3 Local control stations, indicating, sound, light, light and sound signaling devices

Local control stations, indicating, sound, light, sound and light signaling devices

Local control stations

PKIVA, PKIV (CSE, CCFE-01, CSC)

p. 86

PKIE (SHORVE)

p. 99

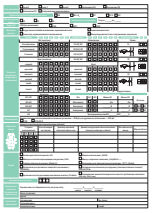
PKIE-P (SHORVE-KP)

p. 108

PKIE-N (SHORVE-S)

p. 112

Datasheet



p. 114

PKI-TABLO (CCFE-BOARD)

IIC

p. 115

Signaling devices

Electrodynamic siren PGZ-SIRENA1 (EMHS)

p. 117

Sound signaling device PGZ-REVUN32 (EMHS12, EMHS-20)

p. 119

Sound signaling device PGZ-REVUN4 (EMHS-12/MOD1)

p. 121

Loudspeakers series PGZ-GROM2 (EMH-20MDLOUD/TR)

p. 123

Sound signaling devices PGZ-POST, PGZ-POST-P, PGZ-POST-N (SHORVE-Q, SHORVE-KP-Q, SHORVE-S-Q)

p. 125

Sound signaling device PGZ-SIRENA2 (S-HOOTER-122)

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Light signaling devices, signs

Lighted sign PGS-IT35

NEW!

IIC

p. 131

LED sign PGS-IT11 (S-INDICATOR)

p. 134

LED display PGS-BS (SA-INDICATOR/INFO)

p. 136

Lighted sign PGS-IT31 (SA-INDICATOR/SS)

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Local control stations, indicating, sound, light, sound and light signaling devices

LED traffic lights PGS-SVETOFOR (CCA-02/S)

p. 140

Strobe light series PGS-VSPYSHKA (EV-4050-FLASH)

p. 142

Light signaling device PGS-SIGNAL (EV-4050-SIGNAL)

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Light and sound signaling devices

Light and sound alarm PGSK01 (EV-4050-HOOTER-122)

p. 147

Light and sound signaling device PGSK02 (CSE-ALARM-122)

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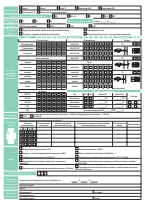
Light and sound signaling device PGSK03 (CSC-HOOTER)

p. 151

Combined local control stations PGSK-MODULE (QFM–SA-EMH, QFM–CCFE-EMH)

p. 153

Datasheet



p. 155

Light and sound board PGSK-TABLO (QFM-S-INDICATOR/M-Q-122S)

p. 156

Fire alarm systems

Digital thermal addressable fire alarm IP-101...Goreltex1 (IP-101)

p. 158

Manual fire alarm IP-535-Goreltex1 (CSE-IP-535)

p. 161

Manual fire alarm IP-535-Goreltex2 (IP-535)

p. 163

Components

Control and indicating elements

p. 377

Cable glands, plugs, adapters

p. 392

CAD

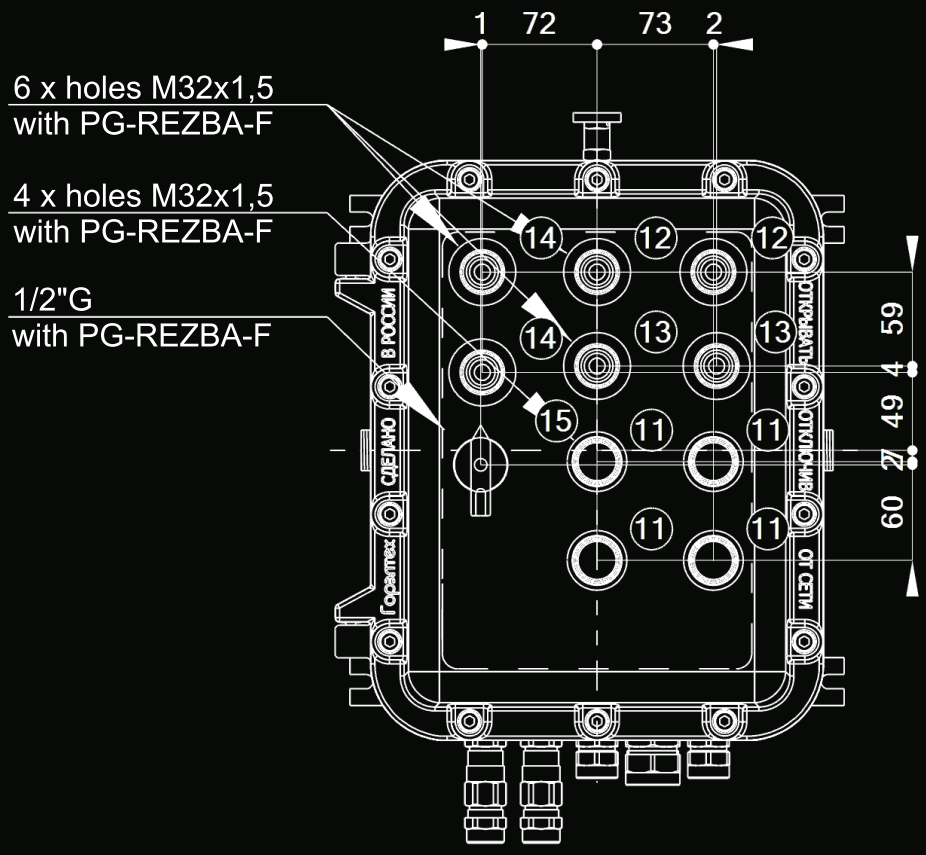
Goreltex®

Local control stations, signaling devices

New possibilities for design of explosion-proof electrical equipment:

– option of design local control and indicating stations of any complexity;
– wide choice of control and indicating elements for any purpose;
– arrangement of terminals can be edited manually;
– arrangement of cable glands can be edited manually

TERMINAL BOXES | **LOCAL CONTROL STATIONS** | STARTERS



CAD "GoreltEx" 2.2.11							
dd. 25.08.2016							
Rev.	Sheet	Document No.		Date	PKIV362827	Lit	Mass / Scale
Originated by	Ivanov			08.11			
Checked	Petrov			08.11	(1014)-TU3400-005-72453807-07	Sheet 1	Sheets 3
Tech.contr							
N. control							
Approved	Sidorov				Customer: Promengineering LLC	GoreltEx	
Copied						Format A3	

CAD GoreltEx is a shareware program which is distributed as a limited version of the program used at Goreltex plant for designing various Ex-devices and does not include full database of Ex-components

www.exd.ru mail to: mail@exd.ru tel.: +7-800-100-100-4 social media: ZAVODGORELTEX

- Flexible system of modulation on the base of one-, two-, three- or multi-button enclosures.
- Ultra-high mechanical and corrosion resistance of explosion-proof pins of control elements.
- Contact modules and light sources can easily be replaced.
- High resistance to hydrogen sulfide exposure.
- Over 25 years of flameproof joint service life.

MARKING

for PKIVA (CSE, CSC-G):

1Ex d IIC T6...T5 Gb

0Ex ia IIC T6...T5 Ga

Ex tb IIIC T85°C...T100°C Db

for PKIV (CSE + CSE, CCFE):

1Ex d IIC T6...T4 Gb X

1Ex d [ia] IIC T6...T4 Gb X

1Ex d IIB+H_2 T6...T4 Gb

1Ex d [ia] IIB+H_2 T6...T4 Gb

Ex tb IIIC T85°C...100°C Db

Ex tb IIIC T70°C...T135°C Db

MINING EQUIPMENT MARKING

PB Ex d I Mb

PO Ex ia I Ma (for PKIVA)

CERTIFICATES AND PERMITS

GOST R ISO 9001-2015 (ISO 9001:2015)
TC RU C-RU.AA87.B.00244
VTT 17 ATEX 047U (for enclosure only)
RU.OC BCCT 048-08.2017
Maritime Register Type Approval Certificate No. 17.12694.120
IECEx CCVE 16.0007U (for enclosure only)
TU 3400-005-72453807-07
GAZPROM OJSC No. Г000.RU.1131.H00666

CODES

GOST 12.2.007.0-75
GOST R IEC 60079-0-2011
GOST R IEC 60079-31-2010
GOST 30852.0-2002 (IEC 60079-0:1998)
GOST 30852.1-2002 (IEC 60079-1:1998)
GOST 30852.10-2002 (IEC 60079-11:1999)
GOST 30852.20-2002
TR CU 012/2011
GOST IEC 61241-1-1-2011
Electrical Installation Code Ch. 7.3, Ch. 7.4
OD 5.2-093-2004
GOST IEC 60079-1-2011

TECHNICAL CHARACTERISTICS

Installation

Category I for firedamp and dust;
Category II for gas subgroup IIA, IIB+H2, IIC (except for acetylene), IIC; zones 0, 1, 2;
Category III for dust, explosive dust atmospheres containing flying particles, conductive and non-conductive dust;
Underground mines non-hazardous with gas (methane) and coal dust;
Facilities under Russian Maritime Register of Shipping supervision;
Dangerous production facilities

Maximum voltage, V

~240 / ~380 / ⎓110

Maximum current, A

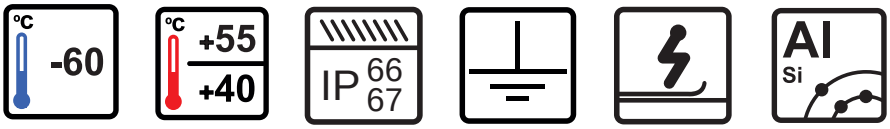
~16 / ~10 / ⎓5

Thread on connecting holes

Taper pipe Rc GOST 6211 for PKIV, N, NPT for PKIVA (other type and size of thread, second hole upon request)

Climatic category

NF1 (upon request NF2, NF3, NF4, NF5, F1, F2, F3, F5, T1, T2, T3, T5, MU1, MU2, MU3, MU4, W2.13**, W5)



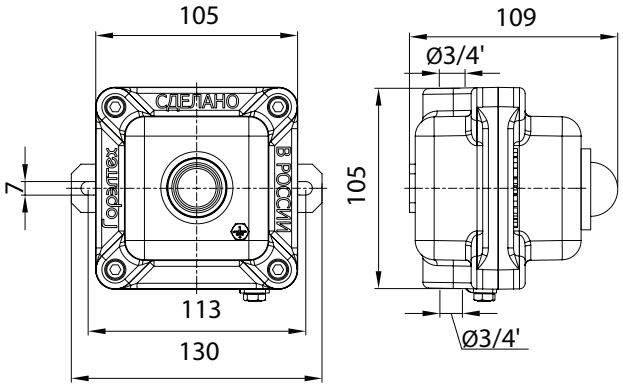
OPTIONS, ACCESSORIES AND VERSIONS

DESCRIPTION	MARKING
Lamp supply voltage	/6DC /6AC /12DC /12AC /24DC /24AC /36DC /36AC /48DC /48AC /110DC /110AC /220AC /380AC
Degree of protection IP67	/IP67
Nameplate with inscription as per customer's specification	/NADPIS «_»
Nameplates with light reflecting coating	/SVP
Earthquake-resistant version	/MSK-64
Yellow external surface coating	/RAL 1003
Black external surface coating	/RAL 9004

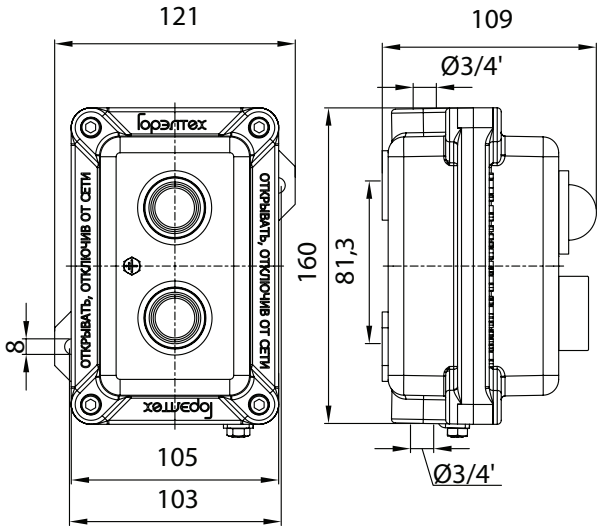
DESCRIPTION	MARKING
Combined color of external surface (yel-low/ black) external surface coating	/KRYSHKA RAL 1003 /KORPUS RAL 9004
Marine version	/MORE
Version for tropics with protection against bugs	/TERMITY
Anti-condensation coating	/AP
Protective canopy	/KOZYREK
Special version for nuclear facilities of nu-clear power plants	/MALAYA TECH
Drain plug for condensate removal	/DKU
Breather plug for moisture removal	/VKU
Hinge for cover fixation (for SHORV281811, for other sizes of SHORV boxes hinges are installed by de-fault)	/PETLYA
Captive bolts for cover fastening	/NBK
External surface coating as per customer's specification	/RAL (code)
Version for minimum operating tempera-ture -75°C	/HOLOD
Moving suspension mounting	/PODVES
Handle's fastening	/RUCHKI

OVERALL AND MOUNTING DIMENSIONS

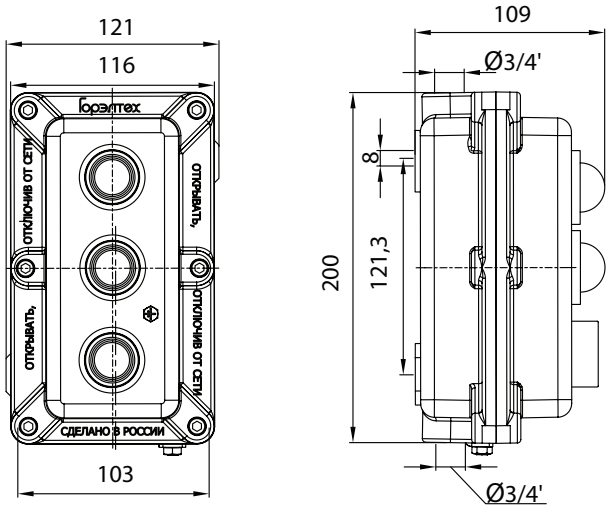
PKIVA101008 with one element



PKIVA161008 with two elements

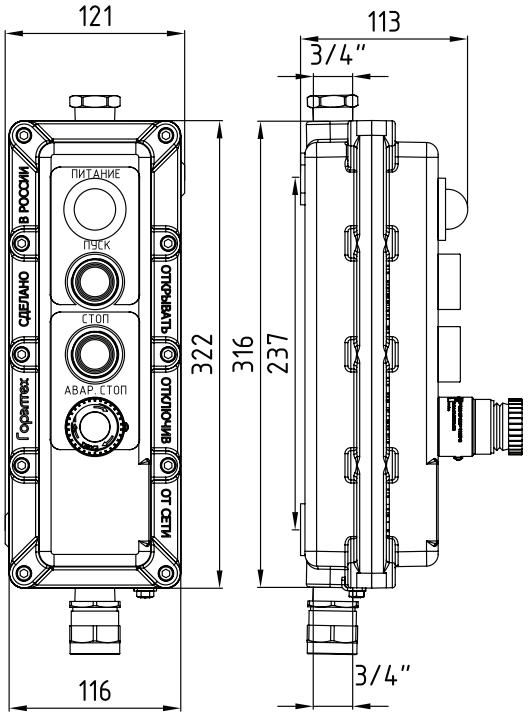


PKIVA211108 with three elements

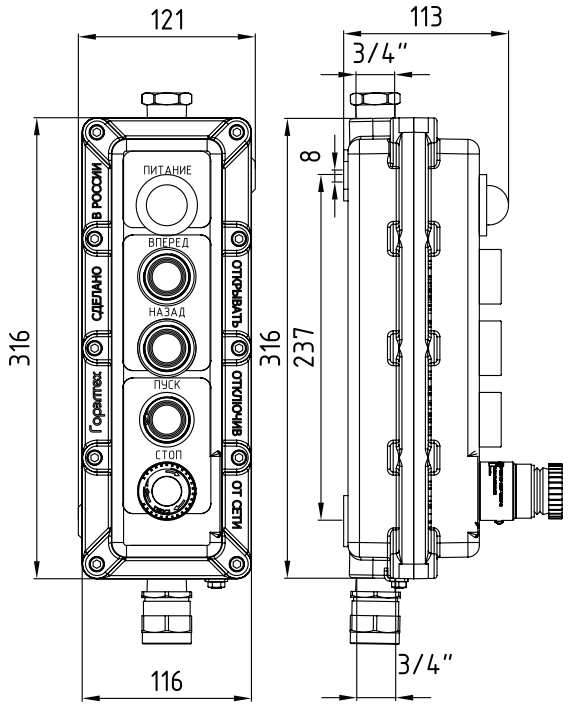


LGV, KGV is a conventional designation of function button and signal lamp; types of elements are specified when making an order.

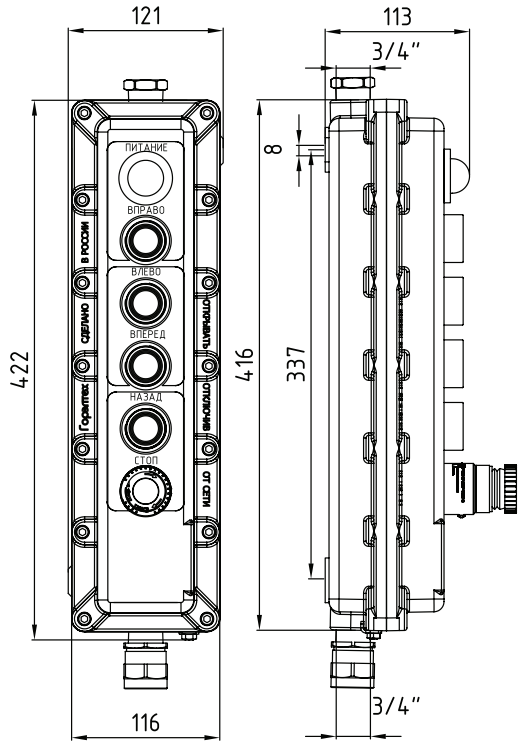
PKIV311109 with four elements



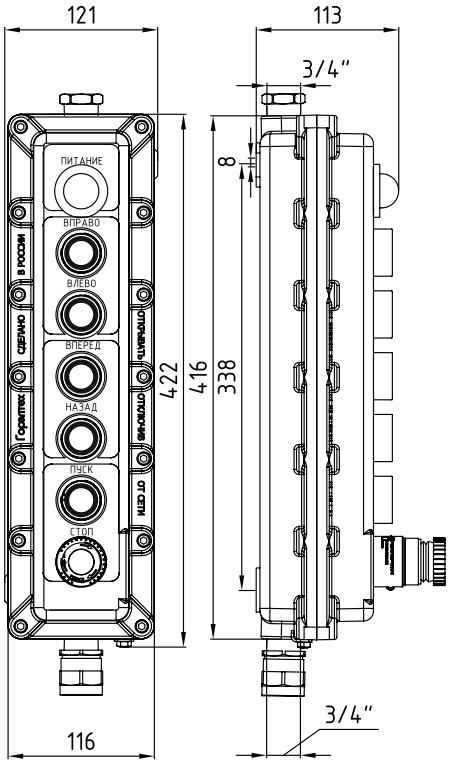
PKIV311109 with five elements



PKIV411109 with six elements



PKIV411109 with seven elements



FORMATION OF MARKING

PKIVA X – X ... – X – X / X – TU 3400-005-72453807-07

- Dimension type of enclosure
- Completeness of set
- Quantity and dimension type of cable glands (max. 2 pcs.)
- Options, accessories and versions

Example of order: **PKIVA211108-LGV01K-KGV01K11-KGV01CH02-KNV1-TU 3400-005-72453807-07.**

— Explosion-proof PKIVA211108 local control station with pre-installed LGV01 signal lamp, color red K, with KGV01 buttons, color red K (normally closed + normally open contacts 11) and black CH (two normally closed contacts 02), 1 KNV1 cable gland for non-armored cable.

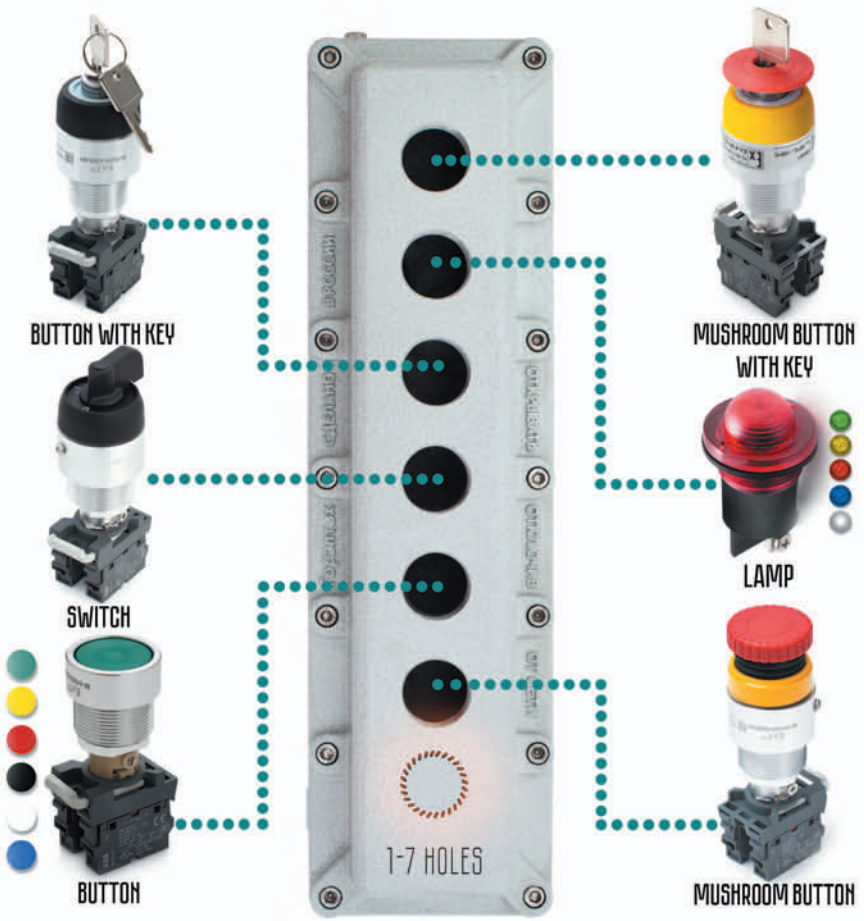
Additionally, PKIVA type local control stations can be completed with:

1. Type PKIVA101008-KGV01/PM — emergency button under glass
2. Type PKIVA101008-KGV11 — momentary emergency mushroom button
3. Type PKIVA101008-KGV07 — locking emergency mushroom button, unlocking by rotation
4. Type PKIVA101008-KGV09 — locking emergency mushroom button, unlocking with key
5. PKIVA101008-PGVA13, PKIVA101008-PGVA2I — local control stations with 1Z, 2I switching diagram

Recommendations on choice of color of light signals on the local control stations and control cabinets according to IEC 73 standard:

Red signal (K) — Danger. Respond immediately. Danger for life or movement of the equipment in secure zone without protection.
Amber yellow signal (ZH) — Warning! Act cautiously. Temperature or pressure deviates from the norm.
Green signal (Z) — Precautionary measure. Act. The test is complete.
Blue signal (S) — Settings are ready or remote control.
White signal (B) — Has no special meaning. Can be a confirmation of an earlier signal.

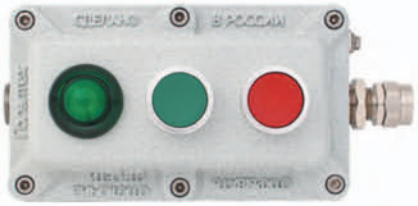
PKIVA, PKIV LOCAL CONTROL STATIONS



LOCAL CONTROL STATIONS VERSIONS:

7-BUTTON PKIV411109

3-BUTTON PKIVA311109

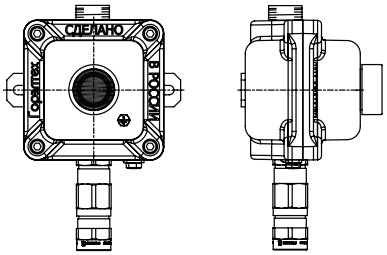


1-BUTTON PKIVA101008

Goreltex®

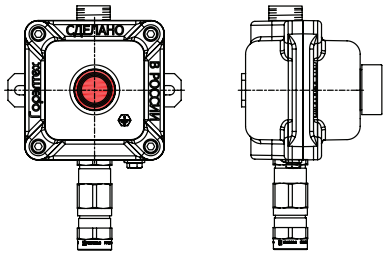
FINISHED STANDARD MODULAR EXD LOCAL CONROL STATIONS WITH ONE CONTROL/INDICATING ELEMENT

PKIVA011



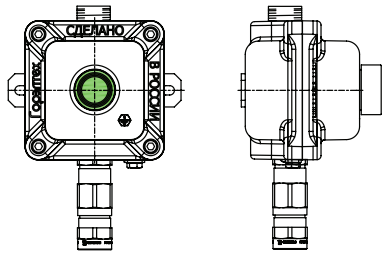
• Type PKIVA-X enclosure; • KGV01CH11 black momentary button 1NO+1NC – 1 pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55;
• mass 1 kg

PKIVA021



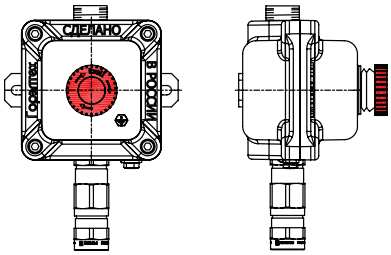
• Type PKIVA-X enclosure • KGV01K11 red momentary button 1NO+1NC – 1 pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55 • mass 1 kg

PKIVA0311



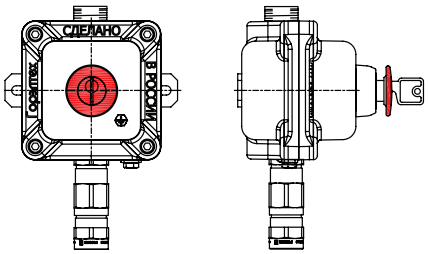
• Type PKIVA-X enclosure; • KGV01Z11 green momentary button 1NO+1NC – 1 pc.;
• KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 1 kg

PKIVA071



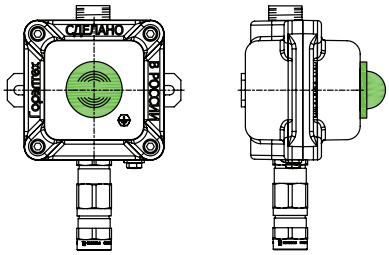
• Type PKIVA-X enclosure; • KGV07 locking mushroom button, unlocking by rotation, red color, 1NO+1NC – 1 pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55 • mass 1 kg

PKIVA091



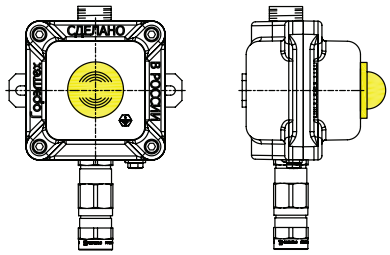
• Type PKIVA-X enclosure; • KGV09 locking mushroom button, unlocking with key, red color, 1NO+1NC – 1 pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 1 kg

PKIVA111



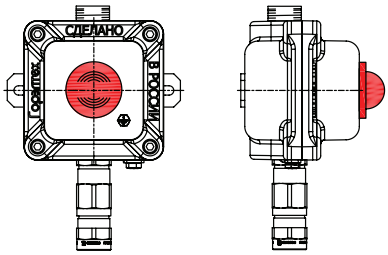
• Type PKIVA-X enclosure; • LGV01Z green signal lamp, base BA9s – 1pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55
• mass 1 kg

PKIVA131



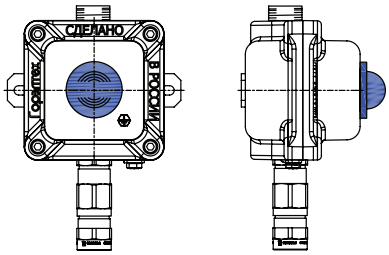
• Type PKIVA-X enclosure; • LGV01ZH amber yellow signal lamp, base BA9s – 1pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55;
• mass 1 kg

PKIVA151



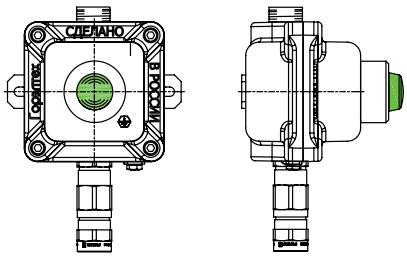
• Type PKIVA-X enclosure; • LGV01K red signal lamp, base BA9s – 1pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.;
•ambient temperature, °C: -60...+40/+55
• mass 1 kg

PKIVA231



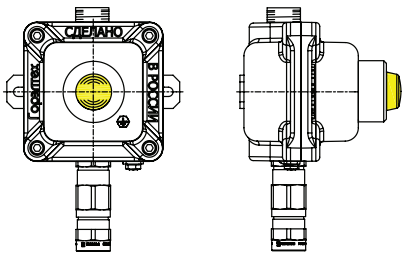
• Type PKIVA-X enclosure; • LGV01S blue signal lamp, base BA9s – 1pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.;
• ambient temperature, °C: -60...+40/+55
• mass 1 kg

PKIVA171



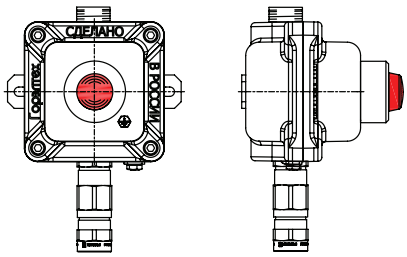
• Type PKIVA-X enclosure; • KGV06Z green button with indication, 1NO+1NC, lamp base BA9s – 1pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 1 kg

PKIVA191



• Type PKIVA-X enclosure; • KGV06ZH amber yellow button with indication, 1NO+1NC, lamp base BA9s – 1pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 1 kg

PKIVA211

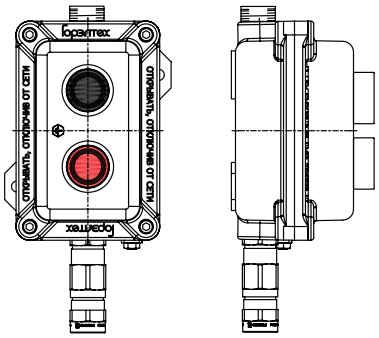


• Type PKIVA-X enclosure; • KGV06K red button with indication, 1NO+1NC, lamp base BA9s – 1pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 1 kg

Armor shall be sealed and grounded outside of gable gland. Subjected to entry into cable gland is inner sheath of cable.

