



Miniature Preamplifier Power Supply

# MPPS-01

user's guide

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# 1. Warranty

VIGO System S.A. hereby represents and warrants all Products manufactured by VIGO and sold hereunder to be free from defects in workmanship or material during a period of twelve (12) months from the date of delivery save for products for which a special warranty is given. If any Product proves however to be defective in workmanship or material within the period herein provided VIGO System undertakes to the exclusion of any other remedy to repair or at its own option replace the defective Product or part thereof free of charge and otherwise on the same conditions as for the original Product or part without extension to original warranty time. Defective parts replaced in accordance with this clause shall be placed at the disposal of VIGO.

VIGO also warrants the quality of all repair and service works performed by its employees to products sold by it. In case the repair or service works should appear inadequate or faulty and should this cause malfunction or nonfunctioning of the product to which the service was performed VIGO shall at its free option either repair or have repaired or replace the product in question. The working hours used by employees of VIGO for such repair or replacement shall be free of charge to the client. This service warranty shall be valid for a period of six (6) months from the date the service measures were completed.

## **This warranty is however subject to following conditions:**

1. A substantiated written claim as to any alleged defects shall have been received by VIGO System within thirty (30) days after the defect or fault became known or occurred, and
2. The allegedly defective Product or part shall, should VIGO so require, be sent to the works of VIGO or to such other place as VIGO may indicate in writing, freight and insurance prepaid, properly packed and labeled.

## **This warranty does not however apply when the defect has been caused through**

1. normal wear and tear or accident;
2. misuse or other unsuitable or unauthorized use of the Product or negligence or error in storing, maintaining or in handling the Product or any equipment thereof;
3. wrong installation, assembly or failure to service the Product or otherwise follow VIGO's service instructions including any repairs or installation or assembly or service made by unauthorized personnel not approved by VIGO or replacements with parts not manufactured or supplied by VIGO;
4. modifications or changes of the Product as well as any adding to it without VIGO's prior authorization;
5. burned active element by irradiation above damage thresholds
6. electrostatic discharges
7. improper detector bias
8. improper TE cooler bias (TE cooler damage or active element overheating).
9. other factors dependent on the Customer or a third party.

Notwithstanding the aforesaid VIGO System liability under this clause shall not apply to any defects arising out of materials, designs or instructions provided by the Customer.

This warranty is expressly in lieu of and excludes all other conditions, warranties and liabilities, expressed or implied, whether under law, statute or otherwise, including without limitation any implied warranties of merchantability or fitness for a particular purpose and all other obligations and liabilities of VIGO or its representatives with respect to any defect or deficiency applicable to or resulting directly or indirectly from the Products supplied hereunder, which obligations and liabilities are hereby expressly canceled and waived. VIGO's liability shall under no circumstances exceed the invoice price of any Product for which a warranty claim is made, nor shall VIGO in any circumstances be liable for lost profits or other consequential loss whether direct or indirect or for special damage.

## **RMA Request Instructions:**

No Product may be returned without first contacting VIGO for a Return Material Authorization ('RMA') number. Please obtain a RMA number at [claim@vigo.com.pl](mailto:claim@vigo.com.pl) before returning any item. When requesting a RMA number, please state your order number, the product you wish to return and the reason for return. We will only accept returns which have a RMA number. Authorized returns are to be shipped according to received instruction from VIGO in appropriate shipping box. An unauthorized return, i.e. one for which an RMA number has not been issued and authorized returns however, shipped with incorrect customs documents - will not be accepted.

Please print the RMA number clearly on the return label to avoid any delay in processing. Please send package to:

**VIGO System S.A.**  
129/133 Poznanska St.,  
PL 05-850 Ozarow Mazowiecki  
Poland



## 2. MPPS-01 overview

The **MPPS-01 (Miniature Preamplifier Power Supply)** is an universal power adapter especially suited to supply IR modules with non cooled detectors. Its modern architecture, compact size and low noise level make the usage simple and convenient. The **MPPS-01** is powered directly from the mains.

### Features:

- Compact size
- Modern architecture
- Low cost
- Easy to use
- Low power consumption
- Low noise level
- Electrical isolation between input and output

### 2.1. MPPS-01 parameters

Parameter	Value	Unit
Input voltage	100 or 230 *	V AC
Output voltage	±9, ±12, ±15, +12/-5	V
Output current	100	mA

