

# Manual RouterNode 2

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# Manual RouterNode 2

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# Manual

## RouterNode 2

### 1 General information

RouterNode 2 performs two basic tasks in SimonsVoss radio networks:

- the card dataset read at a locking device is transmitted to the access control system via the radio network or RouterNode.
- You need to programme the locking device to carry out initial programming in the locking device hardware and make changes to the configuration.

The RouterNode must only be used for this designated purpose in a SimonsVoss radio network.

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## 2 Important notes

SimonsVoss Technologies GmbH reserves the right to modify the product without prior notification. As a result, the descriptions and images in this manual may differ from the latest version of the product or software. The German version of this manual takes precedence in cases of doubt. Errors and spelling mistakes excepted.

You can find more information about SimonsVoss products at:  
[www.simons-voss.com](http://www.simons-voss.com)

Access through a door may be denied if components are installed or programmed incorrectly. SimonsVoss Technologies GmbH is not liable for the consequences of incorrect installation, such as denied access to injured persons or those at risk, physical damage or any other losses.

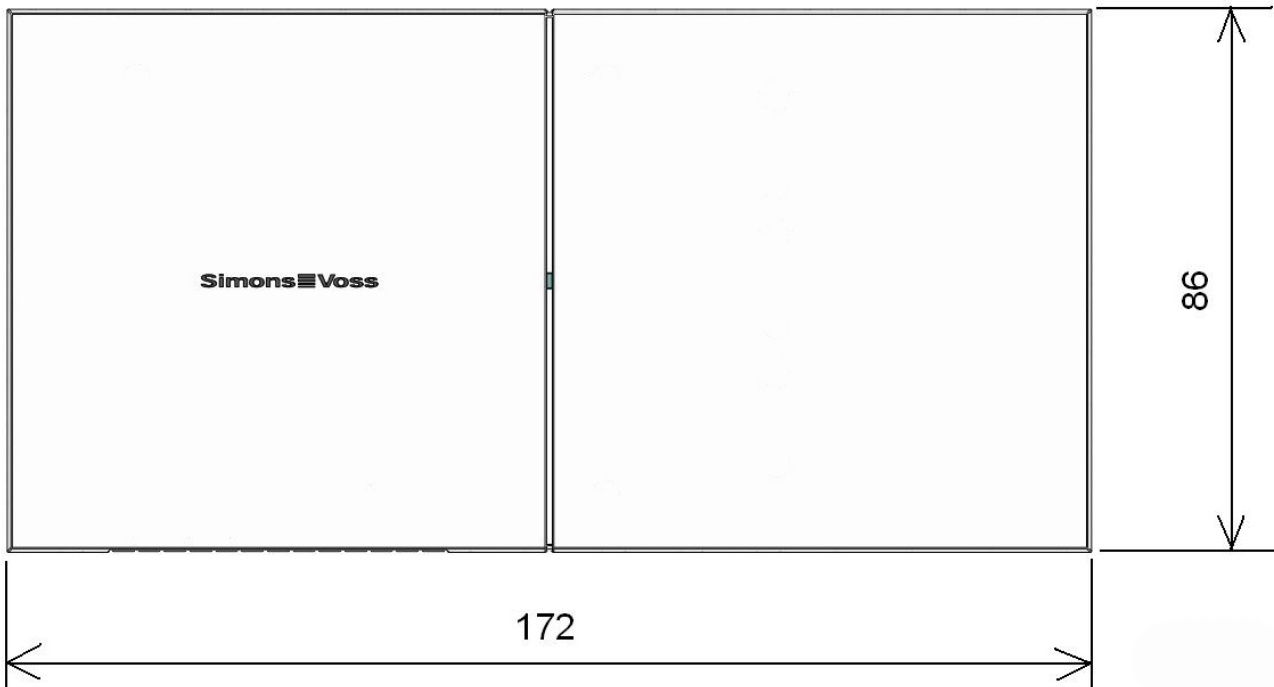
People who have electronic, medical implants such as pacemakers and hearing aids must maintain a minimum distance of 30 cm between the implant and network components. Such people should be expressly informed of this requirement. In the interests of safety, people wearing electronic implants should seek medical advice regarding the potential hazards of radio components (868/915 MHz).

Read through all manuals for the individual SimonsVoss components carefully.

