

# User Manual



VM-100

# Voltage Meter

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**4** VM-100  
Voltage Meter




# 1 General information

This document contains important instructions for the safe operation of the product. Read and follow the safety instructions and all other instructions. Keep the document for future reference. Make sure that it is available to all those using the product. If you sell the product to another user, be sure that they also receive this document.

Our products and documentation are subject to a process of continuous development. They are therefore subject to change. Please refer to the latest version of the documentation, which is ready for download under [www.thomann.de](http://www.thomann.de).

## 1.1 Symbols and signal words

In this section you will find an overview of the meaning of symbols and signal words that are used in this document.

Signal word	Meaning
<b>DANGER!</b>	This combination of symbol and signal word indicates an immediate dangerous situation that will result in death or serious injury if it is not avoided.
<b>WARNING!</b>	This combination of symbol and signal word indicates a possible dangerous situation that can result in death or serious injury if it is not avoided.
<b>NOTICE!</b>	This combination of symbol and signal word indicates a possible dangerous situation that can result in material and environmental damage if it is not avoided.
Warning signs	Type of danger
	Warning – high-voltage.
	Warning – hot surface.
	Warning – danger zone.

## 2 Safety instructions

### Intended use

This device is designed to distribute supply voltage to connected devices and illuminate a rack. Use the device only as described in this user manual. Any other use or use under other operating conditions is considered to be improper and may result in personal injury or property damage. No liability will be assumed for damage resulting from improper use.

This device may be used only by persons with sufficient physical, sensory, and intellectual abilities and having corresponding knowledge and experience. Other persons may use this device only if they are supervised or instructed by a person who is responsible for their safety.

### Safety



#### **DANGER!**

#### **Risk of injury and choking hazard for children!**

Children can suffocate on packaging material and small parts. Children can injure themselves when handling the device. Never allow children to play with the packaging material and the device. Always store packaging material out of the reach of babies and small children. Always dispose of packaging material properly when it is not in use. Never allow children to use the device without supervision. Keep small parts away from children and make sure that the device does not shed any small parts (such knobs) that children could play with.



#### **DANGER!**

#### **Danger to life due to electric current!**

Within the device there are areas where high voltages may be present. Never remove any covers. There are no user-serviceable parts inside. Do not use the device when covers, safety equipment or optical components are missing or damaged.



### **DANGER!**

#### **Danger to life due to electric current!**

A short circuit could lead to a fire hazard and risk of death. Do not modify the mains cable or the plug! In case of isolation damage, disconnect immediately the power supply and arrange repair. If in doubt, seek advice from a qualified electrician.



### **NOTICE!**

#### **Risk of fire due to covered vents and neighbouring heat sources!**

If the vents of the device are covered or the device is operated in the immediate vicinity of other heat sources, the device can over-heat and burst into flames. Never cover the device or the vents. Do not install the device in the immediate vicinity of other heat sources. Never operate the device in the immediate vicinity of naked flames.



### **NOTICE!**

#### **Damage to the device if operated in unsuitable ambient conditions!**

The device can be damaged if it is operated in unsuitable ambient conditions. Only operate the device indoors within the ambient conditions specified in the "Technical specifications" chapter of this user manual. Avoid operating it in environments with direct sunlight, heavy dirt and strong vibrations. Avoid operating it in environments with strong temperature fluctuations. If temperature fluctuations cannot be avoided (for example after transport in low outside temperatures), do not switch on the device immediately. Never subject the device to liquids or moisture. Never move the device to another location while it is in operation. In environments with increased dirt levels (for example due to dust, smoke, nicotine or mist): Have the device cleaned by qualified specialists at regular intervals to prevent damage due to overheating and other malfunctions.



### **NOTICE!**

#### **Damage to the device due to high voltages!**

The device can be damaged if it is operated with the incorrect voltage or if high voltage peaks occur. In the worst case, excess voltages can also cause a risk of injury and fires. Make sure that the voltage specification on the device matches the local power grid before plugging in the device. Only operate the device from professionally installed mains sockets that are protected by a residual current circuit breaker (FI). As a precaution, disconnect the device from the power grid when storms are approaching or if the device will not be used for a longer period.



### 3 Features

- Power supply for up to eight electrical loads with IEC sockets
- Filters to protect the connected units against interference and voltage peaks
- Resettable electronic overload fuse
- Two dimmable rack lights
- Supply voltage monitoring via tricoloured LED chain

## 4 Installation

Unpack and check carefully there is no transportation damage before using the unit. Keep the equipment packaging. To fully protect the product against vibration, dust and moisture during transportation or storage use the original packaging or your own packaging material suitable for transport or storage, respectively.