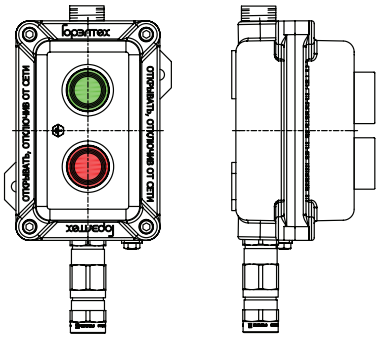
FINISHED STANDARD MODULAR EXD LOCAL CONROL STATIONS WITH TWO CONTROL/INDICATING ELEMENTS

PKIVA301



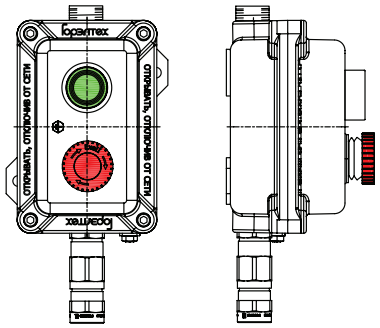
• Type PKIVA-XX enclosure; • KGV01CH11 black momentary button 1NO+1NC – 1 pc.; • KGV01K11 red momentary button 1NO+1NC – 1 pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 1,5 kg

PKIVA321



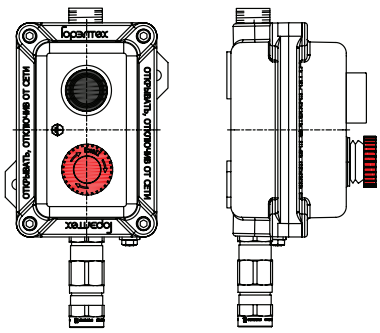
• Type PKIVA-XX enclosure; • KGV01Z11 green momentary button 1NO+1NC – 1 pc.; • KGV01K11 red momentary button 1NO+1NC – 1 pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 1,5 kg

PKIVA341



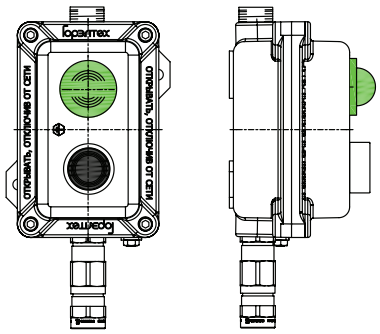
• Type PKIVA-XX enclosure; • KGV01Z11 green momentary button 1NO+1NC – 1 pc.; • KGV07 locking mushroom button, unlocking by rotation, red color, 1NO+1NC – 1 pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 1,5 kg

PKIVA361



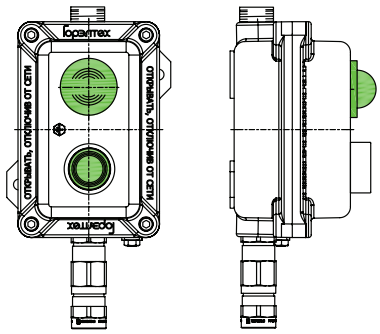
• Type PKIVA-XX enclosure; • KGV01CH11 black momentary button 1NO+1NC – 1 pc.; • KGV07 locking mushroom button, unlocking by rotation, red color, 1NO+1NC – 1 pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 1,5 kg

PKIVA381



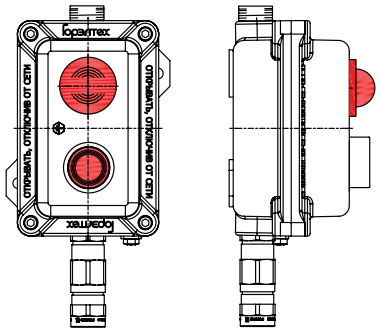
• Type PKIVA-XX enclosure; • KGV01CH11 black momentary button 1NO+1NC – 1 pc.; • LGV01Z green signal lamp, base BA9s – 1pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 1,5 kg

PKIVA401



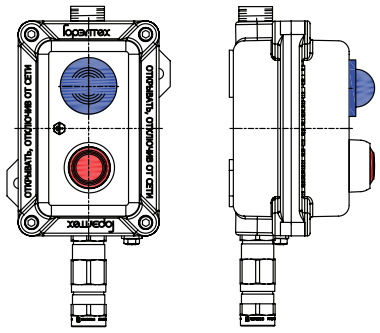
• Type PKIVA-XX enclosure; • KGV01Z11 green momentary button 1NO+1NC – 1 pc.; • LGV01Z green signal lamp, base BA9s – 1pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 1,5 kg

PKIVA421



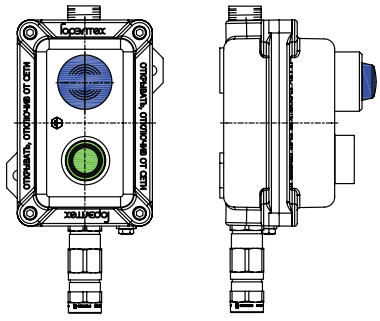
• Type PKIVA-XX enclosure; • KGV01K11 red momentary button 1NO+1NC – 1 pc.; • LGV01K red signal lamp, base BA9s – 1pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 1,5 kg

PKIVA441



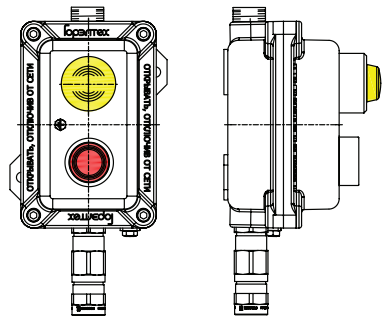
• Type PKIVA-XX enclosure; • LGV01S blue signal lamp, base BA9s – 1pc.; • KGV06K red button with indication, 1NO+1NC, lamp base BA9s – 1pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 1,5 kg

PKIVA461



• Type PKIVA-XX enclosure; • KGV06S blue button with indication, 1NO+1NC, lamp base BA9s – 1 pc.; • LGV01Z green signal lamp, base BA9s – 1 pc.;• KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 1,5 kg

PKIVA481

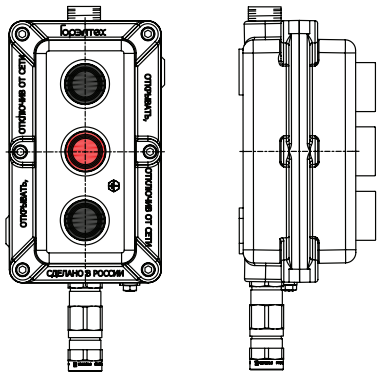


• Type PKIVA-XX enclosure; • KGV06ZH yellow button with indication, 1NO+1NC, lamp base BA9s – 1 pc.; • KGV01K11 red momentary button 1NO+1NC – 1 pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 1,5 kg

**Armor shall be sealed and grounded outside of gable gland. Subjected to entry into cable gland is inner sheath of cable.*

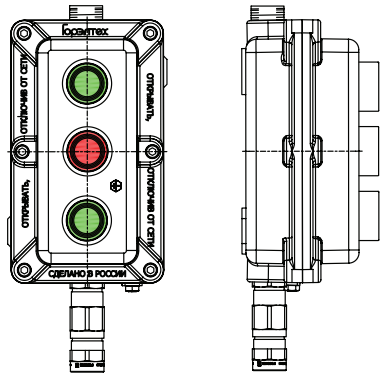
FINISHED STANDARD MODULAR EXD LOCAL CONROL STATIONS WITH THREE CONTROL/INDICATING ELEMENTS

PKIVA501



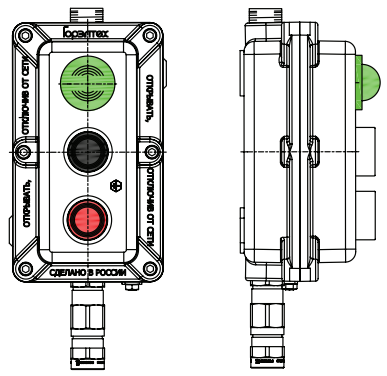
• Type PKIVA-XXX enclosure; • KGV01CH11 black momentary button 1NO+1NC – 1 pc.; • KGV01K11 red momentary button 1NO+1NC – 1 pc.; • KGV01CH11 black momentary button 1NO+1NC – 1 pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 1,9 kg

PKIVA521



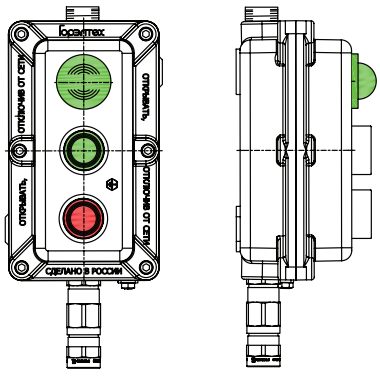
• Type PKIVA-XXX enclosure; • KGV01Z11 green momentary button 1NO+1NC – 1 pc.; • KGV01K11 red momentary button 1NO+1NC – 1 pc.; • KGV01Z11 green momentary button 1NO+1NC – 1 pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 1,9 kg

PKIVA541



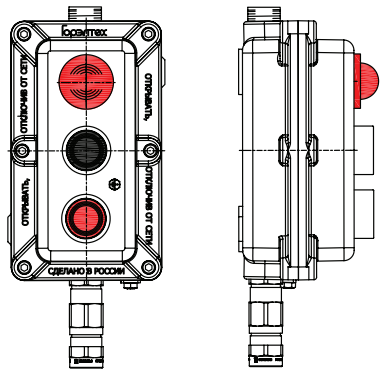
• Type PKIVA-XXX enclosure; • LGV01Z green signal lamp, base BA9s – 1 pc.; • KGV01CH11 black momentary button 1NO+1NC – 1 pc.; • KGV01K11 red momentary button 1NO+1NC – 1 pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 1,9 kg

PKIVA561



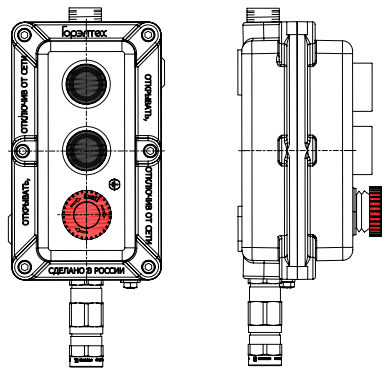
• Type PKIVA-XXX enclosure; • LGV01Z green signal lamp, base BA9s – 1 pc.; • KGV01Z11 green momentary button 1NO+1NC – 1 pc.; • KGV01K11 red momentary button 1NO+1NC – 1 pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 1,9 kg

PKIVA581

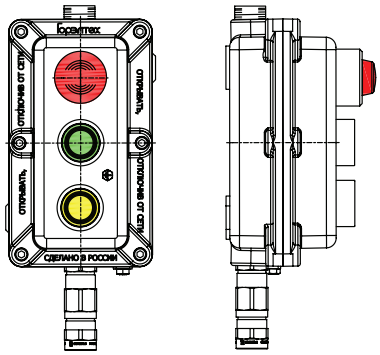
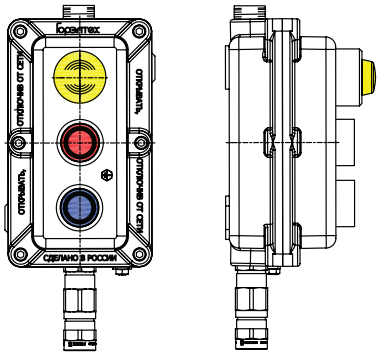
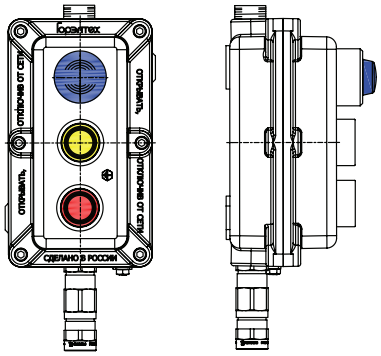


• Type PKIVA-XXX enclosure; • LGV01K red signal lamp, base BA9s – 1 pc.; • KGV01CH11 black momentary button 1NO+1NC – 1 pc.; • KGV01K11 red momentary button 1NO+1NC – 1 pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 1,9 kg

PKIVA601

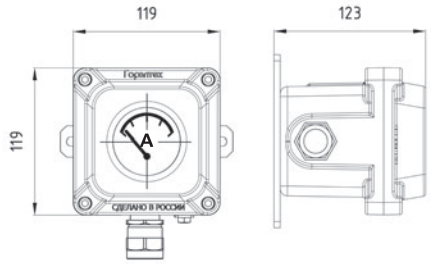
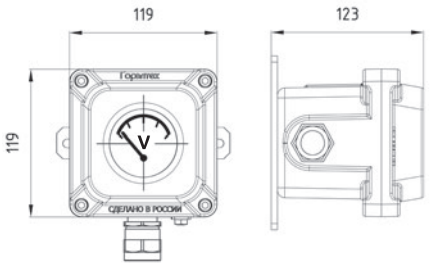
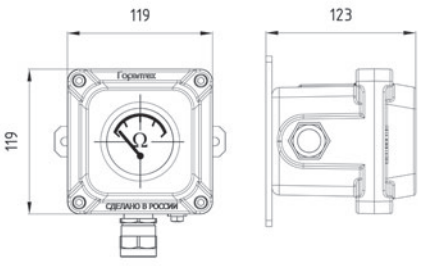


• Type PKIVA-XXX enclosure; • KGV01CH11 black momentary button 1NO+1NC – 1 pc.; • KGV07 locking mushroom button, unlocking by rotation, red color, 1NO+1NC – 1 pc.; • KGV01CH11 black momentary button 1NO+1NC – 1 pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 1,9 kg

PKIVA621	PKIVA641	PKIVA661
		
• Type PKIVA-XXX enclosure; • KGV06K red button with indication, 1NO+1NC, lamp base BA9s – 1pc.; • KGV01Z11 green momentary button 1NO+1NC – 1 pc.; • KGV01ZH11 yellow momentary button 1NO+1NC – 1 pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 1,9 kg	• Type PKIVA-XXX enclosure; • KGV06ZH yellow button with indication, 1NO+1NC, lamp base BA9s – 1pc.; • KGV01K11 red momentary button 1NO+1NC – 1 pc.; • KGV01S11 blue momentary button 1NO+1NC – 1 pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 1,9 kg	• Type PKIVA-XXX enclosure; • KGV06S blue button with indication, 1NO+1NC, lamp base BA9s – 1pc.; • KGV01ZH11 yellow momentary button 1NO+1NC – 1 pc.; • KGV01K11 red momentary button 1NO+1NC – 1 pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 1,9 kg

*Armor shall be sealed and grounded outside of gable gland. Subjected to entry into cable gland is inner sheath of cable.

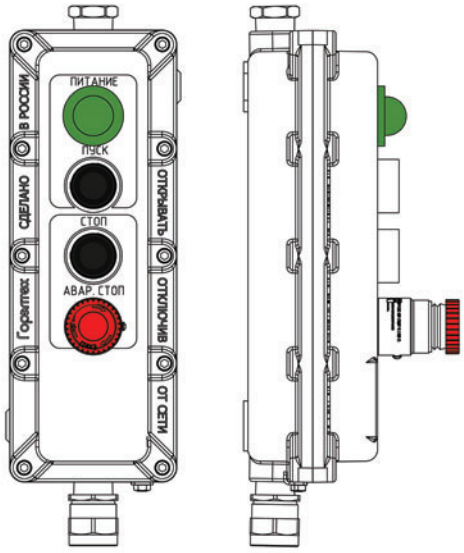
FINISHED STANDARD MODULAR EXD LOCAL CONROL STATIONS WITH MEASURING INSTRUMENTS

KV-KIP011	KV-KIP031	KV-KIP051
		
• Type KV-KIP enclosure; • ammeter (scale..) – 1 pc.; • KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 2 kg	• Type KV-KIP enclosure; • voltmeter (scale..) – 1 pc.;• KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 2 kg	• Type KV-KIP enclosure; • ohmmeter (scale..) – 1 pc.; • KNV2NNK /P cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.; • ambient temperature, °C: -60...+40/+55; • mass 2 kg

*Armor shall be sealed and grounded outside of gable gland. Subjected to entry into cable gland is inner sheath of cable.

FINISHED STANDARD MODULAR EXD LOCAL CONROL STATIONS WITH FOUR CONTROL/INDICATING ELEMENTS

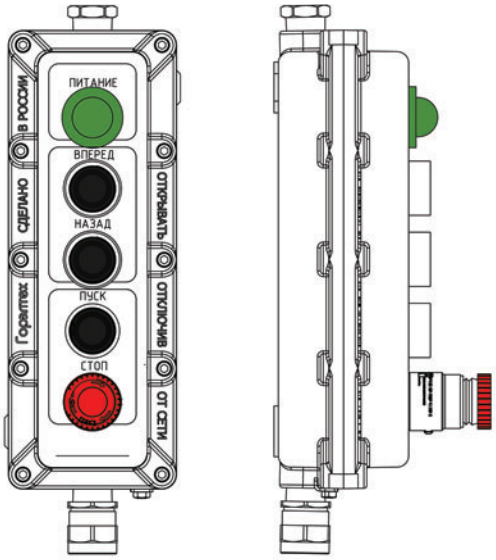
PKIV701



- Type PKIV-XXXX enclosure;
- LGV01Z green signal lamp, base BA9s – 1pc.;
- KGV01CH11 black momentary button 1NO+1NC – 2 pcs.;
- KGV07 locking mushroom button, unlocking by rotation, red color, 1NO+1NC – 1 pc.;
- KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.;
- ambient temperature, °C: -60...+40/+55;
- mass 3,5 kg

FINISHED STANDARD MODULAR EXD LOCAL CONROL STATIONS WITH FIVE CONTROL/INDICATING ELEMENTS

PKIV711

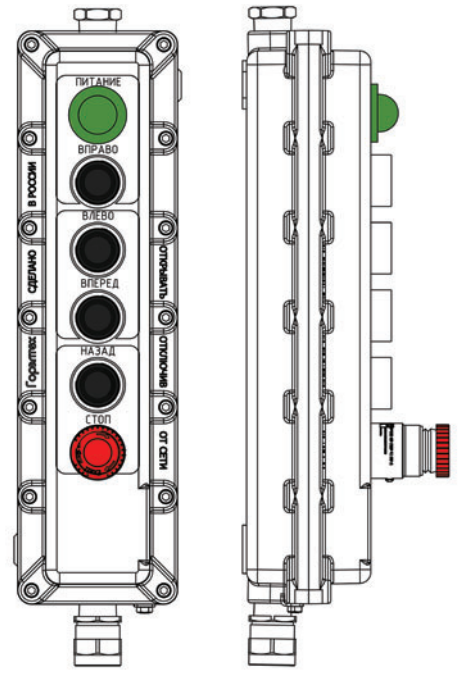


- Type PKIV-XXXXX enclosure;
- LGV01Z green signal lamp, base BA9s – 1pc.;
- KGV01CH11 black momentary button 1NO+1NC – 3 pcs.;
- KGV07 locking mushroom button, unlocking by rotation, red color, 1NO+1NC – 1 pc.;
- KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.;
- ambient temperature, °C: -60...+40/+55;
- mass 3,5 kg

Armor shall be sealed and grounded outside of gable gland. Subjected to entry into cable gland is inner sheath of cable.

FINISHED STANDARD MODULAR EXD LOCAL CONROL STATIONS WITH SIX CONTROL/INDICATING ELEMENTS

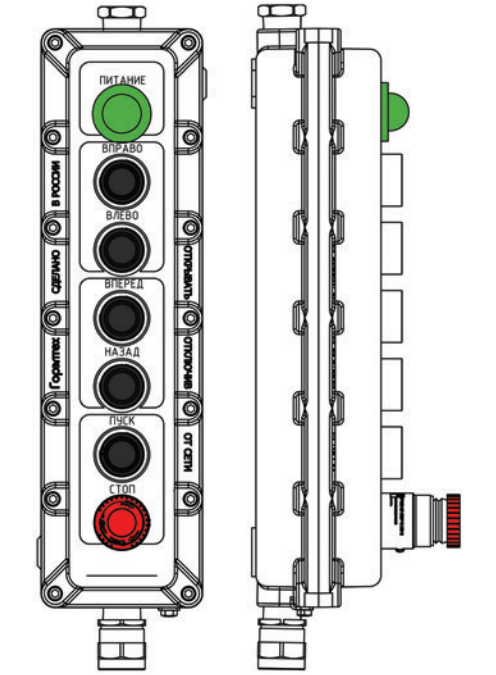
PKIV721



- Type PKIV-XXXXXX enclosure;
- LGV01Z green signal lamp, base BA9s – 1pc.;
- KGV01CH11 black momentary button 1NO+1NC – 4 pcs.;
- KGV07 locking mushroom button, unlocking by rotation, red color, 1NO+1NC – 1 pc.;
- KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.;
- ambient temperature, °C: -60...+40/+55;
- mass 3,5 kg

FINISHED STANDARD MODULAR EXD LOCAL CONROL STATIONS WITH SEVEN CONTROL/INDICATING ELEMENTS

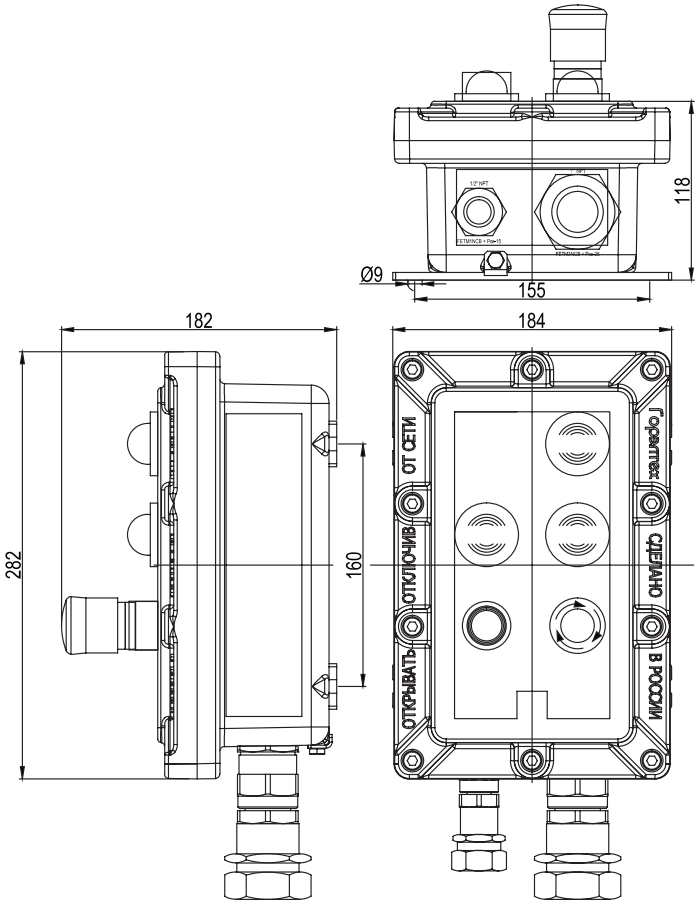
PKIV731



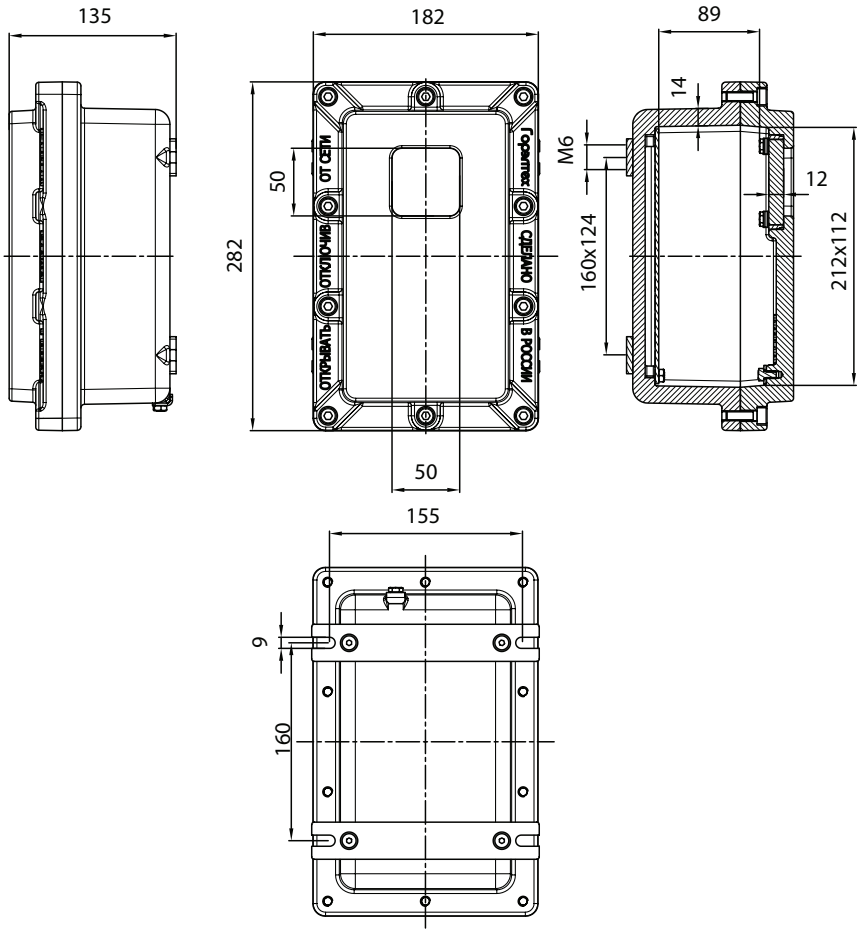
- Type PKIV- XXXXXX enclosure;
- LGV01Z green signal lamp, base BA9s – 1pc.;
- KGV01CH11 black momentary button 1NO+1NC – 5 pcs.;
- KGV07 locking mushroom button, unlocking by rotation, red color, 1NO+1NC – 1 pc.;
- KNV2NNK/R cable gland for non-armored cable, cable diameter 6-18mm* - 1 pc.;
- ambient temperature, °C: -60...+40/+55;
- mass 3,5 kg

Armor shall be sealed and grounded outside of gable gland. Subjected to entry into cable gland is inner sheath of cable.

DESIGN DIMENSIONS OF PKIV281818 LOCAL CONTROL STATIONS



DESIGN DIMENSIONS OF QUADRUPLE PKIV281813 LOCAL CONTROL STATIONS WITH A WINDOW FOR AN INSTRUMENT



Dimension type	Description
PKIV281818-KGV01-TU 3400-005-72453807-07	1 locking button
PKIV281818- KGV07-TU 3400-005-72453807-07	1 “emergency stop” mushroom button (reset by rotation of actuator)
PKIV281818-LGV01-TU 3400-005-72453807-07	1 lamp
PKIV281818-KGV06-TU 3400-005-72453807-07	1 button with indication
PKIV281818-2KGV01-TU 3400-005-72453807-07	2 buttons
PKIV281818-2LGV01-TU 3400-005-72453807-07	2 lamps
PKIV281818-2KGV06- TU 3400-005-72453807-07	2 buttons with indication
PKIV281818-KGV01-LGV01-TU 3400-005-72453807-07	1 button+1 lamp
PKIV281818- KGV01- KGV07-TU 3400-005-72453807-07	1 button+1 “emergency stop” mushroom button (reset by rotation of actuator)
PKIV281818-3KGV01-TU 3400-005-72453807-07	3 buttons
PKIV281818-3LGV01-TU 3400-005-72453807-07	3 lamps
PKIV281818-3KGV06-TU 3400-005-72453807-07	3 buttons with indication
PKIV281818-2KGV01-LGV01-TU 3400-005-72453807-07	2 buttons+1 lamp
PKIV281818-1KGV01-2LGV01-TU 3400-005-72453807-07	1 button+2 lamps
PKIV281818-2KGV01- KGV07-TU 3400-005-72453807-07	2 buttons+1 button+1 “emergency stop” mushroom button (reset by rotation of actuator)
PKIV281818-LGV01-KGV01-KGV07-TU 3400-005-72453807-07	1 lamp+1 button+1 “emergency stop” mushroom button (reset by rotation of actuator)
PKIV281818-4KGV01-TU 3400-005-72453807-07	4 buttons
PKIV281818-2KGV01-2KGV07-TU 3400-005-72453807-07	2 buttons+2 “emergency stop” mushroom buttons (reset by rotation of actuator)
PKIV281818-2LGV01-KGV01-KGV07-TU 3400-005-72453807-07	2 lamps+1 button+1 “emergency stop” mushroom button (reset by rotation of actuator)
PKIV281818-5KGV01-TU 3400-005-72453807-07	5 buttons
PKIV281818-6KGV01-TU 3400-005-72453807-07	6 buttons
PKIV281818-3KGV01-3KGV07-TU 3400-005-72453807-07	3 buttons+3 “emergency stop” mushroom buttons (reset by rotation of actuator)

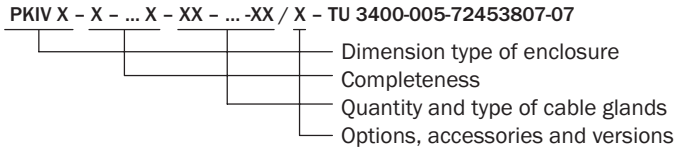
LGV, KGV is a conventional designation of function button and signal lamp; types of elements are agreed on for the order.

Up to 8 elements can be installed.
Lens color is marked with a letter in brackets after signal lamp designation LGV01:
(Z) – green, (ZH) – yellow, (K) – red, (B) – white, (S) – blue.
Button color is marked with a letter in brackets after button designation KGV01:
(Z) – green, (ZH) – yellow, (K) – red, (B) – white, (S) – blue.
Contact block of the button is marked with a letter in square brackets after button color designation:
[11] – normally open + normally closed contacts (supplied by default).

Varied installation of up to 3 contact modules per one control element is optional:
[01] – one normally closed contact; [10] – one normally open contact;
[02] – two normally closed contacts; [20] – two normally open contacts;
[03] – three normally closed contacts; [30] – three normally open contacts;
[01+20] – one normally closed contact + two normally open contacts;
[02+01] – two normally closed contacts + one normally closed contact.

Besides, PKIV type local control stations can be completed with the following control elements:
KGV10 button – momentary emergency mushroom button.
KGV07 button – locking emergency mushroom button, unlocking by rotation
KGV09 button – locking emergency mushroom button, unlocking with key
PGVA13 switch – LCSs with 1C switching diagram (contact modules [11]).
PGVA2I circuit breaker – LCSs with 2I switching diagram (contact modules [20]).

FORMATION OF MARKING



Example of order: **PKIV311109P5 -KGV01K11-4KGV01CH02-KNV2NNK/R/MORE – TU 3400-005-72453807-07.**
Type of local control station: **PKIV311109P5**
– Completeness: **KGV01** button, color red K (normally closed + normally open contacts 11), 4 **KGV01** buttons, color black CH (two normally closed contacts 02), **KNV2NNK/R** cable gland for non-armored cable, diameter of crimped cable 6-18 mm, nickel-plated brass.
– Options, accessories and versions: marine version /**MORE**.

RECOMMENDED CABLE GLANDS FOR PKIV:

KNV2NNK/R – cable gland for non-armored cable, diameter of crimped cable 6-18 mm, nickel-plated brass.

KNVTV2NNK/R – cable gland for non-armored cable in hoses, pipe conduit, metal hoses; thread for external connection pipe cylindrical GOST 6357-81 3/4" G, diameter of crimped cable 6-18 mm, nickel-plated brass.

KNVM2N-25NK/R – cable gland for non-armored cable in metal hoses, diameter of crimped cable 6-17 mm, inside diameter of metal hose 25 mm, nickel-plated brass.

KNVM2N-20NK/R – cable gland for non-armored cable in metal hoses, diameter of crimped cable 6-17 mm, inside diameter of metal hose 20 mm, nickel-plated brass.

Control and indicating elements	refer to p.377
Recommended cable glands KNV2NNK/R, KNVTV2NNK/R.	refer to p.393

PKIVA X – X–...–X – X / X – TU 3400-005-72453807-07

- Dimension type of enclosure
- Completeness
- Quantity and type of cable glands (max. 2)
- Options, accessories and versions

Example of order: **PKIVA211108-LGV01K-KGV01K11-KGV01CH02-KNV2NNK/R– TU 3400-005-72453807-07.**

Explosion-proof PKIVA211108 local control station with LGV01 signal lamp, color red K, with buttons KGV01, color red K (normally closed + normally open contacts 11) and black CH (two normally closed contacts 02) , 1 KNV2NNK/R cable gland for non-armored cable, diameter of crimped cable 6-18 mm, nickel-plated brass.

RECOMMENDED CABLE GLANDS FOR PKIVA:

KNV2NNK/R – cable gland for non-armored cable, diameter of crimped cable 6-18 mm, nickel-plated brass.

KNVTV2NGNK/R – cable gland for non-armored cable in hoses, pipe conduit, metal hoses; inner thread for external connection pipe cylindrical GOST 6357-81 3/4" G, diameter of crimped cable 6-18 mm, nickel-plated brass.

KNVM2N-25NK/R – cable gland for non-armored cable in metal hoses, diameter of crimped cable 6-17 mm, inside diameter of metal hose 25 mm, nickel-plated brass.

KNVM2N-20NK/R – cable gland for non-armored cable in metal hoses, diameter of crimped cable 6-17 mm, inside diameter of metal hose 20 mm, nickel-plated brass.

Control and indicating elements	refer to p.377
Recommended cable glands KNV2NNK/R, KNVTV2NNK/R	refer to p.393

Table of names matching

Previous international name "ZAVOD GORELTEX" Co. Ltd. TU 3400-005-72453807-07	The Customs Union name "ZAVOD GORELTEX" Co. Ltd. TU 3400-005-72453807-07	Previous international name "ZAVOD GORELTEX" Co. Ltd. TU 3400-005-72453807-07	The Customs Union name "ZAVOD GORELTEX" Co. Ltd. TU 3400-005-72453807-07
CSE	PKIVA	CCFE-01	PKIV
CSE-L	PKIVA101008-LGV01	CCFE-01-PPPP	PKIV281818-4KGV01
CSE-P	PKIVA101008-KGV01	CCFE-01-PPEMREMR	PKIV281818-2KGV01-2KGV07
CSE-PEP	PKIVA101008-KGV10	CCFE-01-LLPEMR	PKIV281818-2LGV01-KGV0-KGV07
CSE-EMR	PKIVA101008-KGV07	CCFE-01-PPPPP	PKIV281818-5KGV01
CSE-EMC	PKIVA101008-KGV09	CCFE-01-PPPPPP	PKIV281818-6KGV01
CSE PEA	PKIVA101008-KGV01/P	CCFE-01-PPPEMREMREMR	PKIV281818-3KGV01-3KGV07
CSE PEA-2M	PKIVA101008-KGV01/PM	CCFE-01-LPPEMR	PKIV311109-1LGV01-2KGV01-1KGV07
CSE-1Z	PKIVA101008-PGVA13	CCFE-01-LPPPEMR	PKIV311109-1LGV01-3KGV01-1KGV07
CSE-1I	No	CCFE-01-LPPPPEMR	PKIV411109-1LGV01-4KGV01-1KGV07
CSE-2I	PKIVA101008-PGVA2I	CCFE-01-LPPPPPEMR	PKIV411109-1LGV01-5KGV01-1KGV07
CSE-LL	PKIVA161008-2LGV01		
CSE-PP	PKIVA161008-2KGV01		
CSE-PL	PKIVA161008-LGV01-KGV01		
CSE-LLL	PKIVA211008-3LGV01		
CSE-PPP	PKIVA211008-3KGV01		
CSE-PPL	PKIVA211008-LGV01-2KGV01		
CSE-PLL	PKIVA211008-2LGV01- KGV01		

- Flexible modular system of local control stations is reached by application of different dimension types of enclosures and various control and indicating modules.
- Installation of control and indicating elements, as well as completing with cable glands is carried out according to customer's requirements.
- Bright colors of visual part of control and indicating modules.

MARKING

1Ex d e IIC T6...T5 Gb
1Ex d e mb IIC T6...T5 Gb
0Ex ia IIC T6...T5 Ga
Ex tb IIIC T85°C...100°C Db
Ex ia IIIC T85°C...100°C Da

MINING EQUIPMENT MARKING

PH2

CERTIFICATES AND PERMITS

GOST R ISO 9001-2015 (ISO 9001:2015)
TC RU C-RU.AA87.B.00244
РОСС RU.EX01.B00004
RU.ОС ВССТ 048-08.2017
Maritime Register Type Approval Certificate No. 17.12694.120
TU 3400-005-72453807-07
GAZPROM OJSC No. Г000.RU.1131.H00666

CODES

GOST 14254-96 (IEC 529-89)
GOST R IEC 60079-0-2011
GOST R IEC 60079-31-2010
GOST 30852.0-2002 (IEC 60079-0:1998)
GOST 30852.1-2002 (IEC 60079-1:1998)
GOST 30852.8-2002
GOST 30852.10-2002 (IEC 60079-11:1999)
GOST 30852.17-2002 (IEC 60079-18:1992)
GOST 30852.20-2002
Electrical Installation Code Ch. 7.3, Ch. 7.4
GOST IEC 61241-1-1-2011
OD 5.2-093-2004, TR CU 012/2011
GOST 12.2.007.0-75
GOST 24754-2013

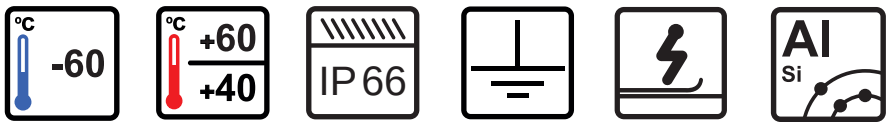
TECHNICAL CHARACTERISTICS

Installation
Category II for gas subgroup IIA, IIB, IIC; zones 0, 1, 2; Category III for dust, explosive dust atmospheres containing flying particles, conductive and non-conductive dust; Underground mines non-hazardous with gas (methane) and coal dust; Non-hazardous area; Dangerous production facilities

Maximum voltage, V
~380

Maximum current, A
~16

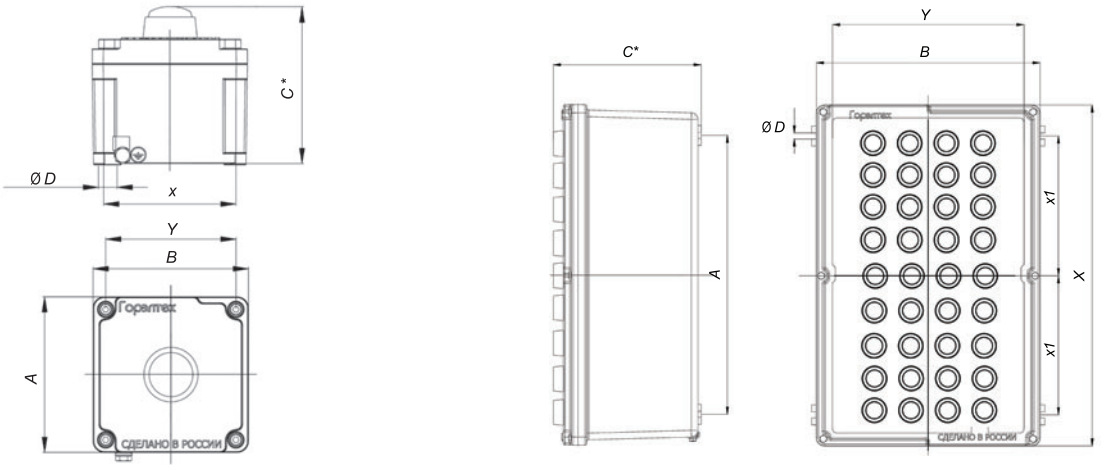
Climatic category
NF1 (upon request NF2, NF3, NF4, NF5, F1, F2, F3, F5, T1, T2, T3, T5, MU1, MU2, MU3, MU4, W2.13**, W5)



OPTIONS, ACCESSORIES AND VERSIONS

DESCRIPTION	MARKING
Lamp supply voltage	/12DC, /12AC, /16-36DC, /16-36AC, /220-380AC
Nameplate with inscription as per customer's specification	/NADPIS «_»
Nameplates with light reflecting coating	/SVP
Anti-condensation coating	/AP
Drain plug for condensate removal	/DKU
Breather plug for moisture removal	/VKU
Window	/O
External surface coating as per customer's specification	/RAL (code)
Earthquake-resistant version	/MSK-64
Marine version	/MORE

DESIGN PARAMETERS

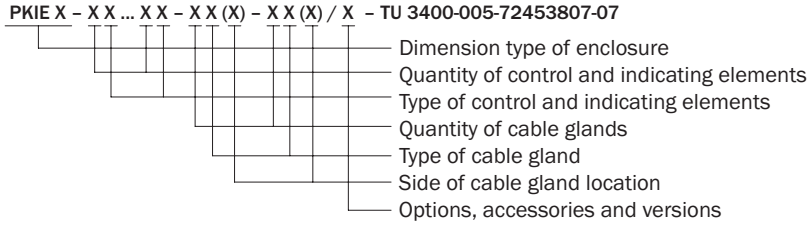


Dimensions of PKIE aluminum-silicon enclosures

Dimension type of enclosure	Max. quantity of control and indicating elements on enclosure cover*	Dimensions, mm							Mass of enclosure, kg
		external			mounting				
		A	B	C*	X	X1	Y	ØD	
PKIE111109	1	112	112	91	94	–	94	6,3	0,8
PKIE171109	3	172	112	91	154	–	94	6,3	1,1
PKIE141410	4	149,5	149,5	107	131	–	131	6,3	1,4
PKIE202012	6	201	201	129	180	–	180	6,5	2,5
PKIE301410	8	304,5	149,5	109	285	–	131	6,3	2,4
PKIE302314	15	305	231	140	285	–	211	6,3	3,9
PKIE342421	16	348	243	212	255	–	250	9	8,9
PKIE513321	35	511	336	207	418	–	338	9	15
PKIE663221	45	669	329	207	576	288	332	9	18,7
PKIE626221	95	622	622	208	530	265	616	9	29,5

**Quantity of installed elements depends on their dimensions and typical sizes of contact blocks. Exact quantity of the elements and dimension type of enclosure for a specific solution is determined during making an order. Production of modular explosion-proof local control stations according to customer's specification is possible.*

FORMATION OF MARKING



** If "dimension type of enclosure" is not specified, an enclosure optimal for the arrangement of given set of elements will be selected. Quantity of elements shall be specified in case of installation of several pieces of the same type.*

Example: PKIE171109-KGE01CH20-KGE07K20-KNV1(D) – TU 3400-005-72453807-07
- Dimension type of enclosure: PKIE171109
- Black momentary button, contacts 2NO: KGE01CH20
- Locking mushroom button, unlocking by rotation, contacts 2NO: KGE07K20
- Cable gland dimension type KNV1, side of location (D): KNV1(D)
- TU 3400-005-72453807-07.