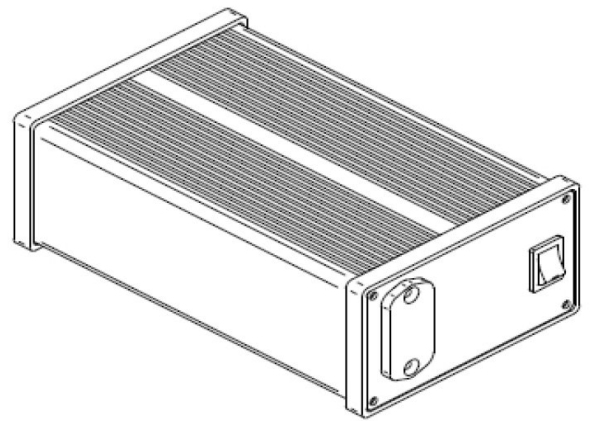
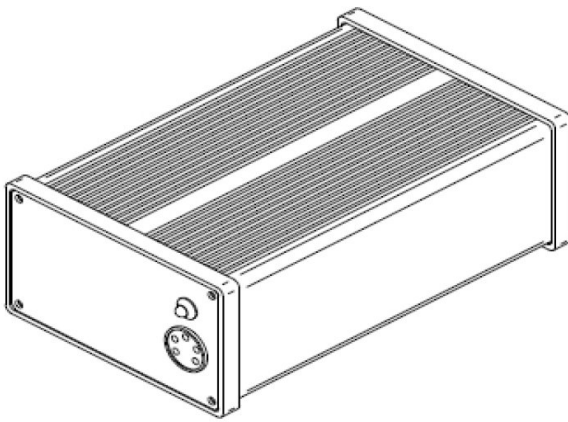
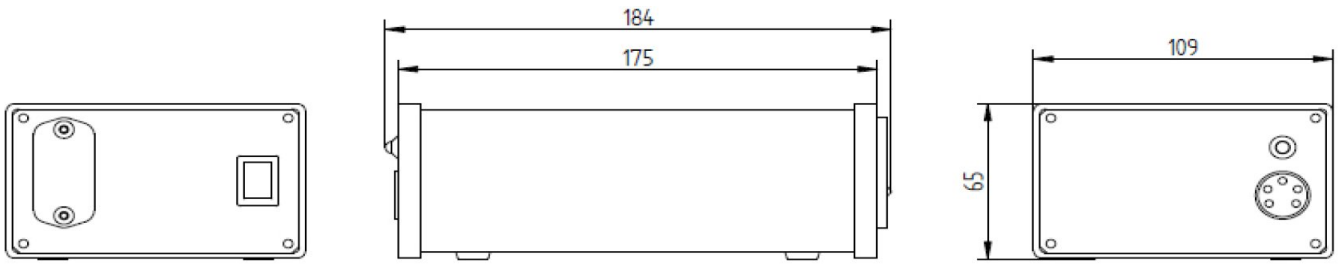
\* Must be specified in order

### 2.2. Coding the symbol of the power supply

Sample symbol of the MPPS-01 power supply

MPPS-01	-	XX
		<b>09</b> – power supply ±9 V / ±100 mA <b>12</b> – power supply ±12 V / ±100 mA <b>15</b> – power supply ±15 V / ±100 mA <b>G1</b> – combined power supply (–5 V, +12 V and +7 V) for VPAC-1000F Preamplifier

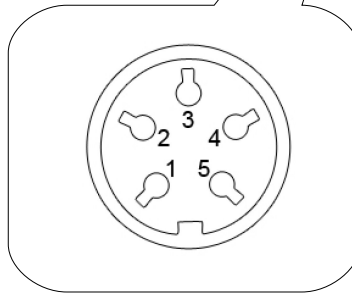
### 2.3. MPPS-01 physical dimensions



Dimension are given in millimeters.

## 2.5. Connectors

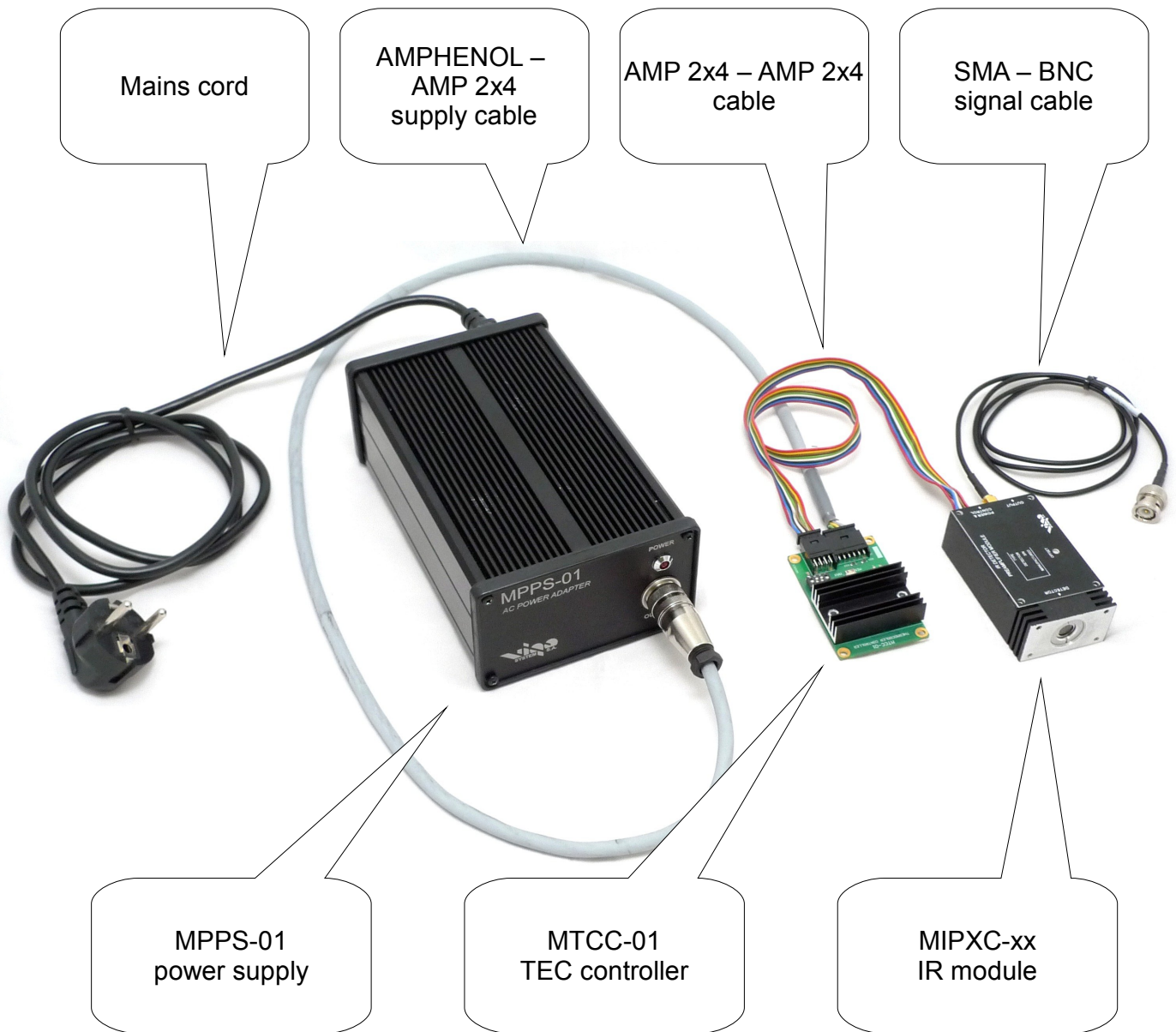
The picture below shows the pin configuration of the module.



