

USER MANUAL

# XPD

POWER SUPPLY SYSTEM

## Another Power Supply System?

A few years ago we asked ourselves why nearly all power supplies looked the same? A front loading box that, for those of us using a two-level board, makes for awkward cable routing. So we set off on an adventure, talking to the best German electronics engineers and manufacturers, about the task of creating a super powerful, small footprint, temperature controlled unit that could power both levels of our boards (or yours). Three years of development later, we believe we have achieved our goal.

Handcrafted in Germany our power supply system is very easy to install and connect, and no matter how many devices you plug in, each socket will deliver 500mA, even with up to three expansion modules connected. We've also added USB A & C sockets for running lights, tablets, phones and synths and the whole package is air-cooled with a low-noise fan to maintain optimum operating temperatures, whatever the conditions (tested with 50°C ambient) or loading. has LEDs on each output for easy visual confirmation of each pedal's power status, and as if that weren't enough, the badge on the front lights up to give a nice glow from inside your board to let you know it's on and you are ready to Rock and Roll.

Let the show commence!

*Martyn Smith*

## Important Safety Information

Before using your XPD Power Supply System, please be sure to read all of the operating instructions carefully.

- Read, follow, and keep these instructions.
- Heed all warnings.
- Do not expose this unit to liquids or moisture.
- Clean only with a dry cloth.
- Do not block any ventilation openings.
- Do not install near any heat sources.
- Use only attachments and / or accessories specified by Schmidt Array.
- Use only mounting brackets as specified by Schmidt Array.
- Unplug during thunderstorms or when unused for long periods of time.
- Do not attempt to service this unit yourself, as opening or removing any cover may expose you to dangerous voltage or other hazards. Refer all servicing to qualified Schmidt Array personnel.
- Servicing is required when the unit has been damaged in any way.
- Never push any object into the slots or openings on your unit enclosure.
- When connected to a power outlet, power is always flowing into your unit. To totally disconnect power, unplug the power cord.

## Getting Started



The **MAIN UNIT** is designed to fit seamlessly into the profiled holes found on the back panels of all our current pedalboards. This ensures that it takes up minimal space. In the unlikely event that it doesn't fit because you have an older pedalboard or one from another manufacturer, don't worry - the rear flange is removable and we provide both screws and Velcro for easy attachment.

There are ten outputs, eight capable of delivering a minimum of 500mA at 9V **AT THE SAME TIME**, four of which can be switched to 12V or 18V, plus two 24 V outputs for powering our extension modules and adapters. It's actively air cooled and temperature controlled and powered by an external transformer that can be conveniently installed wherever it's needed.

**PEDAL OUTPUTS:** Connect up to eight effects pedals with the included 5.5 x 2.1 mm pedal cables. Each output is dual isolated and air cooled for noise free and consistently stable voltage output which is essential for optimal pedal performance.

The **XPD System** will power most effects pedals on the market. Check with each manufacturer for recommended voltage, polarity and required current. For pedals that have unique power requirements (i.e. more than 500 mA of current and 9 or 12 V). You can use our XPD adapters.

### 24 V DC OUTPUTS:

Connect your XPD-E4 or E6 to the 24 V DC OUT socket and gain additional outputs for your pedals. Or connect your XPD adapters to power up your Quad Cortex or Helix (or similar power requirement pedals).

### USB OUTPUTS:

Features both USB-A and USB-C ports, offering up to 15 W of charging/supply power. Perfect for powering USB lamps and electronic devices such as smartphones and tablets, compatible with Apple and Samsung type products.

### ADJUSTABLE OUTPUTS:

Four outputs provide selectable 9, 12 or 18 V DC, each with centre negative polarity. Each output provides 500 mA of current at 9 V, 375 at 12 V and 250 mA at 18 V.

### Active Cooling Management:

An active cooling system with a low-noise fan to maintain optimal operating temperatures.

### 24 V DC INPUT:

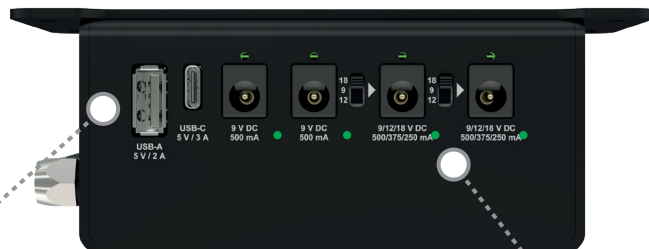
Power up your Main Unit by connecting your XPD transformer (60, 90 or 120 W) to the 24 V input.

### 9 V OUTPUTS:

Eight outputs provide 9 V DC, each with centre negative polarity. Each output provides 500 mA of current at 9 V. Irrespective of how many sockets are being used.