Example: PKIE141410-3KGE01Z11-KGE01K20-KNV1(D) – TU 3400-005-72453807-07
- Dimension type of enclosure: PKIE141410
- Three green "Z" momentary buttons, buttons 1NO+1NC: 3KGE01Z11
- Red momentary button, contacts 2NO: KGE01K20
- Cable gland dimension type KNV1, side of location (D): KNV1(D)
- TU 3400-005-72453807-07.

Example: PKIE301410-KGE01Z20-LGE03Z220-LGE03K220-KGE08K11-KGE01K20-KGE01CH02-PGE1C-PGE2C-KNVM2M-20(D) –TU 3400-005-72453807-07
- Dimension type of enclosure: PKIE301410
- Green momentary button, contacts 2NO: KGE01320
- Green lamp, ~220-380 V: LGE03Z220
- Red lamp, ~220-380 V: LGE03K220
- Locking mushroom button, unlocking by rotation, contacts 1NO+1NC: KGE08K11
- Red momentary button, contacts 2NO: KGE01K20
- Black momentary button, contacts 2NC: KGE01CH02
- Three-position switch with zero position diagram 1C: PGE1C
- Three-position switch with zero position diagram 2C: PGE2C
- KNVM2M-20 cable gland for non-armored cable in metal hose, side of location (D): KNVM2M-20(D)
- TU 3400-005-72453807-07.

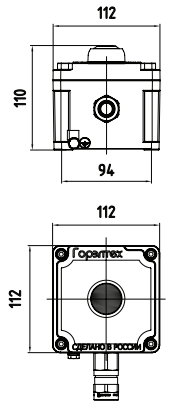
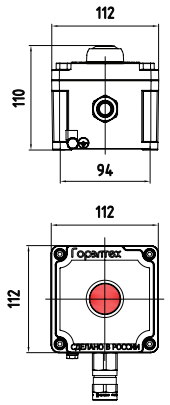
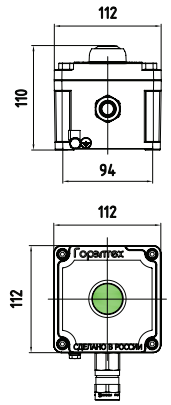
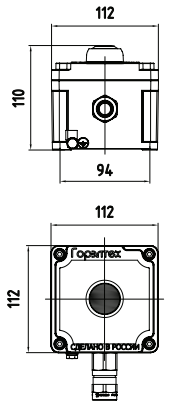
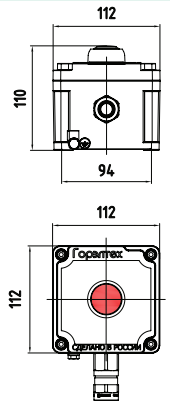
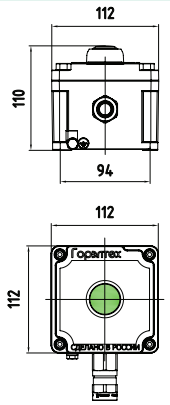
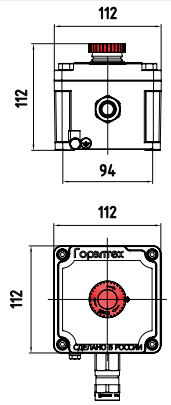
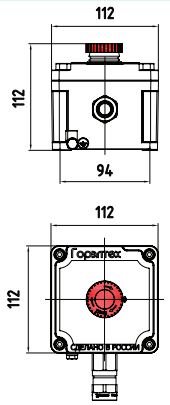
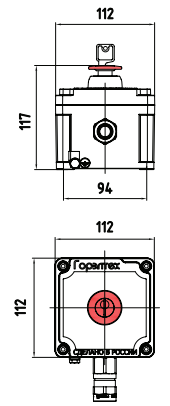
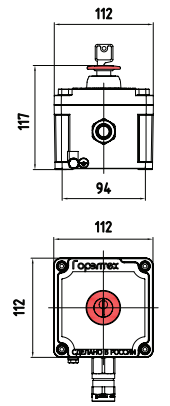
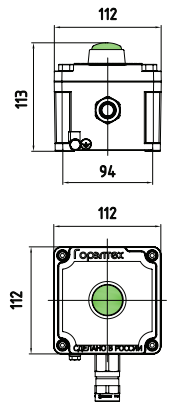
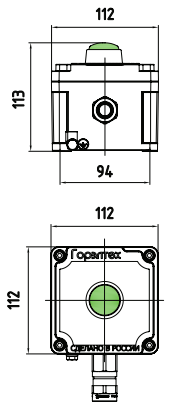
Table of names matching

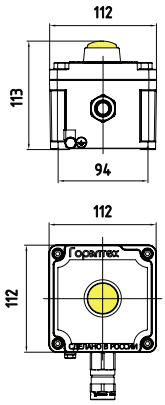
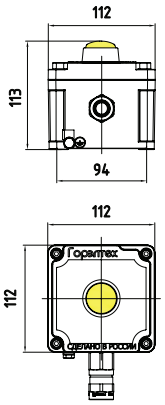
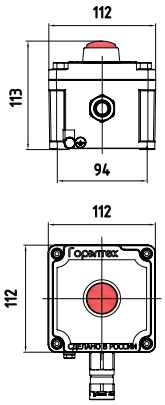
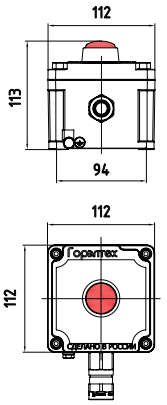
Previous international name "ZAVOD GORELTEX" Co. Ltd. TU 3400-005-72453807-07	The Customs Union name "ZAVOD GORELTEX" Co. Ltd. TU 3400-005-72453807-07
SHORVE	PKIE
SHORVE111108	PKIE111109
SHORVE171108	PKIE171109
SHORVE141410	PKIE141410
SHORVE202012	PKIE202012
SHORVE301410	PKIE301410
SHORVE302310	PKIE302310
SHORVE302318	PKIE302318
SHORVE473018	PKIE513321
SHORVE-Y623018	PKIE663221
SHORVE-Y606018	PKIE626221

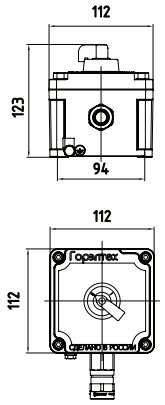
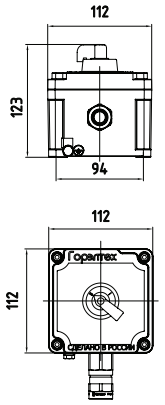
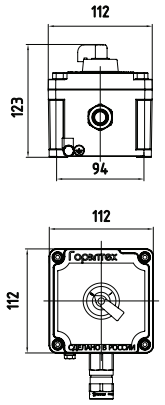
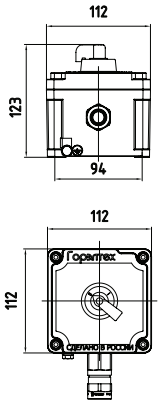
Control and indicating elements	refer to p.377
Recommended cable glands KNV, KOV, KNVTN, KNVTV, KNVM, KNVZ	refer to p.393

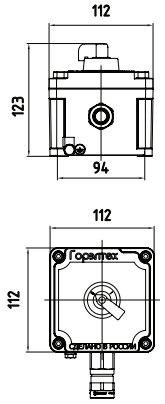
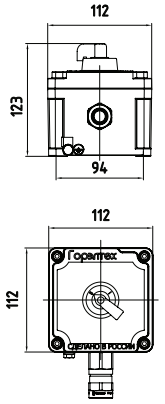
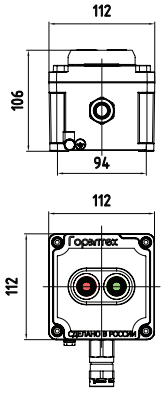
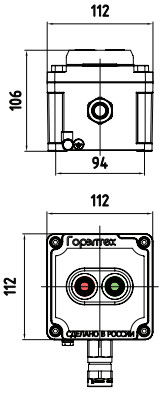
PKIE finished standard devices

FINISHED STANDARD MODULAR EXED LOCAL CONROL STATIONS WITH ONE CONTROL/INDICATING ELEMENT

PKIE01	PKIE02	PKIE03	PKIE04
			
• Dimensions of PKIE enclosure, mm: 112x112x91; • KGE01CH11 black momentary button, 1NO+1NC – 1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1 kg	• Dimensions of PKIE enclosure, mm: 112x112x91; • KGE01K11 red momentary button, 1NO+1NC – 1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1 kg	• Dimensions of PKIE enclosure, mm: 112x112x91; • KGE01Z11 green momentary button, 1NO+1NC – 1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1 kg	• Dimensions of PKIE enclosure, mm: 112x112x91; • KGE01CH11 black momentary button, 1NO+1NC – 1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1 kg
PKIE05	**PKIE06**	**PKIE07**	**PKIE08**
			
• Dimensions of PKIE enclosure, mm: 112x112x91; • KGE01K11 red momentary button, 1NO+1NC – 1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1 kg	• Dimensions of PKIE enclosure, mm: 112x112x91; • KGE01Z11 green momentary button, 1NO+1NC – 1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1 kg	• Dimensions of PKIE enclosure, mm: 112x112x91; • KGE07K11 red locking mushroom button, unlocking by rotation, 1NO+1NC – 1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1 kg	• Dimensions of PKIE enclosure, mm: 112x112x91; • KGE07K11 red locking mushroom button, unlocking by rotation, 1NO+1NC – 1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1 kg
PKIE09	**PKIE10**	**PKIE11**	**PKIE12**
			
• Dimensions of PKIE enclosure, mm: 112x112x91; • KGE09K11 red locking mushroom button, unlocking with key, 1NO+1NC – 1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1 kg	• Dimensions of PKIE enclosure, mm: 112x112x91; • KGE09K11 red locking mushroom button, unlocking with key, 1NO+1NC – 1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1 kg	• Dimensions of PKIE enclosure, mm: 112x112x91; • LGE03Z220 green LED signal lamp – 1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1 kg	• Dimensions of PKIE enclosure, mm: 112x112x91; • LGE03Z220 green LED signal lamp – 1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1 kg

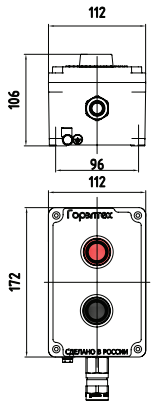
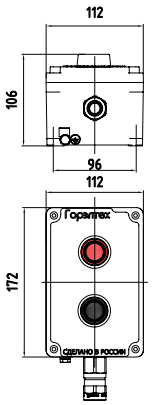
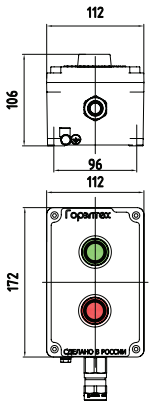
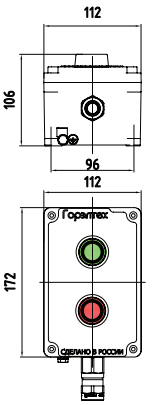
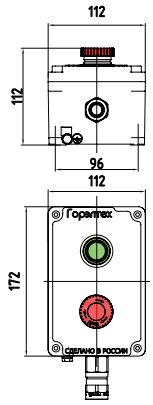
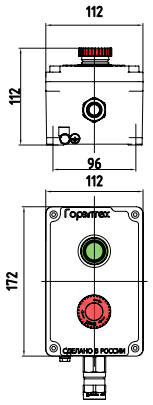
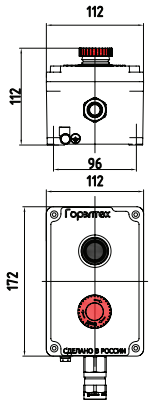
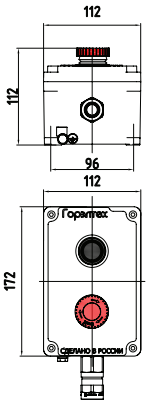
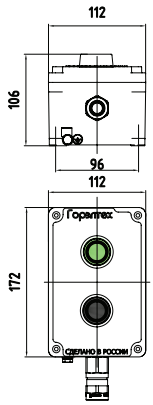
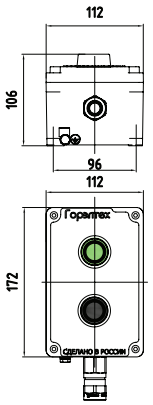
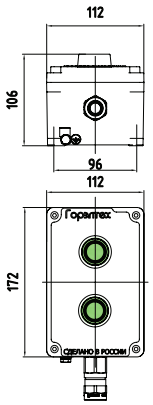
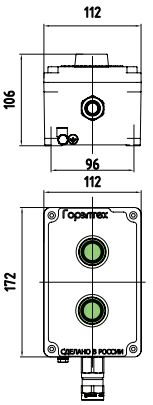
PKIE13	PKIE14	PKIE15	PKIE16
			
• Dimensions of PKIE enclosure, mm: 112x112x91; • LGE03ZH220 yellow LED signal lamp – 1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1 kg	• Dimensions of PKIE enclosure, mm: 112x112x91; • LGE03ZH220 yellow LED signal lamp – 1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1 kg	• Dimensions of PKIE enclosure, mm: 112x112x91; • LGE03K220 red LED signal lamp – 1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1 kg	• Dimensions of PKIE enclosure, mm: 112x112x91; • LGE03K220 red LED signal lamp – 1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1 kg

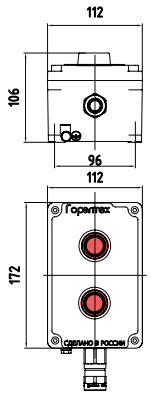
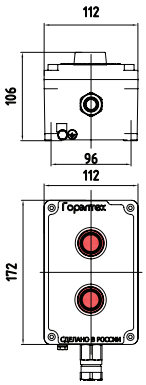
PKIE17	PKIE18	PKIE19	PKIE20
			
• Dimensions of PKIE enclosure, mm: 112x112x91; • Switch PGE2N diagram 2I – 1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1 kg	• Dimensions of PKIE enclosure, mm: 112x112x91; • Switch PGE2N diagram 2I – 1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1 kg	• Dimensions of PKIE enclosure, mm: 112x112x91; • Switch PGE13 diagram 1Z – 1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1 kg	• Dimensions of PKIE enclosure, mm: 112x112x91; • Switch PGE13 diagram 1Z – 1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1 kg

PKIE21	PKIE22	PKIE23	PKIE24
			
• Dimensions of PKIE enclosure, mm: 112x112x91; • Switch PGE1C diagram 1C – 1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1 kg	• Dimensions of PKIE enclosure, mm: 112x112x91; • Switch PGE1C diagram 1C – 1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1 kg	• Dimensions of PKIE enclosure, mm: 112x112x91; • Double red and green button KGE02KZ11 (1NO+1NC) – 1pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1 kg	• Dimensions of PKIE enclosure, mm: 112x112x91; • Double red and green button KGE02KZ11 (1NO+1NC) – 1pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1 kg

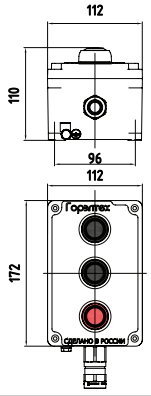
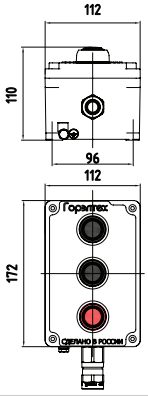
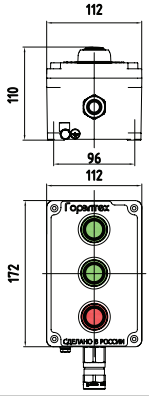
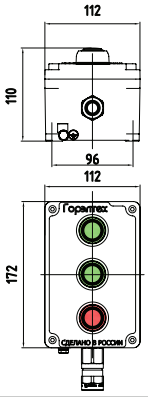
PKIE finished standard devices

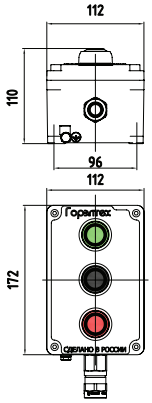
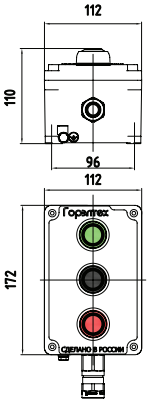
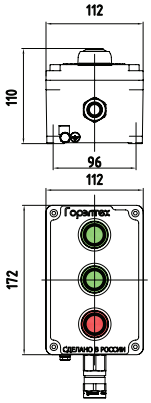
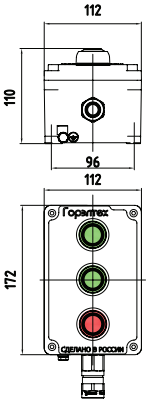
FINISHED STANDARD MODULAR EXED LOCAL CONROL STATIONS WITH TWO CONTROL/INDICATING ELEMENTS

PKIE25	PKIE26	PKIE27	PKIE28
			
• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • KGE01CH11 black momentary button, 1NO+1NC – 1 pc.; • KGE01K11 red momentary button, 1NO+1NC – 1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1,3 kg	• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • KGE01CH11 black momentary button, 1NO+1NC – 1 pc.; • KGE01K11 red momentary button, 1NO+1NC – 1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1,3 kg	• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • KGE01Z11 green momentary button, 1NO+1NC – 1 pc.; • KGE01K11 red momentary button, 1NO+1NC – 1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1,3 kg	• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • KGE01Z11 green momentary button, 1NO+1NC – 1 pc.; • KGE01K11 red momentary button, 1NO+1NC – 1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1,3 kg
PKIE29	**PKIE30**	**PKIE31**	**PKIE32**
			
• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • KGE01Z11 green momentary button, 1NO+1NC – 1 pc.; • KGE08K11 red locking mushroom button, unlocking by rotation, 1NO+1NC – 1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1,3 kg	• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • KGE01Z11 green momentary button, 1NO+1NC – 1 pc.; • KGE08K11 red locking mushroom button, unlocking by rotation, 1NO+1NC – 1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1,3 kg	• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • KGE01CH11 black momentary button, 1NO+1NC – 1 pc.; • KGE08K11 red locking mushroom button, unlocking by rotation, 1NO+1NC – 1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1,3 kg	• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • KGE01CH11 black momentary button, 1NO+1NC – 1 pc.; • KGE08K11 red locking mushroom button, unlocking by rotation, 1NO+1NC – 1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1,3 kg
PKIE33	**PKIE34**	**PKIE35**	**PKIE36**
			
• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • KGE01CH11 black momentary button, 1NO+1NC – 1 pc.; • LGE03Z220 green LED signal lamp – 1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1,3 kg	• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • KGE01CH11 black momentary button, 1NO+1NC – 1 pc.; • LGE03Z220 green LED signal lamp – 1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1,3 kg	• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • KGE01Z11 green momentary button, 1NO+1NC – 1 pc.; • LGE03Z220 green LED signal lamp – 1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1,3 kg	• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • KGE01Z11 green momentary button, 1NO+1NC – 1 pc.; • LGE03Z220 green LED signal lamp – 1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1,3 kg

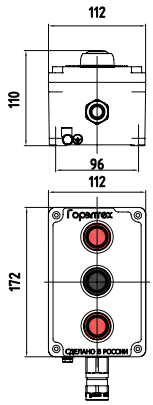
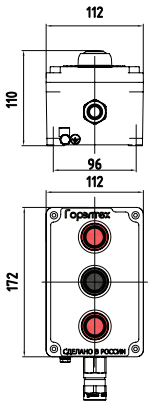
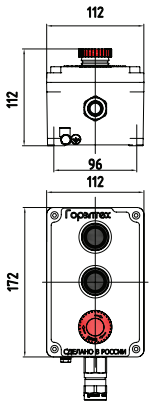
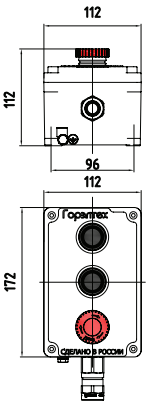
PKIE37	PKIE38
	
• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • KGE01K11 red momentary button, 1NO+1NC – 1 pc.; • LGE03K220 red LED signal lamp – 1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1,3 kg	• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • KGE01K11 red momentary button, 1NO+1NC – 1 pc.; • LGE03K220 red LED signal lamp – 1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1,3 kg

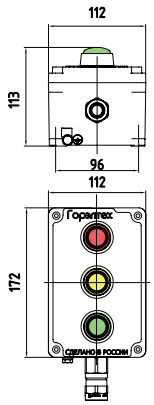
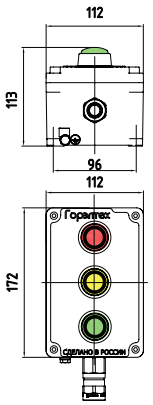
FINISHED STANDARD MODULAR EXED LOCAL CONROL STATIONS WITH THREE CONTROL/INDICATING ELEMENTS

PKIE39	PKIE40	PKIE41	PKIE42
			
• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • KGE01CH11 black momentary button, 1NO+1NC – 1 pc.; • KGE01K11 red momentary button, 1NO+1NC – 1 pc.; • KGE01CH11 black momentary button, 1NO+1NC – 1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1,5 kg	• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • KGE01CH11 black momentary button, 1NO+1NC – 1 pc.; • KGE01K11 red momentary button, 1NO+1NC – 1 pc.; • KGE01CH11 black momentary button, 1NO+1NC – 1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1,5 kg	• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • KGE01Z11 green momentary button, 1NO+1NC – 1 pc.; • KGE01K11 red momentary button, 1NO+1NC – 1 pc.; • KGE01Z11 green momentary button, 1NO+1NC – 1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1,5 kg	• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • KGE01Z11 green momentary button, 1NO+1NC – 1 pc.; • KGE01K11 red momentary button, 1NO+1NC – 1 pc.; • KGE01Z11 green momentary button, 1NO+1NC – 1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1,5 kg

PKIE43	PKIE44	PKIE45	PKIE46
			
• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • LGE03Z220 green LED signal lamp – 1 pc.; • KGE01CH11 black momentary button, 1NO+1NC – 1 pc.; • KGE01K11 red momentary button, 1NO+1NC – 1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1,5 kg	• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • LGE03Z220 green LED signal lamp – 1 pc.; • KGE01CH11 black momentary button, 1NO+1NC – 1 pc.; • KGE01K11 red momentary button, 1NO+1NC – 1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1,5 kg	• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • LGE03Z220 green LED signal lamp – 1 pc.; • KGE01Z11 green momentary button, 1NO+1NC – 1 pc.; • KGE01K11 red momentary button, 1NO+1NC – 1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1,5 kg	• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • LGE03Z220 green LED signal lamp – 1 pc.; • KGE01Z11 green momentary button, 1NO+1NC – 1 pc.; • KGE01K11 red momentary button, 1NO+1NC – 1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1,5 kg

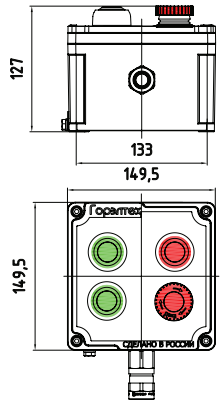
PKIE finished standard devices

PKIE47	PKIE48	PKIE49	PKIE50
			
• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • LGE03K220 red LED signal lamp – 1 pc.; • KGE01CH11 black momentary button, 1NO+1NC – 1 pc.; • KGE01K11 red momentary button, 1NO+1NC – 1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1,5 kg	• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • LGE03K220 red LED signal lamp – 1 pc.; • KGE01CH11 black momentary button, 1NO+1NC – 1 pc.; • KGE01K11 red momentary button, 1NO+1NC – 1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1,5 kg	• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • KGE01CH11 black momentary button, 1NO+1NC – 1 pc.; • KGE08K11 red locking mushroom button, unlocking by rotation, 1NO+1NC – 1 pc.; • KGE01CH11 black momentary button, 1NO+1NC – 1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1,5 kg	• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • KGE01CH11 black momentary button, 1NO+1NC – 1 pc.; • KGE08K11 red locking mushroom button, unlocking by rotation, 1NO+1NC – 1 pc.; • KGE01CH11 black momentary button, 1NO+1NC – 1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1,5 kg

PKIE51	PKIE52
	
• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • LGE03K220 red LED signal lamp – 1 pc.; • LGE03ZH220 yellow LED signal lamp – 1 pc.; • LGE03Z220 green LED signal lamp – 1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1,5 kg	• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • LGE03K220 red LED signal lamp – 1 pc.; • LGE03ZH220 yellow LED signal lamp – 1 pc.; • LGE03Z220 green LED signal lamp – 1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1,5 kg

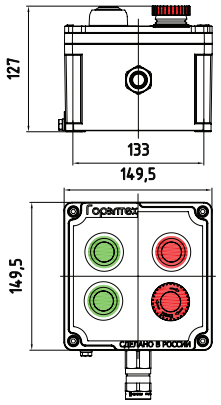
FINISHED STANDARD MODULAR EXED LOCAL CONROL STATIONS WITH FOUR CONTROL/INDICATING ELEMENTS

PKIE53



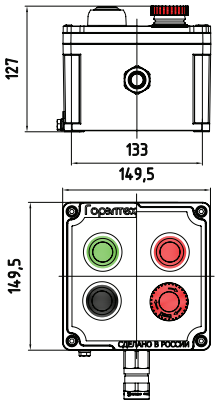
- Dimensions of PKIE enclosure, mm: 149,5x149,5x107;
- LGE03Z220 green LED signal lamp – 1 pc.;
- KGE01K11 red momentary button, 1NO+1NC – 1 pc.;
- KGE01Z11 green momentary button, 1NO+1NC – 1 pc.;
- KGE09K11 red locking mushroom button, unlocking with key, 1NO+1NC – 1 pc.;
- KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.;
- Mass 1,9 kg

PKIE54



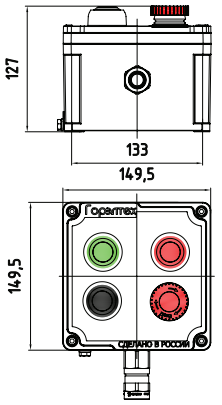
- Dimensions of PKIE enclosure, mm: 149,5x149,5x107;
- LGE03Z220 green LED signal lamp – 1 pc.;
- KGE01K11 red momentary button, 1NO+1NC – 1 pc.;
- KGE01Z11 green momentary button, 1NO+1NC – 1 pc.;
- KGE09K11 red locking mushroom button, unlocking with key, 1NO+1NC – 1 pc.;
- KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.;
- Mass 1,9 kg

PKIE55



- Dimensions of PKIE enclosure, mm: 149,5x149,5x107;
- LGE03Z220 green LED signal lamp – 1 pc.;
- KGE01K11 red momentary button, 1NO+1NC – 1 pc.;
- KGE01CH11 black momentary button, 1NO+1NC – 1 pc.;
- KGE09K11 red locking mushroom button, unlocking with key, 1NO+1NC – 1 pc.;
- KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.;
- Mass 1,9 kg

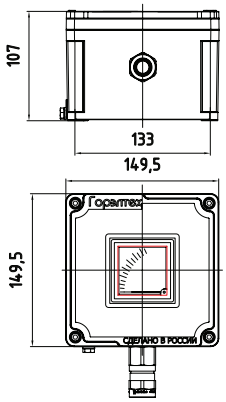
PKIE56



- Dimensions of PKIE enclosure, mm: 149,5x149,5x107;
- LGE03Z220 green LED signal lamp – 1 pc.;
- KGE01K11 red momentary button, 1NO+1NC – 1 pc.;
- KGE01CH11 black momentary button, 1NO+1NC – 1 pc.;
- KGE09K11 red locking mushroom button, unlocking with key, 1NO+1NC – 1 pc.;
- KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.;
- Mass 1,9 kg

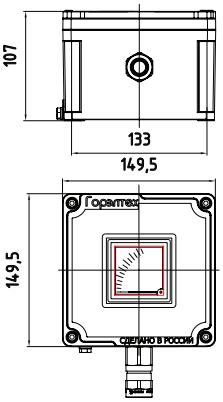
FINISHED STANDARD MODULAR EXED LOCAL CONROL STATIONS WITH MEASURING INSTRUMENTS

PKIE57



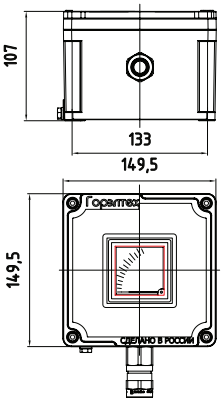
• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • Ammeter (scale...) -1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1,9 kg

PKIE58



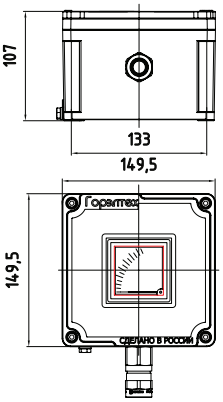
• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • Ammeter (scale...) -1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1,9 kg

PKIE59



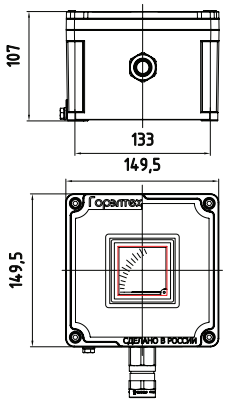
• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • Voltmeter (scale...) -1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1,9 kg

PKIE60



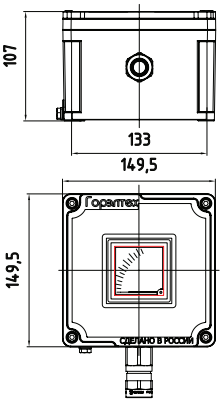
• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • Voltmeter (scale...) -1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1,9 kg

PKIE61



• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • Ohmmeter (scale...) -1 pc.; • KNE1M cable gland for non-armored cable, cable diameter 6-14 mm* - 1 pc.; • Mass 1,9 kg

PKIE62



• Dimensions of PKIE enclosure, mm: 149,5x149,5x107; • Ohmmeter (scale...) -1 pc.; • KNE2M cable gland for non-armored cable, cable diameter 14-20 mm* - 1 pc.; • Mass 1,9 kg

• Flexible modular system of local control stations is reached by application of different dimension types of enclosures and various control and indicating modules.

• One of the advantages of PKIE-P local control stations are bright colors of visual part of control and indicating modules – buttons, lamps etc.

• Installation of control and indicating elements, as well as completing with cable glands is carried out according to customer's requirements.

