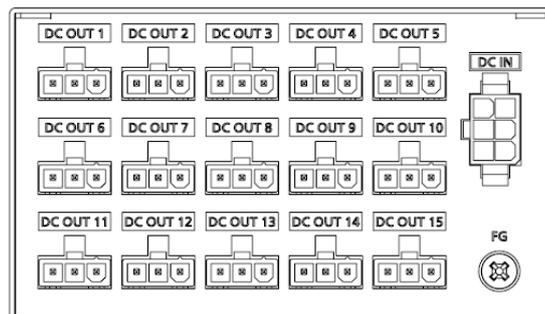
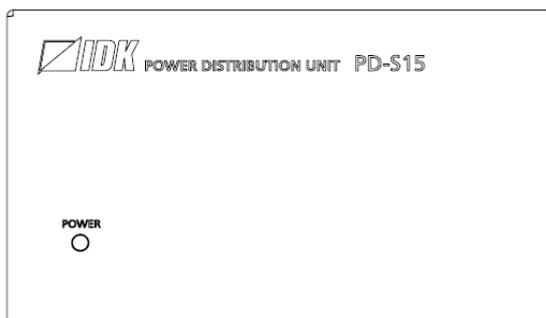


Power Distribution Unit

PD-S15

<User Guide>

Ver.1.0.0



- Thank you for choosing our product.
- To ensure the best performance of this product, please read this user guide fully and carefully before using it and keep this manual together with the product for future reference as needed.

Trademarks

- All other company and product names mentioned in this manual are either registered trademarks or trademarks of their respective owners. In this manual, the “®” or “™” marks may not be specified.

Before reading this manual

- All rights reserved.
- Some information contained in this user guide such as exact product appearance, diagrams, and so on may differ depending on the product version.
- This user guide is subject to change without notice. You can download the latest version from IDK's website at: <http://www.idkav.com>

FCC STATEMENT

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

CE MARKING

This equipment complies with the essential requirements of the relevant European health, safety and environmental protection legislation.

WEEE MARKING



Waste Electrical and Electronic Equipment (WEEE), Directive 2002/96/EC
(This directive is only valid in the EU.)

This equipment complies with the WEEE Directive (2002/96/EC) marking requirement.
The left marking indicates that you must not discard this electrical/electronic equipment in domestic household waste.

Safety Instructions

Read and understand all safety and operating instructions before using this product. Follow all instructions and heed all warnings/cautions.

Enforcement Symbol	Description
 Warning	Indicates the presence of a hazard that may result in death or serious personal injury if the warning is ignored or the product is handled incorrectly.
 Caution	Indicates the presence of a hazard that may cause minor personal injury or property damage if the caution is ignored or the product is handled incorrectly.

Symbol	Description	Example
 Caution	This symbol is intended to alert the user. (Warning and caution)	 Hot surfaces Caution
 Prohibited	This symbol is intended to prohibit the user from specified actions.	 Do not disassemble
 Instruction	This symbol is intended to instruct the user.	 Unplug

Warning

■ For lifting heavy products:

 Instruction	<ul style="list-style-type: none"> ● Lifting must be done by two or more personnel. <p>To avoid injury: When lifting the product, bend your knees, keep your back straight and get close to it with two or more persons.</p>
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■ For installing and connecting products:

 Prohibited	<ul style="list-style-type: none"> ● Do not place the product upon a surface that may give way or that may become unstable. <p>Install the product in a secure and stable place to prevent it from falling and possibly causing injury.</p> <ul style="list-style-type: none"> ● Secure the product if installing in locations prone to vibration or movement. <p>Otherwise, it may move unexpectedly or it may fall and lead to injury.</p>
 Instruction	<ul style="list-style-type: none"> ● Installation work must be performed by professionals. <p>The product is intended to be installed by skilled technicians. For installation, please contact a system integrator or IDK. Improper installation may lead to the risk of fire, electric shock, injury, or property damage.</p> <ul style="list-style-type: none"> ● Insert the power plug into an outlet that is unobstructed. <p>Unobstructed access to the plug enables unplugging the product in case of any extraordinary failure, abnormal situation or for easy disconnection during extended periods of non-use.</p> <ul style="list-style-type: none"> ● Insert the power plug into an appropriate outlet completely. <p>If the plug is partially inserted, arcing may cause the connection to overheat, increasing the risk of electrical shock or fire. Do not use a damaged plug or connect to a damaged outlet.</p> <ul style="list-style-type: none"> ● Unplug the product from the AC power source during installation or service. <p>When connecting peripheral devices to this product, unplug all involved devices from outlets. Ground potential differences may cause fire or other difficulties.</p>

■ For operating products:

 Prohibited	<ul style="list-style-type: none"> ● Keep out any foreign objects. <p>To avoid fire or electric shock, do not permit foreign objects, such as metal and paper, to enter the product from vent holes or other apertures.</p> <ul style="list-style-type: none"> ● For power cable/plug: <ul style="list-style-type: none"> ▪ Do not scratch, heat, or modify, including splicing or lengthening them. ▪ Do not pull, place heavy objects on them, or pinch them. ▪ Do not bend, twist, tie or clamp them together forcefully. <p>Misuse of the power cable and plug may cause fire or electric shock. If power cables/plugs become damaged, contact your IDK representative.</p>
 Do not disassemble	<ul style="list-style-type: none"> ● Do not repair, modify or disassemble. <p>Since the product includes circuitry that uses potentially lethal, high voltage levels, disassembly by unauthorized personnel may lead to the risk of fire or electric shock. For internal inspection or repair, contact your IDK representative.</p>
 Do not touch	<ul style="list-style-type: none"> ● Do not touch the product and connected cables during electrical storms. <p>Contact may cause electric shock.</p>
 Instruction	<ul style="list-style-type: none"> ● Clean the power plug regularly. <p>If the plug is covered in dust, it may increase the risk of fire.</p> <ul style="list-style-type: none"> ● The product must be earthed. <p>To reduce the risk of electrical shock, ensure the product is connected to a mains socket outlet with a protective earthing connection.</p>

■ **If the following problem occurs:**

 Unplug	<ul style="list-style-type: none"> ● Unplug immediately if the product smokes, makes unusual noise, or produces a burning odor. If you continue to use the product under these conditions, it may cause electric shock or fire. ● Unplug immediately if the product is damaged by falling or having been dropped. If you continue to use the product under these conditions, it may increase the risk of electrical shock or fire. For maintenance and repair, contact your IDK representative. ● Unplug immediately if water or other objects are directed inside. If you continue to use the product under these conditions, it may increase the risk of electrical shock or fire. For maintenance and repair, contact your IDK representative.
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Caution

■ **For installing and connecting products:**

 Prohibited	<ul style="list-style-type: none"> ● Do not place the product in a location where it will be subjected to high temperatures. If the product is subjected to direct sunlight or high temperatures while under operation, it may affect the product's performance and reliability and may increase the risk of fire. ● Do not store or operate the product in dusty, oil smoke filled, or humid place. If the product is placed near humidifiers or in a dusty area, it may increase the risk of fire or electric shock. ● Do not block the vent holes. If ventilation slots are blocked, it may cause the product to overheat, affecting performance and reliability and may increase the risk of fire. ● Do not place or stack heavy items on the product. Failure to observe this precaution may result in damage to the product and other property and may lead to the risk of personal injury. ● Do not exceed ratings of outlet and wiring devices. Exceeding the rating of an outlet may increase the risk of fire and electric shock.
 No wet hands	<ul style="list-style-type: none"> ● Do not handle power plug with wet hands. Failure to observe this precaution may increase the risk of electrical shock.
 Instruction	<ul style="list-style-type: none"> ● Use and store the product within the specified temperature/humidity range. If the product is used outside the specified range for temperature and humidity continuously, it may increase the risk of fire or electric shock. ● Do not place the product at elevations of 1.24 mi. (2,000 m) or higher above sea level. Failure to do so may shorten the life of the internal parts and result in malfunctions. ● When mounting the product into the rack, provide sufficient cooling space. Mount the product in a rack meeting EIA standards, and maintain spaces above and below for air circulation. For your safety as required, attach an L-shaped bracket in addition to the panel mount bracket kit to improve mechanical stability. ● Never insert screws without the rubber feet into the threaded holes on the bottom of the product. Never insert screws without the rubber feet into the threaded holes on the bottom of the product. Doing so may lead to damage when the screws contact electrical circuitry or components inside the product. Reinstall the originally supplied rubber feet using only the originally supplied screws.