### LED INDICATOR:

Each output features an LED indicator. The LED illuminates green when a pedal is plugged in. The LED will turn off if the cable is unplugged, or the current draw exceeds the maximum amount available.





## Expanding your System



If you need more power, expanding your setup is easy. You have the flexibility to add up to three **EXPANDER MODULES**. These modules are connected via a single, robust, industrial-grade cable and can be neatly tucked away under the top deck of your setup. This not only saves space, but also allows you to use shorter power cables to connect to your pedals.

The modules can also be used as stand-alone power supplies when used in conjunction with a transformer (see below). This makes them perfect for use with our smaller boards, the SA250 and SA350, and also the SA450\_QC (Quad Cortex, see below) if you only have a few extra pedals.

To connect your extension modules simply use the provided 24 V - M8 cables.

They have 4 or 6 isolated outputs, each with robust filtering and short-circuit protection. These outputs provide 9 V power with a capacity of up to 500 mA per output. Additionally, two of these outputs can be switched to 12 V (375 mA) or 18 V (250 mA).

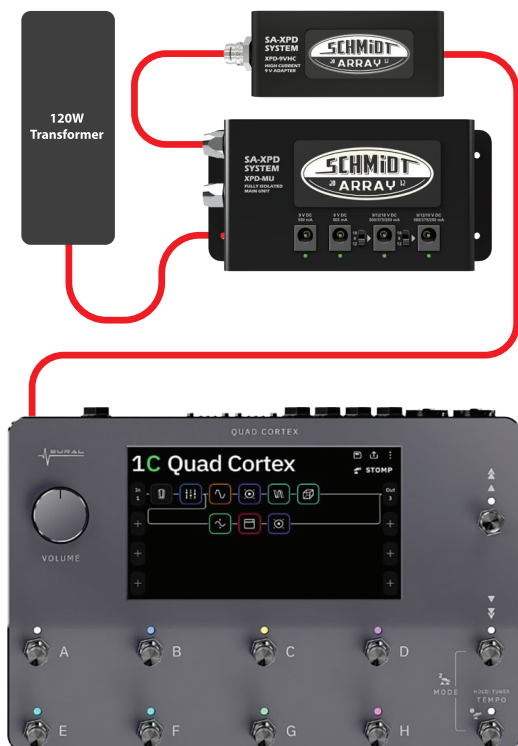
## Adapter Modules



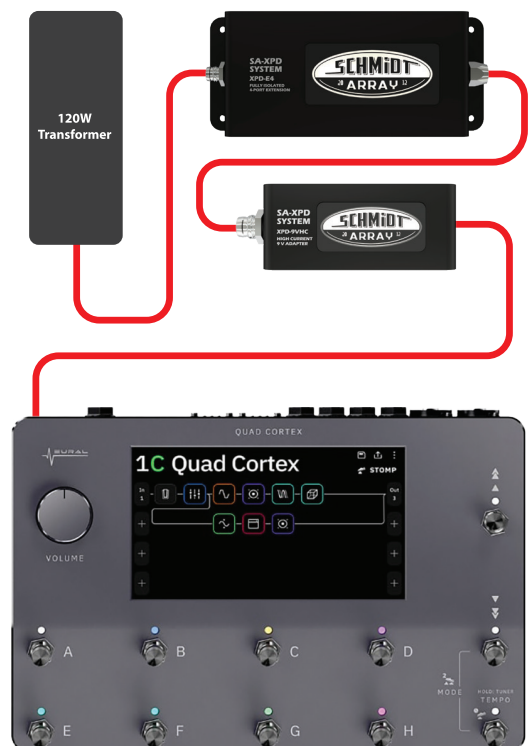
Now let's look at the challenge of pedals, which require different voltages and specifications. Our initial focus has been on powering the very popular Neural DSP Quad Cortex and Line 6 Helix Stomp, for which we've developed special intermediate boxes. This ingenious solution delivers the right power through a single cable, simplifying the setup process.

The **ADAPTER MODULES** can also be used for other pedals with similar power requirements.

### MAIN UNIT CONFIGURATION



### EXTENSION UNIT CONFIGURATION (Main Unit not required)



## Transformers



We have two sizes of **TRANSFORMER** 65 W and 120 W to provide exactly the right amount of power for your pedal configuration.