MARKING

1Ex d e IIC T6...T5 Gb
0Ex ia IIC T6...T5 Ga
1Ex d e mb IIC T6...T5 Gb
Ex tb IIIC T 85°C...100°C Db
Ex ia IIIC T 85°C...100°C Da

MINING EQUIPMENT MARKING

PH1, PH2

CERTIFICATES AND PERMITS

GOST R ISO 9001-2015 (ISO 9001:2015)
TC RU C-RU.AA87.B.00244
POCC RU.EX01.B00004
Maritime Register upon request (check cost and terms of Type Approval Certificate issuance with manager)
TU 3400-005-72453807-07
GAZPROM OJSC No. Г000.RU.1131.H00666

CODES

GOST 12.2.007.0-75
GOST R IEC 60079-0-2011
GOST R IEC 60079-31-2010
GOST 14254-96 (IEC 529-89)
GOST 30852.0-2002 (IEC 60079-0:1998)
GOST 30852.1-2002 (IEC 60079-1:1998)
GOST 30852.8-2002
GOST 30852.17-2002 (IEC 60079-18:1992)
GOST 30852.20-2002
GOST 30852.10-2002 (IEC 60079-11:1999)
GOST IEC 61241-1-1-2011
TR CU 012/2011
Electrical Installation Code Ch. 7.3, Ch. 7.4
GOST 24754-2013

TECHNICAL CHARACTERISTICS

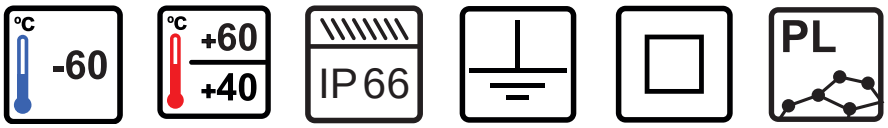
Installation
Category II for gas subgroup IIA, IIB, IIC; zones 0, 1, 2; Category III for dust, explosive dust atmospheres containing flying particles, conductive and non-conductive dust; Underground mines non-hazardous with gas (methane) and coal dust; Non-hazardous area; Dangerous production facilities

Maximum voltage, V
~380

Maximum current, A
16

Cable glands arrangement
According to customer's specification. Cable glands with taper thread are not used for this type of local control stations

Climatic category
NF1 (upon request NF2, NF3, NF4, NF5, F1, F2, F3, F5, T1, T2, T3, T5, MU1, MU2, MU3, MU4, W2.13**, W5)

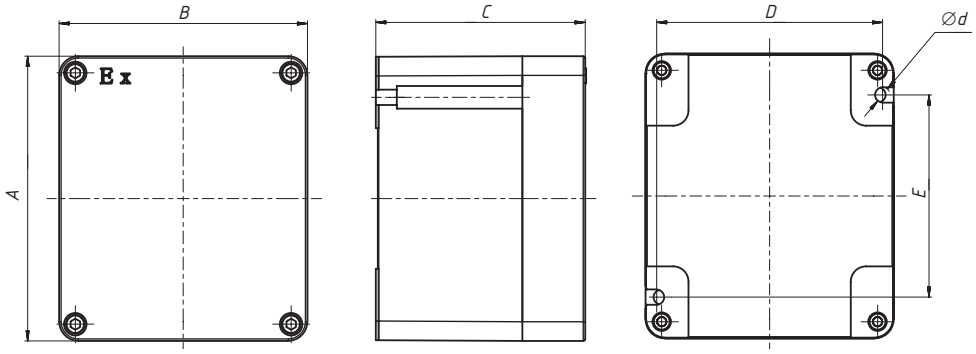


OPTIONS, ACCESSORIES AND VERSIONS

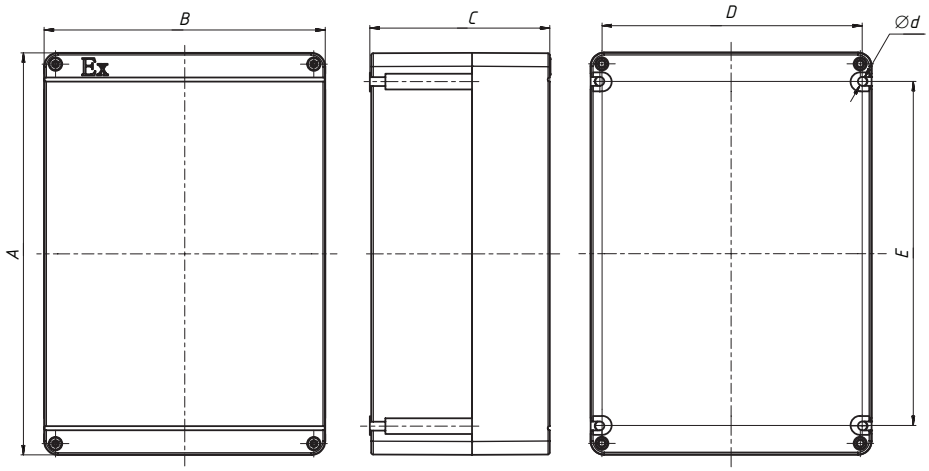
DESCRIPTION	MARKING
Lamp supply voltage	/12DC, /12AC, /16-36DC, /16-36AC, /220-380AC
Nameplates with light reflecting coating	/SVP
Nameplate with inscription as per cus-tomer's specification	/NADPIS «_»
Drain plug for condensate removal	/DKU
Breather plug for moisture removal	/VKU
Window	/O
Fastening with mounting plates	/PLANKA*
Electric shock protection class II	/KZCH2

**For overall and mounting dimensions of PKIE-P local control stations with option /PLATE refer to "Terminal boxes" section p.9.*

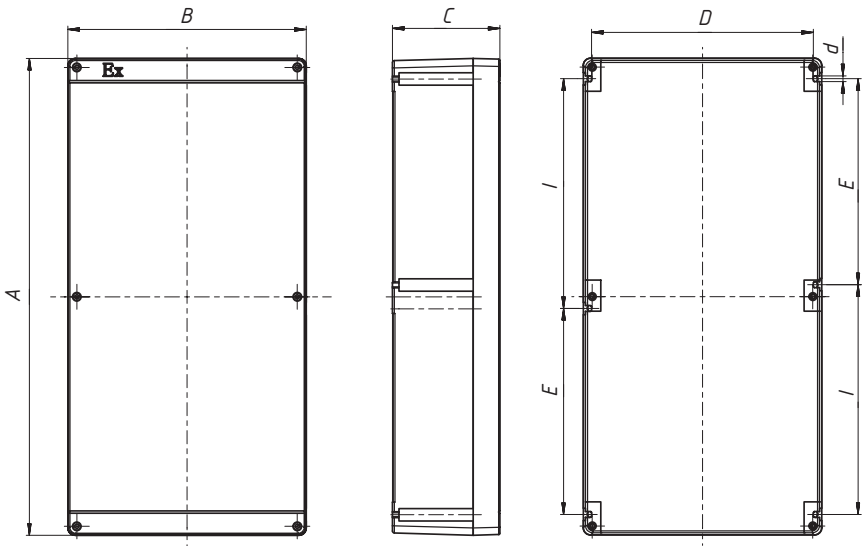
DESIGN PARAMETERS



PKIE-P100809, PKIE-P141210, PKIE-P161609



PKIE-P170809, PKIE-P211311, PKIE-P221512, PKIE-P221515, PKIE-P261812, PKIE-P302113, PKIE-P332212, PKIE-P332215, PKIE-P362216, PKIE-P363616, PKIE-P423019



PKIE-P723616, PKIE-P723622, PKIE-P723624

Dimensions of PKIE-P armored polyester enclosures

Dimension type of enclosure	Max. quantity of control and indicating elements on en-closure cover *	A	B	C	D	d	E	I	Mass, kg
PKIE-P100809	1	105	85	96	73	6	70	-	0,6
PKIE-P170809	3	175	85	95	73	4,8	138	-	0,6
PKIE-P141210	3	148,5	129,5	109	118	8	105,5	-	1,2
PKIE-P161609	4	160	160	92,5	148	8	19	-	1,8
PKIE-P211311	shall be specified when ordering	210	129,5	106,5	116	7	166	-	1,5
PKIE-P221512	6	224,5	149,5	121	135	6,6	182	-	1,7
PKIE-P221515	6	224,5	149,5	151	135	6,6	182	-	1,8
PKIE-P261812	9	259,5	180	121	163,5	6,6	217	-	2,0
PKIE-P302111	10	299	209	107	195	6,6	254	-	2,4
PKIE-P302113	10	299	209	134	195	6,6	254	-	2,9
PKIE-P332212	16	329,5	224	123	210	6,6	286	-	3,0
PKIE-P332215	16	329,5	224	153	210	6,6	285	-	3,1
PKIE-P362216	18	360	220	160,5	203	8,8	300	-	4,5
PKIE-P363616	27	360	360	161,5	342	8,8	297	-	6,0
PKIE-P423019	25	420	300	187,5	287,5	8,8	362	-	6,5
PKIE-P723616	shall be specified when ordering	720	360	162	335	8,8	311	347	12,5
PKIE-P723622	shall be specified when ordering	720	360	221	331	8,8	311	347	13,5
PKIE-P723624	shall be specified when ordering	720	360	243	332	8,8	311	347	13,5

**Quantity of installed elements depends on their dimensions and typical sizes of contact blocks. Exact quantity of the elements and dimension type of enclosure for a specific solution is determined during making an order. Production of modular explosion-proof local control stations according to customer's specification is possible.*

CABLE GLANDS

Cable glands with taper thread Rc GOST 6211, NPT are not used in PKIE-P explosion-proof local control stations.

Goreltex manufactures cable glands for all types of connection with various types of thread. Wide range of produced cable glands allows to connect various types of non-armored and armored cables, braided cables, metal hoses and pipe conduit to enclosures of electrotechnical apparatuses.

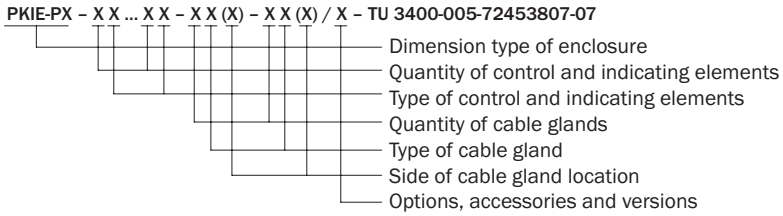
*Maximum recommended number of cable glands on sides of boxes (A – long, B – short)**

Cable gland size code	G, GOST 6357	M, GOST 24705	PKIE-P100809		PKIE-P141210		PKIE-P161609		PKIE-P170809		PKIE-P211311		PKIE-P221512	
			A G/M	B G/M	A G/M	B G/M	A G/M	B G/M	A G/M	B G/M	A G/M	B G/M	A G/M	B G/M
01	3/8”	M16X1,5	1/1	2/2	5/5	5/5	5/5	4/4	5/5	2/2	7/7	6/6	10/10	6/6
1	1/2”	M20X1,5	1/1	1/1	4/4	3/3	3/3	3/3	3/4	1/1	5/5	4/4	8/8	6/6
2	3/4”	M25X1,5	1/1	1/1	2/2	2/2	2/2	2/2	2/2	1/1	3/3	2/2	5/5	3/3
3	1”	M32X1,5	–	1/1	1/1	1/1	2/2	1/1	2/2	1/1	3/3	1/1	3/3	2/2
4	1 1/4”	M40X1,5	–	–	1/1	–	–	–	–	–	2/2	1/1	2/2	1/1
5	1 1/2”	M50X1,5	–	–	–	–	–	–	–	–	–	–	1/1	1/1
6	2”	M63X1,5	–	–	–	–	–	–	–	–	–	–	–	–
7	2 1/2”	M75X1,5	–	–	–	–	–	–	–	–	–	–	–	–
8	3”	M90X1,5	–	–	–	–	–	–	–	–	–	–	–	–

Cable gland size code	G, GOST 6357	M, GOST 24705	PKIE-P221515		PKIE-P261812		PKIE-P302113		PKIE-P332212		PKIE-P332215		PKIE-P362216	
			A G/M	B G/M	A G/M	B G/M	A G/M	B G/M	A G/M	B G/M	A G/M	B G/M	A G/M	B G/M
01	3/8”	M16X1,5	15/15	10/10	12/12	9/9	12/12	10/10	16/16	12/12	27/27	18/18	24/24	15/15
1	1/2”	M20X1,5	12/12	9/9	10/10	8/8	9/9	8/8	13/13	10/10	21/21	15/15	21/21	13/13
2	3/4”	M25X1,5	6/6	5/5	5/5	4/4	6/6	4/4	7/8	5/5	12/12	9/9	12/12	8/8
3	1”	M32X1,5	6/6	4/4	4/4	3/3	4/4	3/3	5/5	4/4	10/10	6/6	10/10	6/6
4	1 1/4”	M40X1,5	2/3	2/2	3/3	2/2	2/2	2/2	4/4	3/3	5/5	3/4	5/5	3/3
5	1 1/2”	M50X1,5	2/2	1/1	1/1	1/1	–	–	2/2	2/2	3/3	2/2	3/3	2/2
6	2”	M63X1,5	1/1	1/1	–	–	–	–	–	–	3/3	2/2	3/3	2/1
7	2 1/2”	M75X1,5	1/1	1/1	–	–	–	–	–	–	2/2	1/1	2/2	1/1
8	3”	M90X1,5	–	–	–	–	–	–	–	–	–	–	–	–

Cable gland size code	G, GOST 6357	M, GOST 24705	PKIE-P363616		PKIE-P423019		PKIE-P723616		PKIE-P723622		PKIE-P723624	
			A G/M	B G/M	A G/M	B G/M	A G/M	B G/M	A G/M	B G/M	A G/M	B G/M
01	3/8”	M16X1,5	27/27	33/33	37/38	30/30	48/48	30/30	92/92	51/51	92/92	51/51
1	1/2”	M20X1,5	21/21	27/27	29/29	22/22	39/39	27/27	72/72	40/40	72/75	40/43
2	3/4”	M25X1,5	12/14	16/16	18/18	15/15	24/24	15/16	46/46	26/26	46/46	26/26
3	1”	M32X1,5	10/10	12/12	12/12	10/10	18/18	12/12	30/30	18/18	30/30	18/18
4	1 1/4”	M40X1,5	6/6	7/7	8/8	7/7	9/11	6/7	22/22	12/12	22/22	12/12
5	1 1/2”	M50X1,5	4/3	4/4	5/5	4/4	6/6	4/4	14/14	8/8	14/14	8/8
6	2”	M63X1,5	3/3	3/3	4/4	3/3	5/5	3/3	12/10	6/6	12/11	6/6
7	2 1/2”	M75X1,5	2/2	3/3	3/3	2/2	4/4	3/3	6/6	3/3	6/6	3/3
8	3”	M90X1,5	–	–	–/2	–/2	–	–	–/4	–/2	–/4	–/2

FORMATION OF MARKING



** If "dimension type of enclosure" is not specified, an enclosure optimal for the arrangement of given set of elements will be selected. Quantity of elements shall be specified in case of installation of several pieces of the same type.*

Example: **PKIE-P161609-2KGE01K20-KGE07K20-2KNEP01(C)-TU 3400-005-72453807-07**

– Dimension type of enclosure: PKIE-P161609
– Two "2" black momentary buttons, contacts 2NO: KGE01K20
– Locking mushroom button, unlocking by rotation, contacts 2NO: KGE07K20
– Two "2" cable glands, dimension type KNEP01, side of location (C): 2KNEP01(C)
– TU 3400-005-72453807-07.

Table of names matching

Previous international name "ZAVOD GORELTEX" Co. Ltd. TU 3400-005-72453807-07	The Customs Union name "ZAVOD GORELTEX" Co. Ltd. TU 3400-005-72453807-07
SHORVE-KP	PKIE-P
SHORVE-KP141210	PKIE-P141210
SHORVE-KP161609	PKIE-P161609
SHORVE-KP170809	PKIE-P170809
SHORVE-KP221512	PKIE-P221512
SHORVE-KP221515	PKIE-P221515
SHORVE-KP261812	PKIE-P261812
SHORVE-KP302113	PKIE-P302113
SHORVE-KP332212	PKIE-P332212
SHORVE-KP332215	PKIE-P332215
SHORVE-KP363616	PKIE-P363616
SHORVE-KP423019	PKIE-P423019
SHORVE-KP723616	PKIE-P723616
SHORVE-KP723622	PKIE-P723622
SHORVE-KP723624	PKIE-P723624

Control and indicating elements	refer to p.377
Cable glands (cable glands with taper thread are not used)	refer to p.393

• Flexible modular system of local control stations is reached by application of different dimension types of enclosures and various control and indicating modules.

• Bright colors of visual part of control and indicating modules – buttons, lamps etc.

• Installation of control and indicating elements, as well as completing with cable glands is carried out according to customer's requirements.

MARKING

1Ex d e IIC T6...T5 Gb
0Ex ia IIC T6...T5 Ga
1Ex d e mb IIC T6...T5 Gb
Ex tb IIIC T85°C...100°C Db
Ex ia IIIC T85°C...100°C Da

MINING EQUIPMENT MARKING

PH2

CERTIFICATES AND PERMITS

GOST R ISO 9001-2015 (ISO 9001:2015)
TC RU C-RU.AA87.B.00244
POCC RU.EX01.B00004
Maritime Register Type Approval Certificate No. 16.03667.315
TU 3400-005-72453807-07
GAZPROM OJSC No. Г000.RU.1131.H00666

CODES

GOST 14254-96 (IEC 529-89)
GOST R IEC 60079-31-2010
GOST 30852.0-2002 (IEC 60079-0:1998)
GOST 30852.1-2002 (IEC 60079-1:1998)
GOST 30852.8-2002
GOST 30852.10-2002 (IEC 60079-11:1999)
GOST 30852.17-2002 (IEC 60079-18:1992)
TR CU 012/2011, Electrical Installation Code Ch. 7.3, Ch. 7.4
GOST IEC 61241-1-1-2011, OD 5.2-093-2004,
GOST 30852.20-2002
GOST 24754-2013
GOST 12.2.007.0-75

TECHNICAL CHARACTERISTICS

Installation

Category II for gas subgroup IIA, IIB, IIC; zones 0, 1, 2;
Category III for dust, explosive dust atmospheres containing flying particles, conductive and non-conductive dust;
Underground mines non-hazardous with gas (methane) and coal dust;
Non-hazardous area;
Dangerous production facilities

Maximum voltage, V

~380

Maximum current, A

16

Cable glands arrangement

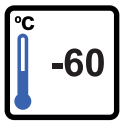
According to customer's specification. Cable glands with taper thread are not used for this type of local control stations

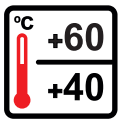
Climatic category

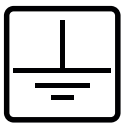
NF1 (upon request NF2, NF3, NF4, NF5, F1, F2, F3, F5, T1, T2, T3, T5, MU1, MU2, MU3, MU4, W2.13**, W5)

OPTIONS, ACCESSORIES AND VERSIONS

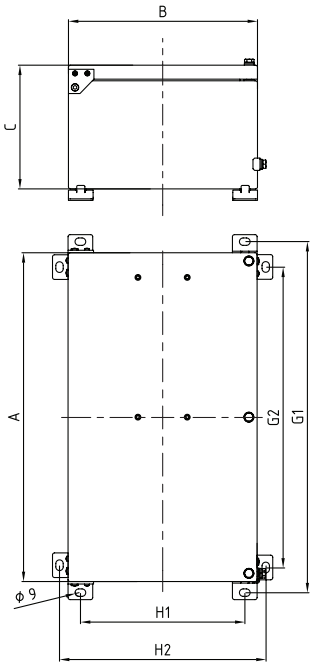
DESCRIPTION	MARKING
Lamp supply voltage	/12DC, /12AC, /16-36DC, /16-36AC, /220-380AC
Nameplate with inscription as per cus-tomer's specification	/NADPIS «_»
Nameplates with light reflecting coating	/SVP
Drain plug for condensate removal	/DKU
Breather plug for moisture removal	/VKU
Window	/O
Marine version	/MORE







DESIGN PARAMETERS



Dimensions of PKIE-N stainless steel 08X18H10 enclosures

Dimension type of enclosure	Max. quantity of control and indicating elements on enclosure cover *	External dimensions, mm			Fastening, mm				Enclosure mass, kg
					Method 1		Method 2		
		A	B	C	G1	H1	G2	H2	
PKIE-N111109	1	110	110	90	80	137	137	80	1,50
PKIE-N151512	3	150	150	120	120	174	174	120	2,00
PKIE-N171109	3	176	116	95	146	143	203	86	1,90
PKIE-N202012	9	200	200	120	227	170	170	227	2,60
PKIE-N231815	9	230	180	150	200	204	254	150	3,39
PKIE-N232315	6	230	230	150	200	254	254	200	4,04
PKIE-N303012	16	300	300	120	327	270	270	327	4,60
PKIE-N322312	12	320	230	120	260	262	352	170	4,99
PKIE-N342315	12	340	230	150	280	262	372	170	5,60
PKIE-N343415	18	340	340	150	280	372	372	280	7,56
PKIE-N402315	13	400	230	150	340	262	432	170	6,43
PKIE-N453415	27	450	340	150	390	372	482	280	9,56
PKIE-N534315	39	530	430	150	470	462	562	370	13,27
PKIE-N606025	93	600	600	250	627	570	570	627	22,2
PKIE-N806030	127	800	600	300	827	570	770	627	29,9
PKIE-N1008030	260	1000	800	300	1027	770	970	827	44,1

**Quantity of installed elements depends on their dimensions and typical sizes of contact blocks. Exact quantity of the elements and dimension type of enclosure for a specific solution is determined during making an order. Production of modular explosion-proof local control stations according to customer's specification is possible.*

Table of names matching

Previous international name "ZAVOD GORELTEX" Co. Ltd. TU 3400-005-72453807-07	The Customs Union name "ZAVOD GORELTEX" Co. Ltd. TU 3400-005-72453807-07
SHORVE-S	PKIE-N
SHORVE-S111109	PKIE-N111109
SHORVE-S171109	PKIE-N171109
SHORVE-S151512	PKIE-N151512
SHORVE-S231815	PKIE-N231815
SHORVE-S232315	PKIE-N232315
SHORVE-S322312	PKIE-N322312
SHORVE-S342315	PKIE-N342315
SHORVE-S343415	PKIE-N343415
SHORVE-S402315	PKIE-N402315
SHORVE-S453415	PKIE-N453415
SHORVE-S534315	PKIE-N534315

Control and indicating elements	refer to p.377
Cable glands (cable glands with taper thread are not used)	refer to p.393

Datasheet

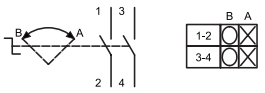
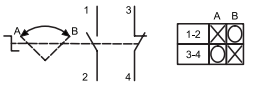
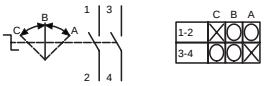
GORELTEX DATASHEET FOR TYPICAL EXPLOSION-PROOF PKI (CSE, SHORVE) SWITCHING AND INDICATING DEVICES

Installation zone	☐ Zone 0	☐ Zone 1	☐ Zone 2	☐ RN Version	☐ RV Version	
	☐ RO Version	☐ Required type of explosion protection _____				
Group and subgroup of air and gas mixture	☐ IIB	☐ IIB + H_2	☐ IIC X	☐ IIC	☐ IIIC	
Temperature class	☐ T4	☐ T5	☐ T6	Operating temperature	Tamb from_____ to _____	
IP degree	IP66 (by default)	☐ IP65	☐ IP67	☐ IP68		
Material of enclosure	☐ Corrosion-resistant aluminum-silicon alloy			☐ Stainless steel		
	☐ Glass fiber armored polyester			☐ Low-carbon steel with powder coating		

Control, indicating and light elements

Button	K1	K2	K3	K4	K5	K6
Type of actuator						
Momentary	☐	☐	☐	☐	☐	☐
Locking	☐	☐	☐	☐	☐	☐
With key	☐	☐	☐	☐	☐	☐
Color of actuator						
black	☐	☐	☐	☐	☐	☐
red	☐	☐	☐	☐	☐	☐
green	☐	☐	☐	☐	☐	☐
yellow	☐	☐	☐	☐	☐	☐
blue	☐	☐	☐	☐	☐	☐
white	☐	☐	☐	☐	☐	☐

Indicators	L1	L2	L3	L4	L5	L6
Voltage						
24 AC/DC	☐	☐	☐	☐	☐	☐
220 AC/DC	☐	☐	☐	☐	☐	☐
110 AC/DC	☐	☐	☐	☐	☐	☐
36 AC/DC	☐	☐	☐	☐	☐	☐
Color						
red	☐	☐	☐	☐	☐	☐
green	☐	☐	☐	☐	☐	☐
yellow	☐	☐	☐	☐	☐	☐
blue	☐	☐	☐	☐	☐	☐
white	☐	☐	☐	☐	☐	☐

Switch	P1	P2
Diagram		
2I	☐	☐
		
1Z	☐	☐
		
1C	☐	☐
		
Other::		

Contacts	
NO+NC	☐
NC+NC	☐
NO+NO	☐
NC	☐
NO	☐

Measuring instruments					
Type	I1	I2	Scale I1	Scale I2	Type of current
Megohmmeter	☐	☐	_____Ohm	_____Ohm	
Voltmeter	☐	☐	_____V	_____V	☐ AC ☐ AC
Ammeter	☐	☐	_____A	_____A	☐ AC ☐ DC
Current transformer I1_____A I2_____A					

Piezo-siren

Hazardous areas indoors and outdoors – 108 dB, for mining version – 102 dB:
☐ 12 V ☐ 220 V AC

Cable glands

Quantity and arrangement of cables for connection

Location side				Quantity of cable glands per side	Outer cable sheath diameter, mm	Inner cable sheath diameter, mm (for armored cable only)	Cable gland type	Cable type
A	B	C	D					
☐	☐	☐	☐					
☐	☐	☐	☐					
☐	☐	☐	☐					
☐	☐	☐	☐					

Options

☐ Anti-condensation coating /AP	☐ Marine version /MORE
☐ Nameplates with light reflecting coating /SVP	☐ Nameplate with inscription as per customer's specification /NADPIS «_»
☐ Earthquake-resistant version /MSK-64	☐ Version for minimum operating temperature -75°C /HOLOD
☐ Version for tropics with protection against bugs /TERMITY	☐ Special version for nuclear facilities of nuclear power plants "Small leak" / MALAYA TECH
☐ Fastening with mounting plates /PLATE	☐ External surface coating as per customer's specification /RAL (code)

Quantity of local control stations, pcs. ☐☐☐

Customer's notes (non-mandatory field)

Dimensional limitations, mm (if any) _____X_____X_____
length height depth

Place of installation

Other

Contact details

Company:	Tel./fax:
Postal address:	
Contact person:	E-mail:

© "ZAVOD GORELTEX" Co. Ltd.

IIC

• The board displays states of 24 events or processes by means of independent switching on colored LED indicators.

• LED boards are characterized by high MTBF values (operational life – 50 thousand hours), low energy consumption, high luminous efficacy.

• Board can be completed, apart from standard rectangular indicators, with digital (7 segments) displays up to 6 discharges, vertical or horizontal linear scale indicators up to 30 segments, graphical monochrome liquid crystal displays, as well as modular colored graphical TFT LCD 6,5 screen with 640x480 pix. resolution.

MARKING

Ex 1Ex d IIC T6...T4 Gb X
Ex 1Ex d IIB+H_2 T6...T4 Gb
Ex 1Ex d [ia] IIB+H_2 T6...T4 Gb
Ex 1Ex d [ia] IIC T6...T4 Gb X
Ex Ex tb IIIC T85°C ...T135°C Db

MINING EQUIPMENT MARKING

Ex PB Ex d I Mb
PH2

CERTIFICATES AND PERMITS

GOST R ISO 9001-2015 (ISO 9001:2015)
TC RU C-RU.AA87.B.00244
РОСС RU.EX01.B00004
C-RU.АБ03.B.00127
Maritime Register upon request (check cost and terms of Type Approval Certificate issuance with manager)
TU 3400-005-72453807-07
TU 4371-020-72453807-2015
GAZPROM OJSC No. Г000.RU.1131.H00666
TC RU C-RU.МЛ02.B.00760

CODES

GOST 12.2.007.0-75
GOST 14254-96 (IEC 529-89)
GOST R IEC 60079-0-2011
GOST R IEC 60079-31-2010
GOST IEC 60079-1-2011
GOST 30852.10-2002 (IEC 60079-11:1999)
GOST 30852.20-2002
GOST IEC 61241-1-1-2011
Electrical Installation Code Ch. 7.3, Ch. 7.4
GOST R 53325-2009
OD 5.2-093-2004, TR CU 012/2011
GOST 24754-2013
TR CU 004/2011
TR CU 020/2011

TECHNICAL CHARACTERISTICS

Installation

Category I for firedamp and dust;
Category II for gas subgroup IIA, IIB+H2, IIC (except for acetylene); zones 1, 2;
Category III for dust, explosive dust atmospheres containing flying particles, conductive and non-conductive dust;
Underground mines non-hazardous with gas (methane) and coal dust;
Dangerous production facilities

Rated voltage, V

⎓12/24
~220 (50/60 Hz)

Window material

Heat-resistant and impact-resistant glass

Sealant

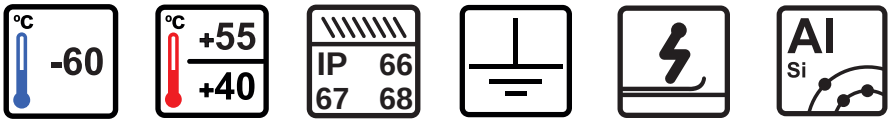
Silicone rubber (in cover groove) for IP67, PG-SMAZKA silicone sealant for IP66

Grounding

2 stainless steel ground clamps (inner and outer)

Climatic category

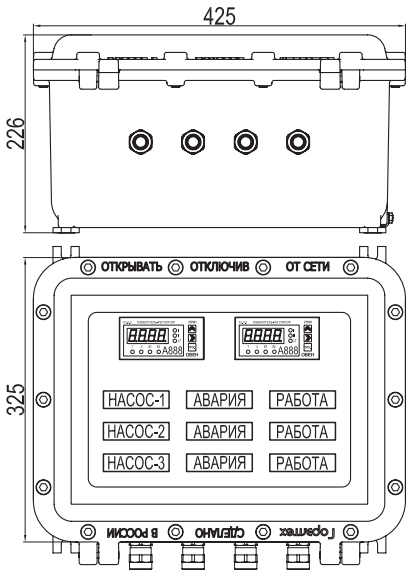
NF1 (upon request NF2, NF3, NF4, NF5, F1, F2, F3, F5, T1, T2, T3, T5, MU1, MU2, MU3, MU4, W2.13**, W5)



OPTIONS, ACCESSORIES AND VERSIONS

DESCRIPTION	MARKING
Supply voltage	/12DC /24DC /36DC /110AC /220AC
Lamp supply voltage	/12DC /24DC
Degree of protection IP67	/IP67
Conformity to fire safety requirements	/POZHAR
Nameplate with inscription as per customer's specification	/NADPIS «_»
Nameplates with light reflecting coating	/SVP
Version for tropics with protection against bugs	/TERMITY
Anti-condensation coating	/AP
Non-explosion-proof version	/PROM
Drain plug for condensate removal	/DKU
Breather plug for moisture removal	/VKU
Device for connection of cable screens	/EKRAN
Electrical heating	/OBOGREV
Board's light indicators control signals as per communication protocol Profibus-DP Slave	/PROFIBUS
Automatic brightness control depending on external illumination	/DS
Protective canopy	/KOZYREK
External surface coating as per customer's specification	/RAL (code)

OVERALL AND MOUNTING DIMENSIONS



Control and indicating elements	refer to p.377
Recommended cable glands KNV, KOV, KNVTN, KNVTV, KNVM, KNVZ	refer to p.393

- Continuous operation in a stand-by mode (single alarm tone output).
- Maximum value of acoustic pressure level is not less than 114 dB.
- Circular pattern of direction.

MARKING

1Ex d IIC T6...T5 Gb
Ex tb IIIC T85°C...T100° Db

MINING EQUIPMENT MARKING

PH2

CERTIFICATES AND PERMITS

GOST R ISO 9001-2015 (ISO 9001:2015)
TC RU C-RU.AA87.B.00244
POCC RU.EX01.B00004
Maritime Register upon request (check cost and terms of Type Approval Certificate issuance with manager)
TU 3400-005-72453807-07
GAZPROM OJSC No. Г000.RU.1131.H00666
TC RU C-RU.МЛ02.B.00745

CODES

GOST 12.2.007.0-75
GOST 14254-96 (IEC 529-89)
GOST R IEC 60079-31-2010
GOST 30852.0-2002 (IEC 60079-0:1998)
GOST 30852.1-2002 (IEC 60079-1:1998)
GOST IEC 61241-1-1-2011, TR CU 012/2011
GOST 24754-2013
Electrical Installation Code Ch. 7.3, Ch. 7.4
OD 5.2-093-2004
GOST 30852.20-2002

TECHNICAL CHARACTERISTICS

Installation

Category II for gas subgroup IIA, IIB, IIC; zones 1, 2;
Category III for dust, explosive dust atmospheres containing flying particles, conductive and non-conductive dust;
Underground mines non-hazardous with gas (methane) and coal dust;
Dangerous production facilities

Sound pressure level, dB

109/114

Thread on connecting holes

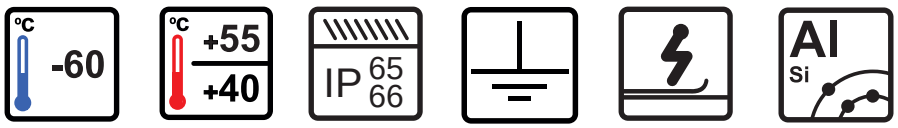
Taper pipe Rc GOST 6211-81 3/4"

Climatic category

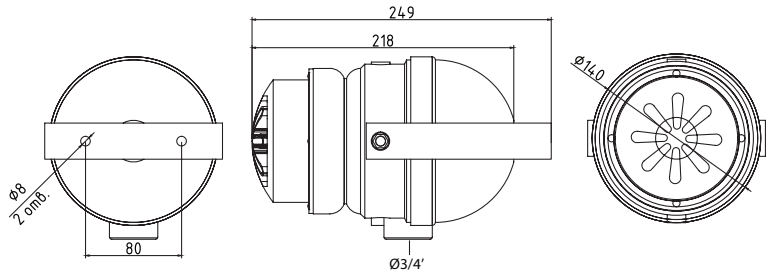
NF1 (upon request NF2, NF3, NF4, NF5, F1, F2, F3, F5, T1, T2, T3, T5, MU1, MU2, MU3, MU4, W2.13**, W5)

OPTIONS, ACCESSORIES AND VERSIONS

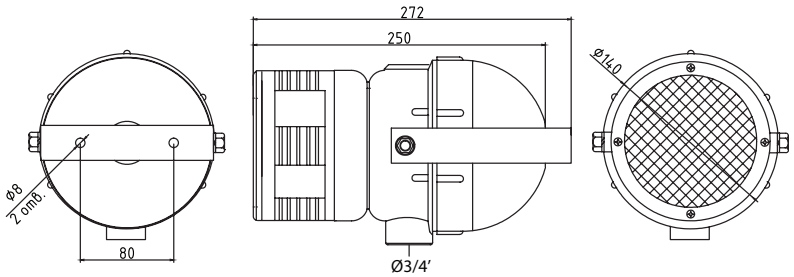
DESCRIPTION	MARKING
Mounting bracket	/SKOBA
External surface coating as per customer's specification	/RAL (code)



OVERALL AND MOUNTING DIMENSIONS
PGZ-SIRENA1-109



OVERALL AND MOUNTING DIMENSIONS
PGZ-SIRENA1-114



Type	Number of tones	Voltage, V	Current, A	Frequency, Hz	Volume, dB	Mass, kg
PGZ-SIRENA1-109-12 DC	1	⎓12	15,6	1150	109	2.3
PGZ-SIRENA1-109-24 DC	1	⎓24	10	1250	109	2.3
PGZ-SIRENA1-109-115 AC	1	~115	1,1	1300	109	2.3
PGZ-SIRENA1-109-230 AC	1	~220	0,6	1310	109	2.3
PGZ-SIRENA1-114-12 DC	1	⎓12	11,7	650	114	2.5
PGZ-SIRENA1-114-24 DC	1	⎓24	5,9	650	114	2.5
PGZ-SIRENA1-114-115 AC	1	~115	1,6	650	114	2.5
PGZ-SIRENA1-114-230 AC	1	~220	0,9	650	114	2.5

FORMATION OF MARKING

PGZ-SIRENA-1 – X – X – X / X – TU 3400-005-72453807-0

- Type of sound alarm
- Power, dB
- Supply voltage, V
- Dimension type of cable gland
- Options, accessories and versions

Example: PGZ-SIRENA1-114-230AC-KNVTV2 – TU 3400-005-72453807-07.

