



MINPROEKT" EAD

CERTIFICATE



- Supplement No 1 to Module B EU-TYPE-EXAMINATION CERTIFICATE [1] (Translation)
- Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Directive [2] 2014/34/EU (ATEX)
- Module B: EU-type-examination Certificate Number: №: MP 18 ATEX 0160 X [3]
- [4] [5] Product (Equipment or protective system): "Control panel SHUS-X-VEL x.x..."
- Applicant: JSC "VELAN"
- [6] Address: 1 Velanovskaya str., Zelenokumsk, Stavropol Region, 357911 Russia
- [5] Manufacturer: JSC "VELAN"
- Address: 1 Velanovskaya str., Zelenokumsk, Stavropol Region, 357911 Russia [6]
- This product (equipment or protective system) and any acceptable variation thereto are specified in details [7] in the schedule to this certificate as well as the documents therein referred to.
- Minproekt EAD, notified body No.1877 in accordance with Article 17 of the Council Directive 2014/34/EU [8] (ATEX) of 26th February 2014, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment or protective system, intended for use in potentially explosive atmospheres, specified in Annex II of the Directive. The examination and test results are recorded in:

Confidential Test reports № 13/24.07.2015; № 02/18.01.2018; № 01/10.04.2019

- Compliance with the Essential Health and Safety Requirements has been assured by compliance with: [9] EN 60079-0:2012; EN 60079-1:2014; EN 60079-31:2014.
- If the sign "X" is placed after the certificate number, it indicates that this equipment or protective system is [10] subject to special conditions for safe use, specified in the schedule to this certificate.
- This EU-type-examination Certificate on Module B relates only to the design and the construction of this [11] specified equipment or protective system in accordance with Directive 2014/34/EU. This certificate does not cover the requirements of the Directive on the forthcoming procedures relating to the production process and the delivery of the product
- The marking of the equipment or protective system shall include the following: [12]



II 2 G Ex db IIB +H2 T6 Gb

II 2 D Ex to IIIC T85°C Db IP66 -40°C≤T_a≤+60°C

This certificate does not authorize the manufacturer or his authorized representative to affix the CE mark followed by the identification number of the Notified Body as well as the marketing and / or use. This Supplement to Certificate MP 18 ATEX 0160 X extends its validity to 22.04.2024 if there is no change in the conditions under which it was issued.

Sofia, 22.04.2019

Executive Director: /dipl. eng St. Bosnev/ Page 1/5

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- [13] Schedule
- [14] Supplement No 1 to Certificate on "Module B: EU-type-examination" No. MP 18 ATEX 0160 X (Translation)
- [15] Characteristics of the type, subject to the examination

1. Technical description

The enclosure of the control panel of the series type SHUS- X -VEL x.x.x ... consists of a housing and a lid made of aluminium alloy AK12. There are a different number of components, depending on the overall dimension, mounted on the cover: BKV x.x. rotary switch ExGN x.x, a light indicator IS d x.x.. and cable entries VK-VEL. These components have ATEX certificates. Circuit breakers with a rated current up to 250A, contactors with rated current up to 63A, switches with a rated current up to 63A, gauges for a current up to 120A and terminals for a nominal current up to 120A can be mounted inside the enclosure.

2. Technical data of the product.

2.1. Type designation:

SHUS-X-VEL-X1- X2- X3- X4- X5- X6- X7- X8- X9- X10- X11- X12- X13- X14- X15- X16- X17- X18- X19- X20-

X21- X22- X23- X24- X25- X26- X27- X28

SHUS-VEL - A switchboard for controlling potentially explosive atmospheres;

X - Housing material - AK-12;

X₁ – Index showing the type implementation and the overall dimension of the housing;

BA – Index showing the presence of circuit breakers;

X₂ – Rated Current (A) and characteristic of the circuit breaker B, C, D, K, Z, L when using the circuit breaker with a device for emergency shutdown, as the leakage current is additionally noted in brackets – (mA);

X₃ - Quantity of the circuit breakers;

X₄ - Number of the poles of the circuit breakers;

PM - Index showing the presence of magnetic starters;

X₅ - Rated Current (A) of the magnetic starter;

X₆ - Quantity of the magnetic starters;