**Amphenol connector model C091**

Pin	Symbol	
1	TGND	Thermoelectric cooler controller ground
2	+V <sub>SUP</sub>	Power supply output (+)
3	GND	Ground
4	-V <sub>SUP</sub>	Power supply output (-)
5	+V <sub>TEC</sub>	Thermoelectric cooler controller supply

## 2.6. Sample kit wiring



## 3. Getting started – regards complete IR detection kit

### 3.1. Unpacking

Before unpacking, verify if there are no visible damages of the package. Report them to the manufacturer or the distributor.

### 3.2. Installation & connections

- Mount the IR module in the measurement setup,
- Connect all elements with cables provided in the package,
- Make sure that all the elements are properly connected.

### 3.3. Switching on procedure

- Do not switch on the IR module power supply until ALL elements of the IR detection kit are properly connected with the proper cables,
- Switch on the thermoelectric cooler controller and wait until detector operating temperature is reached and stabilized. Ready state will be indicated by the „LOCK” green LED light,
- Before starting the measurements make sure the load resistance is valid. IR module output should be terminated by 50Ω or 1MΩ resistance depending on the bandwidth and is given in the test data provided on the module,
- Do not manipulate any connectors on the active IR kit – this may introduce additional noises to the system or can cause severe damages due to electrostatic discharges.



## 4. MPPS-01 other related information

### 4.1. CE statement of conformity

VIGO System declares that IR detection kit is fully compliant with:

EU Low Voltage Directives: 73/23/EEC, 93/68/EEC

EU Electromagnetic Compatibility Directives: 89/336/EEC, 91/263/EEC, 92/31/EEC, 93/68/EEC

### 4.2. Electromagnetic interference

To avoid the electromagnetic interferences (EMI), please do not put any electromagnetic source close to the IR module. That may cause interference to the input of the preamplifier and disturb the useful signal in the IR track

### 4.3. Operating temperature

Detector parameters are guaranteed for the environment temperature not exceeding 35 °C.







### 4.4. Storage information

To ensure reliable operation and long lifetime of detector, the following conditions should be fulfilled:

- Storage temperature: -10°C ÷ + 50°C and 10% to 90% humidity,
- Avoid exposing to direct sunlight and strong UV/VIS light as this may result in degradation of a detector performance,
- Avoid electrostatic discharges (ESD),

## 5. Safety instructions

To ensure safe and failure-free operation of the MPPS-01 power supply, comply with the following precautions:

-  Before connecting the power supply to the mains, make sure it is compatible with the mains voltage and frequency.
-  The power supply is intended for the indoor use.
-  Do not use the power supply if the temperature and the air humidity extends the values valid for the PPS-02.
-  Use the proper cables to connect elements of the kit, dedicated for specified device only. Never cut or shorten any cable, it may cause damage to your device.
-  Use the cables delivered by VIGO. In case of OEM systems, make sure the the cables match the specification of the controller.
-  Turn off the power supply before plugging / unplugging cables. Avoid static discharges.

### Important note!

If you are setting up own system supplied by the the custom power supply adaptor, please make sure, the voltage/current matches to the values of the supply requirements of the MPPS-01.