Ethernet switch

VRA 10

Translation

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Translation

1 Figures

Translation

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Translation

Installation instructions

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1 Safety

1.1 Intended use

In the event of inappropriate or improper use, damage to the product and other property may arise.

This product is a system component that enhances the system's functionality. A central control unit in the heat generator regulates the functions via the SystemLAN interface.

Operation is only permitted for heat generators with an integrated central control unit and SystemLAN interface.

Intended use includes the following:

– observance of accompanying operating, installation and maintenance instructions for the product and any other system components
– compliance with all inspection and maintenance conditions listed in the instructions.

Intended use also covers installation in accordance with the IP code.

Any other use that is not specified in these instructions, or use beyond that specified in this document, shall be considered improper use. Any direct commercial or industrial use is also deemed to be improper.

Caution.

Improper use of any kind is prohibited.

1.2 General safety information.

1.2.1 Risk caused by inadequate qualifications

The following work must only be carried out by competent persons who are sufficiently qualified to do so:

– Set-up
– Dismantling
– Installation
– Start-up
– Inspection and maintenance
– Repair
– Decommissioning

► Proceed in accordance with current technology.

1.2.2 Risk of death from electric shock

There is a risk of death from electric shock if you touch live components.

Before commencing work on the product:

► Disconnect the product from the power supply by switching off all power supplies at all poles (electrical partition with a contact gap of at least 3 mm, e.g. fuse or circuit breaker).
► Secure against being switched back on again.
► Check that there is no voltage.

1.2.3 Danger due to malfunctions

► Immediately eliminate any faults and damage that may affect safety.
► Only connect technically faultless units.
► At lengths of 10 m or more, power supply cables and SystemLAN cables must be routed separately.
► Secure all connection cables in the housing using the strain relief.

1.2.4 Risk of material damage caused by using an unsuitable tool

► Use the correct tool.

1.2.5 Risk of material damage caused by frost

► Do not install the product in rooms prone to frost.

1.3 Regulations (directives, laws, standards)

► Observe the national regulations, standards, directives, ordinances and laws.

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2 Notes on the documentation

2.1 Observing other applicable documents

► Always observe all the operating and installation instructions included with the system components.

2.2 Storing documents

► Pass these instructions and all other applicable documents on to the end user.

2.3 Validity of the instructions

These instructions apply only to:

Product	Article number
VRA 10	8000040350

2.4 Figures in these instructions

You can find all figures in the Figures section of these instructions, from page 3.

► Open the double-page spread to view the figures while reading the sections.

The individual sections refer to the figure number. Keys and instructions for the figures can be found in the respective sections.

3 Product description

The product is a SystemLAN switch.

It expands the number of communication interfaces available on the heat generator's printed circuit board (PCB) for data exchange within the SystemLAN. The product is connected to the heat generator via the SystemLAN cable. Up to seven additional units can be connected to the product and controlled via the heat generator.

3.1 Product design

► See **Figure 1** and **Figure 2** (→ Figures, from page 3).

Figure 1	
1	Housing
2	Housing cover
3	Grommet (twice on the side, twice on the underside)
Figure 2	
1	Power supply terminal IN
2	Power supply terminal OUT
3	SystemLAN connection (8 times)

3.2 Data plate

The data plate is located on the right-hand side of the housing.

Information on the data plate	Meaning
Serial number	for identification; 7th to 16th digits = product article number
VRA 10	Product designation
V	Operating voltage
W	Power consumption

3.3 CE marking

CE

The CE marking shows that the products comply with the basic requirements of the applicable EU laws as stated on the Declaration of Conformity.

The Declaration of Conformity can be viewed at the manufacturer's site.

3.4 National test symbol, Serbia

Validity: Serbia



The test symbol shows that the products comply with the basic requirements of all relevant national regulations in Serbia as stated on the data plate.