■ For operating products:

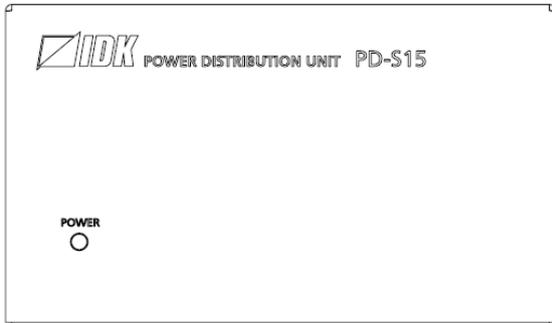
 <p>Hot surfaces Caution</p>	<p>For products with the hot surfaces caution label only:</p> <ul style="list-style-type: none"> ● Do not touch the product's hot surface. <p>If the product is installed without enough space, it may cause failures of other products operation. If you touch product's hot surface, it may cause burn.</p>
 <p>Prohibited</p>	<ul style="list-style-type: none"> ● Use only the supplied power cable and AC adapter. ● Do not use the supplied power cable and AC adapter with other products. <p>If non-compliant adapter or power cables are used, it may increase the risk of fire or electrical shock.</p>
 <p>Unplug</p>	<ul style="list-style-type: none"> ● If the product won't be used for an extended period of time, unplug it. <p>Failure to observe this precaution may increase the risk of fire.</p> <ul style="list-style-type: none"> ● Unplug the product before cleaning. <p>To prevent electric shock.</p>
 <p>Instruction</p>	<ul style="list-style-type: none"> ● If cooling fan stops, power off the product and contact us. <p>Failure to do so may rise internal temperature and increase the risk of malfunction, fire, or electric shock.</p> <ul style="list-style-type: none"> ● Keep vents clear of dust. <p>If the vent holes near the cooling fan or near the fan are covered with dust, internal temperature rises and it may increase the risk of malfunction. Clean the vent holes and near the fan as needed.</p> <p>If dust accumulates inside of the product, it may increase the risk of malfunction, fire, or electric shock. Periodic internal cleaning, especially before humid rainy season, is recommended. For internal cleaning, contact your IDK representative.</p>

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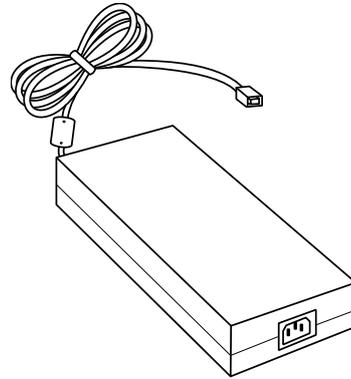
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1 Included Items

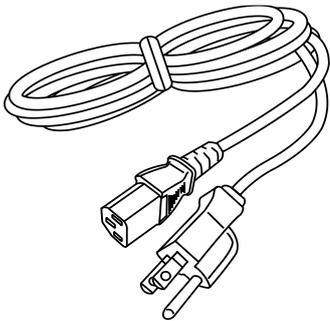
Ensure that all items below are included in the package.
If any items are missing or damaged, please contact IDK.



