



VOZROZHDENIE LLC

OKPD2 27.90.40.190

TU 27.90.40-001-33120038-2018

APPROVED

VZR.248100.000 AS

**SWING GATE
MODEL K-14**

**VZR.248100.000 IG
INSTALLATION GUIDELINES**

20 pages

2019

CONTENTS

1	GENERAL PROVISIONS	4
2	SAFETY MEASURES.....	5
3	THE PRODUCT PREPARATION FOR INSTALLATION	6
	3.1 Procedure for product transportation to the installation site	6
	3.2 Rules of the unpacking of the product	6
	3.3 Rules of the product visual inspection	6
	3.4 Requirements to the product installation place	7
4	INSTALLATION AND DE-INSTALLATION OF THE PRODUCT	8
	4.1 Required equipment	8
	4.2 Product installation	8
	4.3 The product dismantling	10
5	CONNECTION AND ADJUSTMENT OF THE PRODUCT	11
	5.1 Connection of power supply	13
	5.2 Connecting control panel.....	14
	5.3 Connection of access control system (optional).....	14
6	comprehensive examination	17
	6.1 Visual inspection and check of the product readiness for use.....	17
7	COMMISSIONING OF THE MOUNTED PRODUCT	18

This Installation Guidelines (IG) is applied to Oxgard K-14 swing gate and its variants (hereinafter referred to as Product). Product firmware version:

FW v1.0

This IG establishes rules and procedure for the product installation and start-up.

Before installing the product, it is necessary to additionally read Operation Manual VZR.248100.000 OP.

In connection with permanent work on improvement of the product, changes can be made to the product design, which are not included in this edition of Installation Guidelines.

Following abbreviations are used in this document:

OM — Operation manual;

IG — Installation guidelines;

PSU — power supply unit;

CP — control panel;

ACS — access control system.

SFAS – security and fire alarm system;

NC - normally closed connection;

NO - normally open connection.

1 GENERAL PROVISIONS

For general safety when assembling and installing the product, take into account all the recommendations and instructions in this Manual.

Before starting installation work, completely disconnect power supply of the product.



IT IS PROHIBITED TO:

INSTALL POWER SUPPLY UNIT INSIDE THE PRODUCT, AS IT MAY CAUSE ELECTRIC SHOCK TO PEOPLE.

INSTALL THE PRODUCT OUTSIDE DRY AND HEATED ROOMS.

PREVENT OR ACCELERATE THE MOVEMENT OF THE PRODUCT LEAF DURING SWITCHING ON (OFF) ANTI-PANIC MODE - AP.

APPLY FOR THE PRODUCT CLEANING PASTES AND LIQUIDS CHEMICALLY AGGRESSIVE TO MATERIALS OF HOUSING.

2 SAFETY MEASURES

Installation should be carried out with observance of "Regulations for Operation of Consumer Electrical Installations" and "Safety regulations for Operation of Consumer Electrical Installations".

Installation of a product should be carried out by qualified personnel, trained to work with electrical devices, instructed on safety at work with electrical installations for voltage up to 1000 V.



ATTENTION: FAILURE TO COMPLY WITH THE SAFETY REQUIREMENTS SPECIFIED IN THIS SECTION MAY RESULT IN DEATH AND DAMAGE TO HEALTH, COMPLETE OR PARTIAL LOSS OF PERFORMANCE OF THE PRODUCT AND (OR) AUXILIARY EQUIPMENT.



ATTENTION: MANUFACTURER DISCLAIMS ANY LIABILITY FOR DEATH AND DAMAGE TO HEALTH, COMPLETE OR PARTIAL LOSS OF PERFORMANCE OF THE PRODUCT AND (OR) AUXILIARY EQUIPMENT IF USER FAILS TO COMPLY WITH SAFETY REQUIREMENTS SPECIFIED IN THIS SECTION, AND ALSO WILL VOID YOUR WARRANTY ON THE PRODUCT.

3 THE PRODUCT PREPARATION FOR INSTALLATION

3.1 Procedure for product transportation to the installation site

The product in the original packaging can be transported without limiting the range by air, paved roads and rail transport provided it is protected against direct exposure to precipitation and dust.