For example:

- **Small boards using only a Main Unit (XPD-MU) or one extension (4 or 6 (XPD-E4, XPD-E6) - 65 watt**
- **Main Unit (XPD-MU) with QC adapter (XPD-A12V3k) or one extension (4 or 6 (XPD-E4, XPD-E6) with standard loading - 65 Watt**
- **Main Unit (XPD-MU) with QC adapter (XPD-A12V3k) or one extension (4 or 6) (XPD-E4, XPD-E6) with heavy loading - 120 Watt**

## Features

### XPD - MAIN UNIT

- **Advanced Switching Power Technology:** Incorporates cutting-edge switching power supply technology for enhanced efficiency and reliability.
- **Ample High-Power Outputs:** Eight isolated, filtered, heat-protected and short-circuit-protected high-power outputs, each providing 9 V and supporting up to 500 mA. Additionally, four of these outputs can be switched to 12 V (375 mA) or 18 V (250 mA).
- **Fuse protected inputs:** for the main unit and extensions.
- **User-Friendly Output Orientation:** Outputs are strategically oriented toward the front and angled upwards to align with the pedal board top deck.
- **Visual Output Confirmation:** Equipped with LED indicator lights on each output, allowing easy visual confirmation of the power status of individual pedals.
- **Stable Voltage Output:** Maintains a low-noise and consistently stable voltage output, essential for optimal pedal performance.
- **EMC Compliant:** Low noise emission and high electromagnetic compatibility immunity, ensuring minimal interference. Developed and tested in a German accredited laboratory.
- **Versatile USB Ports:** Features both USB-A and USB-C ports, offering up to 15 W of charging/supply power. Perfect for powering USB lamps and electronic devices such as smartphones and tablets, compatible with Apple and Samsung type products.
- **Compact and Space-Efficient:** Designed with a very compact form factor to conserve valuable space on your pedalboard setup.
- **Active Cooling Management:** Utilises an active cooling system with a low-noise fan to maintain optimal operating temperatures.
- **Expansion Options:** Includes 2 expansion outputs with secure screw-secured M8 industrial connectors, catering to the demands of mechanical engineering.
- **Illuminated Logo:** Features an illuminated logo for added style and easy visual identification.
- **Flexible Mounting:** Offers versatile mounting options via screw connection or Velcro, accommodating different preferences and setups.

### PSU Extensions XPD-E4 and XPD-E6

- **Advanced Switching Power Technology:** Utilizes cutting-edge switching power supply technology for efficient and reliable performance.
- **Flexible Power Source:** Can be powered directly from the primary PSU, or from one of our three transformers or through an extension, eliminating the need for an extra power supply unit.
- **Multiple High-Power Outputs:** Offers 4 or 6 isolated outputs, each with robust filtering, heat protection and short-circuit protection. These outputs provide 9 V power with a capacity of up to 500 mA per output. Additionally, two of these outputs can be switched to 12 V (375 mA) or 18 V (250 mA).
- **Visual Output Confirmation:** Features LED indicator lights on each output, ensuring easy visual confirmation of power status.
- **Stable Voltage Output:** Maintains a stable and low-noise voltage output, crucial for pedal performance.
- **EMC Compliant:** Demonstrates low interference emission and exceptional interference immunity, aligning with electromagnetic compatibility standards.
- **Industrial-Grade Connectivity:** Equipped with a secure screw-locked M8 industrial connector, both for 24 V input and output. Designed to withstand the demands of mechanical engineering environments.
- **Space-Efficient Design:** A flat and compact design, perfect for hassle-free installation beneath the board top deck.
- **Illuminated Logo:** Features an illuminated logo, adding a touch of style to your setup while providing a clear visual identifier.
- **Flexible Mounting:** Offers versatile mounting options via screw connection or Velcro, accommodating different preferences and setups.

### High Power Adapters (XPD-9VHC & XPD-12VHC)

- **Advanced Switching Power Technology:** Utilises advanced switching power supply technology for reliable and efficient performance.
- **Streamlined Power Supply:** Powers your Quad Cortex / Helix (or similarly rated devices) directly, eliminating the need for an additional power supply unit.
- **Outputs:** short circuit and heat protected
- **Industrial-Grade Connectivity:** Features a robust 24 V input connection via a secure screw-locked M8 industrial connector, ensuring durability and stability.
- **9 V Output with Ample Power:** Provides a 9 V output with a maximum capacity of 3 A, delivering the necessary power for your Helix or similar pedal.
- **12 V Output with Ample Power:** Provides a 12 V output with a maximum capacity of 3 A, delivering the necessary power for your Quad Cortex or similar pedal.
- **LED Output Status Indicator:** Equipped with an LED indicator at the output to provide clear visual feedback on the power status.
- **EMC Compliant:** Exhibits low interference emission and high immunity to electromagnetic compatibility issues, ensuring a clean and interference-free signal.
- **Steady Output Voltage and High Efficiency:** Maintains a stable output voltage with high efficiency, crucial for consistent Quad Cortex and Helix performance.
- **Space-Efficient Design:** A very compact and space-saving design, optimizing the use of available space.
- **Illuminated Logo:** Features an illuminated logo for an added touch of style and easy visual identification.

