MULTIPLEX ADDRESSABLE POLLING LOOP CONTROLLER
S2000-KDL

ИСО 9001

Operations Manual

1   DESCRIPTION AND OPERATION

1.1 Product Designation

S2000-KDL Multiplex Addressable Polling Loop Controller (hereinafter referred to as the controller) is meant to be used as a part of an Orion Integrated Security System.

The purpose of the controller is to be a component unit of an integrated expansible analog-addressable device to protect premises against intrusions and fire via:

− Monitoring conditions of addressable inputs (*inputs*), which can be addressable fire and intrusion detectors and/or monitored circuits of addressable input modules;
− Control (via *outputs* of addressable executive relay modules) and monitoring (via addressable *inputs*, which are addressable detectors and/or monitored circuits of addressable input modules) of fire safety systems such as voice announcement systems, smoke control systems, fire dampers and other actuators; and
− Sending alarms upon detectors' tripping or monitored circuits resistance falling outside the normal limits to the network controller (S2000M control panel, Sirius fire control panel, or PC) over the RS-485 interface bus.

Also the S2000-KDL can control its addressable *outputs* locally and control *inputs* and *outputs* included in system partitions centrally.

Moreover, built-in algorithms of monitoring inputs and controlling outputs provide using the controller in engineering systems such as utility metering systems, actuators control systems, and thermo-regulating systems.

1.1.1   The controller is intended for round-the-clock operation.

1.1.2   The controller is a reparable and regularly maintained product.

1.1.3   The design of the controller doesn't provide its operating in aggressive and dusty environments or in ex-hazardous premises.

1.2 Specifications

Table 1.2.1

No.	Parameter	Value
1.2.1.	External DC power voltage, V	- 10.2 ÷ 28.4
1.2.2.	Consumed current at 12 V input voltage, mA: - Maximum - Typical value when no addressable device is connected - Typical value when 127 addressable devices each consuming 0.5 mA are connected	 - 400 - 80 - 160
1.2.3.	Consumed current at 24 V input voltage, mA: - Maximum - Typical value when no addressable device is connected - Typical value when 127 addressable devices each consuming 0.5 mA are connected	 - 200 - 40 - 80
1.2.4.	Power inputs	- Two
1.2.5.	Start-up time, s	- 15
1.2.6.	Port RS-485	- One
1.2.7.	Capacity of the non-volatile buffer for events to be sent over the RS-485 interface bus	- 512

No.	Parameter	Value
1.2.8.	Maximum number of connectable addressable devices (addresses)	- 127
1.2.9.	Max length of the polling loop depending on the wire conductor section (min wire conductor diameter), m: - 0.2 mm^2 (0.5 mm) - 0.5 mm^2 (0.8 mm) - 0.75 mm^2 (1 mm) - 1.5 mm^2 (1.4 mm)	 - 160 - 400 - 600 -1200
1.2.10.	Number of zones to combine inputs	- 64
1.2.11.	Reader input	- One
1.2.12.	Credentials capacity, codes	- 512
1.2.13.	Max distance from the controller to the reader, m	- 100
1.2.14.	Ingress Protection Rating as per GOST 14254-2015	- IP41
1.2.15.	Resistance to mechanical exposure as per OST 25 1099-83	- Arrangement Category III
1.2.16.	Vibration exposure: - Frequency range, Hz - Max acceleration	 - 1-35 - 0.5g
1.2.17.	Climatic version as per OST 25 1099-83	- O3
1.2.18.	Operating temperatures, °C	- Minus 30 through +55
1.2.19.	Relative humidity, %	- Up to 93 at 40°C
1.2.20.	Weight, kg	- 0.3 max
1.2.21.	Overall dimensions, mm	- 156 × 107 × 39
1.2.22.	Non-stop operation	- 24/7
1.2.23.	MTBF in quiescent mode, hours	- 80000
1.2.24.	Survival probability	- 0.98758
1.2.25.	Service life, years	- 10

