



AVENTICS SPM Smart Pneumatics Monitor Gateway Instruction Manual

[Home](#) » [AVENTICS](#) » AVENTICS SPM Smart Pneumatics Monitor Gateway Instruction Manual 

**AVENTICS SPM Smart Pneumatics Monitor
Gateway Instruction Manual**



Operating instructions

Smart Pneumatics Monitor, Gateway
Smart Pneumatics Monitor, Gateway

SPM

R412026734/2019-07, Replaces: 2019-04, DE/EN



Contents

- [1 About this Documentation](#)
- [2 Notes on safety](#)
- [3 General Notices on Equipment and Product Damage](#)
- [4 Delivery Contents](#)
- [5 About This Product](#)
- [6 Commissioning and Operation](#)
- [7 Disposal](#)
- [8 Technical Data](#)
- [9 Documents / Resources](#)
- [10 Related Posts](#)

About this Documentation

Documentation validity

This documentation applies to the Smart Pneumatics Monitor (SPM, R419801689).

The documentation is intended for installers, programmers, electrical engineers, service personnel, and system owners.

- Read this documentation completely, especially the chapter 2 “Notes on safety” before working with the product.

Required and supplementary documentation

- Only commission the product once you have obtained the following documentation and understood and complied with its contents.

- ◆ System manual for the bus coupler (only on CD)
 - ◆ System documentation
- If the valve system contains pneumatic components:
- ◆ Documentation for the pneumatic components
- If the unit contains input or output modules:
- ◆ System manual for the I/O modules (only on CD)





You can also find all instructions for the AV valve system and the AES components on the CD R412018133. All instructions for the SPM can be found on the USB stick.

Presentation of information

Warnings

In this documentation, there are warnings before the steps whenever there is a risk of personal injury or damage to equipment. The measures described to avoid these hazards must be followed. Safety instructions are set out as follows:

 SIGNAL WORD	
Hazard type and source Consequences ▶ Precautions ▶ <List>	
Safety sign, signal word	Meaning
 CAUTION	Indicates a dangerous situation which, if not avoided, could result in minor or moderate injury.
NOTICE	Indicates that damage may be inflicted on the product or the environment.

Symbols



Operation may be impaired if this information is disregarded.

Notes on safety

About this chapter

The product has been manufactured according to the accepted rules of current technology. Even so, there is risk of injury and damage to equipment if the following chapter and warnings in this documentation are not followed.

- Read these instructions completely before working with the product.
- Keep this documentation in a location where it is accessible to all users at all times.
- Always include the documentation when you pass the product on to third parties.

Intended use

The Smart Pneumatics Monitor (SPM) is used to connect an AV valve system to an IT system and has the function of a gateway. The serial interface of the SPM (RS422 interface) may only be connected to the SPM interface of the AV valve system. Only one Ethernet connection in accordance with IEEE 802 may be connected to the system's two Ethernet interfaces.

The Smart Pneumatics Monitor is intended for professional use only.

The Smart Pneumatics Monitor may only be used for industrial applications (class A). An individual license must be obtained from the authorities or an inspection center for systems that are to be used in a residential area (residential, business, and commercial areas). In Germany, these individual licenses are issued by the Regulating Agency for Telecommunications and Post (Regulierungsbehörde für Telekommunikation und Post, Reg TP).

Improper use

Improper use of the product includes:

- Using the gateway in explosive areas
- Using the gateway as a safety component

The user is responsible for improper use of the product.

Personnel qualifications


The work described in this documentation requires basic mechanical, electrical, and pneumatic knowledge, as well as knowledge of the appropriate technical terms. In order to ensure safe use, these activities may therefore only be carried out by qualified technical personnel or an instructed person under the direction and supervision of qualified personnel.

Qualified personnel are those who can recognize possible hazards and institute the appropriate safety measures, due to their professional training, knowledge, and experience, as well as their understanding of the relevant regulations pertaining to the work to be done. Qualified personnel must observe rules relevant to the subject matter.

General safety instructions

- Note regulations for accident prevention and environmental protection.
- Observe the regulations for explosive areas.
- Observe the safety instructions and regulations of the country in which the product is used or operated.
- Only use AVENTICS products that are in perfect working order.
- Follow all the instructions on the product.
- Use only accessories and spare parts approved by the manufacturer.
- Comply with technical data and ambient conditions listed in the product documentation.
- You may only commission the product if you have determined that the end product (such as a machine or system) in which the AVENTICS products are installed meets the country specific provisions, safety regulations, and standards for the specific application.

Safety instructions related to the product and technology

 CAUTION
<p>Danger of injury if assembled under pressure or voltage!</p> <p>Assembling when under pressure or voltage can lead to injuries.</p> <ul style="list-style-type: none"> ▶ Make sure that the relevant system component is not under voltage or pressure before you assemble the product. ▶ Protect the system from being switched on.

Responsibilities of the system owner

As the owner of a system that will be equipped with modules from the SPM series, you are responsible for

- ensuring intended use,
- ensuring that operating employees receive regular instruction,

- ensuring that the operating conditions are in line with the requirements for the safe use of the product,
- ensuring that cleaning intervals are determined and complied with according to environmental stress factors at the operating site,
- ensuring that ignition hazards that develop due to the installation of system equipment are observed,
- ensuring that no unauthorized repairs are attempted if there is a malfunction.