Table of names matching

Previous international name "ZAVOD GORELTEX" Co. Ltd. TU 3400-005-72453807-07	The Customs Union name "ZAVOD GORELTEX" Co. Ltd. TU 3400-005-72453807-07
EMHS	PGZ-SIRENA1
EMHS60/109DB12V	PGZ-SIRENA1-109-12 DC
EMHS60/109DB24V	PGZ-SIRENA1-109-24 DC
EMHS60/109DB115V	PGZ-SIRENA1-109-115 AC
EMHS60/109DB230V	PGZ-SIRENA1-109-230 AC
EMHS60/114DB12V	PGZ-SIRENA1-114-12 DC
EMHS60/114DB24V	PGZ-SIRENA1-114-24 DC
EMHS60/114DB115V	PGZ-SIRENA1-114-115 AC
EMHS60/114DB230V	PGZ-SIRENA1-114-230 AC

Control and indicating elements	refer to p.377
Recommended cable glands KNV, KOV, KNVTN, KNVTV, KNVM, KNVZ	refer to p.393

- Continuous operation in a stand-by mode (32 types of alarm tone output).
- Selection of tone is carried out with use of DIP internal switch.
- Maximum value of acoustic pressure level is not less than 112 dB.

MARKING

Ex 1Ex d IIC T6...T5 Gb

Ex Ex tb IIIC T85°C...T100° Db

MINING EQUIPMENT MARKING

PH2

CERTIFICATES AND PERMITS

GOST R ISO 9001-2015 (ISO 9001:2015)
TC RU C-RU.AA87.B.00244
POCC RU.EX01.B00004
Maritime Register upon request (check cost and terms of Type Approval Certificate issuance with manager)
TU 3400-005-72453807-07
GAZPROM OJSC No. Г000.RU.1131.H00666
TC RU C-RU.МЛ02.B.00745

CODES

GOST 12.2.007.0-75
GOST 14254-96 (IEC 529-89)
GOST R IEC 60079-31-2010
GOST 30852.0-2002 (IEC 60079-0:1998)
GOST 30852.1-2002 (IEC 60079-1:1998)
GOST IEC 61241-1-1-2011, TR CU 012/2011
GOST 24754-2013
Electrical Installation Code Ch. 7.3, Ch. 7.4
GOST 30852.20-2002

TECHNICAL CHARACTERISTICS

Installation
Category II for gas subgroup IIA, IIB, IIC; zones 1, 2; Category III for dust, explosive dust atmospheres containing flying particles, conductive and non-conductive dust; Underground mines non-hazardous with gas (methane) and coal dust; Dangerous production facilities

Sound pressure level, dB
106/112

Thread on connecting holes
Pipe taper Rc GOST 6211-81 3/4"

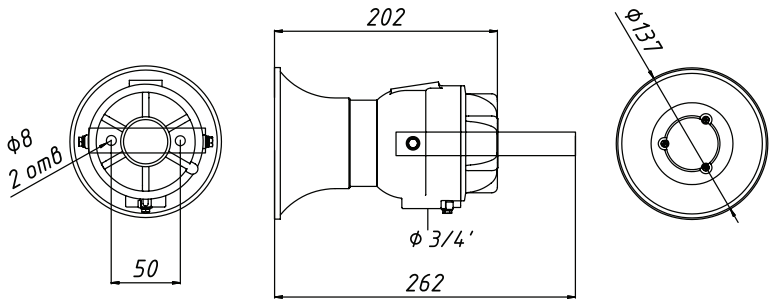
Climatic category
NF1 (upon request NF2, NF3, NF4, NF5, F1, F2, F3, F5, T1, T2, T3, T5, MU1, MU2, MU3, MU4, W2.13**, W5)

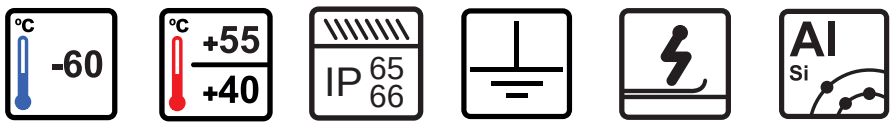
OPTIONS, ACCESSORIES AND VERSIONS

DESCRIPTION	MARKING
Mounting bracket	/SKOBA
External surface coating as per customer's specification	/RAL (code)

DESIGN PARAMETERS

OVERALL AND MOUNTING DIMENSIONS PGZ-REVUN32-102, PGZ-REVUN32-106





PGZ–REVUN32 EMHS–12, EMHS–20

Type	Number of tones	Voltage, V	Current, A	Frequency, Hz	Volume, dB	Mass, kg
PGZ-REVUN32-102-12DC	32	⎓ 12–24	0,16	440-1600	102	1.5
PGZ-REVUN32-106-48AC	32	~48	0,07	440-1600	106	1.5
PGZ-REVUN32-106-115AC	32	~115	0,07	440-1600	106	1.5
PGZ-REVUN32-106-230AC	32	~220	0,07	440-1600	106	1.5
PGZ-REVUN32-112-12DC	32	⎓ 12–24	0,2–0,8	440-1600	112	3.7
PGZ-REVUN32-112-48AC	32	~48	0,07	440-1600	112	3.7
PGZ-REVUN32-112-115AC	32	~115	0,07	440-1600	112	3.7
PGZ-REVUN32-112-230AC	32	~220	0,7	440-1600	112	3.7

FORMATION OF MARKING

PGZ-REVUN32–X X X / X – TU 3400-005-72453807-07

- Type of sound alarm
- Power, dB
- Supply voltage
- Dimension type of cable gland
- Options, accessories and versions

Example of order: PGZ-REVUN32-112-230AC-KNVTV2N – TU 3400-005-72453807-07.

Table of names matching

Previous international name "ZAVOD GORELTEX" Co. Ltd. TU 3400-005-72453807-07	The Customs Union name "ZAVOD GORELTEX" Co. Ltd. TU 3400-005-72453807-07
EMHS-12, EMHS-20	PGZ-REVUN32
EMHS-12/48VCA	PGZ-REVUN32-102-12DC
EMHS-12/115VCA	PGZ-REVUN32-106-48AC
EMHS-12/230VCA	PGZ-REVUN32-106-115AC
EMHS-12/12/32T	PGZ-REVUN32-106-230AC
EMHS-20/48VCA	PGZ-REVUN32-112-12DC
EMHS-20/115VCA	PGZ-REVUN32-112-48AC
EMHS-20/230VCA	PGZ-REVUN32-112-115AC
EMHS-20/12/32T	PGZ-REVUN32-112-230AC

Tone number	DIP switch position	Tone type
1	00000	Variable tone 554 Hz 0.1 s/440 Hz, 0.4 s – France evacuation tone
2	10000	650 Hz-1600 Hz-HELP, variable fast two-tone signal
3	01000	650 Hz-1600 Hz-WAIL, variable slow two-tone signal
4	11000	554 Hz- 1 s ON- 1 s OFF variable tone
5	00100	554 Hz continuous tone
6	10100	1000 Hz – continuous tone, toxic gas leakage signal
7	01100	1000 Hz – 1 s ON, 1 s OFF, variable tone, general annunciation
8	11100	800 Hz – 1000 Hz- 0.25 s variable tone, ISO 8201 international evacuation signal
9	00010	1200 Hz - 500 Hz, 1 s – Germany evacuation tone
10	10010	500 Hz – 1200 Hz, 3.5 s, 0.5 s OFF (NEN 2575:200), variable rising
11	01010	800 Hz – 1000 Hz, 0.5 s, variable two-tone, fire alarm
12	11010	1000 Hz – 2000 Hz, 0.5 s variable, Singapore alert
13	00110	1000 Hz, 1 s ON – 1 s OFF 7 times, then ON for 7 s, OFF 7 s, emergency alarm
14	10110	422 Hz to 775 Hz, 0.85 s (3 times) 1 s OFF repeat NFPA signal
15	01110	970 Hz, 1 s OFF 1 s ON impulse (Appolo Fire System Alert Tone)
16	11110	970 Hz, 0.5 s – 630 Hz, 0.5 s variable (Appolo Fire System Evacuation Tone)
17	00001	500 Hz – 1200 Hz, 3.75 s – 0.5 s OFF
18	10001	420 Hz 0.625 s ON - 0.625 s OFF (Australia AS 1670 Alert Tone)
19	01001	500 Hz- 1200 Hz, 3.75c- 0.25c OFF (Australia AS 1670 Evacuation Tone)
20	11001	340 Hz continuous
21	00101	400 Hz continuous
22	10101	660 Hz continuous
23	01101	750 Hz continuous
24	11101	840 Hz continuous
25	00011	1200 Hz continuous
26	10011	1480 Hz continuous
27	01011	770 Hz, 1 s – 1 s OFF intermittent tone
28	11011	550 Hz, 0.33 s – 1000 Hz, 0.7 s
29	00111	Intermittent tone
30	10111	970 Hz, 0.5 s ON - 0.5 s OFF (3 times), 1.5 s silent, then repeat (ISO 8201)
31	01111	440 Hz, continuous
32	11111	700 Hz, continuous

Control and indicating elements	refer to p.377
Recommended cable glands KNV, KOV, KNVTN, KNVTV, KNVM, KNVZ	refer to p.393

- Siren with an option of remote tone selection.
- 4 tone modes: intermittent, two-tone, slowly rising, constant.
- Control board for incoming voltage 12 V and 24 V (control boards for other voltage can be produced upon request).
- Maximum value of acoustic pressure level is not less than 109 dB.

MARKING

Ex 1Ex d IIC T6...T5 Gb
Ex Ex tb IIIC T85°C...T100°C Db

MINING EQUIPMENT MARKING

PH2

CERTIFICATES AND PERMITS

GOST R ISO 9001-2015 (ISO 9001:2015)
TC RU C-RU.AA87.B.00244
POCC RU.EX01.B00004
Maritime Register upon request (check cost and terms of Type Approval Certificate issuance with manager)
TU 3400-005-72453807-07
GAZPROM OJSC No. Г000.RU.1131.H00666
TC RU C-RU.МЛ02.B.00745

CODES

GOST 12.2.007.0-75
GOST 14254-96 (IEC 529-89)
GOST R IEC 60079-31-2010
GOST 30852.0-2002 (IEC 60079-0:1998)
GOST 30852.1-2002 (IEC 60079-1:1998)
GOST IEC 61241-1-1-2011
TR CU 012/2011
GOST 24754-2013
Electrical Installation Code Ch. 7.3, Ch. 7.4
GOST 30852.20-2002

TECHNICAL CHARACTERISTICS

Installation
Category II for gas subgroup IIA, IIB, IIC; zones 1, 2; Category III for dust, explosive dust atmospheres containing flying particles, conductive and non-conductive dust; Underground mines non-hazardous with gas (methane) and coal dust; Dangerous production facilities

Sound pressure level, dB
109

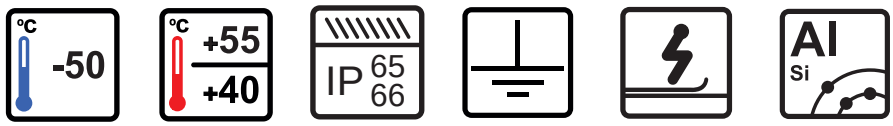
Thread on connecting holes
Pipe taper Rc GOST 6211-81 3/4"

Mass, kg
1,5

Climatic category
NF1 (upon request NF2, NF3, NF4, NF5, F1, F2, F3, F5, T1, T2, T3, T5, MU1, MU2, MU3, MU4, W2.13**, W5)

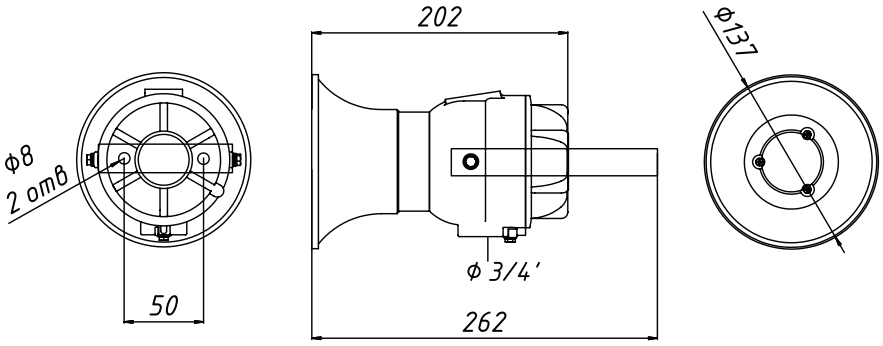
OPTIONS, ACCESSORIES AND VERSIONS

DESCRIPTION	MARKING
Mounting bracket	/SKOBA
External surface coating as per customer's specification	/RAL (code)



PGZ–REVUN4 EMHS–12/MOD1

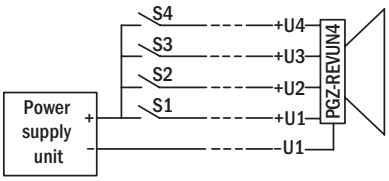
DESIGN PARAMETERS



Type	Voltage, V	Current, A	Volume, dB	Mass, kg	Wires cross-section
PGZ-REVUN4-12DC	⎓8-14	0,45	109	1.5	0,5–2,5 mm²
PGZ-REVUN4-24DC	⎓14-26				

Terminal No.	Priority	Tone type
U2	1 (high priority)	slowly rising
U4	2	intermittent
U3	3	two-tone
U1	4 (low priority)	constant

WIRING DIAGRAM



FORMATION OF MARKING

PGZ-REVUN4 – X – X / X – TU 3400-005-72453807-07

- Type of sound alarm
- Supply voltage: 8...14 – **12DC**; 14... 26 – **24DC**
- Dimension type of cable gland
- Options, accessories and versions

Example of order: PGZ-REVUN4-12DC-KNVTV2N – TU 3400-005-72453807-07.

Control and indicating elements	refer to p.377
Recommended cable glands KNV, KOV, KNVTN, KNVTV, KNVM, KNVZ	refer to p.393

• Loudspeakers have one threaded entry 3/4" Rc GOST 6211 and can be completed with a cable gland depending on the type of the cable.
• PGZ-GROM2 can be completed with speech interface unit /**BS** which allows to store preliminary recorded messages.
• Maximum sound level – 109-112 dB/m.

MARKING

Ex 1Ex d IIC T6...T5 Gb
Ex 1Ex tb IIIC T85°C...T100°C Db

MINING EQUIPMENT MARKING

PH2

CERTIFICATES AND PERMITS

GOST R ISO 9001-2015 (ISO 9001:2015)
TC RU C-RU.AA87.B.00244
POCC RU.EX01.B00004
Maritime Register upon request (check cost and terms of Type Approval Certificate issuance with manager)
TU 3400-005-72453807-07
GAZPROM OJSC No. Г000.RU.1131.H00666
TC RU C-RU.МЛ02.B.00745

CODES

GOST 12.2.007.0-75
GOST R IEC 60079-0-2011
GOST R IEC 60079-31-2010
GOST 14254-96 (IEC 529-89)
GOST 30852.0-2002 (IEC 60079-0:1998)
GOST 30852.1-2002 (IEC 60079-1:1998)
GOST IEC 61241-1-1-2011
TR CU 012/2011
Electrical Installation Code Ch. 7.3, Ch. 7.4
GOST 30852.20-2002
GOST 24754-2013

TECHNICAL CHARACTERISTICS

Installation	Category II for gas subgroup IIA, IIB, IIC; zones 1, 2; Category III for dust, explosive dust atmospheres containing flying particles, conductive and non-conductive dust; Underground mines non-hazardous with gas (methane) and coal dust; Dangerous production facilities
Rated voltage of input signals	100 V
Rated resistance	16 Ohm
Sound pressure level	100–112 dB/m
Mass, kg	3,5
Thread on connecting holes	Pipe taper Rc GOST 6211-81 3/4"
Climatic category	NF1 (upon request NF2, NF3, NF4, NF5, F1, F2, F3, F5, T1, T2, T3, T5, MU1, MU2, MU3, MU4, W2.13**, W5)

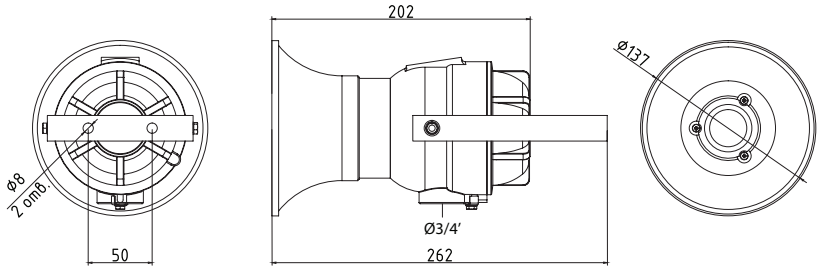
OPTIONS, ACCESSORIES AND VERSIONS

DESCRIPTION	MARKING
Anodized aluminum loudspeaker cone	/AL
Interface unit	/BS
Mounting bracket	/SKOBA
External surface coating as per customer's specification	/RAL (code)

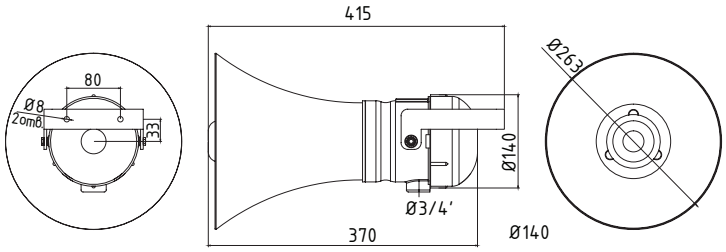
PGZ-GROM2 EMH-20MDLOUD/TR

Type	Power	Sound pressure level	Frequency range
PGZ-GROM2-6	6 W	100 ÷ 102 dB	650 ÷ 10000 Hz
PGZ-GROM2-12	12 W	104 ÷ 106 dB	450 ÷ 9000 Hz
PGZ-GROM2-20	20 W	107 ÷ 108 dB	400 ÷ 9000 Hz
PGZ-GROM2-25	25 W	109 ÷ 112 dB	350 ÷ 10000 Hz

OVERALL AND MOUNTING DIMENSIONS



PGZ-GROM2-6, PGZ-GROM2-12



PGZ-GROM2-20, PGZ-GROM2-25

FORMATION OF MARKING

PGZ-GROM2 – X – X / X – TU 3400-005-72453807-07

- Type of sound alarm
- Power, W: 6, 12, 20 or 25
- Dimension type of cable gland
- Options, accessories and versions

Example of order: PGZ-GROM2-6-KNV2 – TU 3400-005-72453807-07.

Control and indicating elements	refer to p.377
Recommended cable glands KNV, KOV, KNVTN, KNVTV, KNVM, KNVZ	refer to p.393

- Continuous operation in a stand-by mode.
- Explosion-proof PSGE piezo-siren is applied as a source of sound signal.
- Maximum acoustic pressure level is 108 dB.
- Two siren sound modes: constant and intermittent.
- Piezo-siren is additionally completed with a power supply unit installed inside an enclosure of a sound signaling device (version for 220 V).

MARKING

Ex 1Ex d e mb IIC T6...T5 Gb

MINING EQUIPMENT MARKING

PH1 (for PGZ-POST-P), PH2

CERTIFICATES AND PERMITS

GOST R ISO 9001-2015 (ISO 9001:2015)
TC RU C-RU.AA87.B.00244
POCC RU.EX01.B00004
TU 3400-005-72453807-07
TC RU C-RU.MA02.B.00745

CODES

GOST 14254-96 (IEC 529-89)
GOST 30852.0-2002 (IEC 60079-0:1998)
GOST 30852.1-2002 (IEC 60079-1:1998)
GOST 30852.8-2002
GOST 30852.17-2002 (IEC 60079-18:1992)
GOST 24754-2013
TR CU 012/2011
Electrical Installation Code Ch. 7.3, Ch. 7.4
GOST IEC 61241-1-1-2011
OD 5.2-093-2004
GOST 12.2.007.0-75
GOST 30852.20-2002

TECHNICAL CHARACTERISTICS

Installation
Category II for gas subgroup IIA, IIB, IIC; zones 1, 2; Underground mines non-hazardous with gas (methane) and coal dust; Dangerous production facilities

Rated voltage
⎓12, ~220

Current consumtion, mA
150

Maximum acoustic pressure level, dB
108

Arrangement of cable glands
As per customer's specification. Cable glands with taper thread are not used for these types of sound signaling devices

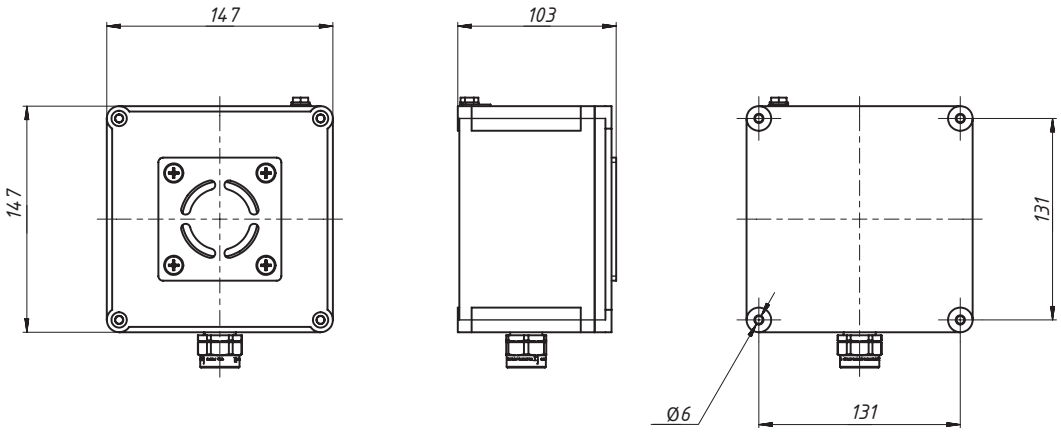
Climatic category
NF1 (upon request NF2, NF3, NF4, NF5, F1, F2, F3, F5, T1, T2, T3, T5, MU1, MU2, MU3, MU4, W2.13**, W5)

OPTIONS, ACCESSORIES AND VERSIONS

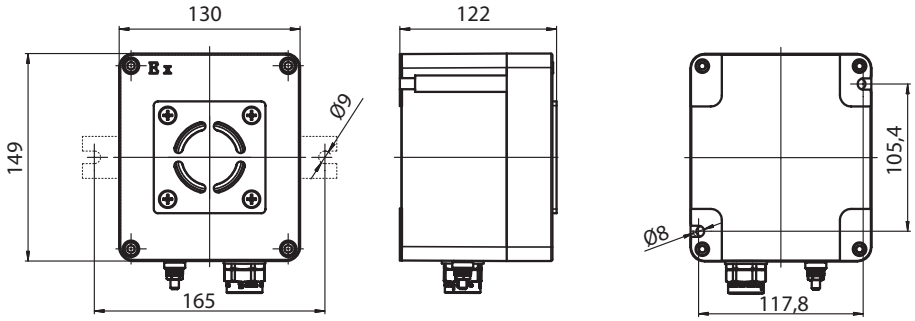
DESCRIPTION	MARKING
Nameplate with inscription as per customer's specification	/NADPIS «_»
Nameplates with light reflecting coating	/SVP
Drain plug for condensate removal	/DKU
Breather plug for moisture removal	/VKU
Electric shock protection class II	/KZCH2
Mounting rail with holes	/REIKA

TYPICAL SOUND SIGNALING DEVICES

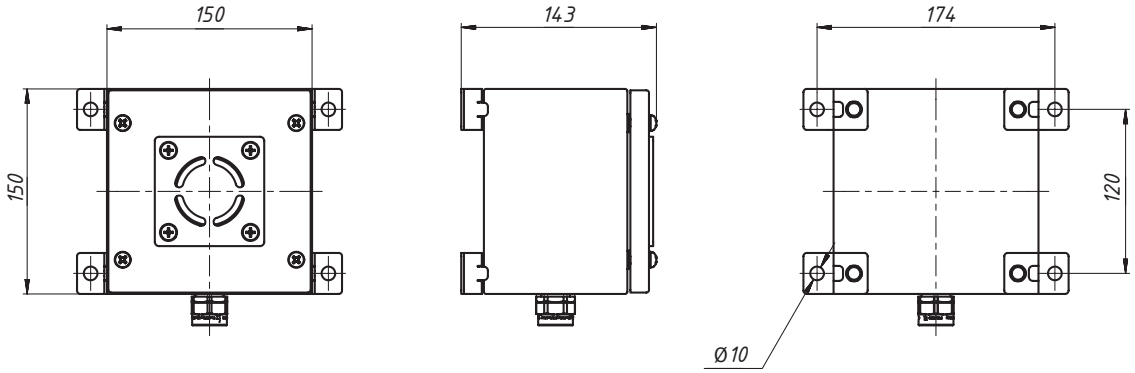
PGZ-POST141410-PSGE01...



PGZ-POST-P141210-PSGE01...



PGZ-POST-N151512-PSGE01...

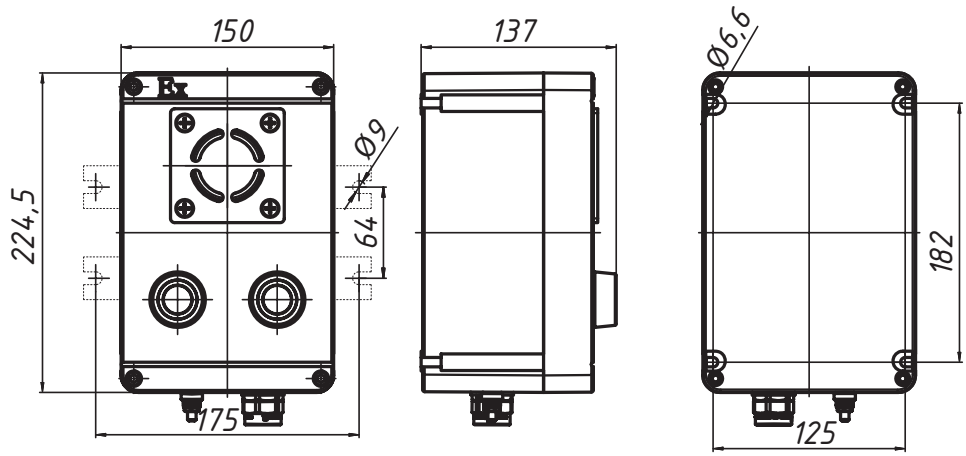


PGZ-POST type sound signaling devices with PSGE01 piezo-siren

Marking for order	Enclosure material	Supply voltage, V	Mass, kg
PGZ-POST141410-PSGE01/12DC-KNV1(D)-TU 3400-005-72453807-07	Aluminum-silicon alloy	⎓12	3
PGZ-POST141410-PSGE01/220AC-KNV1(D)-TU 3400-005-72453807-07	Aluminum-silicon alloy	~220	3
PGZ-POST-P141210-PSGE01/12DC-KNV1(D)-TU 3400-005-72453807-07	Polyester	⎓12	2,8
PGZ-POST-P141210-PSGE01/220AC-KNV1(D)-TU 3400-005-72453807-07	Polyester	~220	2,8
PGZ-POST-N151512-PSGE01/12DC-KNV1(D)-TU 3400-005-72453807-07	Stainless steel	⎓12	3,6
PGZ-POST-N151512-PSGE01/220AC-KNV1(D)-TU 3400-005-72453807-07	Stainless steel	~220	3,6

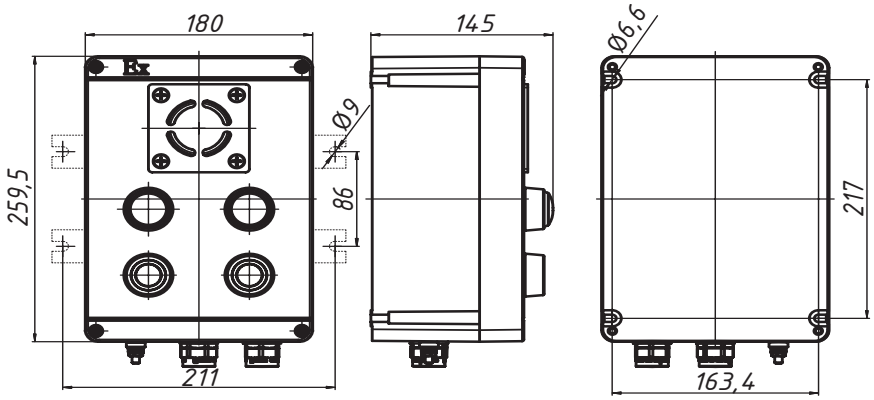
EXAMPLES OF SOUND SIGNALING DEVICES WITH PSGE01 PIEZO-SIREN

PKIE-P221512-KGE01CH11-KGE01K11-PSGE01/220AC-KNV1N(D)-TU 3400-005-72453807-07



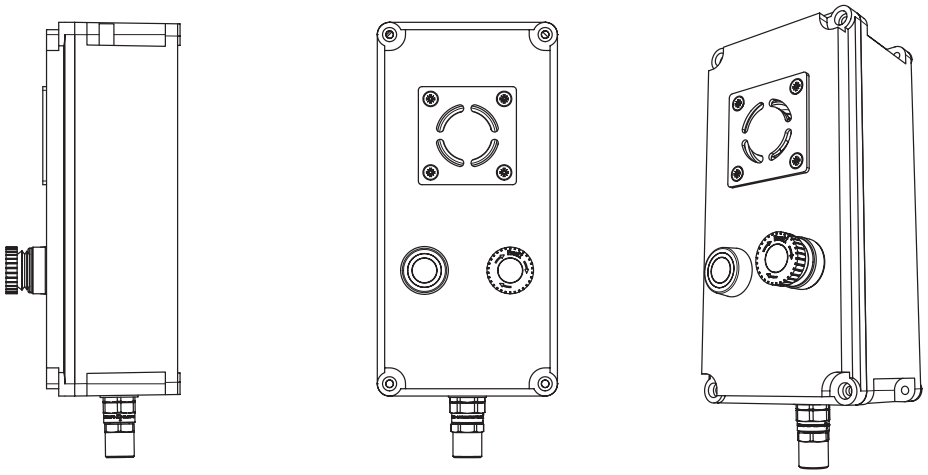
Explosion-proof sound signaling device is made on the base of KSRV-P221512 armored polyester enclosure with pre-installed control elements: KGE01CH11 black momentary button, 1NO+1NC contacts; KGE01K11 red momentary button, 1NO+1NC contacts; PSGE01/220AC explosion-proof piezo-siren with power supply unit ~220 V. One cable gland KNV1N is installed on side D.

PKIE-P221512-LGE03K220-LGE03Z220-KGE01CH11-KGE01K11-PSGE01/12DC-KNV1N(D)-TU 3400-005-72453807-07



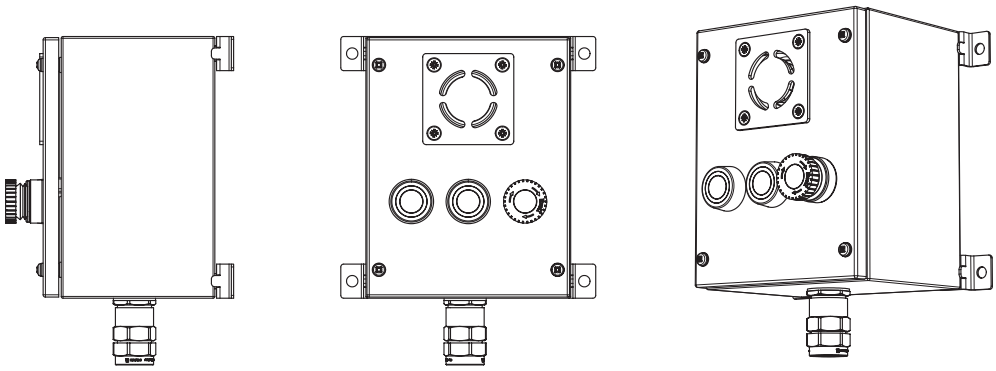
Explosion-proof sound signaling device is made on the base of KSRV-P221512 armored polyester enclosure with pre-installed control elements: LGE03K220 red lamp, ~220-380 V; LGE03Z220 green lamp, ~220-380 V; KGE01CH11 black momentary button, 1NO+1NC contacts; KGE01K11 red momentary button, 1NO+1NC contacts; PSGE01/12DC explosion-proof piezo-siren with supply voltage 12 V. Two cable glands KNV1N are installed on side D.

PKIE301410-KGE01Z20-KGE08K11-PSGE01/220AC-KNV1N(D)-TU 3400-005-72453807-07



Explosion-proof sound signaling device is made on the base of KSRV301410 aluminum-silicon alloy enclosure with pre-installed control elements: KGE01Z20 green momentary button, 2NO contacts; KGE08K11 locking mushroom button, unlocking by rotation, 1NO+1NC contacts; PSGE01/220AC explosion-proof piezo-siren with power supply unit ~220 V. One cable gland KNV1N is installed on side D.

PKIE-N231815-2KGE01CH20-KGE08K11-PSGE01/12DC-KNV1N(D)-TU 3400-005-72453807-07



Explosion-proof sound signaling device is made on the base of KSRV-N231815 stainless steel grade 08X18H10 enclosure with pre-installed control elements: two 2KGE01CH20 black momentary buttons, 2NO contacts; KGE08K11 locking mushroom button, unlocking by rotation, 2NO contacts; PSGE01/12DC explosion-proof piezo-siren with supply voltage 12 V. One KNV1N cable gland is installed on side D.