PT - Index showing the presence of electrical thermal relays;

X7 - Limiting current (A) of the thermal relays;

X₈ - Quantity of the thermal relays;

P - Index showing the presence of switching (intermediate) relay;

X₉ – Quantity of the switching (intermediate) relay;

PP - Index showing the presence of fuses;

X₁₀ - Quantity of the fuses;

X₁₁ - Rated Current (A) of the fuses;

K – Index showing the presence of buttons;

X₁₂ - Type of the buttons;

P - Start (green);

S - Stop (red);

As a rule, a button "stop" has to be put having a mechanism for self-locking, if placing the button "stop" without self-locking is necessary, after the designation of the button "without self-knocking" has to be added;

X₁₃ - Quantity of the buttons;

I - Index showing the presence of Indicator light;

X₁₄ - indicator color: K - red, L - green, G - yellow, C - blue;

X₁₅ - Quantity of the indicator lights;

GN - Index showing the presence of rotary switches type ExGN

X₁₆ - Code of the switching diagram of the rotary switch;

X₁₇ – Quantity of the rotary switches;

Sofia, 2019-04-22

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Supplement No 1 to Certificate on "Module B: EU-type-examination" No. MP 18 ATEX 0160 X (Translation)

[15] Characteristics of the type, subject to the examination

2. Technical data of the product.

2.1. Type designation:

A - Index showing the presence of ammeters;

X₁₈ – Maximum value of the scale of the ammeter. If putting electricity in a current transformer is necessary, the value of the latter is shown by fractional mark in the field of the maximum value of the scale;

X₁₉ - Quantity of the ammeters;

B - Index showing the presence of voltmeters;

X20 - Maximum value of the scale of the voltmeter;

X₂₁ – Quantity of the voltmeters;

Z – Index showing the presence of terminals. As a rule, screw terminals have to be put. If spring terminals are necessary the letter "p" has to be added to the index "z".

X₂₂ - Rated current in the used terminals;

X₂₃ - Quantity of the used terminals;;

X₂₄ - Type of the cable glands VK or VK-X-VEL;

X₂₅ – Quantity of the cable glands;

X₂₆ - Side of placing the cable glands A, B, C, D;

X₂₇ - Marking for explosion protection II2GExd_bIIB+H₂T6Gb/II2DExt_bIIICT85⁰CDbIP66;

X₂₈ - Type of the climatic execution and category of placement: UXL1

2.2. Specifications:

working temperature range: HL1 -40°C ÷ +60°C;

relative humidity of the environment: to (98±2)% at a temperature (35±2)⁰C while condensing moisture;

nominal voltage – 660 (440)V (AC);

rated current - max. 250A;

IP code – IP66.

3. Application field

The control panels of the series, type SHUS-X-VEL x.x.x..., are intended for use in potentially explosive atmospheres of gases, vapors and aerosols or explosive dusts and they serve for controlling, distributing and switching of the electric power in networks with different functions (lighting, power equipment, signaling and automation).

[16] Test reports № 13/24.07.2015; № 02/18.01.2018; 01/10.04.2019

[17] Special requirements for safety use – The control panels of the series, type SHUS-X-VEL x.x.x..., are intended for a working temperature range -40°C ÷ +60°C, different from the standard.

[18] Essential requirements

18.1. According to Directive 2014/34/EU and the Operation manual, the product is not allowed to work in Zone 0 and Zone 20.

18.2. Other essential safety requirements are covered by the standards pointed in (9).

Sofia, 2019-04-22

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Supplement No 1 to Certificate on "Module B: EU-type-examination" No. MP 18 ATEX 0160 X (Translation)

[19] List of the technical record parts

19.1.Operation manual

19.2.Conceptual design and manufacturing drawings and schemes, consisting of SHUS-X-VEL1-x.x...

Drawings № № ПИНЮ.301152.091 СБ; ПИНЮ.301152.091; specifications ПИНЮ.301152.091 СБ – 1 sheet.

SHUS-X-VEL2-x.x...

Drawings № № ПИНЮ.301152.092 СБ; ПИНЮ.301152.092; specifications ПИНЮ.301152.092 СБ – 1 sheet.

SHUS-X-VEL3-x.x...