In order to avoid condensation of moisture after transportation at negative temperature, the product should be held in a room with normal climatic conditions for 12 hours.

Loading and unloading operations should be carried out in compliance with safety regulations.

3.2 Rules of the unpacking of the product

3.2.1 Perform visual inspection of the packaging. The packaging should not have visible damages.

3.2.2 Open transportation box, unpack and inspect completeness of the product:

- 1) Swing gate;
- 2) Control panel with cable.

3.3 Rules of the product visual inspection

3.3.1 Check completeness of the product.

Completeness should be checked according to VZR.248100.000 DTS Product status record.

3.3.2 Perform visual inspection of the product. The product should not have visible damages.

3.3.3 If damage is detected, to make Act of claim.

3.3.4 Figure 1 - overall dimensions of the product.

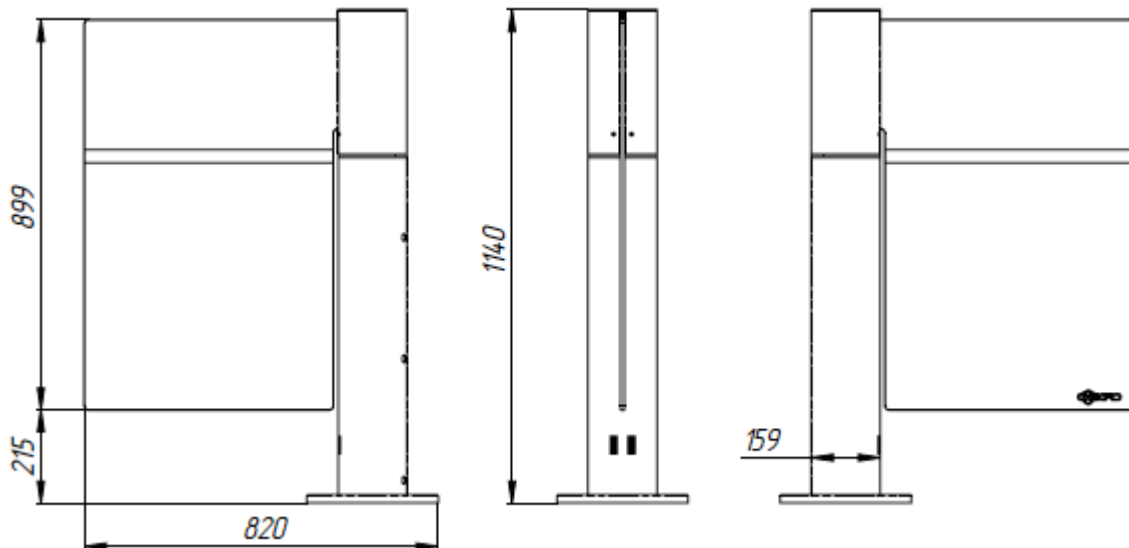


Figure 1-overall dimensions of the product

3.4 Requirements to the product installation place



ATTENTION: TO AVOID WAVING AND (OR) OVERTURNING DURING OPERATION, INSTALL THE PRODUCT SECURELY. IN CASE OF PRODUCT INSTALLATION ON FLOOR OF LOW STRENGTH - TAKE MEASURES FOR FLOORS STRENGTHENING IN THE PLACE OF INSTALLATION.

4 INSTALLATION AND DE-INSTALLATION OF THE PRODUCT

4.1 Required equipment

Equipment used for the product installation:

- 1) Electric perforating machine;
- 2) 16 mm carbide drill bit for drilling anchor holes in the floor (recommended anchor: SORMAT PFGES10 M10-60);
- 3) hexagon socket screw wrench S6;
- 4) cross screwdriver;
- 5) plumb or level;
- 6) steel shims for products leveling.

4.2 Product installation



ATTENTION: CAREFULLY READ THIS SECTION OF THE MANUAL BEFORE MOUNTING THE PRODUCT.



ATTENTION: IT IS RECOMMENDED TO MARK MOUNTING HOLES BY MATCHING TO HOLES OF FLANGE OF POST BASE OF THE GATE WITH ALREADY INSTALLED LEAF.