## Schmidt Array Non-Transferable Limited Warranty

### **Warranty**

Schmidt Array warrants the product to be free from defects in material and workmanship for a period of 2 years from the original date of purchase. If the product fails within the warranty period, Schmidt Array will repair or, at our discretion, replace the product and cover the cost of return shipping to the original purchaser. This warranty covers defects in manufacturing discovered while using this product as recommended by Schmidt Array. This warranty does not cover loss or theft, nor does the coverage extend to damage caused by misuse, abuse, unauthorised modification, improper storage, lightning, or natural disasters. Damage caused by any of the above circumstances may result in a non-warranty repair fee.

### **Legal:**

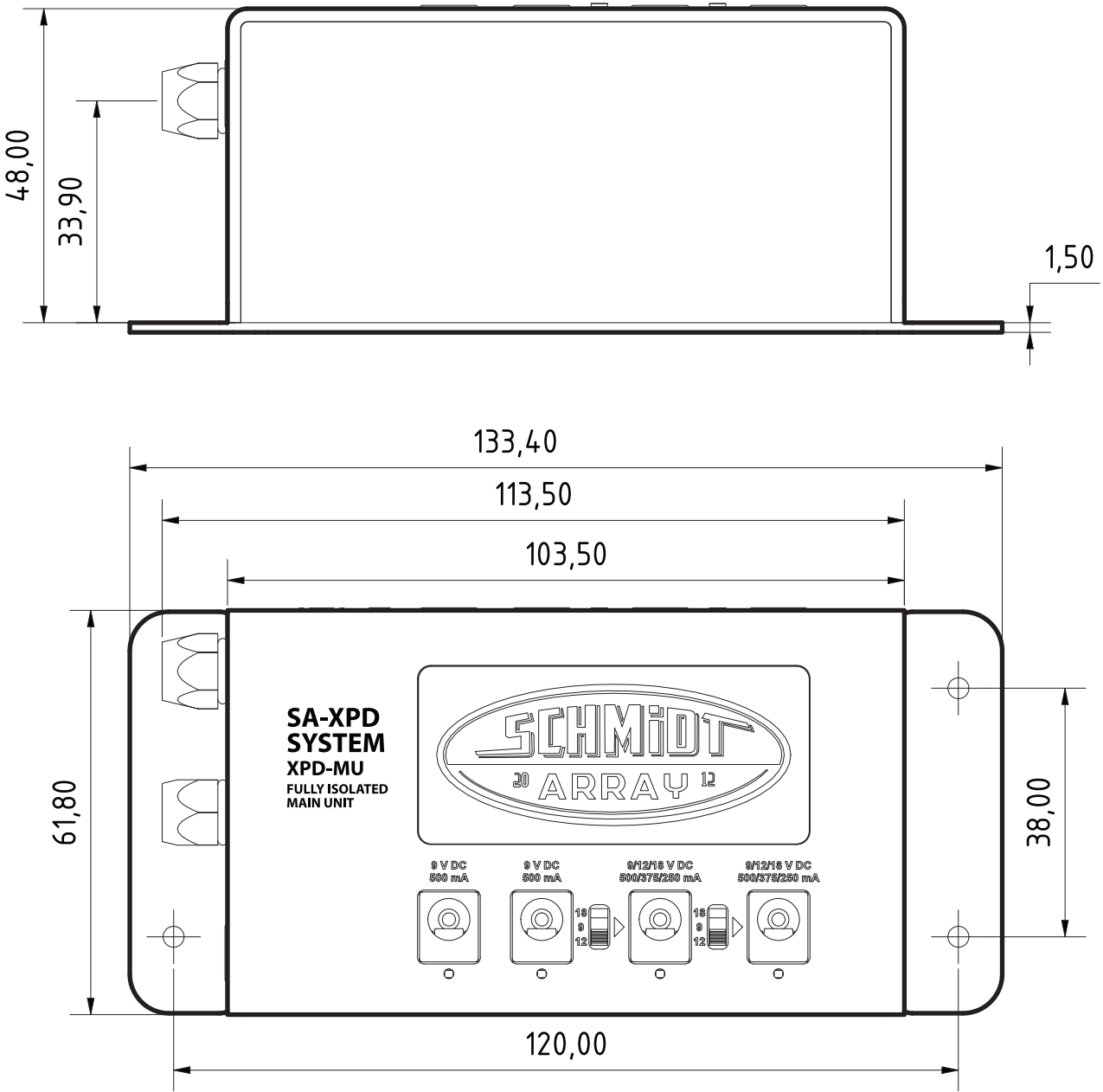
In the case of malfunction, the purchaser's sole recourse shall be repair or replacement, as described in the preceding paragraphs. Schmidt Array will not be held liable to any party for damages that result from the failure of this product. Damages excluded include, but are not limited to, the following: lost profits, lost savings, damage to other equipment, and incidental or consequential damages arising from the use, or inability to use this product. In no event will Schmidt Array be liable for more than the amount of the purchase price, not to exceed the current retail price of the product. Schmidt Array disclaims any other warranties, express or implied. By using the product, the user accepts all terms herein.