Drawings № № ПИНЮ.301152.167 СБ; ПИНЮ.301152.167; specifications ПИНЮ.301152.167 СБ – 1 sheet.

SHUS-X-VEL4-x.x...

Drawings № № ПИНЮ.301152.094 СБ; ПИНЮ.301152.094; specifications ПИНЮ.301152.094 СБ – 2 sheets.

SHUS-X-VEL5-x.x...

Drawings № № ПИНЮ.301152.095 СБ; ПИНЮ.301152.095; specifications ПИНЮ.301152.095 СБ – 2 sheets.

SHUS-X-VEL6-x.x...

Drawings № № ΠИНЮ.6519.001-20 CE; ПИНЮ.735314.025-20 – 2 sheets; ПИНЮ.656519.001 – 20 34; specifications ПИНЮ.656519.001 – 20 – 4 sheets.

SHUS-X-VEL7-x.x...

Drawings № № ПИНЮ.656519.001-21 СБ; ПИНЮ.735314.030-20; ПИНЮ.735341.020-30 — 2 sheets; ПИНЮ.656519.001-21 34; specifications ПИНЮ.656519.001-21—3 sheets.

SHUS-X-VEL8-x.x...

Drawings № № ПИ<mark>HЮ.6</mark>56519.001-22 СБ; ПИНЮ.735314.026-20; ПИНЮ.735341.022-20; specifications ПИНЮ.656519.001-22 – 2 sheets.

SHUS-X-VEL9-x.x...

Drawings № № ПИНЮ.6565<mark>19.</mark>001<mark>-23 СБ; ПИНЮ.735314</mark>.027-20; ПИНЮ.735341.022-30; ПИНЮ.656519.001-2<mark>3 3</mark>4; specifications ПИНЮ.656519.001-23 — 4 sheets.

SHUS-X-VEL10-x.x...

Drawings № № ПИ<mark>НЮ.30</mark>1152.082 СБ; ПИНЮ.301152.082; specifications ПИНЮ.301152.082 СБ – 2 sheets.

SHUS-X-VEL11-x.x...

Drawings № № ПИНЮ.301152.083 СБ; ПИНЮ.301152.083; specifications ПИНЮ.301152.083 СБ – 2 sheets.

SHUS-X-VEL12-x.x...

Drawings № № ПИНЮ.656519.001-24 СБ; ПИНЮ.735314.018-20; ПИНЮ.735<mark>341.00</mark>4-20; specifications ПИНЮ.656519.001-24 – 4 sheets.

SHUS-X-VEL13-x.x...

Drawings № № Π ИНЮ.656519.001-25 СБ; ПИНЮ.735314.019-20; ПИНЮ.735341.004-30; ПИНЮ.656519.001-25 34; specifications ПИНЮ.656519.001-25 — 5 sheets.

19.3.Additional information

Report for chemical analysis of aluminum alloy AK12/02.07.2015.

Sofia, 2019-04-22

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101... 077 10/2040

Supplement No 1 to Certificate on "Module B: EU-type-examination" No. MP 18 ATEX 0160 X (Translation)

[19] List of the technical record parts

19.4 Actual Operation manual (2019)

19.5 Actual conceptual design and manufacturing drawings and schemes, consisting of SHUS-X-VEL1-x.x...

Drawing № ПИНЮ.301152.091 СБ.

SHUS-X-VEL2-x.x...

Drawing № ПИНЮ.301152.092 СБ

SHUS-X-VEL3-x.x...

Drawing № ПИНЮ.301152.167 СБ

SHUS-X-VEL4.x-x.x...

Drawing № ПИНЮ.301152.094 СБ

SHUS-X-VEL4-x.x...

Drawing № ΠИНЮ.656519.001-19 CБ

SHUS-VEL5.x-x.x...

Drawing № ПИНЮ.301152.095 СБ

SHUS-X-VEL5.1-x.x...

Drawing № ПИНЮ.301152.095 СБ

SHUS-X-VEL6-x.x...

Drawing № ПИНЮ.656519.001-20 CБ

SHUS-X-VEL7-x.x...

Drawing № ПИНЮ.656519.001-21 CБ

SHUS-X-VEL8-x.x...

Drawing № ПИНЮ.656519.001-22 СБ

SHUS-X-VEL9-x.x...