General Notices on Equipment and Product Damage

NOTICE

Mechanical loads!

Damage to the module!

- ◆ Make sure that the module is securely fastened mechanically, e.g. by mounting it on a rail.

Damage due to foreign bodies and water!

- ◆ Make sure that the module is operated in an environment that complies with protection class IP20.
- ◆ If protection class IP20 is not sufficient, protect the module with appropriate housing.

Delivery Contents

- 1 Smart Pneumatics Monitor
- 1 set of operating instructions

About This Product

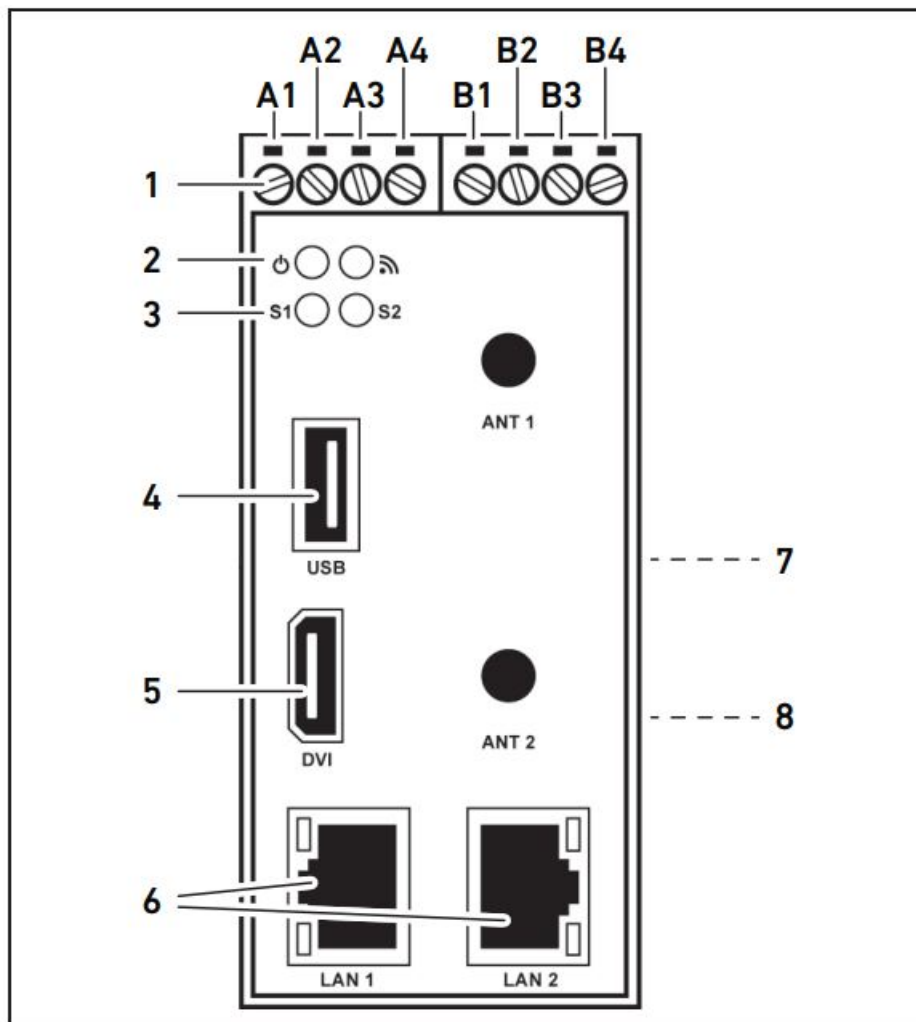


Fig. 1: Product overview

1. Connection for power supply and serial interface
2. LED for power supply
3. LED, user-defined
4. USB 2.0 host connection
5. DVI/HDMI connection
6. Ethernet interfaces
7. Assembly for rail (on the back side)
8. Name plate (on the side)

Product identification



Information for product identification can be found on the name plate.
Information on the IP address can be found on the name plate.

Commissioning and Operation

NOTICE

Damage to the module!

Do not disconnect plugs when power is on.

- Only switch on the 24 V DC supply voltage after the module has been wired.
- ◆ Use a twisted cable for the connection.
◆ Connect the SPM as shown in Fig. 2.