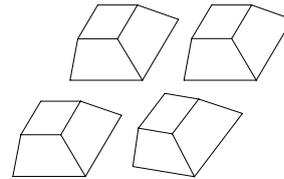
One (1) PD-S15



One (1) AC power adapter



One (1) power cord, 6 ft. (1.8 m)



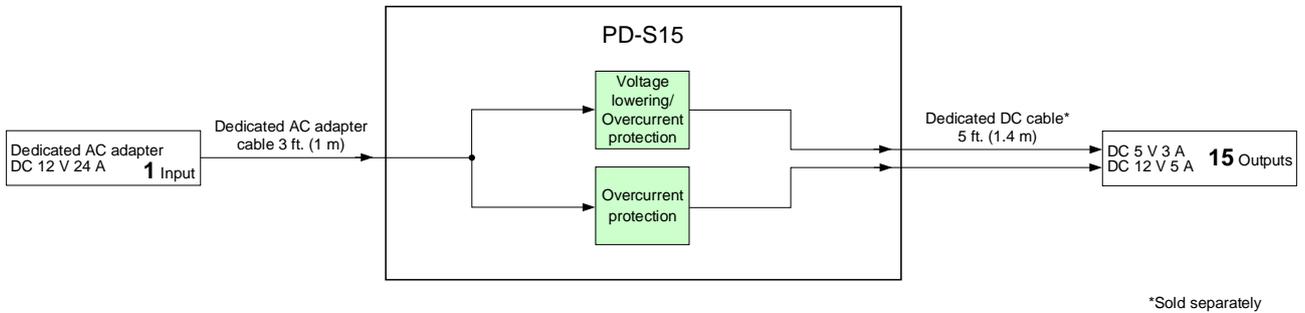
Four (4) Rubber feet

[Fig. 1.1] Included items

2 About PD-S15

The PD-S15 is a power distribution unit with 5 V and 12 VDC power.

By using a dedicated DC power cable (sold separately), the PD-S15 supplies power to up to 15 IDK products which operate via an AC adapter.



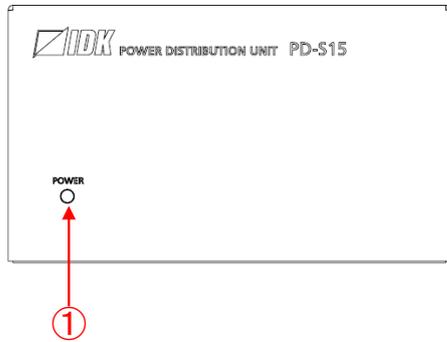
[Fig. 2.1] Diagram

3 Features

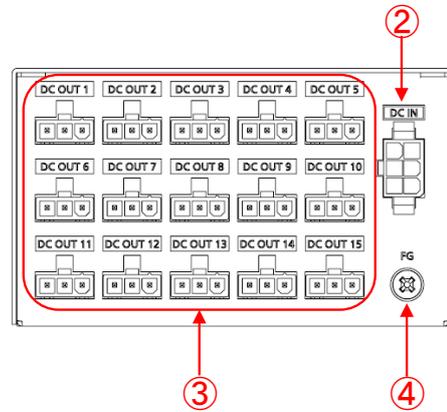
- Multi voltage distribution (5 V/12 V)
- Providing power up to 15 IDK devices
- Overcurrent protection
- Can be mounted to IDK RM-SV series