Drawing № ПИНЮ.656519.001-23 СБ

SHUS-X-VEL10-x.x...

Drawing № ПИНЮ.301152.082 СБ

SHUS-X-VEL11-x.x...

Drawing № ПИНЮ.301152.083 СБ

SHUS-X-VEL12-x.x...

Drawing № ПИНЮ.656519.001-24 СБ

SHUS-X-VEL13-x.x...

Drawing № ПИНЮ.656519.001-25 СБ

Sofia, 2019-04-22

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ROOF ELECTRICAL





MINPROEKT" EAD

CERTIFICATE



- [1] Supplement No 1 to Module B EU-TYPE-EXAMINATION CERTIFICATE (Translation)
- [2] Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - Directive 2014/34/EU (ATEX)
- Module B EU-type-examination Certificate Number: №: MP 18 ATEX 0163 X [3]
- [4] [5] Product (Equipment or protective system): "Control panel SHUS-Z-VEL x.x.x..."

 Applicant: JSC "VELAN"
- Address: 1 Velanovskaya str., Zelenokumsk, Stavropol Region, 357911 Russia [6] [5]
- Manufacturer: JSC "VELAN"
- Address: 1 Velanovskaya str., Zelenokumsk, Stavropol Region, 357911 Russia [6]
- [7] This product (equipment or protective system) and any acceptable variation thereto are specified in details in the schedule to this certificate as well as the documents therein referred to.
- [8] Minproekt EAD, notified body No.1877 in accordance with Article 17 of the Council Directive 2014/34/EU (ATEX) of 26th February 2014, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment or protective system, intended for use in potentially explosive atmospheres, specified in Annex II of the Directive. The examination and test results are recorded in:

Confidential Test reports № 14/27.07.2015; № 03/22.01.2018; № 10/01.07.2019

- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with: EN 60079-0:2012; EN 60079-1:2014; EN 60079-31:2014.
- If the sign "X" is placed after the certificate number, it indicates that this equipment or protective system is [10] subject to special conditions for safe use, specified in the schedule to this certificate.
- This EU-type-examination Certificate on Module B relates only to the design and the construction of this [11] specified equipment or protective system in accordance with Directive 2014/34/EU. This certificate does not cover the requirements of the Directive on the forthcoming procedures relating to the production process and the delivery of the product.
- The marking of the equipment or protective system shall include the following: [12]

housing made of aluminum alloy

housing made of zinc-aluminum alloy

II 2 G Ex db IIC T6 Gb - 60°C≤Ta≤+60°C II 2 G Ex db IIC T6 Gb - 60°C≤T_a≤+60°C



II 2 D Ex to IIIC T85°C Db IP66

II 2 D Ex tb IIIC T85°C Db IP66 I M2 Ex db I Mb

This certificate does not authorize the manufacturer or his authorized representative to affix the CE mark followed by the identification number of the Notified Body as well as the marketing and / or use. This Supplement to Certificate MP 18 ATEX 0163 X extends its validity until 23.07.2024 if there is no change in the conditions under which it was issued.

Sofia, 23.07.2019

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Executive Director: dipl. eng St. Bosnev/

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- [13] Schedule
- [14] Supplement No 1 to Certificate on "Module B: EU-type-examination" No. MP 18 ATEX 0163 X (Translation)
- [15] Characteristics of the type, subject to the examination

1. Technical description

The enclosure of the control panel of the series type SHUS- Z -VEL x.x.x... consist of a housing and a lid made of aluminium alloy AK12 or alloy ZAM4-1. The control panels are assembled as separate modules out of enclosures connected with each other. The electrical connections are accomplished with hermetic cable glands and adaptors. The combinations of the modules and their number are determined depending on the complexity of the electrical circuit which is accomplished.