Table of names matching

Previous international name "ZAVOD GORELTEX" Co. Ltd. TU 3400-005-72453807-07	The Customs Union name "ZAVOD GORELTEX" Co. Ltd. TU 3400-005-72453807-07
SHORVE-Q, SHORVE-KP-Q, SHORVE-C-Q	PGZ-POST, PGZ-POST-P, PGZ-POST-N
SHORVE141410-Q12	PGZ-POST141410-PSGE01/12DC
SHORVE141410-Q220	PGZ-POST141410-PSGE01/220AC
SHORVE-KP141210M2-Q12	PGZ-POST-P141210-PSGE01/12DC
SHORVE-KP141210M2-Q220	PGZ-POST-P141210-PSGE01/220AC
SHORVE-C151512M2-Q12	PGZ-POST-N151512-PSGE01/12DC
SHORVE-C151512M2-Q220	PGZ-POST-N151512-PSGE01/220AC

Control and indicating elements	refer to p.377
Recommended cable glands KNV, KOV, KNVTN, KNVTV, KNVM, KNVZ	refer to p.393

- Maximum level of acoustic pressure is 106 dB.
- Application of explosion-proof sound signaling devices with high level of input signal in large and/or noisy areas guarantees efficient signalization with powerful and precise signal level, as well as reduces terms of installation, number of alarms and cables.
- Compact aluminum-silicon enclosure, highly resistant to hydrogen sulfide exposure

MARKING

Ex 1Ex d e mb IIC T6...T4 Gb
Ex Ex tb IIIC T85°C...T135°C Db

MINING EQUIPMENT MARKING

Ex PB Ex d [ib] I Mb X
PH2

CERTIFICATES AND PERMITS

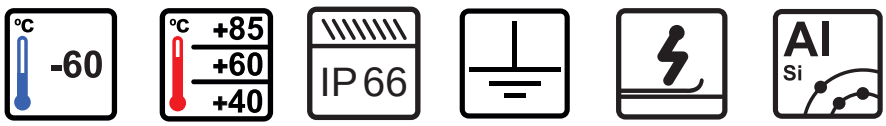
GOST R ISO 9001-2015 (ISO 9001:2015)
TC RU C-RU.AA87.B.00244
РОСС RU.ЕХ01.В00004
TU 3400-005-72453807-07
TU 4371-014-72453807-2013
C-RU.АБ03.В.00098
GAZPROM OJSC No. Г000.RU.1131.H00666
TC RU C-RU.МЛ02.В.00745

CODES

GOST 12.2.007.0-75
GOST 24754-2013
GOST 14254-96 (IEC 529-89)
GOST R IEC 60079-31-2010
GOST R IEC 60079-0-2011
GOST 30852.0-2002 (IEC 60079-0:1998)
GOST 30852.1-2002 (IEC 60079-1:1998)
GOST 30852.10-2002 (IEC 60079-11:1999)
GOST 30852.20-2002
GOST IEC 61241-1-1-2011
TR CU 012/2011
Electrical Installation Code Ch. 7.3, Ch. 7.4
GOST 30852.17-2002 (IEC 60079-18:1992)

TECHNICAL CHARACTERISTICS

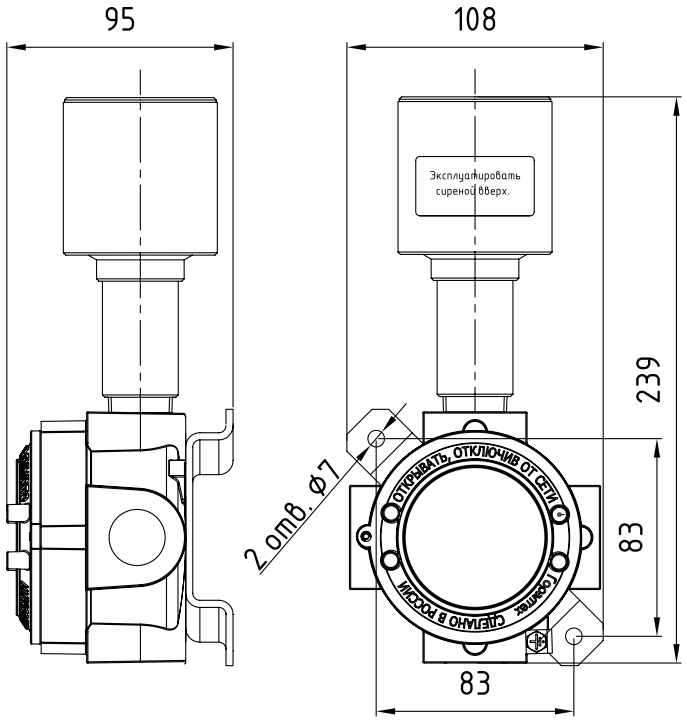
Installation
Category I for firedamp and dust; Category II for gas subgroup IIA, IIB, IIC; zones 1, 2; Category III for dust, explosive dust atmospheres containing flying particles, conductive and non-conductive dust; Underground mines non-hazardous with gas (methane) and coal dust; Dangerous production facilities
Rated voltage, V
⎓5/12/24 or ~220
Current consumtion, A
150
Maximum acoustic pressure level, dB
106, 102 (for mining version)
Mass, kg
2,5
Thread on connecting holes
Pipe taper Rc GOST 6211-81 3/4"
Climatic category
NF1 (upon request NF2, NF3, NF4, NF5, F1, F2, F3, F5, T1, T2, T3, T5, MU1, MU2, MU3, MU4, W2.13**, W5)



OPTIONS, ACCESSORIES AND VERSIONS

DESCRIPTION	MARKING
Anti-condensation coating	/AP
Conformity to fire safety requirements	/POZHAR
Stainless steel chain for cover	/TSEPOCHKA
External surface coating as per customer's specification	/RAL (code)

OVERALL AND MOUNTING DIMENSIONS



FORMATION OF MARKING

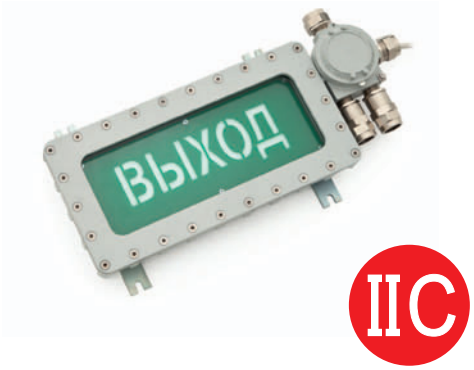
PGZ-SIRENA2 – X – X / X – TU 3400-005-72453807-07

- Type of sound alarm
- Supply voltage: ⎓12V — **12DC**; ⎓24V — **24DC**; ~220V — **220AC**
- Dimension type of cable gland (max. 3 pcs.)
- Options, accessories and versions

Example of order: **PGZ-SIRENA2-220AC-KNV1N –TU 3400-005-72453807-07.**

Control and indicating elements	refer to p.377
Recommended cable glands KNV, KOV, KNVTN, KNVTV, KNVM, KNVZ	refer to p.393

NEW!



- Small dimensions of an enclosure, especially height, in comparison with enclosures of PGS-IT32 (CCFE-INDICATOR) and PGS-IT34 (CCA-03H-INDICATOR).
- Window size is 320mm x 120mm which ensures good visibility of a sign.
- LED illumination evenly lights the entire area of an information sign, brightness value is 1200 cd/m^2, consumed power 8 W.
- Relatively low price.

MARKING

Ex 1Ex d IIC T6...T4 Gb X
Ex Ex tb IIIC T80°C Db

MINING EQUIPMENT MARKING

Ex PB Ex d I Mb
PH2

CERTIFICATES AND PERMITS

TC RU C-RU.AA87.B.00249
TC RU C-RU.МЛ02.B.00760
РОСС RU.EX01.B00004
GOST R ISO 9001-2015 (ISO 9001:2015)
Maritime Register upon request (check cost and terms of Type Approval Certificate issuance with manager)
TU 3400-005-72453807-07
GAZPROM OJSC No. Г000.RU.1131.H00665

CODES

GOST R IEC 60079-0-2011
GOST 12.2.007.0-75
GOST 14254-96 (IEC 529-89)
GOST 30852.0-2002 (IEC 60079-0:1998)
GOST 30852.1-2002 (IEC 60079-1:1998)
GOST IEC 61241-1-1-2011
GOST 24754-2013
Electrical Installation Code Ch. 7.3, Ch. 7.4
TR CU 012/2011
GOST 30852.20-2002
GOST R IEC 60079-31-2010
TR CU 004/2011
TR CU 020/2011

TECHNICAL CHARACTERISTICS

Installation
Category I for firedamp and dust; Category II for gas subgroup IIA, IIB, IIC (except for acetylene); zones 1, 2; Category III for dust, explosive dust atmospheres containing flying particles, conductive and non-conductive dust; Underground mines non-hazardous with gas (methane) and coal dust

Rated voltage, V
~220 (50/60 Hz); ⎓ 12

Rated voltage, V
0,045 (for ~220 V), 0,57 (for ⎓12V)

Power, W
8 (for ~220 V), 7 (for ⎓12V)

Mass, kg
9,8

Connecting holes
4 x 3/4 NPT (3 x 3/4 NPT for version with a storage battery)

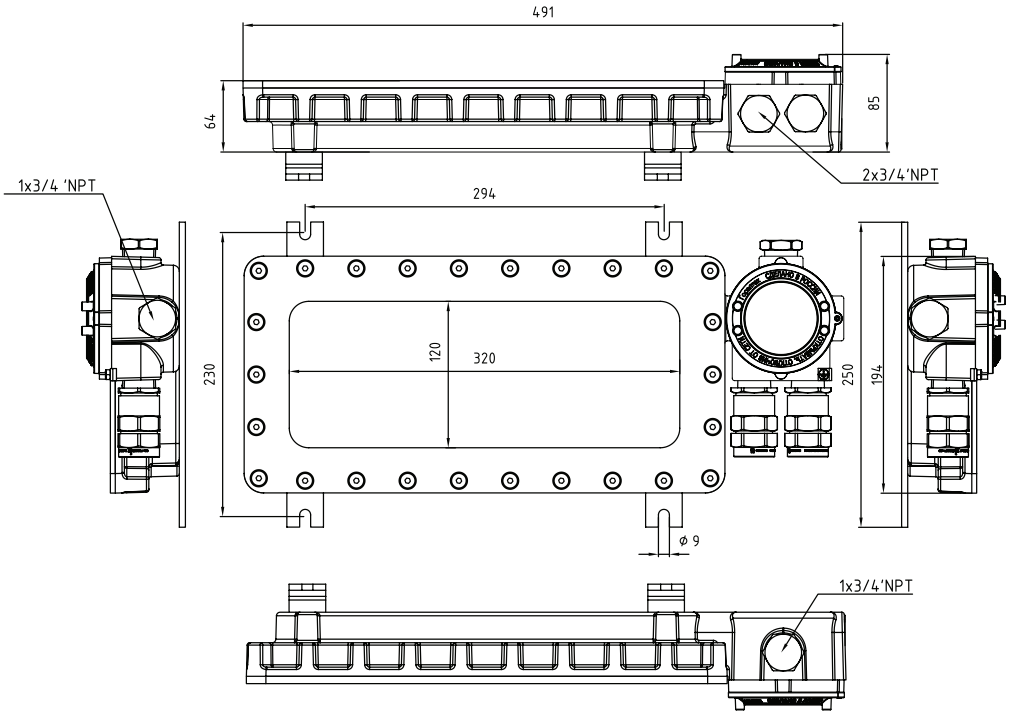
Enclosure mounting
4 external mounting points

Climatic category
NF1 (upon request NF2, NF3, NF4, NF5, F1, F2, F3, F5, T1, T2, T3, T5, MU1, MU2, MU3, MU4, W2.13**, W5)

OPTIONS, ACCESSORIES AND VERSIONS

DESCRIPTION	MARKING
Nameplate with inscription as per customer's specification	/NADPIS «_»
Storage battery	/AKB
External surface coating as per customer's specification	/RAL (code)
Protective canopy	/KOZYREK

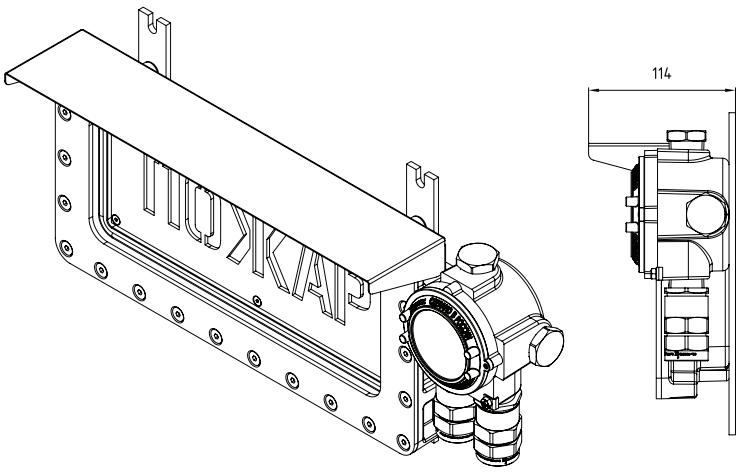
OVERALL AND MOUNTING DIMENSIONS



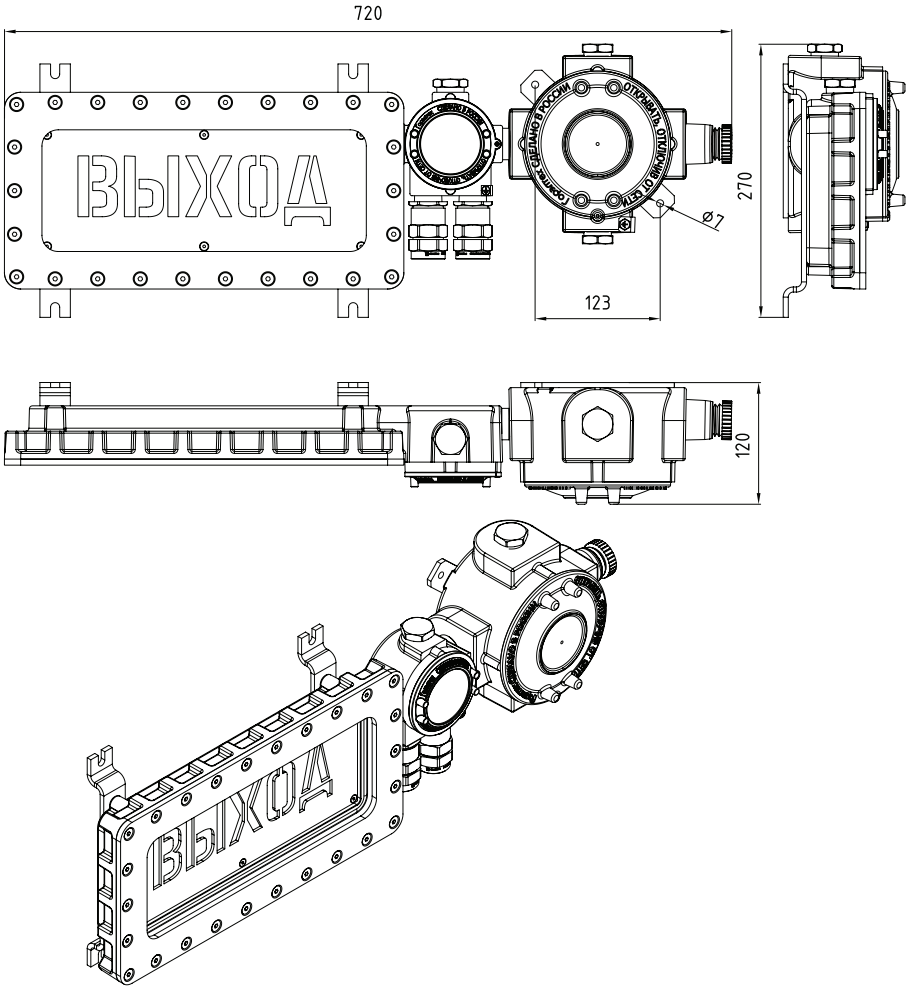
Typical signs

RED LETTERING, BLACK BACKGROUND	WHITE LETTERING, RED BACKGROUND	WHITE LETTERING (SYMBOLS), GREEN BACKGROUND
FIRE	FIRE	
GAS DO NOT ENTER	GAS DO NOT ENTER	
GAS LEAVE NOW!	GAS LEAVE NOW!	
AEROSOL DO NOT ENTER	AEROSOL DO NOT ENTER	
AEROSOL LEAVE NOW!	AEROSOL LEAVE NOW!	
POWDER DO NOT ENTER	POWDER DO NOT ENTER	
POWDER LEAVE NOW!	POWDER LEAVE NOW!	
FOAM LEAVE NOW!	FOAM LEAVE NOW!	
FOAM DO NOT ENTER	FOAM DO NOT ENTER	
WATCH OUT! ELECTRIC TRAIN	WATCH OUT! ELECTRIC TRAIN	
		AUTOMATION IS OFF
		EMERGENCY EXIT
		EXIT
		EXIT
		EXIT LEFT
		EXIT RIGHT
		Symbolic depiction of entrance/exit

PGS-IT35 LIGHTED SIGN WITH A CANOPY



PGS-IT35 LIGHTED SIGN WITH A STORAGE BATTERY



FORMATION OF MARKING:

PGS-IT35 – X/ X/X/X - X / X – TU 3400-005-72453807-07453807-07

- Type of device
- Supply voltage: ⎓12 V – **12 DC**; ~220 V – **220 AC**
- Sign (or pictogram code as per GOST R 12.4.026-2001)
- Text color: white – **B**; Red – **K**; Yellow – **ZH**; Green – **Z**; Blue – **S**; Black – **CH**
- Background color: white – **B**; Red – **K**; Yellow – **ZH**; Green – **Z**; Blue – **S**; Black – **CH**
- Quantity and dimension type of cable glands
- Options, accessories and versions

Example of order: **PGS-IT35-220AC/GASSY/B/K-KOV1N-TU 3400-005-72453807-07.**

Control and indicating elements	refer to p.377
Recommended cable glands KNV, KOV, KNVTN, KNVTV, KNVM, KNVZ	refer to p.393

PGS–IT11 S–INDICATOR

- Low energy consumption.
- Long period of operation using internal emergency power source, installed upon customer's request.
- Selection of a sign with text or a pictogram as per customer's request.

MARKING

1Ex d IIC T6...T5 Gb
0Ex ia IIC T6...T5 Ga (only for 12 V without /AKB)
Ex ia IIIC T85°C...T100°C Da
Ex tb IIIC T85°C ...T100°C Db

MINING EQUIPMENT MARKING

PH2

CERTIFICATES AND PERMITS

GOST R ISO 9001-2015 (ISO 9001:2015)
TC RU C-RU.AA87.B.00244
POCC RU.EX01.B00004
TU 3400-005-72453807-07
GAZPROM OJSC No. Г000.RU.1131.H00666
TC RU C-RU.МЛ02.B.00760

CODES

GOST 12.2.007.0-75
GOST R IEC 60079-0-2011
GOST R IEC 60079-31-2010
GOST 14254-96 (IEC 529-89)
GOST 30852.0-2002 (IEC 60079-0:1998)
GOST 30852.1-2002 (IEC 60079-1:1998)
GOST 30852.10-2002 (IEC 60079-11:1999)
GOST IEC 61241-1-1-2011
Electrical Installation Code Ch. 7.3, Ch. 7.4
GOST 24754-2013
TR CU 012/2011
GOST 30852.20-2002
TR CU 004/2011
TR CU 020/2011

TECHNICAL CHARACTERISTICS

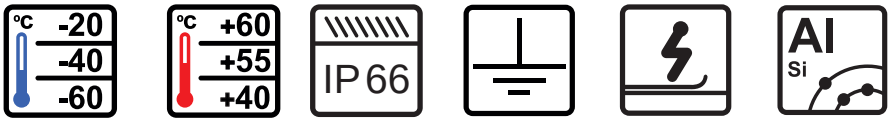
Installation
Category II for gas subgroup IIA, IIB, IIC; zones 0, 1, 2; Category III for dust, explosive dust atmospheres containing flying particles, conductive and non-conductive dust; Underground mines non-hazardous with gas (methane) and coal dust; Non-hazardous area of ground structures and open sites; Dangerous production facilities

Current consumption
130 mA (for 12 V); 14 mA (for 220 V)

Supply voltage, V
⎓12, 24; ~220

Mass, kg
2

Climatic category
NF1 (upon request NF2, NF3, NF4, NF5, F1, F2, F3, F5, T1, T2, T3, T5, MU1, MU2, MU3, MU4, W2.13**, W5)

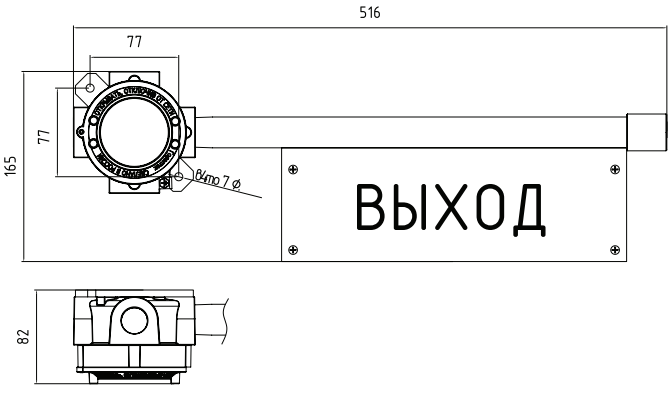


OPTIONS, ACCESSORIES AND VERSIONS

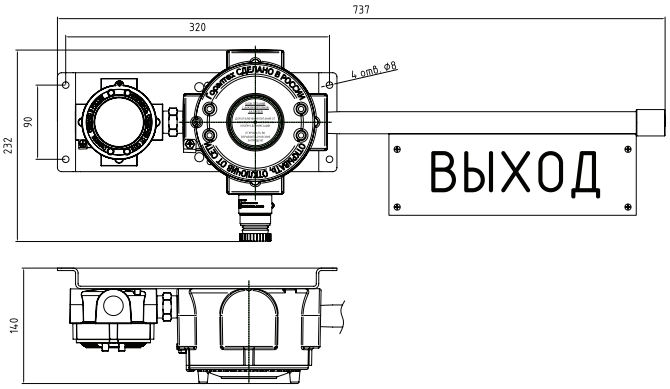
DESCRIPTION	MARKING
Storage battery	/AKB
Nameplate with inscription as per customer's specification	/NADPIS «_»
Nameplates with light reflecting coating	/SVP
Anti-condensation coating	/AP
Stainless steel chain for cover	/TSEPOCHKA
External surface coating as per customer's specification	/RAL (code)
Sign with text or a pictogram, standard or optional in Russian, English, Kasakh, Ukrainian, Belarusian upon customer's request (or pictogram code as per GOST R 12.4.026-2001)	/EXIT
	/EXIT LEFT
	/EXIT RIGHT
	/GAS DO NOT ENTER
	/GAS LEAVE NOW!
	/AEROSOL DO NOT ENTER
	/AEROSOL LEAVE NOW!
	/FOAM DO NOT ENTER
	/FOAM LEAVE NOW!
	/POZHAR
	POWDER DO NOT ENTER
	/POWDER LEAVE NOW!
	/WATCH OUT! ELECTRIC TRAIN

OVERALL AND MOUNTING DIMENSIONS

PGS-IT11-220AC



PGS-IT11-220AC WITH AKB



FORMATION OF MARKING

PGS-IT11 – X/ X/ X - X / X – TU 3400-005-72453807-07

- Type of sound alarm
- Supply voltage: ⎓12V - **12DC**; ⎓24V - **24DC**; ~220V - **220AC**
- Sign (or pictogram code as per GOST R 12.4.026-2001)
- Illumination color: Red – K; Yellow – ZH; Green – Z;
- Quantity and dimension type of cable glands
- Options, accessories and versions

Example of order: **PGS-IT11-220AC/EXIT/Z-KNV1N/AKB-TU 3400-005-72453807-07.**

Control and indicating elements	refer to p.377
Recommended cable glands KNV, KOV, KNVTN, KNVTV, KNVM, KNVZ	refer to p.393

Electronic sign PGS-BS SA-INDICATOR/INFO

• Optional setting of any sign or graphic image at the customer's site.
• Display with various effects: strategic sign; flashing sing; scrolling sign.
• Radiation capacity and brightness of red or green light-emitting diodes of text display provides contrast perception of information in any lighting conditions.
• Optional production of PGS-CHASY device (informational sign-clock), which features high legibility of displayed information, high reliability of electronic components and energy-independent memory.

MARKING

Ex 1Ex s II T5 Gb

MINING EQUIPMENT MARKING

PH2

CERTIFICATES AND PERMITS

GOST R ISO 9001-2015 (ISO 9001:2015)
TC RU C-RU.AA87.B.00244
POCC RU.EX01.B00004
TU 3400-006-72453807-07
TC RU C-RU.MΛ02.B.00760

CODES

GOST R IEC 60079-0-2011
GOST 14254-96 (IEC 529-89)
GOST 30852.0-2002 (IEC 60079-0:1998)
GOST 22782.3-77
GOST 24754-2013
TR CU 012/2011
Electrical Installation Code Ch. 7.3, Ch. 7.4
GOST 12.2.007.0-75
TR CU 004/2011
GOST 30852.20-2002
TR CU 020/2011

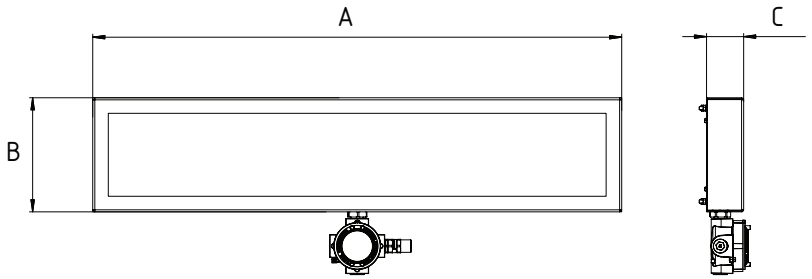
TECHNICAL CHARACTERISTICS

Installation	Category II for gas subgroup IIA, IIB, IIC; zones 1, 2; Underground mines non-hazardous with gas (methane) and coal dust; Non-hazardous area of ground structures and open sites; Dangerous production facilities
Current consumption	130 mA (for 12 V); 14 mA (for 220 V)
Rated voltage, V	~220
Current consumption, A	1,7
Maximum power consumption, W	370
Sign display area, mm	960x160, 640x160, 320x160
Image resolution	32x16, 64x16, 96x16 dots
Grounding	2 stainless steel ground clamps (inner and outer)
Enclosure fastening	4 external mounting points
Climatic category	NF1 (upon request NF4, NF5, T1, T2, T3, T5, F5, MU1, MU2, MU3, MU4, W5)

OPTIONS, ACCESSORIES AND VERSIONS

DESCRIPTION	MARKING
Nameplate with inscription as per customer's specification	/NADPIS «_»
Nameplates with light reflecting coating	/SVP
Electrical heating	/OBOGREV
Frame mounting	/RAMA
Protective canopy	/KOZYREK

OVERALL AND MOUNTING DIMENSIONS



Model	Temperature class	Size, mm			Mass, kg
		A	B	C	
PGS-BS960160	T5	1200	220	70	25
PGS-BS640160		880	220	70	upon request
PGS-BS320160		560	220	70	upon request

FORMATION OF MARKING:

PGS-BS X - X / X / X / X / X – TU 3400-005-72453807-07

- Type of sound alarm
- Size of LED module: **320160**, **640160**, **960160**
- Supply voltage: ~ 220 V – **220AC**; ⎓12V – **12DC**
- Text (display of any information upon customer's request)
- Text color: Red – **K**; Yellow – **ZH**; Green – **Z**; Blue – **S**; White – **B**; Red/ Green – **KZ**;
- Quantity and dimension type of cable glands
- Options, accessories and versions

Example of order: **PGS-BS960160-220AC/AEROSOL DO NOT ENTER/AUTOMATION IS OFF/KZ-KNV1NK/OBOGREV-TU 3400-005-72453807-07.**

Table of names matching

Previous international name "ZAVOD GORELTEX" Co. Ltd. TU 3400-005-72453807-07	The Customs Union name "ZAVOD GORELTEX" Co. Ltd. TU 3400-005-72453807-07
SA-INDICATOR/INFO	PGS-BS
SA-INDICATOR/INFO/960160	PGS-BS960160
SA-INDICATOR/INFO/640160	PGS-BS640160
SA-INDICATOR/INFO/320160	PGS-BS320160

Control and indicating elements	refer to p.377
Recommended cable glands KNV, KOV, KNVTN, KNVTV, KNVM, KNVZ	refer to p.393

Lighted sign PGS-IT31 SA-INDICATOR/SS

• PGS-IT31 signs can be applied in fire alarm warning systems and automatic power suppression systems.
• Device is made from stainless steel.
• Selection of a board with text or a pictogram by customer.

MARKING

Ex 1Ex s IIB T5 Gb

MINING EQUIPMENT MARKING

PH2

CERTIFICATES AND PERMITS

GOST R ISO 9001-2015 (ISO 9001:2015)
TC RU C-RU.AA87.B.00244
POCC RU.EX01.B00004
TC RU C-RU.МЛ02.B.00760
Maritime Register upon request (check cost and terms of Type Approval Certificate issuance with manager)
TU 3400-006-72453807-07

CODES

GOST R IEC 60079-0-2011
GOST 14254-96 (IEC 529-89)
GOST 30852.0-2002 (IEC 60079-0:98)
GOST 22782.3-77
GOST 24754-2013
Electrical Installation Code Ch. 7.3, Ch. 7.4
TR CU 012/2011, TR CU 004/2011
GOST 12.2.007.0-75
GOST 30852.20-2002
TR CU 020/2011

TECHNICAL CHARACTERISTICS

Installation	Category II for gas subgroup IIA, IIB, IIC; zones 1, 2; Underground mines non-hazardous with gas (methane) and coal dust; Non-hazardous area of ground structures and open sites; Dangerous production facilities
Rated voltage, V	⎓12/24; ~220 (other supply voltage upon approval)
Mass, kg	From 7 kg (depending on the dimensions of the sign)
Enclosure fastening	4 external mounting points
Climatic category	NF1 (upon request NF2, NF3, NF4, NF5, F1, F2, F3, F5 T1, T2, T3, T5, MU1, MU2, MU3, MU4, W2.13**, W5)

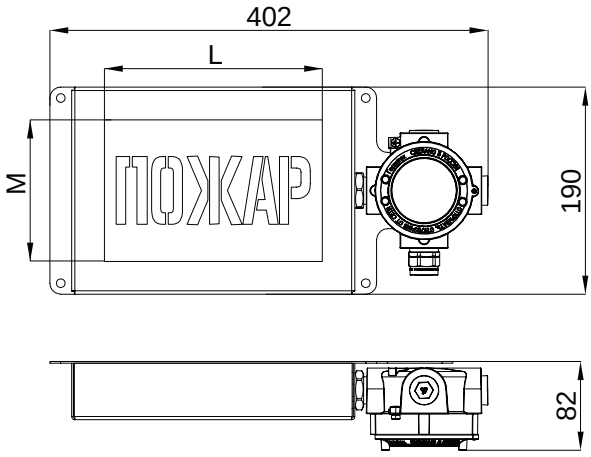
OPTIONS, ACCESSORIES AND VERSIONS

DESCRIPTION	MARKING
Nameplates with light reflecting coating	/SVP
Non-explosion-proof version	/PROM
Storage battery	/AKB
Protective canopy	/KOZYREK
Electrical heating	/OBOGREV

Typical signs

RED LETTERING, BLACK BACKGROUND	WHITE LETTERING, RED BACKGROUND	WHITE LETTERING (SYMBOLS), GREEN BACKGROUND
FIRE GAS DO NOT ENTER GAS LEAVE NOW! AEROSOL DO NOT ENTER AEROSOL LEAVE NOW! POWDER DO NOT ENTER POWDER LEAVE NOW! FOAM LEAVE NOW! FOAM DO NOT ENTER WATCH OUT! ELECTRIC TRAIN	FIRE GAS DO NOT ENTER GAS LEAVE NOW! AEROSOL DO NOT ENTER AEROSOL LEAVE NOW! POWDER DO NOT ENTER POWDER LEAVE NOW! FOAM LEAVE NOW! FOAM DO NOT ENTER WATCH OUT! ELECTRIC TRAIN	AUTOMATION IS OFF EMERGENCY EXIT EXIT EXIT EXIT LEFT EXIT RIGHT Symbolic depiction of entrance/exit

OVERALL AND MOUNTING DIMENSIONS



FORMATION OF MARKING

PGS-IT31 – X – O L x M – X – X – X – X / X – TU 3400-005-72453807-07

- Type of sign
- Supply voltage: ⎓12V - **12DC**; ⎓24V - **24DC**; ~220V - **220AC**
- Dimensions of the window, mm
- Text (or a pictogram code as per GOST R 12.4.026-2001)
- Text color: White – **B**; Red – **K**; Yellow – **ZH**; Green – **Z**; Blue – **S**; Black – **CH**
- Background color: White – **B**; Red – **K**; Yellow – **ZH**; Green – **Z**; Blue – **S**; Black – **CH**
- Dimension type of a cable gland
- Options, accessories and versions

Example of order: **PGS-IT31-220AC-0500X200/EMERGENCY EXIT/B/Z-KNV1N-TU 3400-005-72453807-07.**

Control and indicating elements	refer to p.377
Recommended cable glands KNV, KOV, KNVTN, KNVTV, KNVM, KNVZ	refer to p.393

LED traffic lights PGS–SVETOFOR CCA–02/S

• PGS-SVETOFOR traffic lights are a modular structure and can contain one, two or three modules (depending on customer's demands).
• Source of light – light emitting diodes.
• Traffic light optical element with diameter 140 mm.
• Canopy for protection against sunlight.
• Light diffuser forms even and bright emission of the signal and good side viewing.

MARKING

Ex 1E x d IIC T4 Gb
Ex 1Ex d [ia] IIC T4 Gb
Ex Ex tb IIIC T135°C Db

MINING EQUIPMENT MARKING

Ex PB Ex d I Mb
PH2

CERTIFICATES AND PERMITS

GOST R ISO 9001-2015 (ISO 9001:2015)
TC RU C-RU.AA87.B.00249
POCC RU.EX01.B00003
Maritime Register upon request (check cost and terms of Type Approval Certificate issuance with manager)
TU 3400-006-72453807-07
GAZPROM OJSC No. Г000.RU.1131.H00665

CODES

GOST 12.2.007.0-75
TR CU 012/2011
GOST R IEC 60079-0-2011
GOST R IEC 60079-31-2010
GOST IEC 61241-1-1-2011
GOST 14254-96 (IEC 529-89)
GOST 30852.0-2002 (IEC 60079-0:1998)
GOST 30852.1-2002 (IEC 60079-1:1998)
GOST P 24754-2013
Electrical Installation Code Ch. 7.3, Ch. 7.4
GOST 30852.20-2002
GOST 24471-80

TECHNICAL CHARACTERISTICS

Installation

Category I for firedamp and dust;
Category II for gas subgroup IIA, IIB, IIC; zones 1, 2;
Category III for dust, explosive dust atmospheres containing flying particles, conductive and non-conductive dust;
Underground mines non-hazardous with gas (methane) and coal dust;
Non-hazardous area of ground structures and open sites;
Dangerous production facilities.