4.2.1 Prepare horizontal platform at the product installation site.

4.2.2 Prepare channel or cable duct from the installation site to power supply unit and, if required, to ACS and security and fire alarm system connection point.

4.2.3 Install the gate leaf on the post using mounting screws. Make sure that the gate leaf is securely fastened to the post.

4.2.4 Figure 2 - mark and drill 4 holes with a diameter of 16 mm in the floor for the gate post anchors.

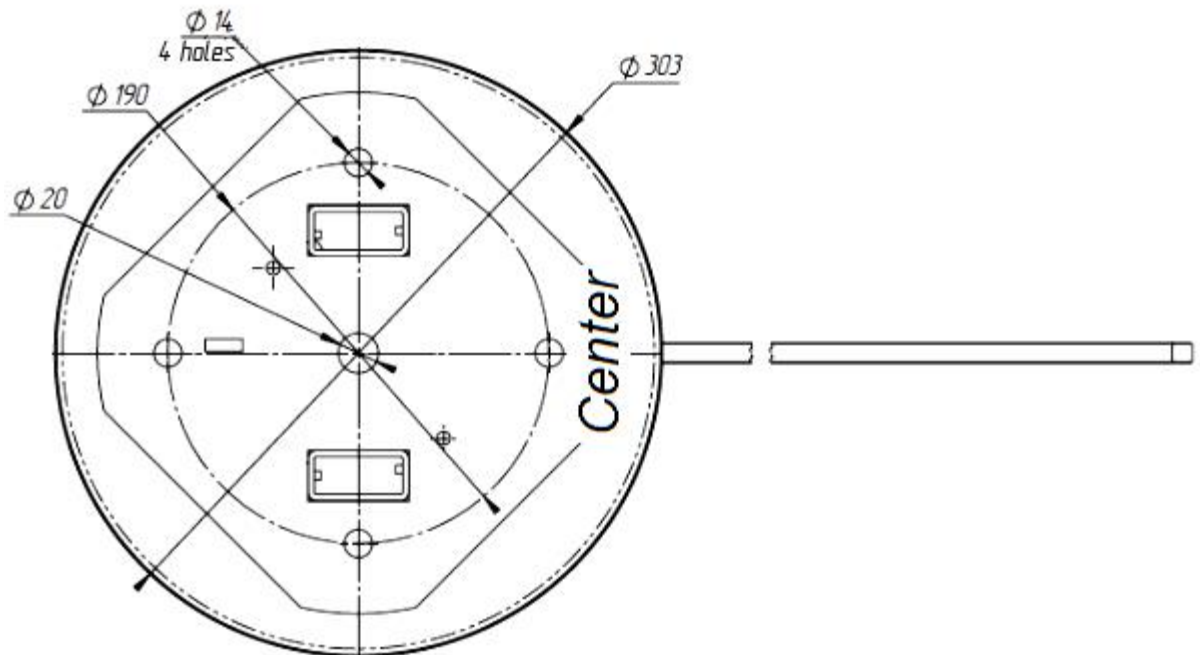


Figure 2 - Dimensions of installation site

Depth of the holes for embedded parts should exceed anchor length by 5 mm. Insert the anchors into the holes.

4.2.5 In cable duct or channel, lay control panel connection cable, power supply cable and, if provided, cables for ACS and security and fire alarm system.

4.2.6 Install the gate post on the prepared place.

4.2.7 Insert in the gate cables from control panel, power supply and, if necessary, cables for ACS and security and fire alarm system.

Perform cabling through a hole with a diameter of 20 mm. Fasten the cables with cable ties.

4.2.8 Match the holes in the gate base with the anchors in the floor.

4.2.9 Check the gate verticality in 2 planes using, if necessary, steel gaskets of the required thickness for correct installation of the gate.

4.2.10 Fasten the gate base flange with 4 M10 screws by screwing them into the appropriate anchors with a wrench S6.

4.3 The product dismantling

4.3.1 The product dismantling for sending for inspection or repair should be performed in the following order:

- 1) turn off the product power;
- 2) disconnect the product from the power supply;
- 3) disconnect the cable part of the product from the additional cables;
- 4) dismantle the product from the installation site.