1.2.26. *The controller passes the standards of industrial radio disturbance prescribed for Class B equipment as per GOST 30805.22.*

1.2.27. *The controller withstands electrostatic discharge of Test Severity Level III as per GOST 30804.4.2.*

1.2.28. *The controller withstands radio-frequency electromagnetic field in 80 – 100 MHz range as per GOST 30804.4.3.*

1.3 Standard Delivery

Find the following unpacking the controller (see Table 1.3.1):

Table 1.3.1

Item	Q-ty
S2000-KDL Multiplex Addressable Polling Loop Controller	1
Operations Manual	1
Woodscrew 1-3×25.016 GOST 1144-80	3
Wall Plug 6×30 (for 3×25 woodscrew)	3
Tapping screw GOST R ISO 7049 - ST2,9x9,5-St-C-H-A1A	2

2 USAGE

Operating restrictions, design, mounting, connecting, settings, and testing procedures for the controller are described in its User's Manual (the full version), which is available online at **bolid.ru** in the section PRODUCTS on the page of S2000-KDL.

3 MAINTENANCE

3.1. The controller should be maintained by personnel qualified for the Electrical Safety of Level II or higher.

3.2. The controller is serviced according to a scheduled-preventive system which provides annual maintenance.

3.3. Maintenance works for the controller are described in its User's Manual (the full version), which is available online at **bolid.ru** in the section PRODUCTS on the page of S2000-KDL.

4 ROUTINE REPAIR

4.1. Routine repair of defective equipment is to be performed by the manufacturer or in authorized repair centers. The product shall be sent for repair in line with established procedures.

ATTENTION

The equipment shall be submitted for repair being assembled and clean and along with all the parts listed in the documentation.

Claims are accepted only if a reclamation report describing the failure is applied to the submitted equipment.

4.2. A controller's failure resulted from consumer's not observing mounting or operation rules shall not be a reason for claims and warranty repair.

4.3. Claims should be submitted to the following address:

NVP BOLID, #4 Pionerskaya Str., Korolyov, Moscow Region, 141070, Russia

Tel./fax: +7 (495) 775-71-55 (PBX). E-mail: info@bolid.ru

4.4. In case of any issue related to use of the product, please contact the technical support: +7 (495) 775-71-55 or e-mail: support@bolid.ru.

5 STORAGE

5.1. In a transport container the controller can be stored at ambient temperatures -50°C through +50°C and relative humidity up to 95% at +35°C.

5.2. In the consumer package the controller can be stored only in heated premises at temperatures +5°C through +40°C and relative humidity up to 80% at +20°C.

6 TRANSPORTING

6.1. The controller can be transported in a transport container at ambient temperatures -50°C to +50°C and relative humidity up to 95% at +35°C.

7 DISPOSAL

7.1. The controller should be disposed of considering that there are no toxic components in it.

7.2. The content of precious materials: does not require accountability for storage, retirement and disposal (Clause 1.2 of GOST 2.608-78).

7.3. The content of non-ferrous metals: does not require accountability for retirement and further disposal.

8 MANUFACTURER WARRANTY

8.1. The manufacturer guaranties the controller meets with technical requirements specified in the manuals if the user follows the instructions for transportation, storage, installation, and usage.

8.2. The warranty period is 18 months since the day of putting the product into operation but no more than 24 months from the manufacturer's date of production.

9 CERTIFICATION INFORMATION

9.1. For certification details please see S2000-KDL User's Manual (the full version), which is available online at **bolid.ru** in the section PRODUCTS on the page of S2000-KDL (select the Download tab).

10 ACCEPTANCE AND PACKAGING CERTIFICATE

S2000-KDL Multiplex Addressable Polling Loop Controller, Serial No._____ is manufactured, accepted in line with requirements of national standards and applicable technical documentation, approved as ready for use, and packaged by the Bolid Company.

Responsible for acceptance and packaging

QCD _____   _____
           Name   Date/Month/Year

BOLID ®