -2G T3, -2G T3 / 2D	0,75/0,86	2,0/1,9	940/1140	50/60	21,0
6.	Ex 3SIE(K)90L6 -2G T3, -2G T3 / 2D	1,1/1,27	2,8/2,7	940/1140	50/60	23,0
7.	Ex 3SIE(K)100L2 -2G T3, -2G T3 / 2D	3,0/3,45	5,8/5,7	2915/3515	50/60	13,5
8.	Ex 3SIE(K)100L4A -2G T3, -2G T3 / 2D	2,2/2,53	4,6/4,5	1465/1760	50/60	19,0
9.	Ex 3SIE(K)100L4B -2G T3, -2G T3 / 2D	3,0/3,45	6,3/6,0	1465/1765	50/60	15,0
10.	Ex 3SIE(K)100L6 -2G T3, -2G T3 / 2D	1,5/1,73	3,5/3,3	960/1155	50/60	24,0
11.	Ex 3SIE(K)112M2 -2G T3, -2G T3 / 2D	4,0/4,6	7,4/7,2	2925/3525	50/60	14,0
12.	Ex 3SIE(K)112M4 -2G T3, -2G T3 / 2D	4,0/4,6	8,1/7,9	1455/1755	50/60	12,0
13.	Ex 3SIE(K)112M6 -2G T3, -2G T3 / 2D	2,2/2,53	5,0/4,7	965/1165	50/60	23,0
14.	Ex 3SIE(K)132S2A -2G T3, -2G T3 / 2D	5,5/6,3	10,0/10,0	2940/3535	50/60	12,0
15.	Ex 3SIE(K)132S2B -2G T3, -2G T3 / 2D	7,5/8,6	13,3/13,2	2940/3535	50/60	7,7
16.	Ex 3SIE(K)132S4 -2G T3, -2G T3 / 2D	5,5/6,3	10,4/10,3	1465/1765	50/60	14,0
17.	Ex 3SIE(K)132M4 -2G T3, -2G T3 / 2D	7,5/8,6	14,4/14,2	1465/1760	50/60	12,0
18.	Ex 3SIE(K)132S6 -2G T3, -2G T3 / 2D	3,0/3,45	6,2/6,0	965/1165	50/60	17,0
19.	Ex 3SIE(K)132M6A -2G T3, -2G T3 / 2D	4,0/4,6	8,1/7,9	965/1160	50/60	19,0
20.	Ex 3SIE(K)132M6B -2G T3, -2G T3 / 2D	5,5/6,3	11,1/10,9	960/1160	50/60	15,0
21.	Ex 3SIE(K)160M2A -2G T3, -2G T3 / 2D	11,0/12,7	19,3/19,5	2945/3545	50/60	10,0
22.	Ex 3SIE(K)160M2B -2G T3, -2G T3 / 2D	15,0/17,3	26,2/26,0	2945/3545	50/60	5,9
23.	Ex 3SIE(K)160L2 -2G T3, -2G T3 / 2D	18,5/21,3	33,2/33,1	2950/3550	50/60	5,7
24.	Ex 3SIE(K)160M4 -2G T3, -2G T3 / 2D	11,0/12,7	20,9/20,5	1470/1770	50/60	13,0
25.	Ex 3SIE(K)160L4 -2G T3, -2G T3 / 2D	15,0/17,3	28,3/27,8	1475/1770	50/60	8,8
26.	Ex 3SIE(K)160M6 -2G T3, -2G T3 / 2D	7,5/8,6	15,2/14,8	970/1165	50/60	16,0
27.	Ex 3SIE(K)160L6 -2G T3, -2G T3 / 2D	11,0/12,7	22,0/21,9	970/1165	50/60	14,0
28.	Ex 3SIE(K)180M2 -2G T3, -2G T3 / 2D	22,0/25,3	38,1/38,2	2945/3550	50/60	6,7
29.	Ex 3SIE(K)180M4 -2G T3, -2G T3 / 2D	18,5/21,3	33,9/33,2	1475/1770	50/60	12,0
30.	Ex 3SIE(K)180L4 -2G T3, -2G T3 / 2D	22,0/25,3	39,7/39,5	1475/1770	50/60	7,5
31.	Ex 3SIE(K)180L6 -2G T3, -2G T3 / 2D	15,0/17,3	29,6/29,2	980/1175	50/60	12,0



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Siemianowice Śl., 31th March 2023



(13)

SCHEDULE

(14)

CERTIFICATE No. JSHP 23 ATEX 0005X

Mains power:

- rated voltage U_N :
190V ÷ 630V AC – frame size 90, 100, 112
190V ÷ 690V AC – frame size 132, 160, 180
- maximum current I_{MAX} :
25A – frame size 90, 100, 112
35A – frame size 132
80A – frame size 160, 180

- rated frequency f_N : 50Hz and 60Hz
- voltage tolerance: $\pm 5\% U_N$

Power supply from the frequency converter:

- maximum supply voltage of the converter – 460V AC +5% (480V AC)
- frequency range
 - 25Hz ÷ 50Hz at a constant rated torque for motor with 2p=2
 - 15Hz ÷ 50Hz at a constant rated torque for motors with 2p=4,6
 - 50Hz ÷ 60Hz at constant rated power
- maximum value of voltage pulses on motor terminals: 1kV

(16)

Report number:

- JSHP/RW/51/22/GP.

(17)

Specific conditions of use :

- Motors equipped with PTC and/or KTY 84-1 or Pt100 or Pt1000 sensors should be protected by means of a device cooperating with PTC and/or KTY 84-1 or Pt100 or Pt1000 sensors, respectively, which cuts off the power supply in the event of an excessive increase off motor temperature.
- Motors should be used with an overload protection device which should not only control the motor current but also ensure that the stalled motor is switched off in less than the specified time t_E .
- In the case of a dusty atmosphere, a potential risk of electrostatic charging. Information provided in the device manual.
- Ambient temperature range $-40^{\circ}\text{C} \leq T_{amb} \leq +40^{\circ}\text{C}$ (for motors marked -ELT).

(18)

Essential Health and Safety Requirements:

These requirements (EHSRs) are covered by the standards listed at item 9.




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(13)

SCHEDULE

(14)

CERTIFICATE No. JSHP 23 ATEX 0005X

(19) Drawings and documents:

- Operation manual for explosion-proof three phase induction motor type with squirrel-cage series Ex 3 SIE(K,L) 90÷180. ITR-247-PL. Edition 1 from 28.03.2023.
- Three- phase induction explosion proof increased safety motors efficiency class IE3. Edition 1. KK-23-07.
- List of motors- certification drawing no Plg-40-43 from 22.10.2022.

Detailed list of documents required for certified type identification is included in Report mentioned in Clause (16).

(20) Document history:

- EU type examination certificate No. JSHP 23ATEX 0005X of 31th March 2023 - issue 0.



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