

Rittal – The System.

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Power System Modul
Overvoltage protection
DK 7856.170



Assembly and operating instructions

ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

IT INFRASTRUCTURE

SOFTWARE & SERVICES

FRIEDHELM LOH GROUP



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1 Notes on documentation

1.1 CE labelling

Rittal GmbH & Co. KG confirms the conformance of the PSM overvoltage protection to the EC EMC directive 2004/108/EC. An appropriate declaration of conformity has been prepared. It can be provided on request.

1.2 Storing the documents

The installation and operating instructions as well as all applicable documents are integral components of the product. They must be passed to those persons who are engaged with the unit and must always be available and on hand for the operating and maintenance personnel.

1.3 Symbols in these operating instructions

The following symbols are used in this documentation:

**Note!**

Useful information and special features.

**Caution!**

A dangerous situation for which the failure to comply with this note can cause (minor) injuries or machine damage.

1.4 Other applicable documents

Installation guide and short operating instructions of the following products (optional, depending on the application):

- Rittal PSM measuring busbars
(Model no. 7856.003, 7856.005, 7856.006, 7856.008, 7856.010, 7856.015, 7856.016, 7856.020, 7856.043, 7856.321, 7856.323)
- Active PSM modules
(Model no. 7859.212, 7859.222, 7859.232, 7859.215, 7859.225, 7859.235, 7856.201, 7856.203, 7856.204, 7200.001)

2 Safety instructions

2.1 General safety instructions

Please observe the subsequent general safety instructions for the installation and operation of the system:

- Assembly and installation of the PSM overvoltage protection, in particular for wiring with mains power, may be performed only by a trained electrician.
- Please observe the valid regulations for the electrical installation of the country in which the PSM overvoltage protection is installed and operated, and the national regulations for accident prevention. Please also observe any company-internal regulations, such as work, operating and safety regulations.
- Use only original Rittal products or products recommended by Rittal in conjunction with the PSM overvoltage protection.
- Please do not make any changes to the PSM overvoltage protection that are not described in this manual or in the associated manuals.
- The operational safety of the PSM overvoltage protection is guaranteed only for its approved use. The technical data and limit values stated in the technical specifications may not be exceeded under any circumstances. In particular, this applies to the specified ambient temperature range and IP degree of protection.
- The PSM overvoltage protection must not be opened. The unit does not contain any parts that need servicing.
- The operation of the system in direct contact with water, aggressive materials or inflammable gases and vapours is prohibited.
- Other than these general safety instructions, ensure you also observe the specific safety notes when the tasks described in the following sections are performed.



Caution!

Rittal recommends the use of the pre-assembled connection leads available as accessory.

Ensure the correct positioning of the connection plug when making the connection!

There is the danger of electrical shock and damage to the connected consumers in case of incorrect connection.

The connection plugs that accompany the PSM busbars may only be installed by trained electricians!

2.2 Service and technical staff

- The mounting, installation, commissioning, maintenance and repair of this unit may be performed only by qualified mechanical and electro-technical trained personnel.
- Only properly instructed personnel may carry out service on a unit while in operation.

3 Product description

3 Product description

3.1 Function

The PSM overvoltage protection is provided in 3-phase form.

Each of the two 3-phase infeeds of the PSM busbars requires its own overvoltage protection. Existing systems can be upgraded with the overvoltage protection.

It is equipped with a failure display (red control LED). The pre-assembled connection cable is used to feed the PSM busbar. The connection to the busbar is made using a 5-pin plug-in terminal strip. A connection cable type DK 7856.025 or the connection plug enclosed with the PSM busbar is required for the infeed.

The permanently green-illuminated LED indicates that the overvoltage protection is active.

An illuminating red LED indicates clearly the failure of the overvoltage-protection unit!

of the user or third parties, or result in possible impairment of the system and other property.

The unit should thus only be used properly and in technically sound condition. Any malfunctions which impair safety should be rectified immediately! Follow the operating instructions!

The intended use also includes the observance of the provided documentation and fulfilling the inspection and maintenance conditions.

Rittal GmbH & Co. KG is not responsible for any damage which may result from failure to comply with the provided documentation. This also applies to failure to comply with the valid documentation for the accessories used.

Note!



The red LED indicates the initiation of the overvoltage protection. The connected units continue to be provided with power but are not protected.

The overvoltage protection must be replaced as soon as possible.

3.2 Requirement class

The overvoltage protection is designed for requirement class D (portable use on power sockets).