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## 3 Housing

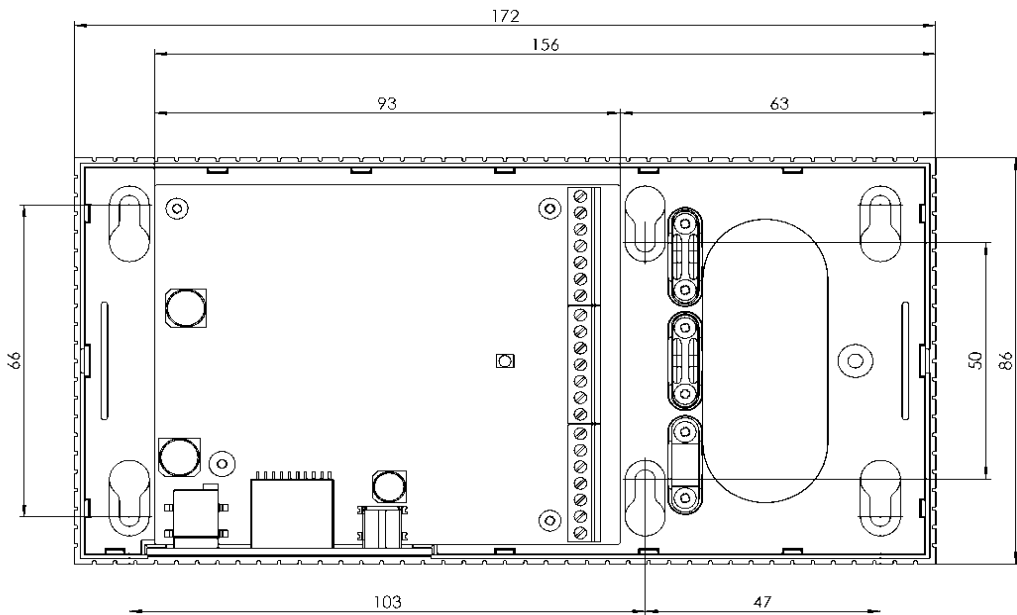
### 3.1 Images and dimensions



(dimensions in mm)

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## 3.2 Dimensions of lower housing shell



## 3.3 Opening the housing lid

You do not need a tool to open the upper shell. Apply slight pressure to the centre of the base plate on the left- or right-hand side and then you can remove the upper shell.



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### **4 Surface installation of wiring**

Carefully separate the ribs on the lower housing shell from one another with a saw and move the web up and down until it breaks off. Remove any sharp edges with a file.

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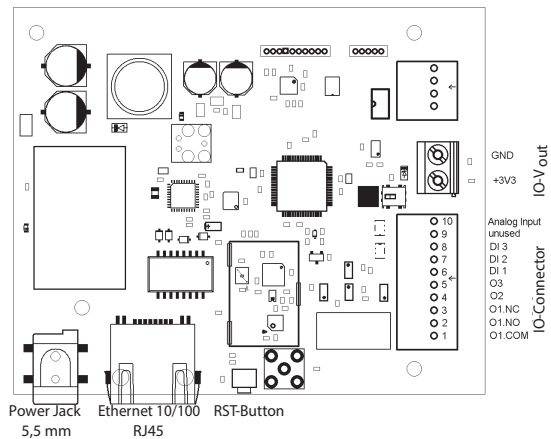
### **5 Configuration of IP settings**

You can configure the IP settings using the SimonsVoss Admin Tool. The SimonsVoss Admin Tool is available for download free of charge at [www.simons-voss.com](http://www.simons-voss.com).