4 Panels

● Front panel



● Rear panel

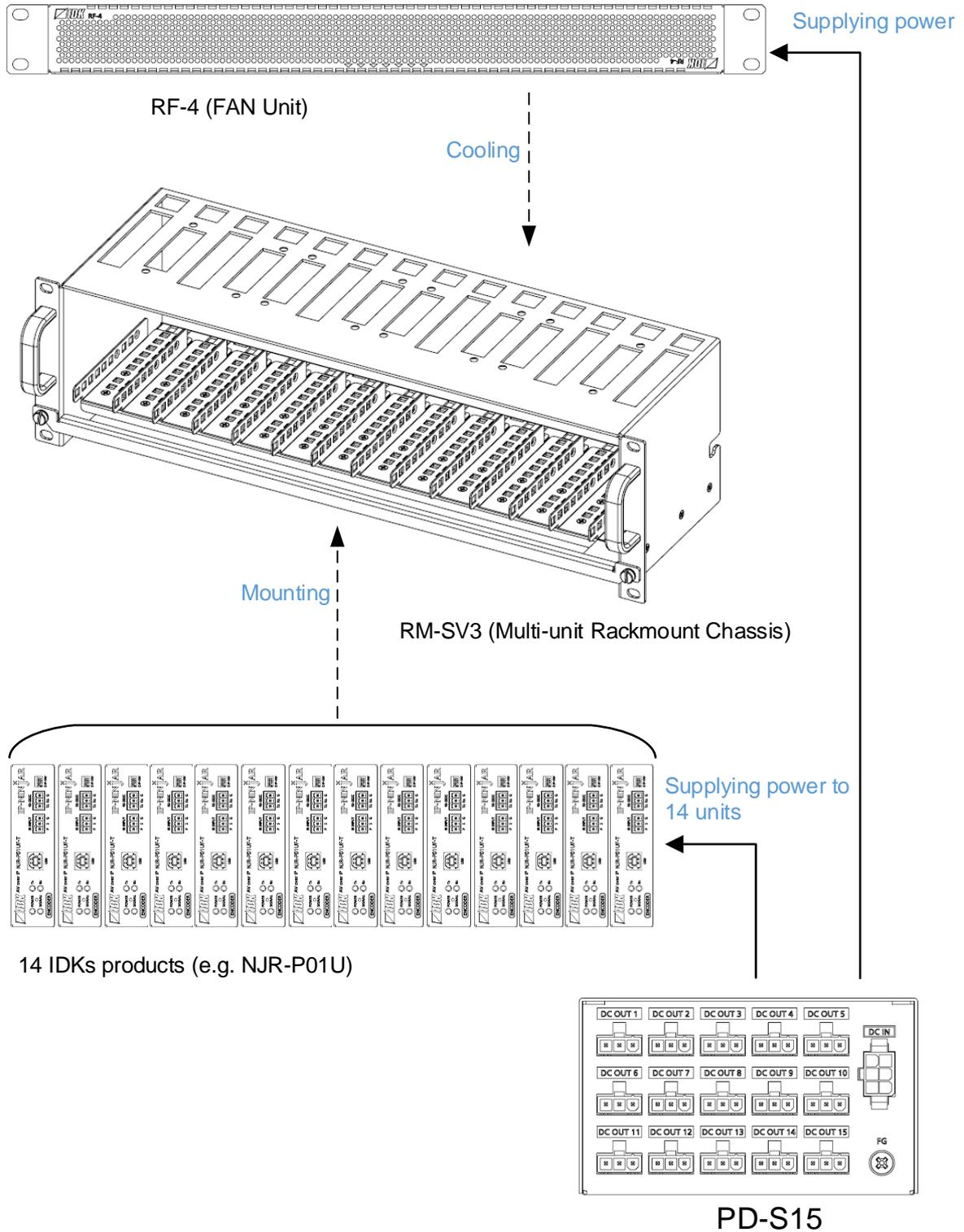


[Fig. 4.1] Drawing

[Table 4.1] Features

①	LED for power status	Illuminates in green when power is supplied from the DC input connector.
②	DC input connector	For use with supplied AC adapter
③	DC output connectors	Supply powers, DC 5 V or 12 V, up to 15 outputs over a dedicated DC cable. Current of each output is controlled separately.
④	Frame ground	Use for bonding chassis to local ground. An M4 screw is used.

