



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Ex COMPONENT CERTIFICATE

Certificate No.:	IECEX CCVE 16.0007U	Issue No: 3	Certificate history:
Status:	Current	Page 1 of 5	Issue No. 3 (2018-09-13)
Date of Issue:	2018-09-13		Issue No. 2 (2018-04-28)
Applicant:	"ZAVOD GORELTEX" Co. Ltd. 195176, Saint Petersburg, Revolutsii road, 18, lit. A Russian Federation		Issue No. 1 (2017-04-14)
Ex Component:	Empty flameproof enclosures types SHORV..., PKIV...		Issue No. 0 (2016-11-03)

This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).

Type of Protection: **flameproof enclosure "d", protection by enclosure "t"**

Marking:

Ex db IIB+H₂ Gb

Ex db IIC Gb

Ex tb IIIC Db

IP66/IP67

Approved for issue on behalf of the IECEx
Certification Body:

Alexander Zalogin

Position:

Head of NANIO CCVE

Signature:
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

NANIO CCVE
Zavod ECOMASH, VUGI Settlement
Lyubertsy, Moscow region
140004
Russian Federation





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Manufacturer: **"ZAVOD GORELTEX" Co. Ltd.**
193149, Novosaratovka township area, liter A, Vsevolozhsky district, Leningrad region
Russian Federation

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex Component covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended.

STANDARDS:

The Ex Component and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the Ex Component listed has successfully met the examination and test requirements as recorded in

Test Report:

[RU/CCVE/ExTR16.0006/00](#)

[RU/CCVE/ExTR16.0006/01](#)

[RU/CCVE/ExTR16.0006/02](#)

[RU/CCVE/ExTR16.0006/03](#)

Quality Assessment Report:

[RU/CCVE/QAR16.0004/00](#)

[RU/CCVE/QAR16.0004/01](#)



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Schedule

Ex Component(s) covered by this certificate is described below:

Empty enclosures types SHORV..., SHORV-N... are rectangular flameproof enclosures consisting of a cover and a housing with a flanged joint connected by screws. The cover and the housing are made of aluminum-silicon alloy (SHORV...) or stainless steel (SHORV-N...), the screws are made of stainless steel. The enclosures of aluminum-silicon alloy are coated with powder paint.

Empty enclosures type PKIV... are rectangular or square flameproof enclosures consisting of a cover and a housing with a flanged joint connected by screws. The cover and the housing are made of aluminum-silicon alloy, the screws are made of stainless steel. The enclosures are coated with powder paint.

Empty enclosures type PKIVA148 are flameproof cylindrical enclosures which consist of a cover and an enclosure with cylindrical flanged joint. The cover and the enclosure are made of aluminum-silicon alloy. The enclosures have powder paint coating.

Grounding elements of the empty flameproof enclosures types SHORV..., SHORV-N..., PKIV... are installed inside and outside the housing and on the internal surface of the cover. The walls of the housing and the cover may have threaded holes for mounting of cable glands, controls and other. The enclosures can be installed indoors and outdoors.

The covers of the enclosures of types SHORV... and PKIV... may be provided with an inspection window made of tempered glass sealed with a sealant.

Sealing ring between the housing and the cover shall be used for provision of IPX7 for empty enclosures of types SHORV..., SHORV-N..., PKIV....

SCHEDULE OF LIMITATIONS:

The Schedule of Limitations is further described in the Annex to this certificate.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 1:

- additional sizes of empty enclosures were considered: SHORV281811, SHORV422221, SHORV654526, SHORV654533, SHORV725224, SHORV725235, SHORV896735, SHORV896745, SHORV-N281811, SHORV-N432221, SHORV-N372920, SHORV-N563823, SHORV-N563828;
- new revisions of the drawings for the following models were considered: PKIVA101008, PKIVA111112, PKIVA161008, SHORV302021, SHORV362821, SHORV362827, SHORV-N372926, SHORV-N312120;
- the changes of the drawings relate to the designation of the materials of empty enclosures.

Refer to the Annex for the details of the changes.