### **Disposal:**

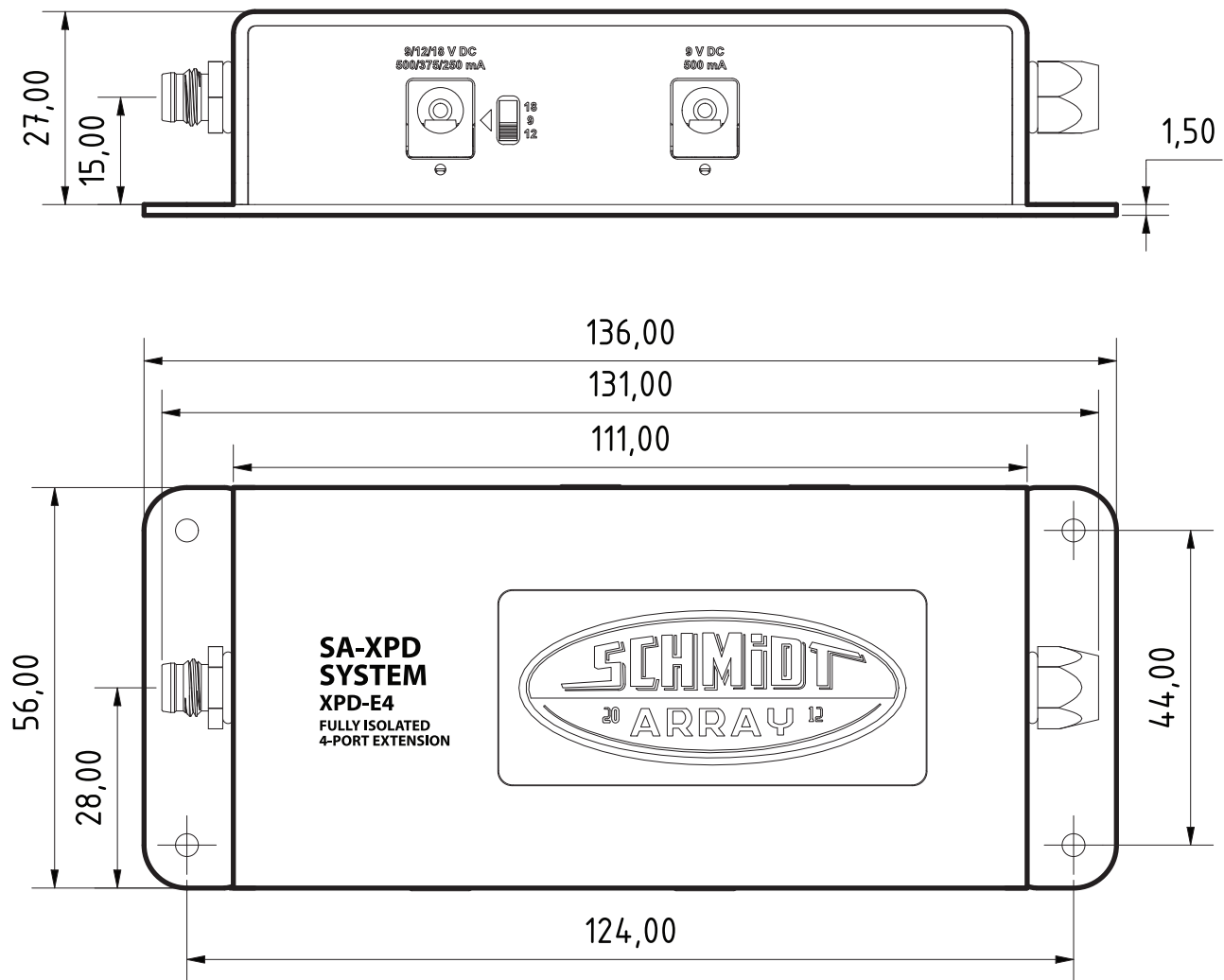
Return the unit to Schmidt array for disposal or use standard disposal for electrical equipment recommended in your country.