Rated voltage, V

~220
⎓8–48 (upon request)

Power of module's LED matrix, W

18

Mass, kg

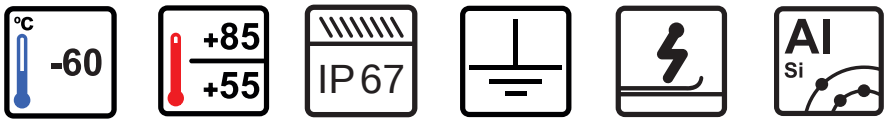
25

Climatic category

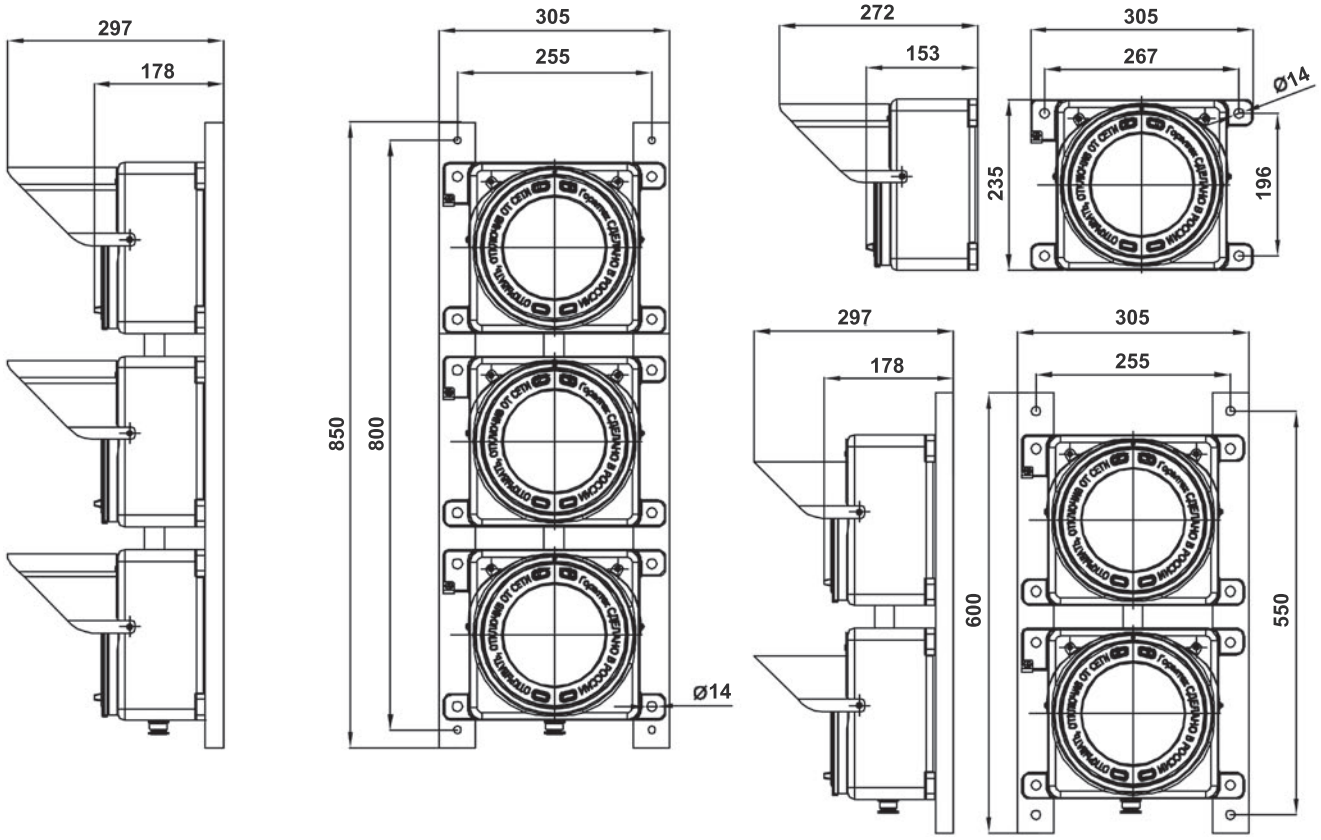
NF1 (upon request NF2, NF3, NF4, NF5, F1, F2, F3, F5 T1, T2, T3, T5, MU1, MU2, MU3, MU4, W2.13**, W5)

OPTIONS, ACCESSORIES AND VERSIONS

DESCRIPTION	MARKING
Breather plug for moisture removal	/VKU
Frame mounting	/RAMA
External surface coating as per customer's specification	/RAL (code)
Anti-condensation coating	/AP
Drain plug for condensate removal	/DKU
Electrical heating	/OBOGREV



OVERALL AND MOUNTING DIMENSIONS



*Traffic lights selection table**

Type of traffic lights	Matrix color	Number of modules, pcs.
PGS-SVETOFOR-Z	Green	1
PGS-SVETOFOR-ZH	Yellow	
PGS-SVETOFOR-K	Red	
PGS-SVETOFOR-B	Lunar-white	
PGS-SVETOFOR-S	Blue	
PGS-SVETOFOR-KZ	Red+Green	2
PGS-SVETOFOR-ZHZ	Yellow+Green	
PGS-SVETOFOR-KZH	Red+Yellow	
PGS-SVETOFOR-BS	Lunar-white+Blue	
PGS-SVETOFOR-KZHZ	Red+Yellow+Green	3

** Any combination of lights can be produced upon customer's request, production of non-standard traffic lights is possible.*

FORMATION OF MARKING:

PGS-SVETOFOR – X – X – X / X – TU 3400-006-72453807-07

- Type of traffic lights
- Color scheme: Red – **K**; Yellow – **ZH**; Green – **Z**; Blue – **S**; Lunar-white – **B**
- Supply voltage: ~220 – **220AC**; ⎓8–48 – **48DC**
- Dimension type of cable gland
- Options, accessories and versions

Example of order: **PGS-SVETOFOR-KZHZ-220AC-KNV2N – TU 3400-006-72453807-07.**

Control and indicating elements	refer to p.377
Recommended cable glands KNV, KOV, KNVTN, KNVTV, KNVM,KNVZ	refer to p.393

Light signaling device PGS-VSPYSHKA EV-4050-FLASH

• Built-in impulse signal lamp.
• Heat-resistant impact-resistant borosilicate glass shade.
• Convenient connection: absence of wires between a lamp compartment and an outlet box excludes wire twisting during installation.
• Power supply from terminals in the outlet box to the light source is carried out through spring-loaded current-conducting wear-resistant pins.

MARKING

Ex 1Ex d IIC T5...T4 Gb
Ex Ex tb IIIC T100°C...T134°C Db

MINING EQUIPMENT MARKING

Ex PB Ex d I Mb
PH2

CERTIFICATES AND PERMITS

GOST R ISO 9001-2015 (ISO 9001:2015)
TC RU C-RU.AA87.B.00249
TC RU C -RU.MΛ02.B.00627
C-RU.AБ03.B.00100
POCC RU.EX01.B00003
Maritime Register upon request (check cost and terms of Type Approval Certificate issuance with manager)
TU 3400-006-72453807-07
GAZPROM OJSC No. Г000.RU.1131.H00665

CODES

GOST 12.2.007.0-75
GOST R IEC 60079-0-2011
GOST R IEC 60079-31-2010
GOST 14254-96 (IEC 529-89)
GOST 30852.0-2002 (IEC 60079-0:1998)
GOST 30852.1-2002 (IEC 60079-1:1998)
GOST IEC 61241-1-1-2011
OD 5.2-093-2004
Electrical Installation Code Ch. 7.3, Ch. 7.4
GOST 30852.20-2002
TR CU 004/2011, TR CU 012/2011,
GOST 24471-80
GOST 24754-2013

TECHNICAL CHARACTERISTICS

Installation

Category I for firedamp and dust;
Category II for gas subgroup IIA, IIB, IIC; zones 1, 2;
Category III for dust, explosive dust atmospheres containing flying particles, conductive and non-conductive dust;
Underground mines non-hazardous with gas (methane) and coal dust;
Non-hazardous area of ground structures and open sites;
Dangerous production facilities

Power

0,5 J, 6 J, 16 J, 20 J
up to 14 W (LED lamps power depends on supply voltage and emission color of lamps)

Rated voltage, V

~/⎓12...85; ~/⎓85...230; ~ 220 (50/60 Hz)

Electric diagram

Connection to three terminals with cross-section 4 mm^2

Thread on connecting holes

Taper inch NPT 3/4” (1 or 4 holes)

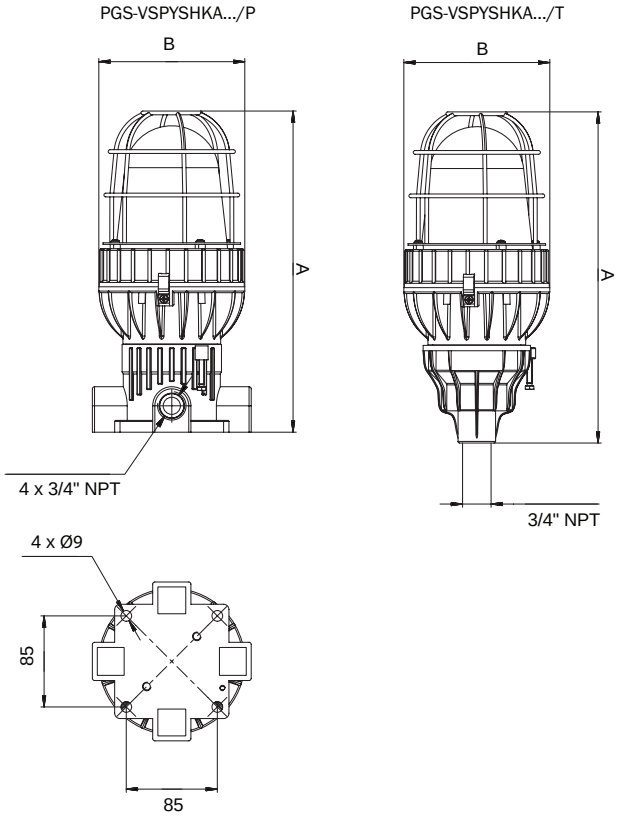
Climatic category

NF1 (upon request NF2, NF3, NF4, NF5, F1, F2, F3, F5 T1, T2, T3, T5, MU1, MU2, MU3, MU4, W2.13**, W5)

OPTIONS, ACCESSORIES AND VERSIONS

DESCRIPTION	MARKING
Conformity to fire safety requirements	/POZHAR
External surface coating as per customer’s specification	/RAL (code)
Non-explosion-proof (fire safe) version, operating temperature up to +85°C	/PROM

OVERALL AND MOUNTING DIMENSIONS



Model	Lamp type	Voltage, V	Current consumption, A	Dimensions, mm		Mass, kg
				A	B	
PGS-VSPYSHKA-K05(...)12DC/T	xenon 0,5 J	⎓6...12	up to 0,182	309	136	2,33
PGS-VSPYSHKA-K05(...)24DC/T	xenon 0,5 J	⎓24	up to 0,182	309	136	2,33
PGS-VSPYSHKA-K05(...)220AC/T	xenon 0,5 J	~220	up to 0,182	309	136	2,33
PGS-VSPYSHKA-SC9(...)12AC/DC/T	LED 14 W**	~/⎓12...85	up to 0,5	309	136	2,33
PGS-VSPYSHKA-SC9(...)220AC/DC/T	LED 14 W**	~/⎓85...230	up to 0,3	309	136	2,33
PGS-VSPYSHKA-K6(...)220AC/T	xenon 6 J	~220	up to 0, 2	352	201	4,90
PGS-VSPYSHKA-K6(...)24AC/DC/T	xenon 6 J	~/⎓24	up to 0,5	352	201	4,90
PGS-VSPYSHKA-K16(...)220AC/T	xenon 16 J*	~220	up to 0, 2	352	201	4,90
PGS-VSPYSHKA-K16(...)24AC/DC/T	xenon 16 J*	~/⎓24	up to 0,5	352	201	4,90
PGS-VSPYSHKA-K20(...)220AC/T	xenon 20 J*	~220	up to 0, 2	352	201	4,90
PGS-VSPYSHKA-K05(...)12DC/P	xenon 0,5 J	⎓6...12	up to 0,182	299	136	2,73
PGS-VSPYSHKA-K05(...)24DC/P	xenon 0,5 J	⎓24	up to 0,182	299	136	2,73
PGS-VSPYSHKA-K05(...)220AC/P	xenon 0,5 J	~220	up to 0,182	299	136	2,73
PGS-VSPYSHKA-SC9(...)12AC/DC/P	LED 14 W**	~/⎓12...85	up to 0,5	299	136	2,73
PGS-VSPYSHKA-SC9(...)220AC/DC/P	LED 14 W**	~/⎓85...230	up to 0,3	299	136	2,73
PGS-VSPYSHKA-K6(...)220AC/P	xenon 6 J	~220	up to 0,2	347	201	4,90
PGS-VSPYSHKA-K6(...)24AC/DC/P	xenon 6 J	~/⎓24	up to 0,5	347	201	4,90
PGS-VSPYSHKA-K16(...)220AC/P	xenon 16 J*	~220	up to 0,2	347	201	4,90
PGS-VSPYSHKA-K16(...)24AC/DC/P	xenon 16 J*	~/⎓24	up to 0,5	347	201	4,90
PGS-VSPYSHKA-K20(...)220AC/P	xenon 20J*	~220	up to 0,2	347	201	4,90

** Xenon lamp for 16 J or 20 J without colored shade (only white).*

*** LED lamps power depends on supply voltage and emission color of lamps.*

DESIGN DESCRIPTION

- Stainless steel grid.
- Enclosure is made from modified corrosion-resistant aluminum-silicon alloy.
- Heat-resistant impact-resistant borosilicate glass shade.
- Inner and outer stainless steel ground clamps.
- Silicone rubber sealing rings resistant to acids and hydrocarbons.
- Antistatic polymer-epoxy coating, frictionally intrinsically safe, resistant to operating environment and ionizing radiation. Color RAL 7035.

FORMATION OF MARKING

PGS-VSPYSHKA – X (X) X – X – X / X – TU 3400-006-72453807-07

- Device name
- Lamp type: xenon – **K**; LED – **SC**
- Lamp color: Red – **K**; Yellow – **ZH**; Green – **Z**; Blue – **S**
- Supply voltage
- Type of mounting
- Dimension type of cable gland
- Options, accessories and versions

Example of order: **PGS-VSPYSHKA-SC(K)12AC/DC/P-KNV2NNK/R – TU 3400-006-72453807-07.**

CONNECTION SHALL BE CARRIED OUT WITH A CABLE GLAND:

KNV2NNK/R — cable gland for non-armored cable, diameter of crimped cable 6-18 mm, nickel-plated brass.

KNVTV2NGNK/R — cable gland for non-armored cable in hoses, pipe conduit, metal hoses; inner thread for external connection pipe cylindrical GOST 6357-81 3/4" G, diameter of crimped cable 6-18 mm, nickel-plated brass.

KNVM2N-25NK/R — cable gland for non-armored cable in metal hoses, diameter of crimped cable 6-17 mm, inside diameter of metal hose 25 mm, nickel-plated brass.

KNVM2N-20NK/R — cable gland for non-armored cable in metal hoses, diameter of crimped cable 6-17 mm, inside diameter of metal hose 20 mm, nickel-plated brass.

Recommended cable glands KNV2NNK/R, KNVTV2NGNK/R etc. refer to p.393

• Built-in impulse signal lamp and a heat-resistant impact-resistant borosilicate glass shade fastened to the enclosure by means of threaded joint.
• Convenient connection: absence of wires between a lamp compartment and an inlet box excludes wire twisting during installation.
• Power supply from terminals in the inlet box to the light source is carried out through spring-loaded current-conducting wear-resistant pins.

MARKING

Ex 1Ex d IIC T5...T4 Gb
Ex Ex tb IIIC T100°C...T134°C Db

MINING EQUIPMENT MARKING

Ex PB Ex d I Mb
PH2

CERTIFICATES AND PERMITS

GOST R ISO 9001-2015 (ISO 9001:2015)
TC RU C-RU.AA87.B.00249
TC RU C -RU.MΛ02.B.00627
Maritime Register upon request (check cost and terms of Type Approval Certificate issuance with manager)
TU 3400-006-72453807-07
GAZPROM OJSC No. Г000.RU.1131.H00665

CODES

GOST 12.2.007.0-75
GOST R IEC 60079-0-2011
GOST R IEC 60079-31-2010
GOST 14254-96 (IEC 529-89)
GOST 30852.0-2002 (IEC 60079-0:1998)
GOST 30852.1-2002 (IEC 60079-1:1998)
GOST IEC 61241-1-1-2011
OD 5.2-093-2004
Electrical Installation Code Ch. 7.3, Ch. 7.4
GOST 30852.20-2002
TR CU 004/2011
GOST 24471-80
GOST 24754-2013
TR CU 012/2011

TECHNICAL CHARACTERISTICS

Installation
Category I for firedamp and dust;
Category II for gas subgroup IIA, IIB, IIC; zones 1, 2;
Category III for dust, explosive dust atmospheres containing flying particles, conductive and non-conductive dust;
Underground mines non-hazardous with gas (methane) and coal dust;
Non-hazardous area of ground structures and open sites;
Dangerous production facilities

Rated voltage, V
~/⎓12...85; ~/⎓85...230; ~ 220 (50/60 Hz)

Socket
E27

Maximum power
14 W LED lamp

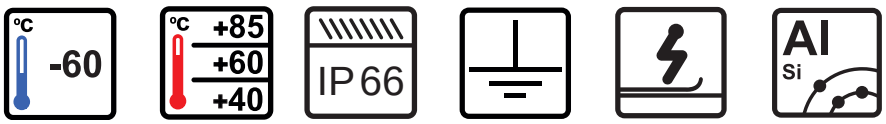
Electric diagram
Connection to three terminals with cross-section 4 mm²

Thread on connecting holes
Taper inch NPT 3/4" (1 or 4 holes)

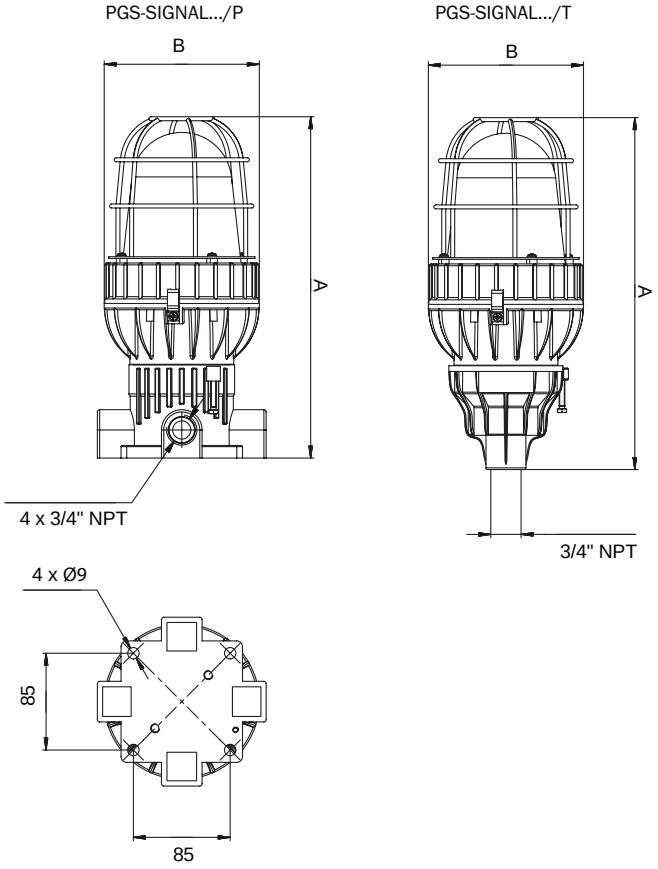
Climatic category
NF1 (upon request NF2, NF3, NF4, NF5, F1, F2, F3, F5 T1, T2, T3, T5, MU1, MU2, MU3, MU4, W2.13**, W5)

OPTIONS, ACCESSORIES AND VERSIONS

DESCRIPTION	MARKING
Non-explosion-proof (fire safe) version, operating temperature up to +85°C	/PROM
External surface coating as per customer's specification	/RAL (code)



OVERALL AND MOUNTING DIMENSIONS



Model	Lamp type	Voltage, V	Current consumption, A	Dimensions, mm		Mass, kg
					B	
PGS-SIGNAL-SC(...)12AC/DC/T	LED 14 W*	~/A12...85	0,5	309	136	2,33
PGS-SIGNAL-SC(...)220AC/DC/T	LED 14 W*	~/A85...230	0,3	309	136	2,33
PGS-SIGNAL-SC(...)12AC/DC/P	LED 14 W*	~/A12...85	0,5	299	136	2,73
PGS-SIGNAL-SC(...)220AC/DC/P	LED 14 W*	~/A85...230	0,3	299	136	2,73

** LED lamps power depends on supply voltage and emission color of lamps.*

FORMATION OF MARKING

PGS-SIGNAL – X (X) X / X – X / X – TU 3400-006-72453807-07

- Device name
- Lamp type: LED - **SC**
- Lamp color: Red - **K**; Yellow - **ZH**; Green - **Z**; Blue - **S**
- Supply voltage: /~12...85V - **12AC/DC**; /85...230 - **220AC/DC**
- Type of mounting: pipe mounting - **T**; ceiling mounting - **P**
- Dimension type of cable gland
- Options, accessories and versions

Example of order: **PGS-SIGNAL-SC(K)220AC/DC/P-KNV2NNK/R– TU 3400-006-72453807-07.**

CONNECTION SHALL BE CARRIED OUT WITH A CABLE GLAND:

KNV2NNK/R — cable gland for non-armored cable, diameter of crimped cable 6-18 mm, nickel-plated brass.

KNVTV2NGNK/R — cable gland for non-armored cable in hoses, pipe conduit, metal hoses; inner thread for external connection pipe cylindrical GOST 6357-81 3/4" G, diameter of crimped cable 6-18 mm, nickel-plated brass.

KNVM2N-25NK/R — cable gland for non-armored cable in metal hoses, diameter of crimped cable 6-17 mm, inside diameter of metal hose 25 mm, nickel-plated brass.

KNVM2N-20NK/R — cable gland for non-armored cable in metal hoses, diameter of crimped cable 6-17 mm, inside diameter of metal hose 20 mm, nickel-plated brass.

Recommended cable glands KNV2NNK/R, KNVTV2NGNK/R etc. refer to p.393

Light signaling device PGSK01 EV-4050-HOOTER-122

- Combined device that includes functions of a sound and light signaling device.
- Device design allows to connect mains for simultaneous work of the siren and the beacon and a separate connection for an independent operation.
- Application of PGSK01 explosion-proof sound signaling devices with a high level of output signal in large and/or noisy areas guarantees effective signalization with a powerful and precise level of signal, and also allows to reduce the number of signaling devices, cables and terms of installation.
- Convenient connection: absence of wires between a lamp compartment and an inlet box excludes wire twisting during installation.

MARKING

Ex 1Ex d e mb IIC T6...T4 Gb
Ex Ex tb IIIC T85 °C...T135°C Db

MINING EQUIPMENT MARKING

Ex PB Ex d [ib] I Mb
PH2

CERTIFICATES AND PERMITS

GOST R ISO 9001-2015 (ISO 9001:2015)
TC RU C-RU.AA87.B.00249
TU 3400-005-72453807-07
GAZPROM OJSC No. Г000.RU.1131.H00666
РОСС RU.EX01.B00003

CODES

GOST 12.2.007.0-75
GOST R IEC 60079-0-2011
GOST R IEC 60079-31-2010
GOST 14254-96 (IEC 529-89)
GOST 30852.0-2002 (IEC 60079-0:1998)
GOST 30852.1-2002 (IEC 60079-1:1998)
GOST 30852.10-2002 (IEC 60079-11:1999)
GOST 30852.20-2002
Electrical Installation Code Ch. 7.3, Ch. 7.4
GOST IEC 61241-1-1-2011
TR CU 012/2011
GOST 24754-2013

TECHNICAL CHARACTERISTICS

Installation

Category I for firedamp and dust;
Category II for gas subgroup IIA, IIB, IIC; zones 1, 2;
Category III for dust, explosive dust atmospheres containing flying particles, conductive and non-conductive dust;
Underground mines non-hazardous with gas (methane) and coal dust;
Non-hazardous area of ground structures and open sites;
Dangerous production facilities

Rated voltage, V

~220; ⎓12; ⎓24

Lamp power

Xenon lamp: 0,5 J
LED lamp: 14 W

Maximum level of sound pressure, dB

106; 102 (for mining version)

Type of emission

Constant (by default), intermittent (option /MIG)

Sound signal options

Upon approval

Thread on connecting holes

Taper inch NPT 3/4” (1 or 4 holes)

Climatic category

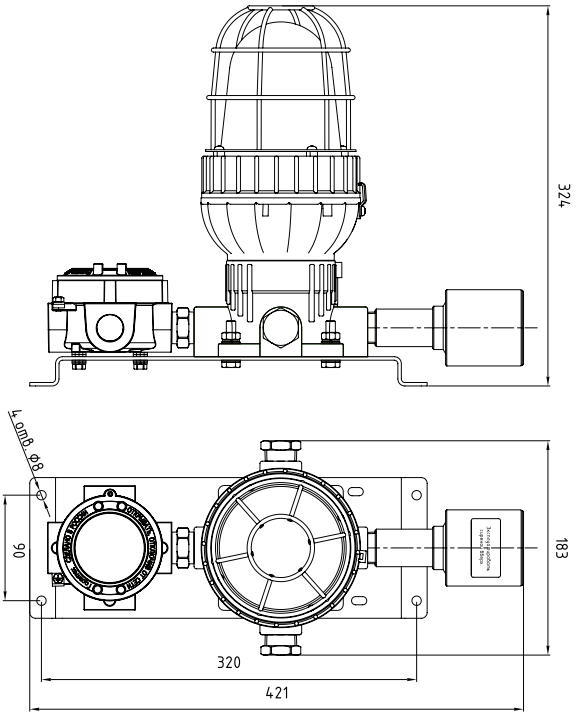
NF1 (upon request NF2, NF3, NF4, NF5, F1, F2, F3, F5 T1, T2, T3, T5, MU1, MU2, MU3, MU4, W2.13**, W5)

OPTIONS, ACCESSORIES AND VERSIONS

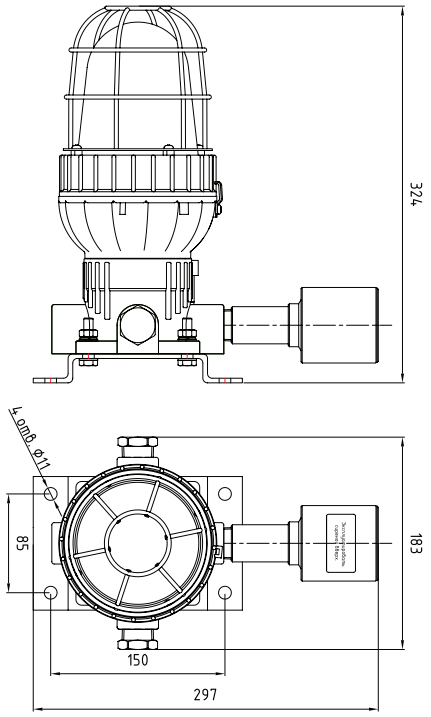
DESCRIPTION	MARKING
External surface coating as per customer’s specification	/RAL (code)
Intermittent lighting	/MIG

OVERALL AND MOUNTING DIMENSIONS

PGSK01-...220DC, PGSK01-...24DC



PGSK01-...12DC



Model	Voltage, V	Lamp type	Current consumption, A	Mass, kg
PGSK01-K(...)12DC	⎓12	Xenon lamp+piezo siren	0,65	3,80
PGSK01-K(...)24DC	⎓24	Xenon lamp+piezo siren	0,32	3,80
PGSK01-K(...)220AC	~220	Xenon lamp+piezo siren	0,02	4,48
PGSK01-SC(...)12DC	~/⎓12/24	LED lamp+piezo siren	0,8	3,80
PGSK01-SC(...)220AC	~/⎓220	LED lamp+piezo siren	0,3	3,80

FORMATION OF MARKING

PGSK01 – X (X) X – X / X – TU 3400-006-72453807-07

- Device name
- Lamp type: Xenon - **K**; LED - **SC**
- Lamp color: Red - **K**; Yellow - **ZH**; Green - **Z**; Blue - **S**
- Supply voltage for xenon lamp: ⎓12V – **12DC**; ⎓24V – **24DC**; ~220V – **220AC**
- Supply voltage for LED lamp: ⎓/~12/24V – **12AC/DC**; ⎓/~220 – **220AC/DC**
- Dimension type of cable gland
- Options, accessories and versions

Example of order: **PGSK01-SC(K)220AC-KNV2NNK/R \– TU 3400-006-72453807-07.**
Light and sound signaling device with LED red lamp
— supply voltage 220 V
— completed with KNV2N (d=12-17 mm) cable gland
Sound signal options as approved by the customer.

KNV2NNK/R — cable gland for non-armored cable, diameter of crimped cable 6-18 mm, nickel-plated brass.

KNVTV2NGNK/R — cable gland for non-armored cable in hoses, pipe conduit, metal hoses; inner thread for external connection pipe cylindrical GOST 6357-81 3/4" G, diameter of crimped cable 6-18 mm, nickel-plated brass.

KNVM2N-25NK/R — cable gland for non-armored cable in metal hoses, diameter of crimped cable 6-17 mm, inside diameter of metal hose 25 mm, nickel-plated brass.

KNVM2N-20NK/R — cable gland for non-armored cable in metal hoses, diameter of crimped cable 6-17 mm, inside diameter of metal hose 20 mm, nickel-plated brass.

Recommended cable glands KNV2NNK/R, KNVTV2NGNK/R etc. refer to p.393

- Maximum level of sound pressure 106 dB.
- Application of PGSK02 explosion-proof sound signaling devices with a high level of output signal in large and/or noisy areas guarantees effective signalization with a powerful and precise level of signal, and also allows to reduce the number of signaling devices, hence number of cables and terms of installation.
- The device is supplied with different cable glands.

MARKING

Ex 1Ex d e mb IIC T6...T5 Gb
Ex Ex tb IIIC T85°C...T100°C Db

MINING EQUIPMENT MARKING

Ex PB Ex d [ib] I Mb

CERTIFICATES AND PERMITS

GOST R ISO 9001-2015 (ISO 9001:2015)
TC RU C-RU.AA87.B.00244
TU 3400-005-72453807-07
GAZPROM OJSC No. Г000.RU.1131.H00666

CODES

GOST 12.2.007.0-75
GOST R IEC 60079-0-2011
GOST R IEC 60079-31-2010
GOST 30852.0-2002 (IEC 60079-0:1998)
GOST 30852.1-2002 (IEC 60079-1:1998)
GOST 30852.10-2002 (IEC 60079-11:1999)
GOST 30852.17-2002 (IEC 60079-18:1992)
GOST IEC 61241-1-1-2011
GOST 30852.20-2002
TR CU 012/2011
Electrical Installation Code Ch. 7.3, Ch. 7.4

TECHNICAL CHARACTERISTICS

Installation
Category I for firedamp and dust; Category II for gas subgroup IIA, IIB, IIC; zones 1, 2; Category III for dust, explosive dust atmospheres containing flying particles, conductive and non-conductive dust; Facilities under Russian Maritime Register of Shipping supervision; Dangerous production facilities

Rated voltage, V
⎓12/24 or ~220

Current consumption, mA
190

Maximum level of sound pressure, dB
106, 102 (for mining version)

Mass, kg
4

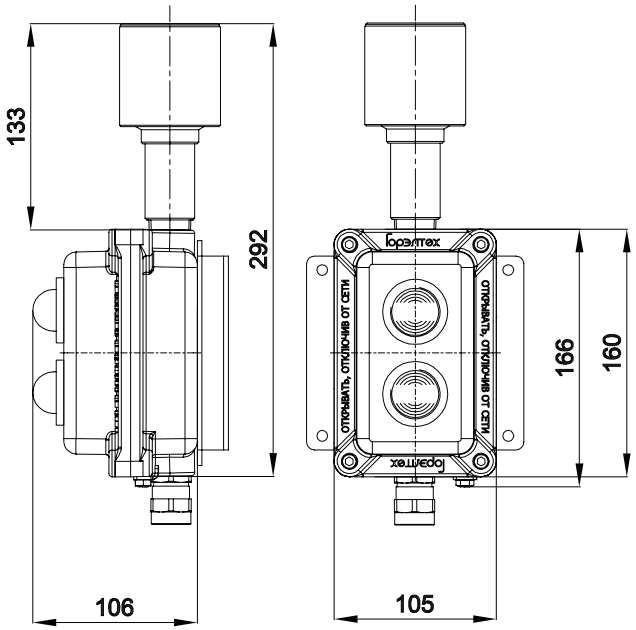
Thread on connecting holes
Taper pipe Rc NPT 3/4”

Climatic category
NF1 (upon request NF2, NF3, NF4, NF5, F1, F2, F3, F5 T1, T2, T3, T5, MU1, MU2, MU3, MU4, W2.13**, W5)

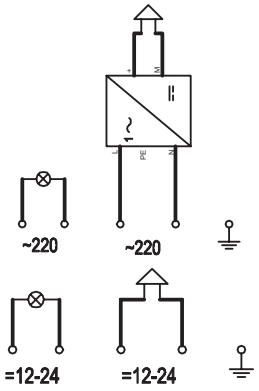
OPTIONS, ACCESSORIES AND VERSIONS

DESCRIPTION	MARKING
Nameplate with inscription as per customer's specification	/NADPIS «_»
Nameplates with light reflecting coating	/SVP
Anti-condensation coating	/AP
Signaling device's button version with protection against accidental pressing	/ZSN
External surface coating as per customer's specification	/RAL (code)

OVERALL AND MOUNTING DIMENSIONS



PGSK02 CONNECTION DIAGRAM



FORMATION OF MARKING

PGSK02 – XX – XX – X – X / X – TU 3400-005-72453807-07

- Device name
- Type of control/indicating element: Lamp – **L**; Button – **K**
- Color of control/indicating element: Red – **K**; Yellow – **ZH**; Green – **Z**; Black (for button) - **CH**
- Type of control/indicating element: Lamp – **L**; Button – **K**
- Color of control/indicating element: Red – **K**; Yellow – **ZH**; Green – **Z**; Black (for button) - **CH**
- Supply voltage =12/24V – **12DC**; ~220V – **220AC**
- Dimension type of cable gland
- Options, accessories and versions

Example of order: **PGSK02-LZH-LK-12DC-KNV1N – TU 3400-005-72453807-07.**

Recommended cable glands
KNV, KOV, KNVTN, KNVTV, KNVM, KNVZ refer to p.393

• Piezo-siren is used in PGSK03 signaling devices for generation of sound signals.
• Combination of colors of light signals is selected upon customer's request.
• 8 light emitting diodes of high brightness are used as a source of light signals.
• Power supply can be selected depending on the version – 12, 24 V DC and ~220 V AC.
• PGSK03 explosion-proof signaling device has 3 operating modes:
– Stand-by mode – green indicator is ON, indicating that the device is switched on and ready for operation;
– Warning mode – intermittent mode for sound and light signalization (duration of the impulse – 0,5 s - 1 s; interval between signals - 0,5 s - 1 s);
– Emergency signalization – constant mode for sound and light signalization. Piezo-siren is used in PGSK03 signaling devices for generation of sound signals.

MARKING

Ex 1Ex d e mb IIC T6...T5 Gb

CERTIFICATES AND PERMITS

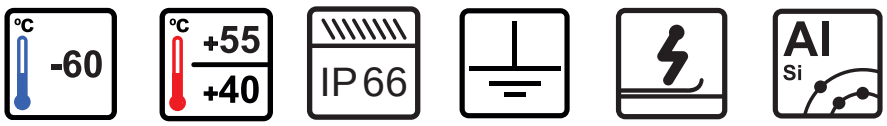
GOST R ISO 9001-2015 (ISO 9001:2015)
TC RU C-RU.AA87.B.00244
TU 3400-005-72453807-07
GAZPROM OJSC No. Г000.RU.1131.H00666

CODES

GOST 12.2.007.0-75
GOST R IEC 60079-0-2011
GOST 30852.0-2002 (IEC 60079-0:1998)
GOST 30852.1-2002 (IEC 60079-1:1998)
GOST 30852.8-2002
GOST 30852.17-2002 (IEC 60079-18:1992)
TR CU 012/2011
Electrical Installation Code Ch. 7.3, Ch. 7.4

TECHNICAL CHARACTERISTICS

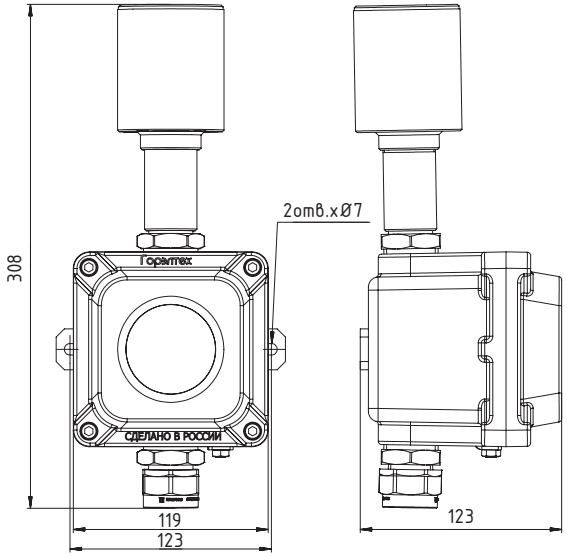
Installation
Category II for gas subgroup IIA, IIB, IIC; zones 1, 2; Facilities under Russian Maritime Register of Shipping supervision; Dangerous production facilities
Rated voltage, V
⎓12/24 or ~220
Current consumption in stand-by mode, mA
50 (for ⎓12), 30 (for ⎓24), 20 (for ~220)
Current consumption in emergency signalization mode, mA
350 (for ⎓12), 180 (for ⎓24), 40 (for ~220)
Maximum axial luminous intensity of the light source, MCd
12000
Maximum level of sound pressure, dB
106
Mass, kg
4
Thread on connecting holes
Taper pipe NPT 1"
Climatic category
NF1 (upon request NF2, NF3, NF4, NF5, F1, F2, F3, F5 T1, T2, T3, T5, MU1, MU2, MU3, MU4, W2.13**, W5)



OPTIONS, ACCESSORIES AND VERSIONS

DESCRIPTION	MARKING
Anti-condensation coating	/AP
External surface coating as per customer's specification	/RAL (code)

OVERALL AND MOUNTING DIMENSIONS



FORMATION OF MARKING

PGSK03 – X – X – X – X / X – TU 3400-005-72453807-07

- Device name
- Color of intermittent mode of operation of light indication: Red – **K**; Yellow – **ZH**; Green – **Z**
- Color of constant mode of operation of light indication: Red – **K**; Yellow – **ZH**; Green – **Z**
- Supply voltage: ⎓12V — **12DC**; ⎓24V — **24DC**; ~220V — **220AC**
- Dimension type of cable gland
- Options, accessories and versions

Example of order: **PGSK03-Z-K-220AC-KNV1N – TU 3400-005-72453807-07.**

Control and indicating elements	refer to p.377
Recommended cable glands KNV, KOV, KNVTN, KNVTV, KNVM, KNVZ	refer to p.393

• Sound/sound and light signaling devices are combined alarm devices, which include functions of a sound alarm and sound signalization control devices.
• Various siren sounds can be selected.
• Maximum level of sound pressure is 112 dB.
• Dimensions, construction and composition can vary depending on customer's request.

