EN

PMK

Probing Solutions.
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Multi-channel Power Supplies

Power and Remote Control for PMK active probes

Instruction Manual

Manufacturer

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E-Mail: sales@pmk.de

Warranty

PMK warrants this product for normal use and operation within specifications for a period of two years from date of shipment and will repair or replace any defective product which was not damaged by negligence, misuse, improper installation, accident or unauthorized repair or modification by the buyer. This warranty covers defects in materials and workmanship only and does not cover wear and tear. PMK disclaims any other implied warranties of merchantability or fitness for a particular purpose. PMK will not be liable for any indirect, special, incidental, or consequential damages (including damages for loss of profits, loss of business, loss of use or data, interruption of business and the like), even if PMK has been advised of the possibility of such damages arising from any defect or error in this manual or product.

Declaration of Conformity

CE PMK declares the conformity of this product with the actual required safety and environmental standards.

EN IEC 61010-1:2020	Safety requirements for electrical equipment for measurement, control and laboratory use – part 1: General safety requirements for electrical equipment for measurement, control, and laboratory use.

WEEE/ RoHS Directives

This electronic product is classified within the WEEE/ RoHS category list as monitoring and control equipment (category 9) and is compliant to the following EC Directives.

WEEE Directive 2012/19/EU	Waste Electrical and Electronic Equipment
RoHS Directive 2011/65/EU	Restriction of the use of certain Hazardous Substances in Electrical and Electronic Equipment

Your help and efforts are required to protect and keep clean our environment. Therefore, return this electronic product at the end of its life either to our Service Department or take care of separate WEEE collection and professional WEEE treatment yourself. Do not dispose as unsorted municipal waste.

Table of Contents

IEC Safety Information

IEC Pollution Degree

According to IEC 61010-1

Pollution Degree 1	No POLLUTION or only dry, nonconductive POLLUTION. NOTE: The POLLUTION has no influence.
Pollution Degree 2	Only- nonconductive POLLUTION. Occasionally, however, a temporary conductivity caused by condensation must be accepted.
Pollution Degree 3	Conductive POLLUTION occurs or dry, non-conductive POLLUTION occurs which becomes conductive due to condensation which is to be expected.

IEC Safety Symbols

The following symbols may appear on the product or in this instruction manual:

Caution, risk of danger. Refer to manual.

Caution, risk of electric shock.

Earth (ground GND) TERMINAL.

Safety and Handling Information

Read the Instruction Manual before first use and keep it for future reference. A digital copy of the latest Instruction Manual revision can be downloaded at www.pmk.de.

This product is for use with qualified personnel only.

Do not operate with suspected failures.

Indoor use only.

Do not operate in wet or damp environment. Keep the product dry and clean.

Do not operate the product in an explosive atmosphere.

Do not expose the power supply to unnecessary loads.
The sensitive electronic components are shock sensitive. Avoid unnecessary kinetic strain caused by throwing, falling and strong vibrations.

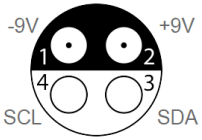
A fuse is been integrated into IEC-power connector.

Disconnect all connections to the power supply before changing the fuse or opening the housing.
Only qualified personnel should use this instrument.

Connect and disconnect correctly.
Connect the LEMO power supply connector of the probe to the power supply and the BNC connector of the probe to the measurement instrument before connecting the probe input to signal sources. Disconnect the probe input from the signal sources before disconnecting the probe from the measurement device and power supply.

Keep away from hazardous live circuits.
Avoid open circuitry. Do not touch connections or components when power is present.

For use with PMK products only



Probe's power supply pin assignment "cable view"

Observe the probe's power supply pin assignment.

About the Multi-channel Power Supply Series

The multi-channel power supplies from PMK are high precision 2ch, 4ch or 8ch power supplies specifically engineered to provide clean, stable, and reliable voltage and current for demanding high-performance probe applications in measurement and testing environments.

All are equipped with a USB interface that allows direct connection and remote control from a host computer. Models with additional LAN interface are available as well, enabling also networked operation and seamless integration into automated test environments.

Key technical features include:

- **Low noise and ripple:** Ensuring minimal interference and preserving signal integrity for highly sensitive measurements
- **Stable regulation:** Fast transient response and precise voltage/current control across multiple output channels
- **Flexible multi-channel design:** Supports simultaneous powering of several probes or measurement devices with independent channels
- **High-quality power modules and integrated filtering:** Optimized to minimize electrical disturbances and maximize measurement accuracy
- **Access to remote controllable probe features**

The multi-channel power supplies are fully compatible with the PMK Probe Control software, which provides a user-friendly graphical interface as well as a Python API for automated scripting and real-time monitoring of power supply parameters.

Specifications

Read the Instruction Manual before first use and keep it for future reference. A digital copy of the latest Instruction Manual revision can be downloaded at www.pmk.de.

Do not exceed the specifications. This product comes with 2 years warranty. Each specification is determined at +23 °C ambient temperature.