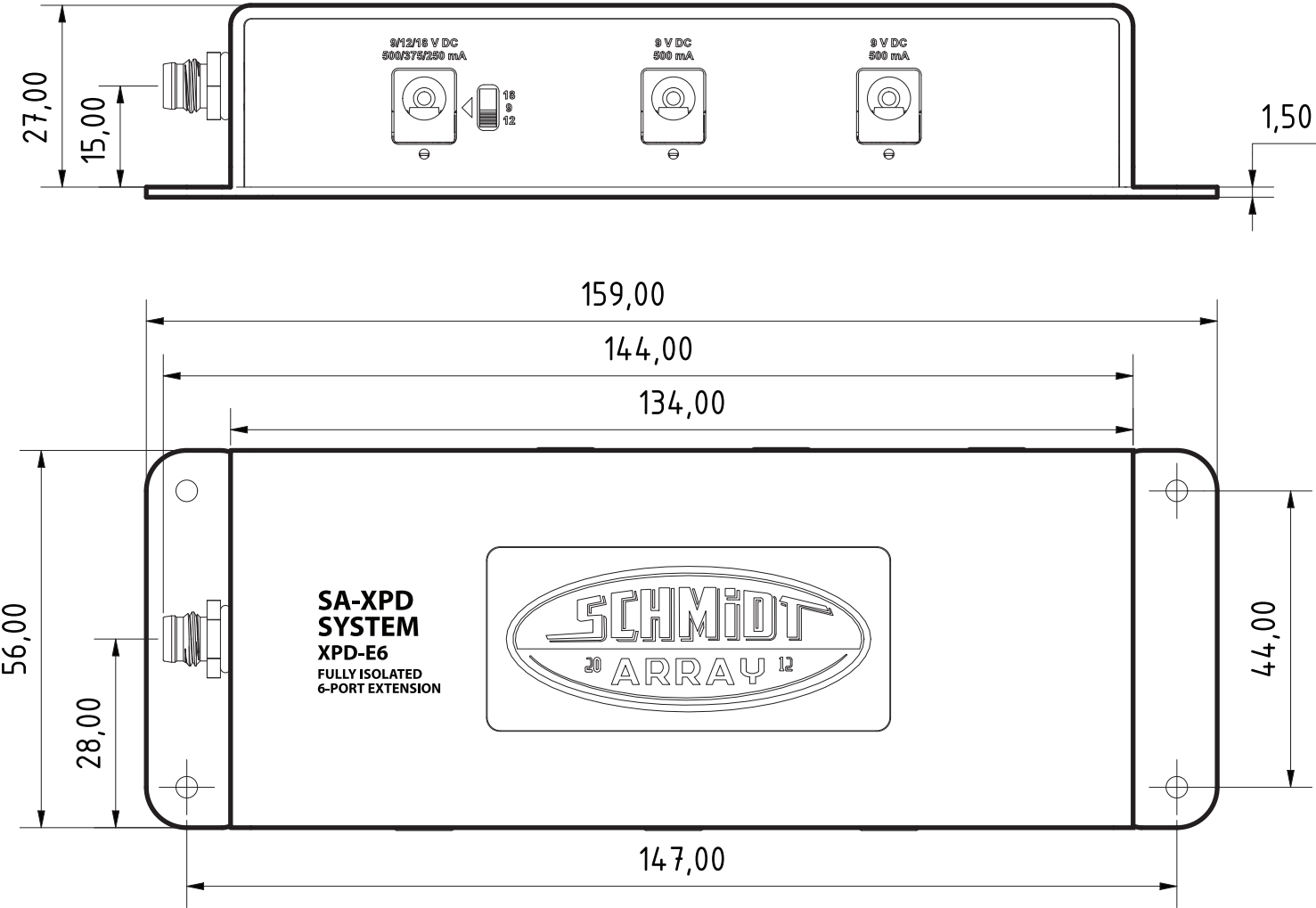
# XPD - MAIN UNIT



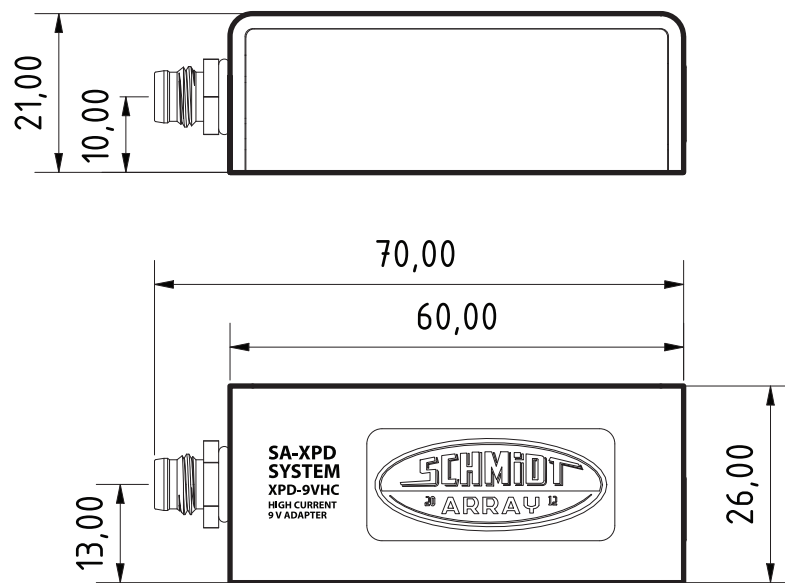
# XPD - 4 PORT EXTENSION



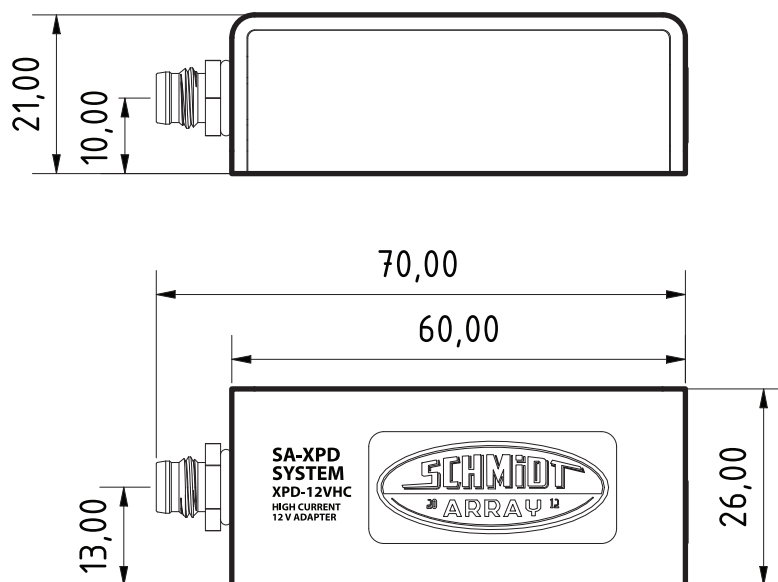
# XPD - 6 PORT EXTENSION



## XPD - 9 V HIGH CURRENT ADAPTER

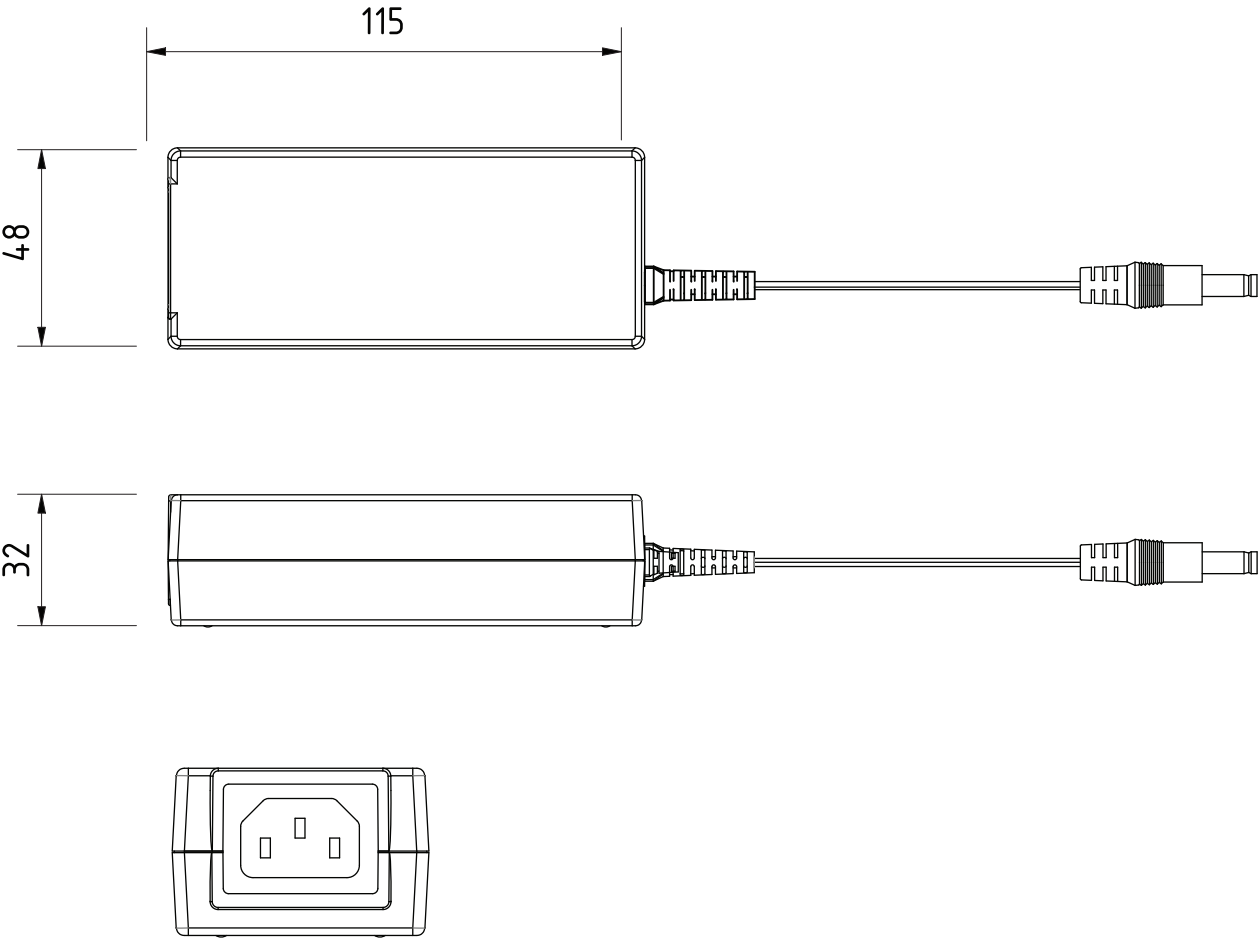