5 System Configuration Example



[Fig. 5.1] System configuration example

6 Precautions

6.1 Attaching Rubber feet

First, clean the bottom surface of the PD-S15 as needed, and then peel the release papers from the rubber feet and place them in each of the four corners.

6.2 Installation

When installing the PD-S15, please observe the following precautions; otherwise, the internal temperature increases and it may affect the product lifetime and operation.

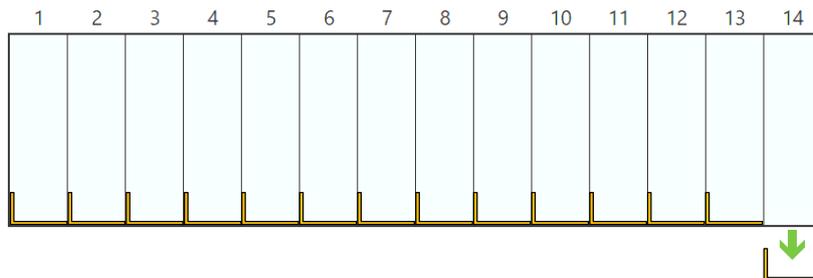
- Do not stack or place one PD-S15 directly on top of another PD-S15.
- Do not block vent holes.
- To provide adequate ventilation, maintain sufficient clearances around the PD-S15 (1.2 in. (30 mm) or more), except for when mounted to a rack.
- Consider installing the PD-S15 in an environment compatible with the maximum temperature indicated in the specification sheet 32°F to 104°F (0°C to +40°C).

6.3 Mounting to RM series

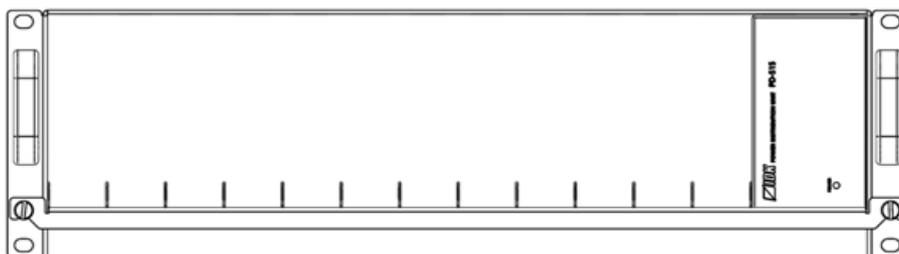
The PD-S15 can be mounted to RM series. Refer to the user manual of the RM series for details.

● Mounting to RM-SV3

Remove the partition bracket of slot No.14.



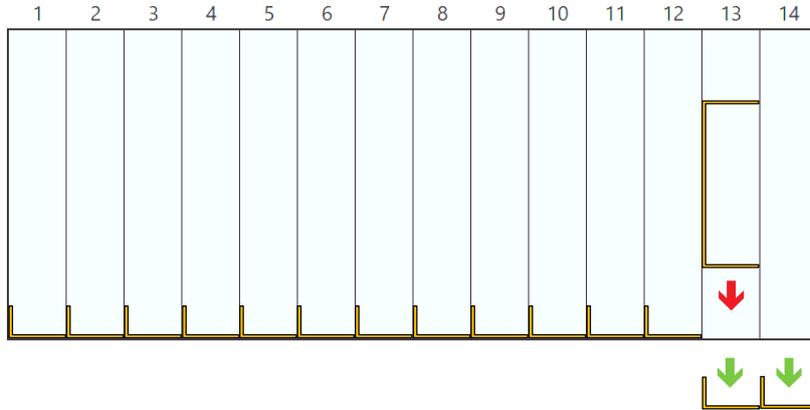
Attach the partition bracket to the PD-S15 to space of slots No.13 and 14.