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## 6 System connections

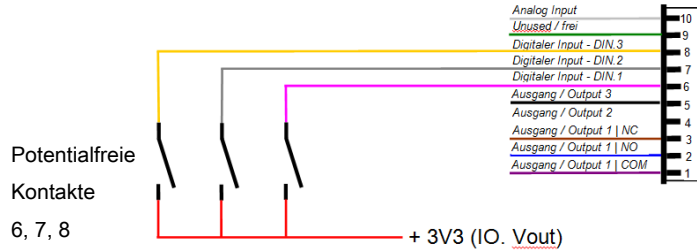


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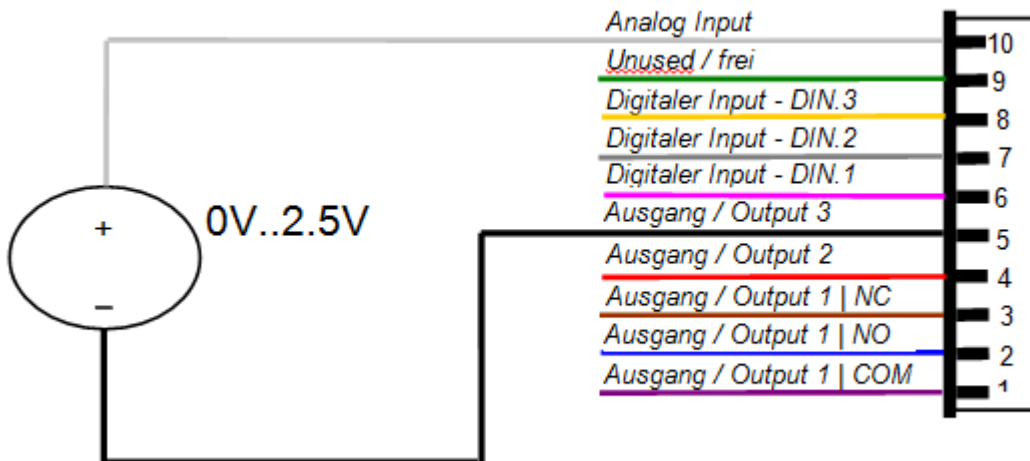
## 7 IO connector wiring

### Simple contact analysis

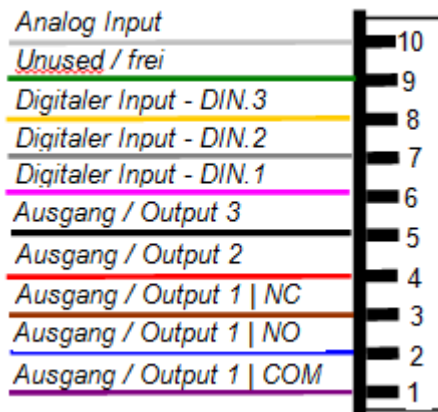


Wiring for digital input (DIN 1-3): to analyse/wire isolated contacts (relay, reed contacts). Opening external contacts can change inputs to carry out certain functions.

### Analogue input wiring



### Relay contact wiring (Output 1)

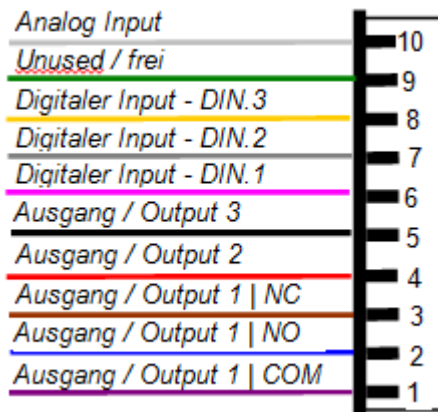


Output 1 (isolated relay output)

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- 1 --> Common
- 2 --> Normally open
- 3 --> Normally closed

## Wiring for Outputs 2/3



### Output 2/3

- 2 --> Ground contact
- 3 --> Ground contact

The user has three open drain outputs at their disposal for use. These may be exposed to a maximum current of 200 mA each. We recommend using a recovery diode, such as a 1N4148, when connecting larger inductances. The router's earth must be connected to the system earth without fail. Maximum line length of the IO wiring: 30 m. Applies to DIN 1-3 + Output 2/3

Item	Explanation
Power jack (5.5 mm)	Jack plug from external source, 9-24 V DC, polarity-independent
Circuit board dimensions (L x W)	93 x 76 mm (L x W)
RJ45 Ethernet 10/100	Ethernet interface with PoE 802.3af
RST button	Reset button accessible from outside, can be tripped using paper clip or similar

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IO connector	Explanation
1. O1.COM	Output 1: C-contact relay (C = common), isolated
2. O1.NO	Output 1: NO-contact relay (normally open)
3. O1.NC	Output 1: NC-contact relay (normally closed)
4. O2	Output 2: Open collector
5. O3	Output 3: Open collector
6. DI 1	Digital Input 1
7. DI 2	Digital Input 2
8. DI 3	Digital Input 3
9. Not in use	Not in use
10. Analogue input	Input for analogue input signals