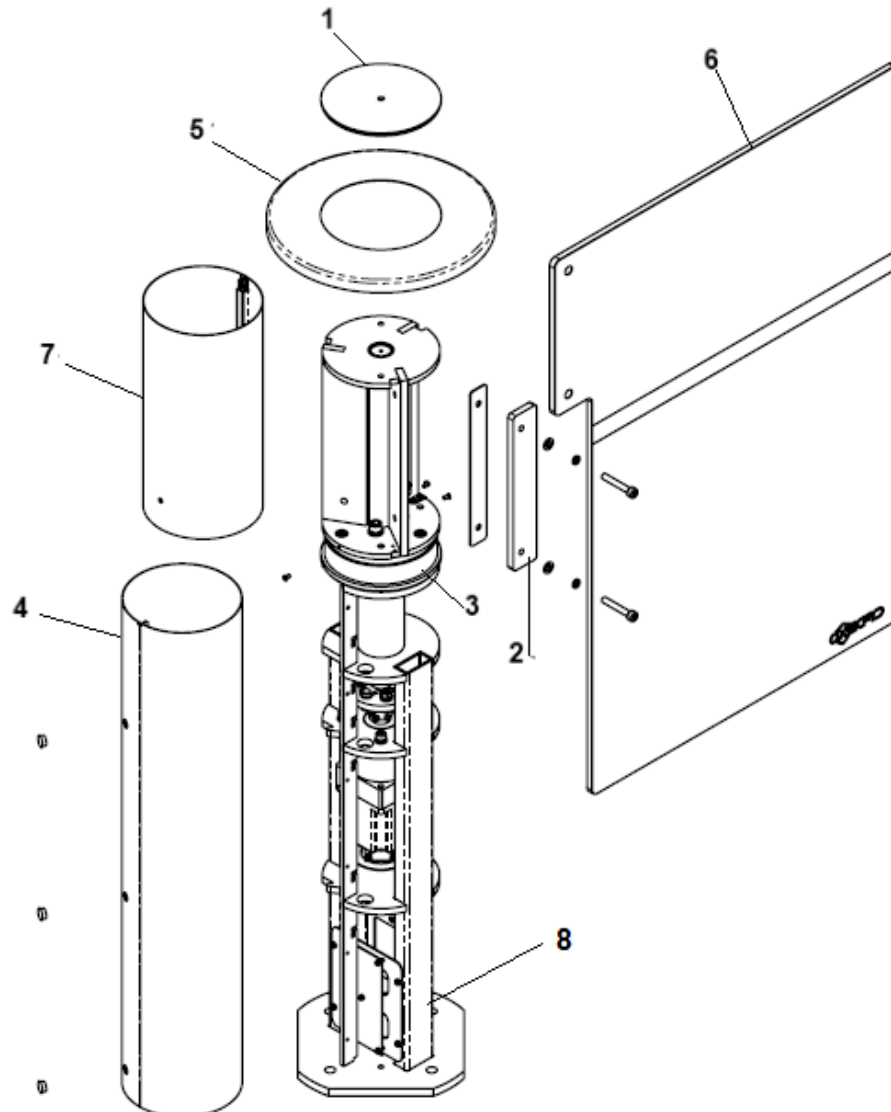
4.3.2 Before packing, clean the product of dust and dirt.

4.3.3 Pack the product in a packing box.

5 CONNECTION AND ADJUSTMENT OF THE PRODUCT

Figure 3 – components arrangement on the gate post.

Connection of power supply, control panel and ACS should be carried out by means of the cross-board.



**1 - Cover; 2 – Insert; 3 - Indication panel; 4- Body housing;
5 – Cap; 6- Glass; 7- Upper housing; 8 - Location of cross-board**

Figure 3 - Components arrangement on the gate post

Figure 4 - Shown appearance of cross-board and location of connectors for power supply unit, control panel, ACS and security and fire alarm system.