2. Technical data of the product.

2.1. Type designation:

SHUS-Z-VEL-X1- X2- X3- X4- X5- X6- X7- X8- X9- X10- X11- X12- X13- X14- X15- X16- X17- X18. X19- X20-

X21- X22- X23- X24- X25- X26- X27- X28

SHUS-VEL - A switchboard for controlling potentially explosive atmospheres;

Z - Housing material - AK-12/ ZAM4-1;

X₁ – Index showing the type implementation and the overall dimension of the enclosure;

BA - Index showing the presence of circuit breakers;

X₂ – Rated Current (A) and characteristic of the circuit breaker B, C, D, K, Z, L when using the circuit breaker with a device for emergency shutdown, as the leakage current is additionally noted in brackets – (mA);

X₃ - Quantity of the circuit breakers;

X₄ - Number of the poles of the circuit breakers;

PM - Index showing the presence of magnetic starters:

X₅ - Rated Current (A) of the magnetic starter;

X6 - Quantity of the magnetic starters;

PT - Index showing the presence of electrical thermal relays;

X7 - Limiting current (A) of the thermal relays;

X8 - Quantity of the thermal relays;

P - Index showing the presence of switching (intermediate) relay:

X₉ - Quantity of the switching (intermediate) relay;

PP - Index showing the presence of fuses;

X₁₀ - Quantity of the fuses:

X₁₁ - Rated Current (A) of the fuses;

K - Index showing the presence of buttons;

X₁₂ - Type of the buttons;

P - Start (green);

S - Stop (red);

As a rule, a button "stop" has to be put having a mechanism for self-locking, if placing the button "stop" without self-locking is necessary, after the designation of the button "without self-locking" has to be added;

X₁₃ - Quantity of the buttons:

I - Index showing the presence of light indication;

X₁₄ - indicator color: K - red, L - green, G - yellow, C - blue;

X₁₅ - Quantity of the indicators:

GN - Index showing the presence of rotary switches type ExGN

X₁₆ - Code of the switching diagram of the switch;

X₁₇ - Quantity of switches:

София, 2019-07-23

Executive Director: /dipl. eng St. Bosnev/

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Supplement No 1 to Certificate on "Module B: EU-type-examination" No. MP 18 ATEX 0163 X (Translation)

[15] Characteristics of the type, subject to the examination

2. Technical data of the product.

2.1. Type designation:

A - Index showing the presence of ammeters;

X₁₈ – Maximum value of the scale of the ammeter. If putting a current transformer is necessary, the value of the latter is shown by fractional mark in the field of the maximum value of the scale:

X₁₉ - Quantity of the ammeters;

B - Index showing the presence of voltmeters;

X₂₀ - Maximum value of the scale of the voltmeter;

X21 - Quantity of the voltmeters;

Z – Index showing the presence of terminals. As a rule, screw terminals have to be put. If spring terminals are necessary the letter "p" has to be added to the index "z".

X₂₂ - Rated current in the used terminals:

X₂₃ - Quantity of the used terminals;

X24 - Type of the cable gland VK or VK-X-VEL;

X₂₅ – Quantity of the cable glands;

X₂₆ - Side of placing the cable glands A, B, C, D;

X₂₇ - Marking for explosion protection II 2G Ex d_b IIC T6 Gb; II 2D Ex t_b IIIC T85°C Db IP66;

X₂₈ – Type of the climatic execution and category of placement: UXL1

2.2. Specifications:

working temperature range: HL1 -60 °C ÷ +60 °C;

- relative humidity of the environment: to (98±2)% at a temperature (35±2)°C while condensing moisture;

nominal voltage – 660 (440)V (AC);

rated current - buttons 16A, circuit breakers 250A, contactors 63A, switches 63A, measuring instruments up to 120A, terminals to 120A;

light Indicators to 380V;

IP code - IP66.

3. Application field

The control panels of the series, type SHUS-Z-VEL x.x.x..., are intended for use in potentially explosive atmospheres of gases, vapors and aerosols or explosive dusts and they serve for controlling, distributing and switching of the electric power in networks with different functions (lighting, power equipment, signaling and automation).

[16] Test reports No. 14/27.07.2015; No. 03/22.01.2018; № 10/01.07.2019

[17] Special requirements for safety use – The control panels of the series, type SHUS-Z-VEL x.x.x..., are intended for a working temperature range -60°C≤T_a≤+60°C, different from the standard.

[18] Essential requirements

18.1. According to Directive 2014/34/EU and the Manufacturer's instructions, the product is not allowed to work in Zone 0 and Zone 20 and the areas of mines, dangerous in terms of methane gas (firedamp) and combustible coal dust (Category M1).