Item	Explanation
IO.Vout	IO connector for power supply
+3V3	Positive contact max. 3.3 V; can be used as an input signal for DI1-3
GND	Negative contact

Item	Explanation
RS485 (not assigned)	Interface
V in	Power supply from external source 9-24 V DC
GND	Negative contact
A	Data cable, max. 900 m
B	Data cable, max. 900 m

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## 8 Technical specifications for WN(M).RN2.ER.IO

### General information

Order number	WN(M).RN2.ER.IO (RouterNode2 Ethernet/ Radio)
Housing	ABS plastic, UV-stable,
Dimensions (L x W x H)	172 x 86 x 33 mm (L x W x H)
Frequency band	868.xx-870 MHz
Colour	9/118645, same as RAL 9016 (Traffic white)
External power supply	Regulated mains adapter, 9-32 V DC, jack plug, round, 5.5 mm
PoE	Power-over-Ethernet, supports IEEE 802.3af
Output	Max. 3 VA
Transmitting power	10 dBm (about 10 mW) to the antenna socket
Wiring to device	Surface or in-wall installation
Strain relief clamp	3 x in housing
LED	In centre of housing
Wall mount	Housing can be mounted in horizontal or vertical position. Do not install on metal. Keep away from electric or magnetic sources of interference.

Power supply: the RouterNode can draw the required power supply via the network (PoE). If there is no PoE available, you can connect an additional mains adapter.

### Power supply

External power supply (mains adapter)	Input voltage: 9 V DC min., 32 V DC max.; (min. 3 W) Input current: depends on the input voltage (350 mA @ 8V) Polarity-dependent: no
PoE (power-over-Ethernet)	IEEE802.3af, floating, $V_{in}$ : 36 V to 57 V, $P_{out}$ max. 10 W
Voltage outputs	1 x 3.0 – 3.3 V at 200 mA max.

### Environment

Temperature	Operational: -10°C to +55°C Storage: 0°C to +30°C
Humidity	Max. 90%, non-condensing
Environmental Class	IP20

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## Interfaces

TCP/IP	10T/100T, HP Auto_MDIX, DHCP client, IPv4 TCP service: 1x at Port 2101 UDP service: 1x for Digi-Scan DHCP: on WebServer: enable Connector: RJ45
Frequency	WaveNet 868-870 MHz, 10 mW max. (10 dBm)

## Signalling

LED	A three-colour LED: red, green, blue (in centre of housing)
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## Programming

Interfaces	Via TCP/IP
Memory	1 MB, internal

## Relay for Output 1

Quantity	1 x
Operating mode	Changeover contact 1 x C, 1 x NO, 1 x NC.
External output via relay contact	Max. switching voltage: 30 V DC/24 V AC (ohmic load) Max. switching current: 1A (ohmic load)

## Digital inputs

Quantity	3 x
Input voltage	Low: 0 to 0.5 V / high: 2 V to 3.3 V max
Ext. Contact	Isolated contact can be connected between output (I1, I2, I3) and I <sub>+</sub>

## Digital outputs

Quantity	2 x
Type	Open collector
Switching voltage	12 V DC/100mA (max. ohmic load)
Power supply	A pull-up resistor (about 1 KOhm) can be connected between each output and output <sub>+</sub> ( $V_{out} = V_{in} - 1V$ )

## Analogue inputs

Quantity	1 x
Resolution	12 bit
Input voltage	0 to 3.3V

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### **9 Declaration of Conformity**

You can access documents such as declarations of conformity and other certificates online at [www.simons-voss.com](http://www.simons-voss.com).

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### 10 Help & Contact

<b>Instruction manuals</b>	You will find detailed information on operation and configuration online on our homepage at <a href="http://www.simons-voss.de">www.simons-voss.de</a> in INFOCENTER > DOWNLOADS
<b>Hotline</b>	If you have any questions, the SimonsVoss Service Hotline will be happy to help you on +49 (0)89 99 228 333 (German fixed network; call charges vary, depending on the operator)
<b>E-mail</b>	Would you prefer to send us an email? <a href="mailto:hotline@simons-voss.com">hotline@simons-voss.com</a>
<b>FAQs</b>	You will find information and help for SimonsVoss products in the FAQ section <a href="http://www.simons-voss.de">www.simons-voss.de</a> in INFO CENTRE > FAQ SECTION

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