3.3 Proper use, foreseeable misuse

The PSM overvoltage protection is used to protect against overvoltage on all three phases.

The overvoltage protection is provided for the overvoltage category II in accordance with DIN VDE 0110 Part 1.

It is designed for operation in data centres (IT environment).

The unit is state of the art and built according to recognised safety regulations. Nevertheless, improper use can present a hazard to life and limb

4 Transportation and handling

4.1 Transport

The unit is delivered in a carton.



Note!

After unpacking, the packaging materials must be disposed of in an environmentally friendly way. They can consist of the following materials:
Polyethylene film (PE film), cardboard.

4.2 Unpacking

- Remove the unit's packaging materials.



Note!

After unpacking, the packaging materials must be disposed of in an environmentally friendly way. They can consist of the following materials:
Polyethylene film (PE film), cardboard.

- Check the unit for any damage that has occurred during transport.



Note!

Damage and other faults, e.g. incomplete delivery, should immediately be reported to the shipping company and to Rittal GmbH & Co. KG in writing.

- Remove the unit from the packaging.

5 Installation and siting

5.1 Installation site requirements

To ensure the correct function of the unit, the conditions for the installation site of the unit specified in section 6 "Technical specifications" must be observed.

Electromagnetic interference

- Interfering electrical installations (high frequency) should be avoided.

5.2 Installation

The installation is made in accordance with the plug-and-play principle.

The preassembled plug must be inserted in the appropriate socket of the PSM busbar. The connection to the infeed is made using the cable DK 7856.025 (available as accessory) or the connection plug included with the PSM busbar.

Caution!

Rittal recommends the use of the pre-assembled connection cables available as accessory.

Ensure the correct positioning of the connection plug when making the connection!



There is the danger of electrical shock and damage to the connected consumers in case of incorrect connection.

The connection plugs that accompany the PSM busbars may only be installed by trained electricians!

6 Technical specifications

6 Technical specifications

Technical specifications	PSM overvoltage protection
Voltage range	110 V – 400 V, 50/60 Hz 3-phase
Max. current per infeed	3x16 A
Cable type	H07RN-F 5G 2.5 mm ²
Ambient operating temperature	+5 °C to +45 °C
Ambient operating humidity	5% to 95% relative humidity, non-condensing
Degree of protection	IP20

Tab. 1: Technical specifications

7 Accessories

The accessories programme includes a connection cable to connect the PSM overvoltage protection to the power supply. A detailed listing of the complete accessories programme is available at the Internet address specified in section 8 "Customer service addresses".

Accessories	Model No.
3-phase connection cable with CEE plugs (IEC 60 309), length 3 m	7856.025

Tab. 2: Accessories

8 Customer service addresses

For technical questions, please contact:

Tel.: +49 (0)2772/505-9052

E-mail: info@rittal.de

Homepage: www.rittal.de

For complaints or service requests, please contact:

Tel.: +49 (0)2772/505-1855

E-mail: service@rittal.de

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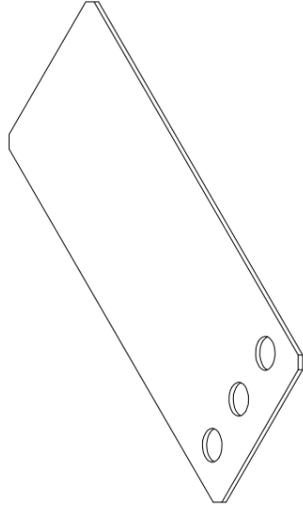




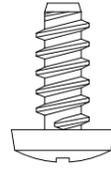
DK
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Raum für Verpackungsdatum
Area for date of packing
(MMJJTT / MMYDD)