4 Set-up

4.1 Checking the scope of delivery

► Check that the scope of delivery is complete:

Quantity	Component
1	SystemLAN switch VRA 10
1	Installation accessory
1	Labelling sticker
1	Documentation

4.2 Requirements for the installation site

– Level installation surface
– Room temperature: 0 to 40 °C
– Relative air humidity: 35 to 90%
– Not above or next to heat sources

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4.3 Installing the product

1. → **Figure 3**: Remove the housing cover.
2. → **Figure 4**: Install the housing to a level wall using three screws. Use suitable fixing material for the wall for this.

5 Electrical installation

Only qualified electricians may carry out the electrical installation.

5.1 Requirements for the cable

Power supply cable:

– Commercially available cables
– No flexible cables
– Sheathed cables (e.g. NYM 3x1.5)
– Conductor cross-section: ≥ 1.5 mm²

SystemLAN cable:

– 4-core shielded round cable
– At least 2-pair twisted conductors
– Conductor cross-section: AWG20 to AWG24
– Conductor colours: Orange/white, orange, green/white, green
– Cable category: At least Cat5
– Cable length: ≤ 100 m
– Recommended cable type: 2x2xAWG24/1 SF/UTP

► Route communication cables with a clearance of at least 40 mm from power supply cables and units with high power requirements.
► If required, route cables in empty conduits to protect against UV radiation.

5.2 Opening the grommet

1. → **Figure 5**: Open one or more grommets **(1)** on the underside or side of the casing. To do this, use a wire cutter to cut approx. 1 cm into both edges of the cut-out.
2. Move the punched-out projection back and forth to release it from the casing.
3. If required, deburr the edges of the grommet.

5.3 Connecting the power supply cable

Danger!
Risk of electric shock

There is a risk of electric shock when working on electrical components that are connected to the low-voltage network.

► Disconnect the product from the power supply.
► Secure the product against being switched back on again.
► Check that the product is voltage-free.
► Only open the product when it is voltage-free.

Caution.
Damage to electronic components

Electrostatic charge may damage electronic components on the PCB.

► Earth yourself and the tool that you are using each time before touching the PCB.

1. Use a power supply cable in accordance with the requirements (→ Page 8).
2. → **Figure 5**: Guide the power supply cable through the grommet and into the housing.
3. Guide the power supply cable through the left-hand strain relief **(3)**. If required, undo the screw on the strain relief for this.
4. Strip the power supply cable.
   – ≤ 25 mm
5. Strip the insulation from the individual conductors.
   – 3–5 mm
6. Connect the conductors for the power supply cable to the L, N and ⏚ terminals on the left-hand power supply terminal **(IN, 2)**.
7. Tighten the screw of the strain relief by hand.

5.4 Connecting the SystemLAN cable

Caution.
Damage to electronic components

Electrostatic charge may damage electronic components on the PCB.

► Earth yourself and the tool that you are using each time before touching the PCB.

1. Use a SystemLAN cable in accordance with the requirements (→ Page 8).
2. Guide the SystemLAN cable through the grommet and into the housing.
3. Guide the SystemLAN cable through a strain relief. If required, undo the screw for the strain relief for this.
4. → **Figure 6**: Remove 50 mm of the cable jacket. Use a suitable stripping tool for this purpose.
5. Remove 50 mm of the shield braid and any plastic film, aluminium foil and filler wires. Keep your distance from the PCB so that no cutting residues fall onto the PCB.
6. Leave the ends of the individual conductors unprocessed. Stripping is not necessary.
7. → **Figure 7**: Remove a SystemLAN plug from the connection on the PCB above the open grommet .
8. Slide the first conductor **(1)** as far as it will go into the entry opening. Use the following assignment for this:

Pin	Colour
1a	Orange
1b	Orange/white
2a	Green
2b	Green/white

9. Use a flat-blade screwdriver to push the gate valve **(2)** into the plug until you feel and hear it click into place.
10. Repeat the process for the second to fourth conductors.
11. Pull gently to check whether all conductors are firmly connected.