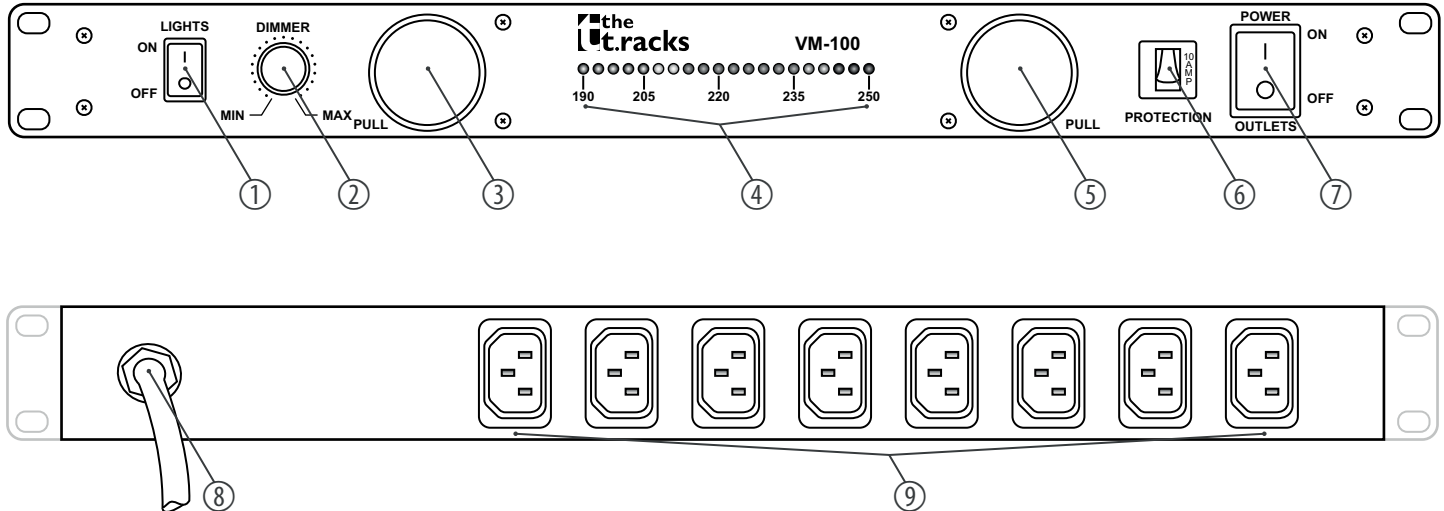
Create all connections while the device is off. Use the shortest possible high-quality cables for all connections. Take care when running the cables to prevent tripping hazards.

### **Rack mounting**

The unit has been designed for rack mounting in a standard 19-inch rack; it occupies one rack unit.

## 5 Connections and operating elements

### Front and back



## Connections and operating elements

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1	<i>[LIGHTS]</i>   Rack illumination switch
2	<i>[DIMMER]</i>   Stepless dimmer control for rack illumination
3, 5	Extensible rack lights. Pull out the rack light and adjust the light beam as desired.
4	Indicates the currently available mains voltage in a range of 190 V...250 V
6	<i>[PROTECTION]</i>   Resettable fuse for the power supply outlets on the back
7	<i>[POWER OUTLET]</i>   On/off switch for the power supply outlets on the back
8	Mains connection
9	IEC chassis sockets to supply up to eight devices

## 6 Maintenance

### Replacing the lamp



#### **DANGER!**

##### **Risk of death from electrical current!**

The device contains parts where high voltage is present.

Disconnect the device completely from the power supply before opening or removing covers. Do not reconnect the unit until the covers are fully refitted and tightly closed.

Do not use the device if covers, safety equipment or optical components are missing or damaged.



#### **WARNING!**

##### **Risk of burns on the hot lamp!**

The lamp gets hot during operation and can cause burns if it comes into contact with skin.

Do not touch the lamp during and shortly thereafter.

Prior to changing a lamp, let the respective lamp cool down sufficiently.

### Procedure

1. ➤ Make sure that the device is turned off, disconnected from the mains and completely cooled down.
2. ➤ Pull out the faulty rack light (3, 5). Unscrew the cap from the end of the rack light.

- 3.** ▶ Replace the lamp.
- 4.** ▶ Screw the cap back onto the end of the rack light.
- 5.** ▶ Reconnect the device to the mains.

## 7 Technical specifications

Output connections	Power supply of further devices	8 × IEC chassis plug
Supply voltage	220 - 240 V ~ 50/60 Hz	
Fuse	10 A, resettable	
Maximum connected load	2200 W	
Mounting options	Rack mounting, 1 RU	
Dimensions (W × H × D)	482 mm × 44 mm × 229 mm	
Weight	3 kg	
Ambient conditions	Temperature range	0 °C...40 °C
	Relative humidity	20 %...80 % (non-condensing)

## 8 Protecting the environment

### Disposal of the packing material



Environmentally friendly materials have been chosen for the packaging. These materials can be sent for normal recycling. Ensure that plastic bags, packaging, etc. are disposed of in the proper manner.

Do not dispose of these materials with your normal household waste, but make sure that they are collected for recycling. Please follow the instructions and markings on the packaging.



Observe the disposal note regarding documentation in France.



## Disposal of your old device



This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE) as amended.

Do not dispose of your old device with your normal household waste; instead, deliver it for controlled disposal by an approved waste disposal firm or through your local waste facility. When disposing of the device, comply with the rules and regulations that apply in your country. If in doubt, consult your local waste management facility. Proper disposal protects the environment as well as the health of your fellow human beings.

Also note that waste avoidance is a valuable contribution to environmental protection. Repairing a device or passing it on to another user is an ecologically valuable alternative to disposal.

You can return your old device to Thomann GmbH at no charge. Check the current conditions on [www.thomann.de](http://www.thomann.de).

If your old device contains personal data, delete those data before disposing of it.