2X

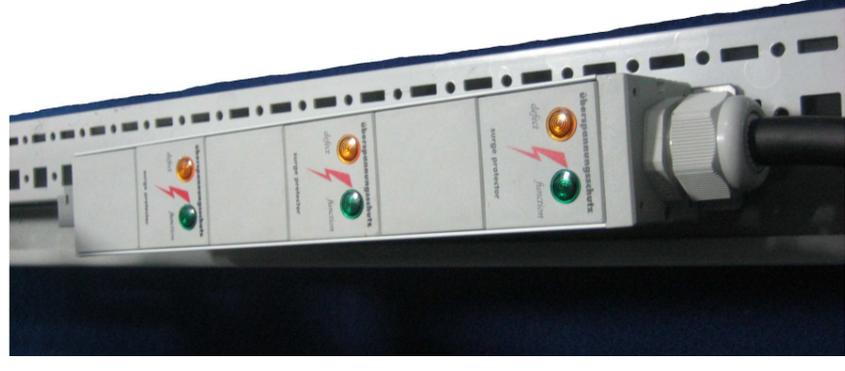
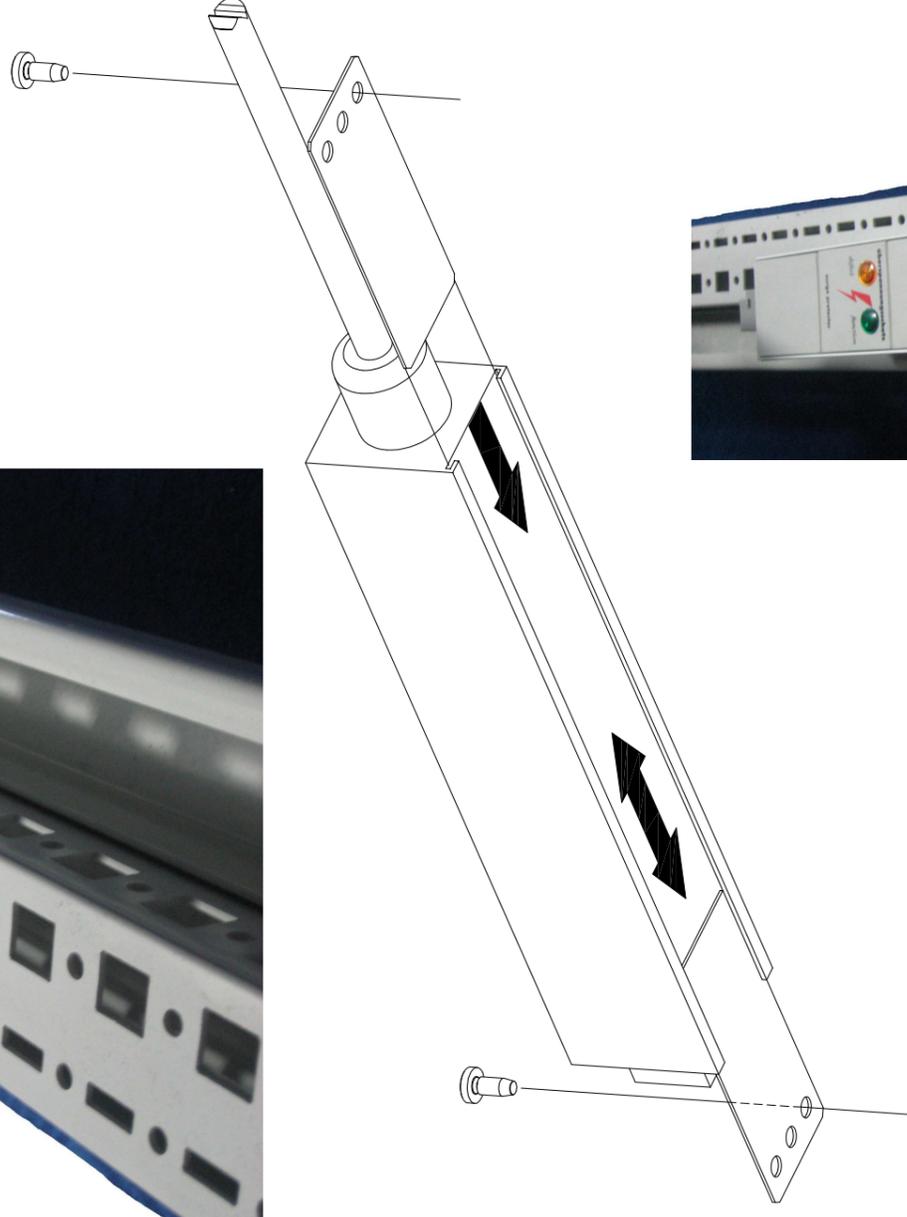
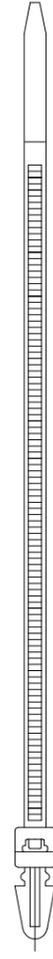


4X



5,5x13

4X



Zchng.-Nr. / No. of dwg. : A3111304IT73

Versandbeutel-Nr. / No. of accessory bag : 290050

Lieferanten-Nr. / No. of supplier : 6869220