Electrical Specifications

Output referred specifications:

Models	2ch PS-02	4ch PS-03	8ch PS-06
Max output power	20 W	40 W	60 W
Output voltage	± 9 V DC; symmetrical with ground		
Max output current per channel	0.5 A DC continuous		
Ripple and noise (20 MHz bandwidth)	5 mV RMS	5 mV RMS	8 mV RMS

Input referred specifications:

Models	2 ch PS-02	4 ch PS-03	8 ch PS-06
Immunity / EMI	IEC/EN 60601-1 - EN55011-B		
Input voltage range	90 V - 264 V AC 47 Hz - 63 Hz		90 Hz - 264 V AC 47 Hz - 63 Hz
Input current under full load @115V/230V	0.35 A / 0.22 A	0.7 A / 0.4 A	1.5 A / 1.0 A
Withstand voltage (input-output)	4 kV AC		
Environmental protection	IP30		
External Fuse	2 A, slow	2 A, slow	3.15 A, slow

Mechanical Specifications

Models	2 ch PS-02	4 ch PS-03	8 ch PS-06
Length	213 mm		
Width	127.5 mm		
Height	50.5 mm		
Weight	1.0 kg	1.2 kg	1.4 kg
Output Connector	4 pin LEMO *		
Number of output channels	2 ch	4 ch	8 ch

* Observe pin out. See Operating Instructions. For use with PMK products only.

Environmental Specifications

Models		2 ch PS-02	4 ch PS-03	8 ch PS-06
Altitude	operating	up to 2000 m		
	non-operating	up to 15000 m		
Temperature Range	operating	0 °C to +40 °C		
	storage temperature	-20 °C to +40 °C		
Maximum Relative Humidity	operating	90 %, non-condensing humidity		
	non-operating	90 %, non-condensing humidity		

Maintenance

Cleaning

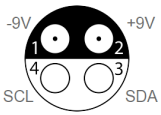
To clean the exterior of the power supply, use a soft cloth moistened with either distillated water or isopropyl alcohol. Before use allow the probe to dry completely.

Operating Instructions

The PMK power supplies are for use with PMK probes only.

The power supply pin assignment is different from other power supplies. Use only original PMK power supplies with PMK probes.

Probe's power supply pin assignment "cable view"



Before first use. Follow the instructions in the "Getting Started" section before first use.

Getting Started

After unpacking, place the power supply unit on a firm, level surface with adequate ventilation. First connect the enclosed C14 power cord to the input socket on the rear of the power supply unit. Check that the on/off switch is set to "off."

Then plug the power cable into a grounded outlet and turn on the power supply.

If you would like to use the "Probe Control" software provided free of charge by PMK, please connect a USB Type C cable connected to your computer or a network cable connected to your LAN to the power supply.

You can download the latest version of the software free of charge at:
https://www.pmk.de/de/remotecontrol.

Finally, connect your PMK probes to the power supply using the connection cable supplied with each probe. You can find connection cables in various lengths as accessories at https://www.pmk.de/.

Please note that all probes powered by a power supply unit with multiple outputs may only be connected to one measuring device (oscilloscope), as otherwise ground loops may form.

Further Information

The outputs of the multi-channel power supplies are individually protected against overload by self-resetting fuses. This means that in the event of a temporary overload on one port, all other ports continue to be supplied with power and communication without interruption. This ensures that in the event of a probe defect, measurements from the unaffected probes can continue uninterrupted.

Scope of Delivery

See chapter “Ordering Information” to review the selection of multi-channel power supplies and referring cables.

- 1x Multi-channel Power Supply
- 1x Instruction manual
- IEC C14 power cord
- USB-A to USB-B cable
- Only if LAN model was selected: LAN network cable

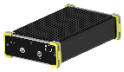
Ordering Information

All models are equipped with an integrated wide-range power supply and an USB interface for remote control. Some models are available with additional LAN interface. The 2 ch, 4 ch and 8 ch model all have the same form factor.

Note, that for some PMK low voltage probe series also a more compact international wall plug power supply is available, without remote control capabilities. Please refer to the specific probe series datasheet for more information.

Step 1: Select Power Supply

889-09V-PS2	PS-02 (2 channels, with USB interface for remote control)
889-09V-PS2-L	PS-02L (2 channels, with LAN and USB interface for remote control)
889-09V-PS3	PS-03 (4 channels, with USB interface for remote control)
889-09V-PS3-L	PS-03L (4 channels, with LAN and USB interface for remote control)
889-09V-PS6	PS-06 (8 channels, with USB interface for remote control)
889-09V-PS6-L	PS-06L (8 channels, with LAN and USB interface for remote control)



The power supply pin assignment is different from other power supplies.
Use only original and recommended PMK power supplies with PMK probes.

Observe Connector Pin-Out
for PMK power supply cables

Step 2: Select Probe Power Supply cable

890-520-900	Power supply cable (0.6 m) **check if your probe already includes a power supply cable**
890-520-915	Power supply cable (1.5 m)

Notes

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