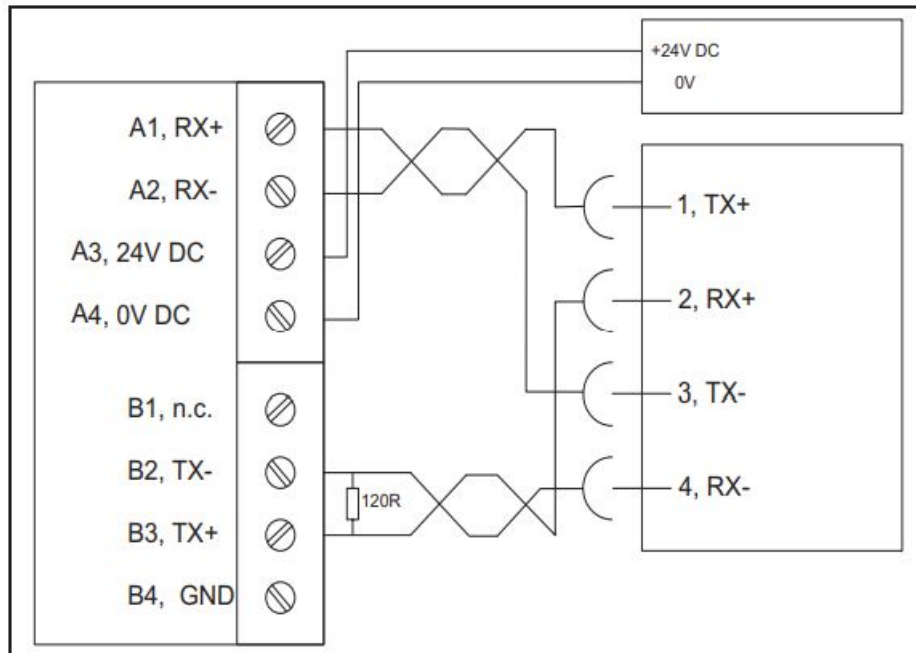


Fig. 2: SPM electrical connection

A3, A4 Power supply

A1, A2, B2, B3 Serial connection between SPM and SPM interface in the AV valve system

B2, B3 Terminating resistor 120 Ω between B2 and B3

- Connect the Ethernet interface as follows:
LAN1 Ethernet connection to a local computer
or
LAN2 Ethernet connection to a network
- Switch on the supply voltage for the SPM. Start the WebUI of the module to configure the module.
- Connect the LAN1 plug with a computer and access the module with a web browser.



To directly connect the SPM with a computer, use a crossover cable.
If you connect the SPM to a computer via a switch, this special cable type is not required.

The IP address of the module in the delivery state is indicated on the name plate. The address is 192.168.0.126.

- Enter the following address in the address bar of the web browser: <http://192.168.0.126:7777>
- Enter the user name “admin”.
- Enter the password “admin”.
- Click on “OK” to confirm your entry.



Fig. 3: Login with user name and password

You can configure the SPM in the following settings menu (see Fig. 4).
Details can be found on the enclosed USB stick in the file “SPM_Accessing_Configuration”.



Fig. 4: Settings menu

Disposal

- Dispose of the module in accordance with the currently applicable regulations in your country.

Technical Data

General data

Dimensions 112 mm x 100 mm x 45 mm

Weight < 270 g

Protection class IP20, industrial housing for 35 mm rail assembly

Electrical data

Power supply	12...24 V DC Only use a power pack with safe isolation for the power supply.
Power consumption	< 6 W
Electrical interfaces	
Ethernet	1 x 10/100/1000 Mbps with Auto MDI-X (LAN 2, RJ45) 1 x 10/100 Mbps (LAN 1, RJ45)
USB	1 x USB 2.0 host
Software	
Operating system	Embedded Linux, kernel version 2.6
Programming for Internet of Things	Node RED Nodes for AV valve system
IP addresses	Static, DHCP, AutoIP, UPnP
Protocol stack	TCP, UDP, Telnet, FTP, HTTP, TFTP, MQTT, OPC UA
Safety protocols	SSL/SSH, HTTPS, TLS 1.2, OpenVPN, IPsec
Firewall	netfilter + iptables
Other	DynDNS support Firmware update via WebUI

AVENTICS GmbH

Ulmer Straße 4
30880 Laatzen, GERMANY
Phone +49 (0) 5 11-21 36-0

Fax: +49 (0) 511-21 36-2 69

www.aventics.com

aventics@emerson.com

Further addresses:

www.aventics.com/contact

The data specified above only serve to describe the product. No statements concerning a certain condition or suitability for a certain application can be derived from our information. The given information does not release the user from the obligation of own judgement and verification. It must be remembered that our products are subject to a natural process of wear and aging.



An example configuration is depicted on the title page. The delivered product may thus vary from that in the illustration.

Translation of the original operating instructions. The original operating instructions were created in the German language.

R412026734-BAL-001-AB/2019-07 Subject to modifications. © All rights reserved by AVENTICS GmbH, even and especially in cases of proprietary rights applications. It may not be reproduced or given to third parties without its consent.



Documents / Resources

	<p>AVENTICS SPM Smart Pneumatics Monitor Gateway [pdf] Instruction Manual</p> <p>SPM Smart Pneumatics Monitor Gateway, SPM, Smart Pneumatics Monitor Gateway, Pneumatics Monitor Gateway, Monitor Gateway, Gateway</p>
	<p>AVENTICS SPM Smart Pneumatics Monitor Gateway [pdf] Instruction Manual</p> <p>SPM Smart Pneumatics Monitor Gateway, SPM, Smart Pneumatics Monitor Gateway, Pneumatics Monitor Gateway, Monitor Gateway, Gateway</p>