MARKING

for PGZ-REVUN5, PGZ-REVUN4, PGZ-REVUN32 siren:

1Ex d IIC T6...T5 Gb

Ex tb IIIC T85°C...T100°C Db

for PKIE control station:

1Ex d e IIC T6...T5 Gb

Ex tb IIIC T85°C...T100°C Db

for PGZ-SIRENA2:

1Ex d e mb IIC T6...T4 Gb

for PGZ-POST siren:

1Ex d e mb IIC T6...T5 Gb

for a control station on the base of PKIV enclosure:

1Ex d IIC T6...T5 Gb X

1Ex d IIB+H_2 T6...T5 Gb

Ex tb IIIC T70°C...T100°C Db

for PGS-SIGNAL light signaling device:

1Ex d IIC T5...T4 Gb

Ex tb IIIC T100°C...T134°C Db

MINING EQUIPMENT MARKING

PH2

CERTIFICATES AND PERMITS

GOST R ISO 9001-2015 (ISO 9001:2015)
TC RU C-RU.AA87.B.00244
POCC RU.EX01.B00004
POCC RU.EX01.B00003
TU 3400-005-72453807-07
GAZPROM OJSC No. Г000.RU.1131.H00666

CODES

GOST 14254-96 (IEC 529-89)
GOST R IEC 60079-31-2010
GOST 12.2.007.0-75
GOST 30852.0-2002 (IEC 60079-0:1998)
GOST 30852.1-2002 (IEC 60079-1:1998)
GOST 30852.8-2002
GOST 30852.17-2002 (IEC 60079-18:1992)
GOST IEC 61241-1-1-2011, Electrical Installation Code Ch. 7.3, Ch. 7.4
GOST 30852.20-2002
GOST 24754-2013

TECHNICAL CHARACTERISTICS

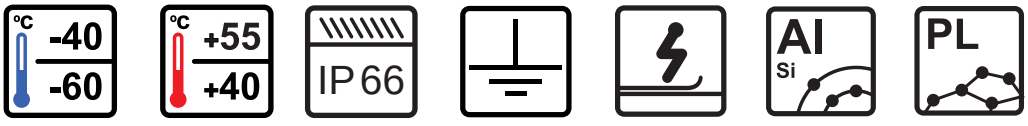
Installation
Category II for gas subgroup IIA, IIB, IIC; zones 1, 2; Category III for dust, explosive dust atmospheres containing flying particles, conductive and non-conductive dust; Underground mines non-hazardous with gas (methane) and coal dust; Dangerous production facilities

Rated voltage, V
⎓12/24 ~110/22

Current consumption, mA
According to the type of the siren of sound signalization

Frame material
Galvanized steel, color RAL3000

Climatic category
NF1 (upon request NF4, NF5, T1, T2, T3, T5, F5, MU1, MU2, MU3, MU4, W5)

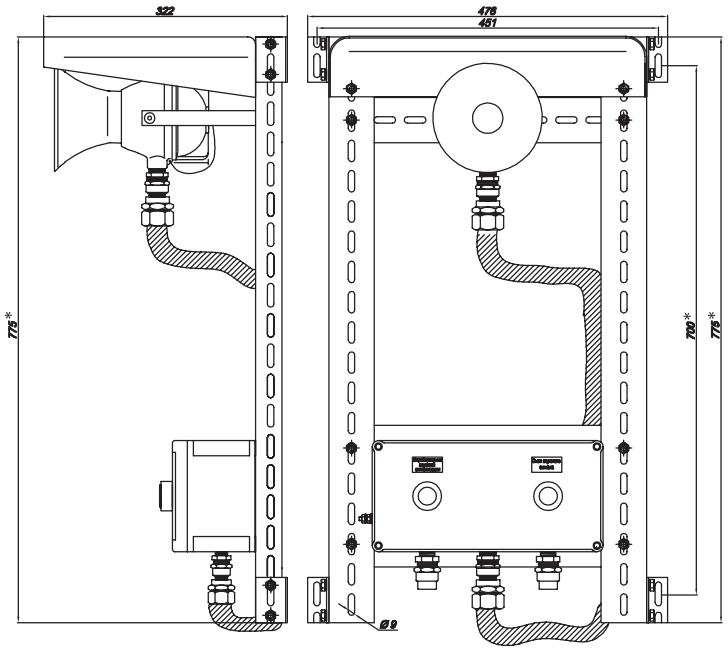


PGSK-MODULE QFM-SA-EMH, QFM-CCFE-EMH

OPTIONS, ACCESSORIES AND VERSIONS

DESCRIPTION	MARKING
Nameplate with inscription as per customer's specification	/NADPIS «_»
Nameplates with light reflecting coating	/SVP
Anti-condensation coating	/AP
Protective canopy	/KOZYREK
External surface coating as per customer's specification	/RAL (code)

PGSK-MODULE TYPE DESIGN PARAMETERS



* height as per customer's specification

Recommended cable glands
KNV, KOV, KNVTN, KNVTV, KNVM, KNVZ
refer to p.393

GORELTEX DATASHEET FOR PGSK-MODULE (QFM-SA/EMH, QFM-CCFE/EMH) COMBINED LIGHT AND SOUND SIGNALING DEVICE

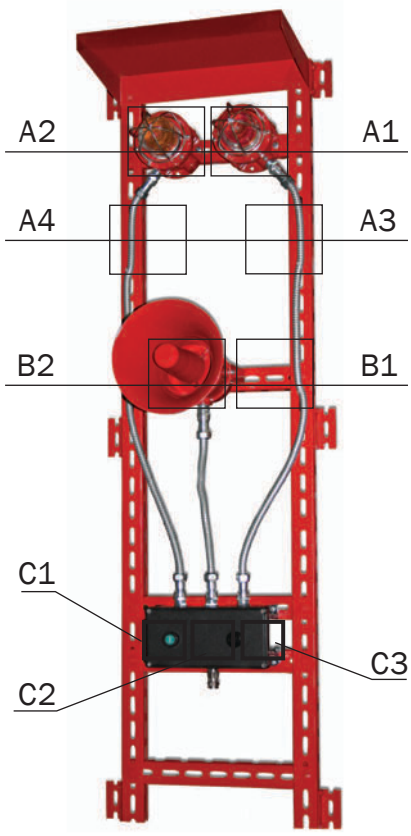
Installation zone	☐ Zone 1	☐ Zone 2	☐ PH	☐ Required type of explosion protection _____			
Group and subgroup of air and gas mixture	☐ I	☐ II	☐ IIB+H_2	☐ IICX	☐ IIC		
Temperature class	☐ T4	☐ T5	☐ T6	Operating temperature	T_{amb} from_____ to _____		
IP degree	☐ IP65	☐ IP66					
Climatic category	☐ NF1	☐ NF2	☐ NF3	☐ NF4	☐ NF5	☐ F1	☐ F2
	☐ F3	☐ F5	☐ Other: _____				
Rated voltage, V	☐ 12 DC ☐ 24 DC ☐ 110 AC (50/60 Hz) ☐ 220 AC (50/60 Hz) ☐ Other:_____		Frame dimensions	Height:_____ mm Width: _____ mm		Frame version	☐ Wall ☐ Floor ☐ Canopy

Parameters of light signaling devices

Position	Type of signaling device		Color
A1	LED ☐ Impulse/ ☐ Const. lighting	☐ Xenon/impulse	_____
A2	LED ☐ Impulse/ ☐ Const. lighting	☐ Xenon/impulse	_____
A3	LED ☐ Impulse/ ☐ Const. lighting	☐ Xenon/impulse	_____
A4	LED ☐ Impulse/ ☐ Const. lighting	☐ Xenon/impulse	_____

Parameters of sound signaling devices

Position	Type of siren	Maximum loudness, dB
B1	☐ 32-tone siren	☐ 102 ☐ 106 ☐ 112
	☐ 4-tone siren (remote tone control)	☐ 109
	☐ 5-tone siren	☐ 102 ☐ 106 ☐ 106–109 ☐ 110
	☐ electrodynamic siren (1 tone)	☐ 109 ☐ 114
	☐ piezo-siren	☐ 102 ☐ 108
B2	☐ 32-tone siren	☐ 102 ☐ 106 ☐ 112
	☐ 4-tone siren (remote tone control)	☐ 109
	☐ 5-tone siren	☐ 102 ☐ 106 ☐ 106–109 ☐ 110
	☐ electrodynamic siren (1 tone)	☐ 109 ☐ 114
	☐ piezo-siren	☐ 102 ☐ 108



Panel control elements

Position	Control element	Type of contacts	Sign
C1			
C2			
C3			

Cable glands installed from the bottom side of the panel

Quantity of cable glands	Cable gland type	Outer cable sheath diameter, mm	Inner cable sheath diameter, mm (for armored cable only)	Cable type

Quantity of items, pcs.	☐☐☐ pieces

Customer's notes	Conductor's cross-section, mm		Number of terminals
	Main		
	Neutral		

Contact details	Company:	Tel./fax:
	Postal address:	
	Contact person:	E-mail:

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PGSK-TABLO QFM-S-INDICATOR/M-Q-122

• Combined signaling device that includes functions of a lighted sign and a siren.
• Maximum sound pressure level is 102 dB.
• Text of the sign or a picture (a pictogram) and color of lighting are defined by the customer.

MARKING

Ex 1Ex d e mb IIC T6...T5 Gb

MINING EQUIPMENT MARKING

PH2

CERTIFICATES AND PERMITS

GOST R ISO 9001-2015 (ISO 9001:2015)
TC RU C-RU.AA87.B.00244
POCC RU.RU.EX01.B00004
TU 3400-005-72453807-07

CODES

GOST R IEC 60079-0-2011
GOST 14254-96 (IEC 529-89)
GOST 30852.0-2002 (IEC 60079-0:98)
GOST 30852.17-2002 (IEC 60079-18:1992)
GOST 24754-2013
Electrical Installation Code Ch. 7.3, Ch. 7.4
TR CU 012/2011
GOST 12.2.007.0-75
GOST 30852.20-2002
GOST 30852.1-2002 (IEC 60079-1:1998)
GOST 30852.8-2002

TECHNICAL CHARACTERISTICS

Installation

Category II for gas subgroup IIA, IIB, IIC; zones 1, 2;
Underground mines non-hazardous with gas (methane) and coal dust;
Dangerous production facilities

Rated voltage, V

⎓12, 24
~220 (50/60 Hz)

Maximum current consumption, A

0,4 (for 12 V)
0,25 (for 24 V)
0,03 (for 220 V)

Maximum sound pressure level, dB

106

Mass, kg

4

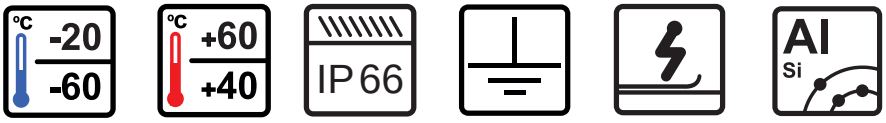
Climatic category

NF1 (upon request NF2, NF3, NF4, NF5, F1, F2, F3, F5 T1, T2, T3, T5, MU1, MU2, MU3, MU4, W2.13**, W5)

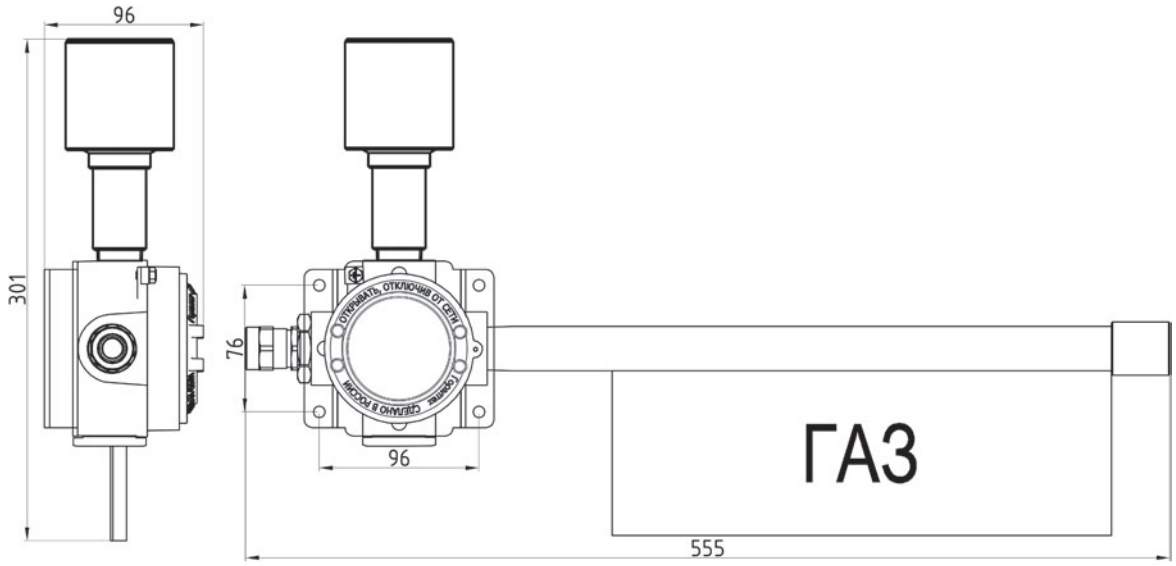
OPTIONS, ACCESSORIES AND VERSIONS

DESCRIPTION	MARKING
Anti-condensation coating	/AP
Storage battery	/AKB
Stainless steel chain for cover	/TSEPOCHKA
External surface coating as per customer's specification	/RAL (code)
Sign with text or a pictogram, standard or optional in Russian, English, Kasakh, Ukrainian, Belarus upon customer's request (or pictogram code as per GOST R 12.4.026-2001)	/EXIT
	/EXIT LEFT

DESCRIPTION	MARKING
Sign with text or a pictogram, standard or optional in Russian, English, Kazakh, Ukrainian, Belarusian upon customer's request (or pictogram code as per GOST R 12.4.026-2001)	/EXIT RIGHT
	/GAS DO NOT ENTER
	/GAS LEAVE NOW!
	/AEROSOL DO NOT ENTER
	/AEROSOL LEAVE NOW!
	/FOAM DO NOT ENTER
	/FOAM LEAVE NOW!
	/POZHAR
	POWDER DO NOT ENTER
	/POWDER LEAVE NOW!
	/WATCH OUT! ELECTRIC TRAIN



OVERALL AND MOUNTING DIMENSIONS



FORMATION OF MARKING:

PGSK-TABLO – X / X / X / X / X – TU 3400-005-72453807-07

- Type of signaling device
- Supply voltage: ⎓12V – **12DC**; ⎓24V – **24DC**; ~220V – **220A**
- Sign (or pictogram code as per GOST R 12.4.026-2001)
- Color of lighting: Red – **K**; Yellow – **ZH**; Green – **Z**
- Number and type of cable glands
- Options, accessories and versions

Example of order: **PGSK-TABLO-220AC/EMERGENCY/K-KNV1N/AKB-TU 3400-005-72453807-07.**

According to GOST R IEC 60073-2000, sound signals can be used in the following situations:

– To draw operator's attention;
– When encoded information is brief, simple and transient;
– The information requires urgent or time-dependable reply;
– Application of visual signals is restricted;
– The situation is critical and needs additional or excess information.

Sound signal may consist of clear or complicated tones (not more than 5 signals). Sound signal must be hearable and easily recognizable by operators and people in a given range of signal receipt in given background noise conditions. Signal must clearly differ from emergency signal according to ISO 8201 part 7.

Sound signals of various kinds must be distinguishable from one another.

It is necessary to take into consideration restricted audibility of signals if personnel uses protective devices or headphones, as well as people with hearing disorders.

Recommended cable glands
KNV, KOV, KNVTN, KNVTV, KNVM, KNVZ
refer to p.393

• Operates as a maximum heat detector, gives out emergency signal when ambient temperature rises above permitted level.

• Equipped with mode indicator. When the temperature is below maximum actuation temperature, green LED is on, indicating that the power is on. When the temperature equals or is above maximum actuation temperature, red LED lights up and the signal of mode switching turns on. This mode remains on until temperature drops below minimum actuation temperature.

• Precise digital heat sensor.

MARKING

Ex 1Ex d [ib] IIC T6..T4 Gb

Ex 1Ex d e [ib] IIC T6..T4 Gb

MINING EQUIPMENT MARKING

Ex PB Ex d [ib] I Mb
PH2

CERTIFICATES AND PERMITS

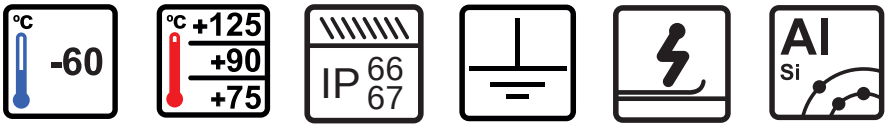
GOST R ISO 9001-2015 (ISO 9001:2015)
TC RU C-RU.AA87.B.00244
POCC RU.RU.EX01.B00004
TC RU C-RU.АБ03.B.00099
Maritime Register upon request (check cost and terms of Type Approval Certificate issuance with manager)
TU 3400-005-72453807-07
TU 4371-013-72453807-2011
GAZPROM OJSC No. Г000.RU.1131.H00666

CODES

GOST 12.2.007.0-75
GOST R IEC 60079-0-2011
GOST 14254-96 (IEC 529-89)
GOST 30852.0-2002 (IEC 60079-0:1998)
GOST 30852.1-2002 (IEC 60079-1:1998)
GOST 30852.10-2002 (IEC 60079-11:1999)
GOST 30852.8-2002
GOST 30852.20-2002
GOST 24754-2013
TR CU 012/2011
Electrical Installation Code Ch. 7.3, Ch. 7.4
GOST R 53325-2009

TECHNICAL CHARACTERISTICS

Installation
Category I for firedamp and dust; Category II for gas subgroup IIA, IIB, IIC; zones 1, 2; Underground mines non-hazardous with gas (methane) and coal dust; Dangerous production facilities
Operating voltage, V
⎓6...24; ~90...250 (50/60 Hz)
Maximum power P_{inst}, W
22
Maximum voltage of switching by relay's contacts, V
~ 250 (50/60 Hz)
Maximum current of switching by relay's contacts, A
5 (for ~220V (50/60Hz))
Connection
Connection to L, N, PE terminals and signal terminals of the alarm, cable cross-section up to 2,5 mm^2
Thread on connecting holes
Taper inch NPT
Mass, kg
max. 3 (depending on the set)
Climatic category
NF1 (upon request NF2, NF3, NF4, NF5, F1, F2, F3, F5 T1, T2, T3, T5, MU1, MU2, MU3, MU4, W2.13**, W5)



OPTIONS, ACCESSORIES AND VERSIONS

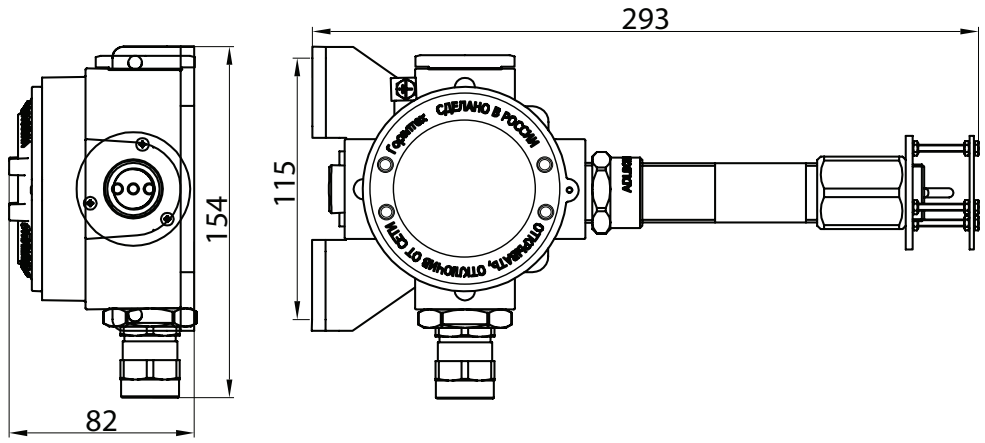
DESCRIPTION	MARKING
IP67 version	/IP67
Anti-condensation coating	/AP
Stainless steel chain for cover	/TSEPOCHKA

ALARM'S ACTUATION TEMPERATURE

Alarm class (upon customer's request)	Actuation temperature, °C	
	min	max
A1	54	65
A2	54	70
A3	64	76
B	69	85
C	84	100
D	99	115

Temperature rise speed, °C/min	Actuation time, s	
	minimum	maximum
Class A1 maximum alarms		
1	1740	2420
3	580	820
5	348	500
10	174	260
20	87	140
30	58	100
Class A2, A3, B, C, D, E, F, G, H maximum alarms		
1	1740	2760
3	580	960
5	348	600
10	174	329
20	87	192
30	58	144

OVERALL AND MOUNTING DIMENSIONS



FORMATION OF MARKING

IP-101-...-GORELTEX1 – X – X / X – TU 4371–013-72453807-2011

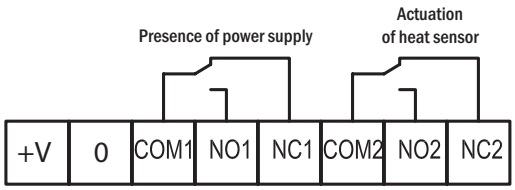
- Alarm type
- Operating voltage: 6...24 V – **12DC**; ~90...250V – **220AC**
- Cable gland type (max. 2 pcs.)
- Options, accessories and versions

Example of order: IP-101-...-GORELTEX1-220AC-KNV1N – TU 4371-013-72453807-2011

Recommended cable glands
KNV, KOV, KNVTN, KNVTV, KNVM, KNVZ
refer to p.393

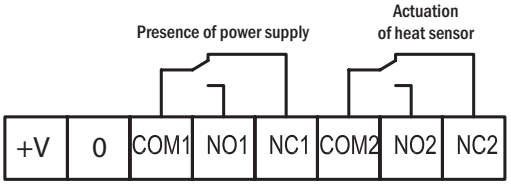
ALARM'S WIRING DIAGRAM FOR MODIFICATION /12DC

Contact designation		PURPOSE
+V		+6...24 V
0		0
PE		Grounding
Power relay	COM	Power relay common contact
	NO	Normally open contact of power relay
	NC	Normally closed contact of power relay
Heat sensor relay	COM	Heat sensor relay common contact
	NO	Normally open contact of heat sensor relay
	NC	Normally closed contact of heat sensor relay



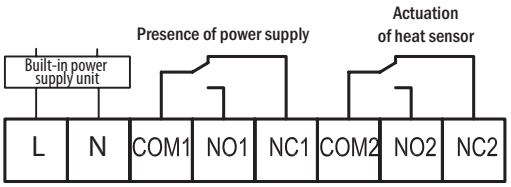
ALARM'S WIRING DIAGRAM TO INTRINSICALLY SAFE CIRCUITS FOR MODIFICATION /EXIA

Contact designation		PURPOSE
+V		+6...24 V, 100 мА
0		0
PE		Grounding
Power relay	COM	Power relay common contact
	NO	Normally open contact of power relay
	NC	Normally closed contact of power relay
Heat sensor relay	COM	Heat sensor relay common contact
	NO	Normally open contact of heat sensor relay
	NC	Normally closed contact of heat sensor relay



ALARM'S WIRING DIAGRAM FOR MODIFICATION /220 AC

Contact designation		PURPOSE
L		~220 V (50/60 Hz)
M		0
PE		Grounding
Power relay	COM	Power relay common contact
	NO	Normally open contact of power relay
	NC	Normally closed contact of power relay
Heat sensor relay	COM	Heat sensor relay common contact
	NO	Normally open contact of heat sensor relay
	NC	Normally closed contact of heat sensor relay



• Constant all-day operation in fire alarm and fire suppression systems as a passive element in cooperation with receiving and control devices.

• Application of the fire alarm as a single element and option of series connection to fire alarm circuit of a group of fire alarms.

• Option of feeding by the source of direct current or impulse alternating current of up to 210 V and in circuits of receiving and control devices with short-circuit current value not more than 20 mA and with certified intrinsic safety barriers with outgoing intrinsically safe circuits “i”.

MARKING

Ex 1Ex d IIC T6...T5 Gb
Ex 0Ex ia IIC T6...T5 Ga
Ex Ex tb IIIC T85°C...T100°C Db
Ex Ex ia IIIC T85°C...T100°C Da

MINING EQUIPMENT MARKING

Ex PB Ex d I Mb
Ex PO Ex ia I Ma
PH2

CERTIFICATES AND PERMITS

GOST R ISO 9001-2015 (ISO 9001:2015)
TC RU C-RU.AA87.B.00244
C-RU.АБ03.B.00097
РОСС RU.EX01.B00004
Maritime Register upon request (check cost and terms of Type Approval Certificate issuance with manager)
TU 3400-005-72453807-07
TU 4371-012-72453807-2011
GAZPROM OJSC No. Г000.RU.1131.H00666

CODES

GOST 30852.0-2002 (IEC 60079-0:1998)
GOST 30852.1-2002 (IEC 60079-1:1998)
GOST 30852.10-2002 (IEC 60079-11:1999)
GOST IEC 61241-1-1-2011
GOST 30852.20-2002
GOST 24754-2013
Electrical Installation Code Ch. 7.3, Ch. 7.4
TR CU 012/2011
OD 5.2-093-2004
GOST R 53325-2009
GOST 12.2.007.0-75

TECHNICAL CHARACTERISTICS

Installation
Category I for firedamp and dust; Category II for gas subgroup IIA, IIB, IIC; zones 0, 1, 2; Category III for dust, explosive dust atmospheres containing flying particles, conductive and non-conductive dust; Underground mines non-hazardous with gas (methane) and coal dust; Dangerous production facilities

Maximum voltage, V
~690 /⎓250

Maximum current, A
16

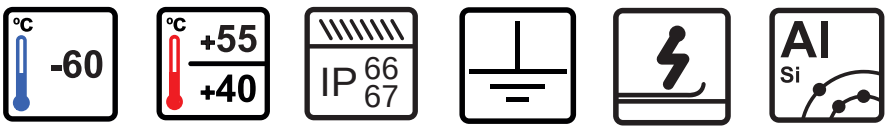
Rated current, A
10

Contact block
1H3+1HO (by default)

Coating color
RAL3001 for “Fire” version

Mass, kg
2

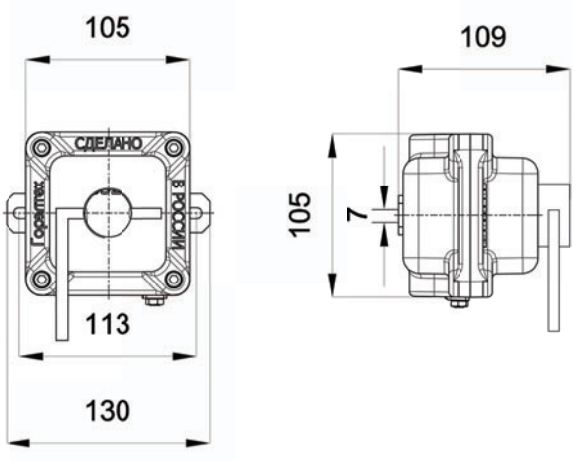
Climatic category
NF1 (upon request NF2, NF3, NF4, NF5, F1, F2, F3, F5 T1, T2, T3, T5, MU1, MU2, MU3, MU4, W2.13**, W5)



OPTIONS, ACCESSORIES AND VERSIONS

DESCRIPTION	MARKING
IP67 version	/IP67
Nameplates with light reflecting coating	/SVP
Anti-condensation coating	/AP
Circuit which duplicates sensors' relays for checking circuits, activated by a key	/MK
Built-in optical indication of actuation (only for version with NO contacts	/LGV
Version for start of fire suppression, yellow color RAL 1003 (is not a fire alarm)	/START
Protective canopy	/KOZYREK
External surface coating as per customer's specification	/RAL (code)

OVERALL AND MOUNTING DIMENSIONS



FORMATION OF MARKING

IP-535-GORELTEX1 – X – X /X – TU 3400-005-72453807-07

- Device name
- Contact block:
  - **01** – one normally closed contact;
  - **10** – one normally open contact;
  - **02** – two normally closed contacts;
  - **20** – two normally open contacts;
  - **03** – three normally closed contacts;
  - **30** – three normally open contacts;
  - **01+10** – normally closed + normally closed contacts;
  - **01+20** – one normally closed + two normally closed contacts;
  - **02+10** – two normally closed contacts + one normally closed contacts.
- Dimension type of cable gland (max. 2 pcs.)
- Options, accessories and versions

Example of order: **IP-535-GORELTEX1-20-KNV2N – TU 3400-005-72453807-07.**

Recommended cable glands
KNV, KOV, KNVTN, KNVTV, KNVM, KNVZ
refer to p.393

- Intended for constant all-day operation.
- Application of the fire alarm as a single element and also an option of series connection to fire alarm circuit of a group of fire alarms.
- Alarm announcement mode is switched on by pulling out safety pin. Return of the fire alarm to initial position (standby mode) by installation of the safety pin to its proper location using a special tool.

MARKING

1Ex d IIC T6...T4 Gb
0Ex ia IIC T6...T4 Ga
Ex tb IIIC T85°C...T135°C Db
Ex ia IIIC T85°C...T135°C Da

CERTIFICATES AND PERMITS

GOST R ISO 9001-2015 (ISO 9001:2015)
TC RU C-RU.AA87.B.00244
C-RU.РБ97.B.00537
KZ39VEH00005608
TU 3400-005-72453807-07
GAZPROM OJSC No. Г000.RU.1131.H00666

CODES

GOST 12.2.007.0-75
GOST R IEC 60079-0-2011
GOST 14254-96 (IEC 529-89)
GOST 30852.0-2002 (IEC 60079-0:1998)
GOST 30852.1-2002 (IEC 60079-1:1998)
GOST 30852.10-2002 (IEC 60079-11:1999)
GOST IEC 61241-1-1-2011
TR CU 012/2011
Electrical Installation Code Ch. 7.3, Ch. 7.4

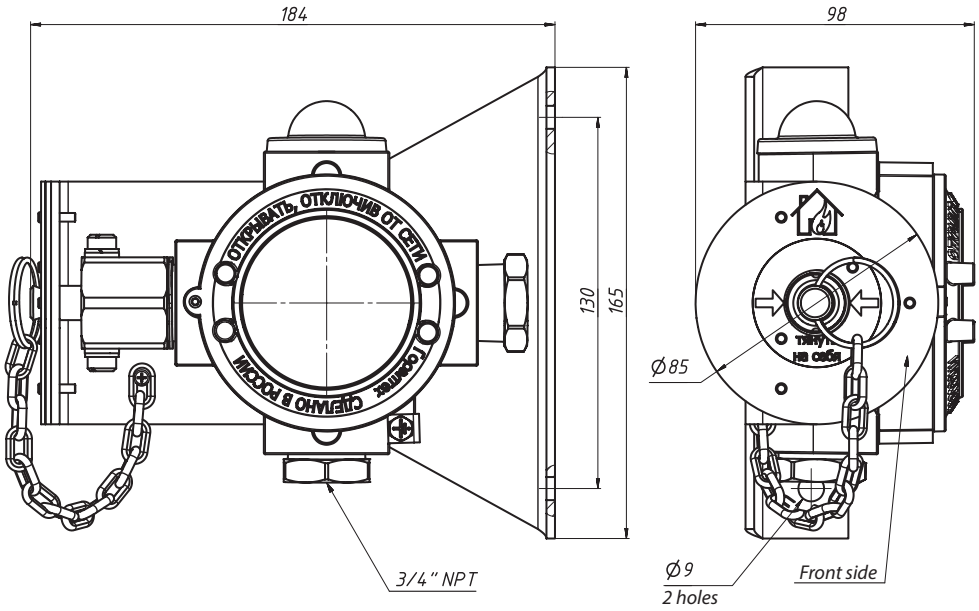
TECHNICAL CHARACTERISTICS

Installation	Category II for gas subgroup IIA, IIB, IIC; zones 0, 1, 2; Category III for dust, explosive dust atmospheres containing flying particles, conductive and non-conductive dust; Dangerous production facilities
Maximum voltage, V	6...24
Maximum switching current of reed switch contacts, A	0,25
Maximum current consumption, A	0,04 (6 V) 0,029 (12 V) 0,021 (24 V)
Installed power (at actuation) P_{inst}, W	0,5
Mass, kg	2,4
Connection	Terminals 2,5 mm^2
Climatic category	NF1 (upon request NF2, NF3, NF4, NF5, F1, F2, F3, F5 T1, T2, T3, T5, MU1, MU2, MU3, MU4, W2.13**, W5)

OPTIONS, ACCESSORIES AND VERSIONS

DESCRIPTION	MARKING
IP67 version	/IP67
Anti-condensation coating	/AP
Stainless steel chain for cover	/TSEPOCHKA
Version for start of fire suppression, yellow color RAL 1003	/PUSK

OVERALL AND MOUNTING DIMENSIONS



FORMATION OF MARKING

IP-535-GORELTEX2 – X / X – TU 3400-005-72453807-07

- Device type
- Dimension type of cable gland (max. 2 pcs.)
- Options, accessories and versions

Example of order: IP-535-GORELTEX2-KNV1N – TU 3400-005-72453807-07.

Recommended cable glands KNV, KOV, KNVTN, KNVTV, KNVM, KNVZ refer to p.393