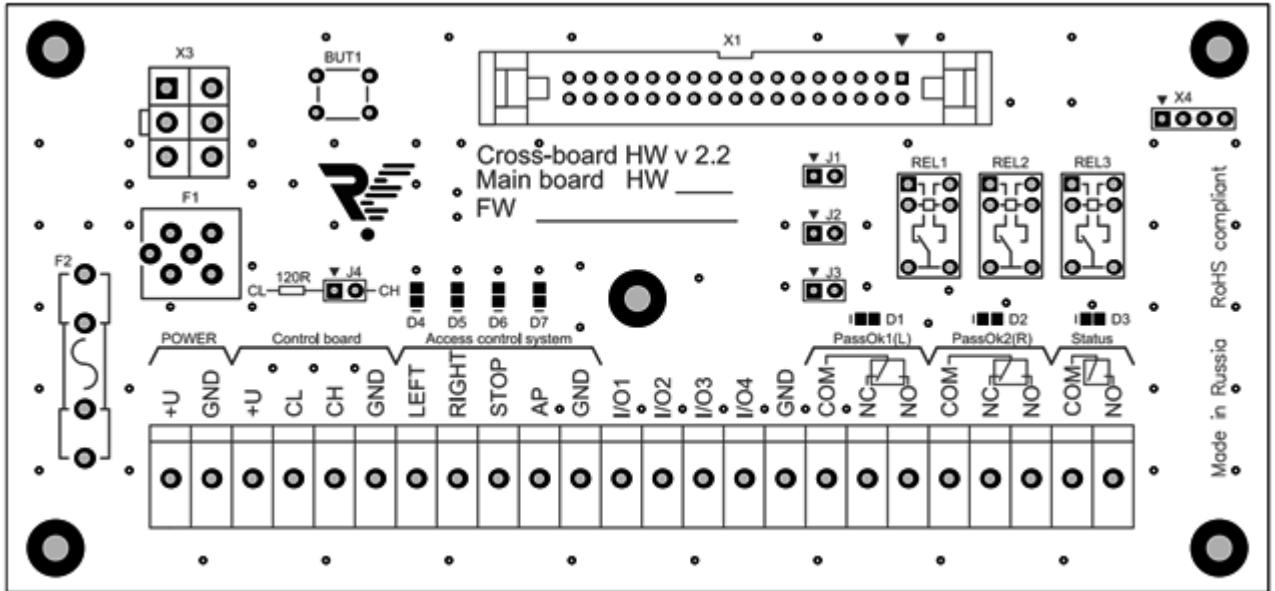


Figure 4 – Appearance of cross-board

In Table 1, the product operation modes for different jumper positions are given.

Таблица 1 – The product operation mode

Jumper positions	Product operation mode
J1 is not installed	Pulse control mode (p. 5.3)
J1 installed	Potential control mode (p. 5.3)
J2 installed	Direction of the leaf opening in anti-panic mode * left/right
J2 is not installed	Direction of the leaf opening in anti-panic mode* changes to the opposite, relative to the mode with the installed jumper

* anti-panic mode is automatically switched-off after 20 minutes of switching on.

–J3 jumper is used to enable regular speed of leaf opening and accelerated by 5 percent.

J3 – not installed: standard opening speed of the gate; installed: accelerated by 5 percent gate opening.

–J4 jumper is always not installed, it can be used to organize normal operation of bus of CAN2.0 standard.

5.1 Connection of power supply



IT IS PROHIBITED TO:

POWER SUPPLY UNITS SHOULD BE WITH OUTPUT CURRENT OF NOT MORE THAN 5 A, PULSE POWER SUPPLY UNITS SHOULD BE WITH CURRENT OF NOT MORE THAN 7 A.

POWER SHOULD BE SUPPLIED THROUGH CONNECTING CABLE WITH CROSS-SECTION LESS THAN 1.5 MM²; WHEN THE SUPPLY CABLE LENGTH IS MORE THAN 10 M, IT IS RECOMMENDED TO USE CABLE WITH CROSS-SECTION OF 2.5 MM².



ATTENTION: IT IS NOT RECOMMENDED TO INSTALL POWER SUPPLY UNIT AT A DISTANCE OF MORE THAN 25 M FROM THE PRODUCT.

The product is powered by voltage of 24V DC.

It should be taken into account that the voltage drop increases with the length of the supplied cable (operating voltage range is given in Operation Manual VZR.248100.000 OP).

Install the power supply unit in a place where there is free space for operator access. Connect power supply unit cable to POWER group of terminals on the cross-board.