18.2. Other essential safety requirements are covered by the standards pointed in (9).

София, 2019-07-23

Executive Director: /dipl. eng St. Bosnev/

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Supplement No 1 to Certificate on "Module B: EU-type-examination" No. MP 18 ATEX 0163 X (Translation)

[19] List of the technical record parts

19.1. Operating instructions

19.2. Conceptual design and manufacturing drawings and schemes, consisting of SHUS-Z-VEL4x2-x...

Drawings № № ПИНЮ.656519.001-045 СБ; ПИНЮ.656519.001-045 34; ПИНЮ.735312.114; ПИНЮ.301152142; specifications ПИНЮ.656519.001-045 – 3 sheets.

SHUS-Z-VEL4x4-x...

Drawings № № ПИНЮ.656519.001-044 СБ; ПИНЮ.656519.001-044 34; ПИНЮ.735312.114; ПИНЮ.301152.142; specifications ПИНЮ.656519.001-044 — 4 sheets; Drawings № № ПИНЮ.656519.001-045 СБ; ПИНЮ.656519.001-045; specifications ПИНЮ.656519.001-045 — 3 sheets.

SHUS-Z-VEL4x6-x...

Drawings № № ПИНЮ.656519.001-043 СБ; ПИНЮ.656519.001-043 34; specifications ПИНЮ.656519.001-043 — 4 sheets; Drawings № № ПИНЮ.656519.001-044 СБ; ПИНЮ.656519.001-044; specifications ПИНЮ.656519.001-044; Drawings № № ПИНЮ.735312.114; ПИНЮ.301152.142.

SHUS-Z-VEL4x8-x...

Drawings № № ΠИНЮ.656519.001-043 CB; ПИНЮ.656519.001-043; specifications ПИНЮ.656519.001-043 – 3 sheets.

SHUS-Z-VEL4x10-x...

Drawings № № ПИНЮ.656519.001-041 CБ; specifications ПИНЮ.656519.01-041 CБ – 4 sheets; ПИНЮ.656519.001-041 34.

Cable glands

Drawings № № ПИЖЦ.685562.012-048 СБ.; ПИНЮ.753125.013-048; specifications ПИЖЦ.685562.012-048 СБ — 1 sheet; Drawings № № ПИНЮ.753167.009-01; ПИНЮ.753167.007-01; ПИЖЦ.685562.012-047 СБ; ПИНЮ.753125.013-047; specifications ПИЖЦ.685562.012-047 СБ; Drawings № № ПИНЮ.753125.013-046; specifications ПИЖЦ.685562.012-046 СБ; Drawings № № ПИНЮ.753167.009-01; ПИНЮ.753167.007-01; Drawings № № ПИЖЦ.685562.012-043 СБ; ПИНЮ.753125.013-043; specifications ПИЖЦ.685562.012-043 СБ — 1 sheet; Drawings № № ПИЖЦ.685562.012-041 СБ; ПИНЮ.753125.013-041; specifications ПИЖЦ.685562.012-041 СБ; Drawings № № ПИЖЦ.685562.012-044 СБ; ПИНЮ.753125.013-044; specifications ПИЖЦ.685562.012-044 СБ; Drawings № № ПИЖЦ.685562.012-045; ПИНЮ.753125.013-045; specifications ПИЖЦ.685562.012-044 СБ; Drawings № № ПИЖЦ.685562.012-045; ПИНЮ.753167.009-01; ПИНЮ.753167.007-01; ПИНЮ.741315.004.

Additional information

Report for chemical analysis of aluminum alloy AK12/02.07.2015.

GOST 12652-74 "Electrotechnical sheet glass-cloth-base laminate".

GOST 10587-84 "Epoxy-dyphenylpropane unconsolidated resins".

Up to date operating instructions (2019)

Additionally presented conceptual design and manufacturing drawings and schemes (2019)
Drawings №№ ПИНЮ 656519.01-041 СБ; ПИНЮ.656519.01-042 СБ; ПИНЮ.656519.01-043 СБ;
ПИНЮ.656519.01-046 СБ; ПИНЮ.656519.01-046; ПИНЮ.656519.01-046
СБ (electric circuit dragram), specification ПИНЮ.656519.01-046.

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