Issue 2:

- additional sizes of empty enclosures were considered: SHORV423222, SHORV423229, SHORV573926, SHORV573931, SHORV1045839, SHORV1077740, SHORV-N644433;
- update to manufacturing address;
- update to drawings reflecting changes to IPX7 marking and some other changes;
- add IPX7 ratings;

Issue 3:

- additional sizes of empty enclosures and additional designs of empty enclosures with glass windows were considered. The full list of considered models and sizes is specified in the Annex 3;
- new revisions of the drawings reflecting the changes for all the models were considered.



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Additional information:

Additional information is provided in the Annex to the Certificate.

Annex:

[Annex to IECEX _CCVE_16 0007U_3_2018.pdf](#)



Annex to IECEx CCVE 16.0007U

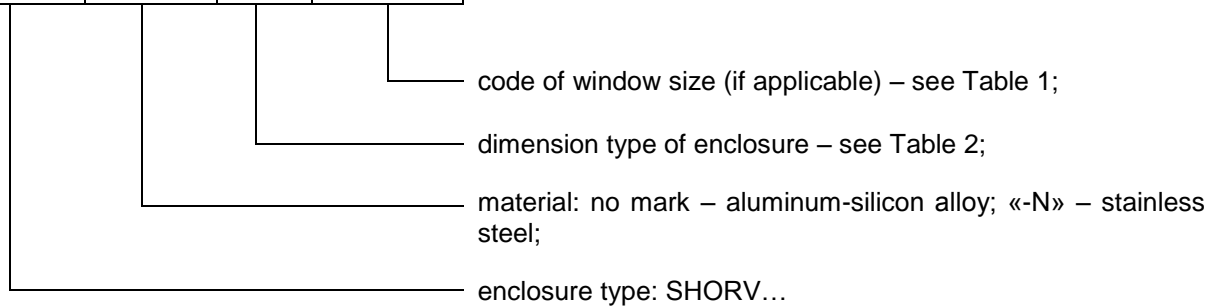
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Date: 2018-09-13

Enclosure symbol structure:

Empty enclosures type SHORV...

X1	X2	X3	-X4
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Empty enclosures type PKIV...

X1	X2	X3	-X4
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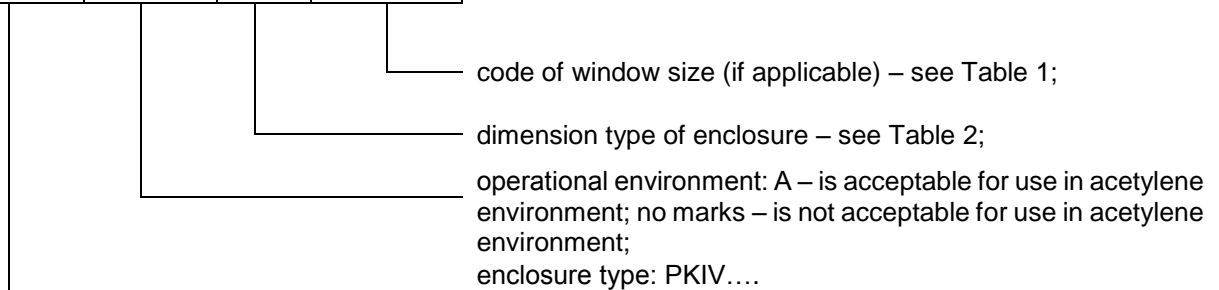


Table 1 – Codes of window sizes

Enclosure type:	Code of window size
SHORV281813	O0505
SHORV302021	O1508
SHORV422221	O2508
SHORV573931	O1525
SHORV573926	
SHORV362821	O2515
SHORV362827	
SHORV764323	O2610
PKIVA111112	O05

Table 2 – Dimension type of SHORV..., PKIV... series enclosures

SHORV...	SHORV-N...	PKIV...
281811	281811	101008
281813*	312120	111112
302021	372920	161008
362821	372926	148
362827	432221	
422221	563823	
423222	563828	
423229	644433	
573926		
573931		
654526		
654533		
725224		
725235		
764323		
896735		
896745		
1045839		
1077740		

* - Used only as empty enclosure with window SHORV281813-O0505

Model identification:

SHORV302021, SHORV362821, SHORV362827, SHORV281811, SHORV422221, SHORV654526, SHORV654533, SHORV725224, SHORV725235, SHORV896735, SHORV896745, SHORV423229, SHORV423222, SHORV573931, SHORV573926, SHORV1077740, SHORV1045839, SHORV281813-O0505, SHORV302021-O1508, SHORV362821-O2515, SHORV362827-O2515, SHORV422221-O2508, SHORV573931-O1525, SHORV573926-O1525, SHORV764323-O2610, SHORV764323;

SHORV-N312120, SHORV-N372926, SHORV-N281811, SHORV-N432221, SHORV-N372920, SHORV-N563823, SHORV-N563828, SHORV-N644433;

PKIVA101008, PKIVA111112, PKIVA161008, PKIVA148, PKIVA111112-O05.

Ambient temperature range of the enclosures: from minus 60 °C to +60 °C;

Service temperature range of the enclosures:

- with windows: from minus 60 °C to +100 °C;
- without windows: from minus 60 °C to +150 °C.

SCHEDULE OF LIMITATIONS

1. SHORV..., SHORV-N..., PKIV... series enclosures with Ex tb IIIC Db explosion-proof marking:

- the enclosures are not intended for separate use (without installation of internal elements) in hazardous areas.

2. SHORV..., SHORV-N ... series enclosures with Ex db IIB+H₂ Gb explosion-proof marking, PKIV... series enclosures with Ex db IIC Gb explosion-proof marking:

- the enclosures are not intended for separate use (without installation of internal elements) in hazardous areas;
- oil-filled circuit-breakers and contactors shall not be used;

- the content of enclosure equipment may be placed in any arrangement provided that at least 40% of cross-sectional area of the enclosure remains free;
- separate relief areas may be aggregated provided that each area has a minimum dimension in each direction of 12.5 mm;
- apertures in enclosures are specified on the following drawings: LGSA.302021.5.2016, LGSA.362821.5.2016, LGSA.362827.5.2016, LGSA.312120N.5.2016, LGSA.372926N.5.2016, LGSA.101008.1.2016, LGSA.111112.1.2016, LGSA.161008.1.2016, LGSA.281811.5.2016, LGSA.422221.5.2016, LGSA.654526.5.2016, LGSA.654533.5.2016, LGSA.725224.5.2016, LGSA.725235.5.2016, LGSA.896735.5.2016, LGSA.896745.5.2016, LGSA.281811N.5.2016, LGSA.432221N.5.2016, LGSA.563828N.5.2016, LGSA.563823N.5.2016, LGSA.372920N.5.2016, LGSA.423229.5.2017, LGSA. 423222.5.2017, LGSA.573931.5.2017, LGSA.573926.5.2017, LGSA.1077740.5.2017, LGSA.764323.5.2018, LGSA.1045839.5.2017, LGSA.644433N.5.2017, LGSA.PKIVA148.1.2018, LGSA.281813-O.4.2018, LGSA.573926-O.4.2018, LGSA.573931-O.4.2018, LGSA.764323-O.4.2018, LGSA.111112-O.1.2018.

3. SHORV-N... series enclosures with Ex db IIC Gb explosion-proof marking:

- it is prohibited to use SHORV-N enclosures with Ex db IIC Gb explosion protection marking in explosive mixture of acetylene with air;
- the enclosures are not intended for separate use (without installation of internal elements) in hazardous areas;
- oil-filled circuit-breakers and contactors shall not be used;
- the content of enclosure equipment may be placed in any arrangement provided that at least 40% of cross-sectional area of the enclosure remains free;
- separate relief areas may be aggregated provided that each area has a minimum dimension in each direction of 12.5 mm;
- apertures in enclosures are specified on the following drawings: LGSA.312120N.5.2016, LGSA.372926N.5.2016, LGSA.281811N.5.2016, LGSA.432221N.5.2016, LGSA.563828N.5.2016, LGSA.563823N.5.2016, LGSA.372920N.5.2016, LGSA.644433N.5.2017.

4. Enclosures type PKIVA111112, PKIVA111112-O05:

- it is prohibited to use the enclosures in explosive mixture of acetylene with air without the components installed inside reducing the free internal volume up to 425 cm³.