Connect (+) and (-) terminals of power supply unit to terminals (24V) and (GND), respectively. Make sure that the cable is securely connected. Install the door and lock it.

5.2 Connecting control panel

Connect control panel to *Control Board* group of terminals on the cross-board. The terminals are marked as: 24 V, CL, CH, GND.

The control panel connection should be performed according to terminal markings given in Table 2.

Table 2 – Marking of terminal for control panel connection

Terminal marking	Wire color
24V	Red
CL	Yellow
CH	Green
GND	Blue

5.3 Connection of access control system (optional)

ACS controller should be connected to a group of terminals *Access Control System* on the cross-board.



ATTENTION: THE PRODUCT IS NOT INTENDED FOR PERSONNEL TIME TRACKING.

Marking of terminals: LEFT, RIGHT, STOP, AP, GND. Terminal assignment is shown in Table 3.

Table 3 – Assignment of ACS terminals

Terminal marking	Terminal assignment
LEFT, RIGHT	One-time passing left/ right (lower priority)
STOP	Passing forbidden (Stop mode) (Medium priority)
AP	Is not used
GND	Common

ACS input priorities are different:

- 1) STOP input has medium priority. When this input terminal is grounded to GND terminal, the product enters "Stop" mode and does not react to other influences except AP;
- 2) LEFT and RIGHT have the same low priority and provide single one-way passing. If both inputs are closed, the leaf is open in the direction defining by input which was closed first. In case when passing did not occur, the product will automatically enter "Stop" mode after 10 seconds (in pulse control mode). In potential control mode, the gate will be open as long as there is a signal at its input from the controller to allow passing.



ATTENTION: IN CASE OF STOP INPUT CLOSING - COMMANDS FROM THE REMOTE CONTROL ARE NOT ACCEPTED AS ACS HAS HIGHER PRIORITY.

STOP input is a potential one, i.e. the product operates in proper mode as long as the input is grounded to GND terminal, after the terminal opening – the product enters "Stop" mode regardless of what mode was before ACS operation.

LEFT and RIGHT inputs can operate both in potential and pulse mode (is triggered at grounding to GND terminal). Pulse mode is set by default.

Jumper (J1) should be installed to switch to potential operation mode. In this case, left/right pass mode is activated only for period of action of control signal to LEFT/RIGHT inputs

The cross-board has two relay outputs for ACS which work as "dry contact" - Pass Ok1 and Pass Ok2. NO and COMM are normally open connection, NC and COMM - normally closed connection.

Triggering of one of the terminal groups indicates opening of gate in corresponding direction and its return in initial, closed, state (PassOk1 - right PassOk2 – left).

D1 and D2 LEDs indicate relay status PassOk1 - right and PassOk2 - left.

The cross-board has relay output for ACS which work as "dry contact – Status. NO and COMM is normally open connection, its contacts are closed when the product enters AP mode, in this case D3 diode lights up.

Also, LEDs indicating grounding of corresponding input to GND terminal are installed on the cross-board:

- 1) D4 signals receipt of LEFT input signal;
- 2) D5 signals receipt of RIGHT input signal;
- 3) D6 signals receipt of STOP input signal;

6 COMPREHENSIVE EXAMINATION

6.1 Visual inspection and check of the product readiness for use

6.1.1 Check fastenings of parts and units of the product.

6.1.2 Check fastenings of all cables.

6.1.3 Turn on power supply of the product and carry out check of operation by making several test cycles.

6.1.4 If any extraneous noise and violations of operation modes are not found, the product is ready for operation.

7 COMMISSIONING OF THE MOUNTED PRODUCT

Commissioning of the mounted product should be performed in the following order:

- 1) representative of organization which performed installation work demonstrates reliability of the product installation;
- 2) mark on the product installation are made in VZR.248100.000 DTS Product status record, in the section "Product movement in the course of operation";
- 3) "Data on installation" section of 248100.000 DTS Product status record on the product is filled in;
- 4) Act of acceptance in operation is made out.



Vozrozhdenie LLC
192289 St.-Petersburg
Sofiyskaya str., 66
Telephone/ Fax +7 (812) 366 15 94
www.oxgard.com
info@oxgard.com