## XPD - 12 V HIGH CURRENT ADAPTER

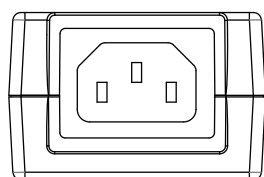
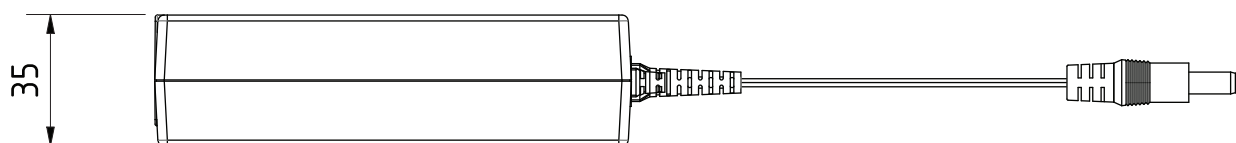
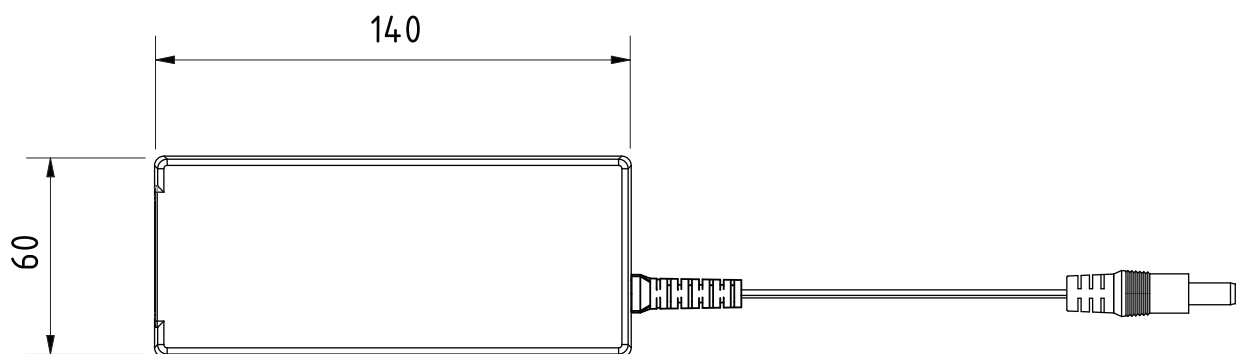




65 W - TRANSFORMER



## 120 W - TRANSFORMER



## DC CABLES

2 x 18 swg, angled at both ends

Available in the following lengths (mm):

150

250

400

600

800



## **24v DC CABLES**

Actuator/sensor cordset with overmolded connectors

Cable end 1: M8 male, straight, A-coded, IP6

Cable end 2: M8 female, straight, A-coded, IP677

Cable: PUR, black

Available in the following lengths (mm):

150

250