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12. Ensure that all gate valves are fully pressed in and flush with the edge of the plug.
13. Insert the plug into the SystemLAN connection on the PCB.
14. Tighten the screw of the used strain relief by hand.
15. Connect additional SystemLAN cables from other components to be connected as described above.
16. Hand-tighten the screws of all unused strain reliefs.
17. Ensure that there are no cut remnants of the shield braid on the PCB.
18. If required, note the configuration of the connections on the sticker from the bag of small parts and affix the sticker to the inside of the housing cover.

5.5 Cascading the product

Warning.
Risk of fire due to electrical overload!

A total current of more than 10 A from all connected units may lead to overheating of the power supply terminals and cause a fire.

- ► Connect a maximum of 10 SystemLAN switches in series.
- ► Ensure that the total current of all connected units (on all cascaded SystemLAN switches) is less than 10 A.

To connect more than seven units via SystemLAN, it is possible to connect multiple SystemLAN switches. Beforehand, check the maximum number of units that the heat generator can control (→ Heat generator instructions).

- ► → **Figure 8**: Use a suitable power supply cable **(2)** to connect the product's right-hand power supply terminal OUT **(1)** to the left-hand power supply terminal IN **(3)** of the additional SystemLAN switch.
- ► Use a suitable SystemLAN cable **(4)** to connect a free SystemLAN connection of the product to a SystemLAN connection for the additional SystemLAN switch.
- ► Connect additional units to free SystemLAN connections on the additional SystemLAN switch.

5.6 Installing the housing cover

1. → **Figure 9**: Place the housing cover onto the housing.
2. Secure the housing cover using the screw.

6 Procuring spare parts

The original components of the product were also certified by the manufacturer as part of the declaration of conformity. If you use other, non-certified or unauthorised parts during maintenance or repair work, this may result in the product no longer meeting the applicable standards, thereby voiding the conformity of the product.

We strongly recommend that you use original spare parts from the manufacturer as this guarantees fault-free and safe operation of the product. To receive information about the available original spare parts, contact the contact address provided on the back page of these instructions.

- ► If you require spare parts for maintenance or repair work, use only the spare parts that are permitted for the product.

7 Decommissioning

7.1 Decommissioning the heating installation

- ► Decommission all system components of the heating installation, as described in the installation instructions for the individual system components.

7.1.1 Removing the product

Danger!
Risk of electric shock

There is a risk of electric shock when working on electrical components that are connected to the low-voltage network.

- ► Disconnect the product from the power supply.
- ► Secure the product against being switched back on again.
- ► Check that the product is voltage-free.
- ► Only open the product when it is voltage-free.

1. → **Figure 3**: Remove the housing cover.
2. Undo the conductors for the power supply cable on the left-hand power supply terminal.
3. If required, undo the connection cable to another cascaded SystemLAN switch at the right-hand power supply terminal.
4. Open the screws for all strain reliefs used.
5. Remove the power supply cable from the product.
6. Pull the plugs of the connected units out of the SystemLAN connections on the PCB.
7. Open the gate valves of the plugs or cut off the connected conductors.
8. Remove the SystemLAN cable from the product.
9. Remove the three screws with which the product is secured to the wall.
10. Remove the product from the wall.

8 Recycling and disposal, packaging

8.1 Disposing of the packaging

- ► Dispose of the packaging correctly.
- ► Observe all relevant regulations.

9 Customer service

The contact details for our customer service are provided at the end of the instructions, in the Supplier Addresses section or on our website.

Translation

10 Technical data

Rated voltage	230 V AC
Mains frequency	50 Hz
Total output	1 W
Rated surge voltage	2,500 V
Max. extra-low voltage (ELV)	3.3 V DC
Safety extra-low voltage (SELV)	3.3 V DC
Mode of operation	Type 1.B.Y.K.
Connection type	Y
IP rating	IP 10B
Protection class	I
Pollution degree	2
Environmental temperature	0 to 40 °C
Relative air humidity	35 to 90 %
Height	250 mm
Width	250 mm
Depth	75 mm

Translation

Supplier Addresses

1 Supplier addresses

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