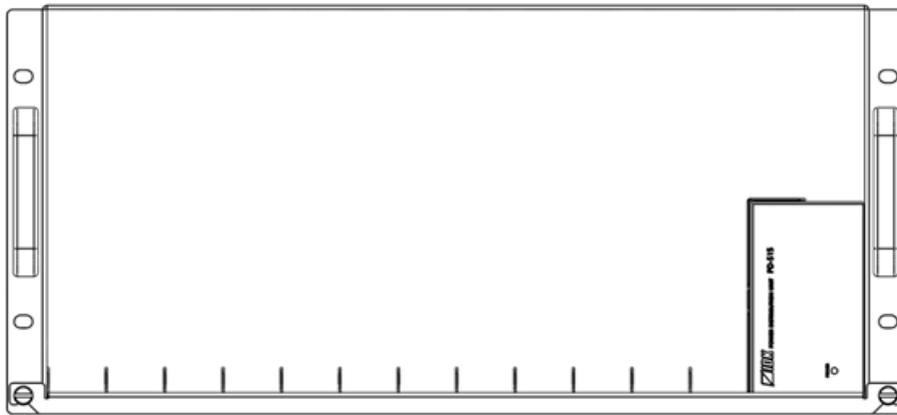
[Fig. 6.1] Mounting to RM-SV3

● Mounting to RM-SV5

Remove the partition brackets of slot No.13 and 14, and then attach the RM-QSP to space of slot No.13.



Attach the partition bracket to the PD-S15 to space of slots No.13 and 14.



[Fig. 6.2] Mounting RM-SV5

● Mounting to RM-SF

Secure the PD-S from the bottom of the RM-SF using screws.



2U height is necessary.

[Fig. 6.3] Mounting to RM-SF

7 Connecting to compatible models

7.1 Precautions

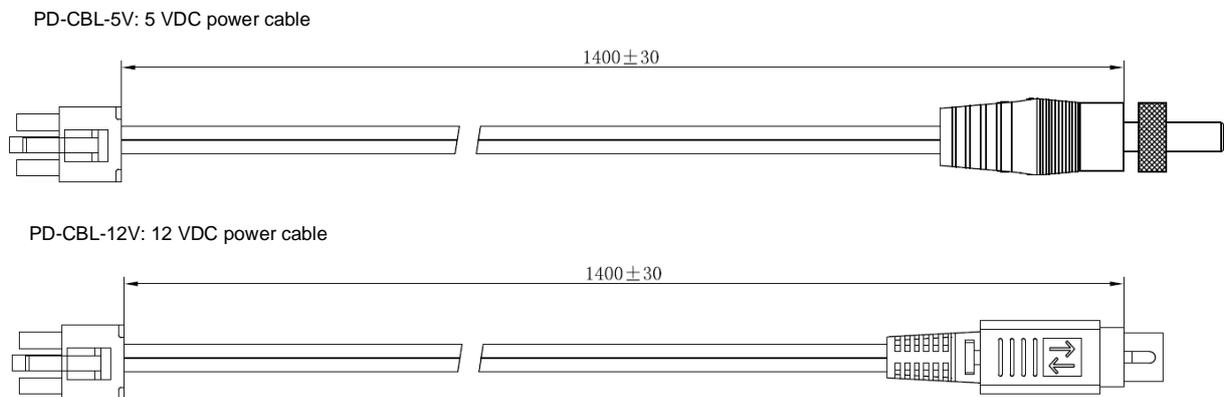
When connecting the PD-S15 to IDK products which operate via an AC adapter, observe the following precautions.

- Read manuals of the IDK products.
- Before connecting cables to the PD-S15 or IDK products, dissipate static electricity by touching grounded metal such as equipment racks before handling signal cables. Failure to observe this precaution may result in ESD (electrostatic discharge) damage.
- Power all units off before connecting cables.
- Be sure to fully seat all plugs and connections and dress cables to reduce stress on connectors.
- Do not connect incompatible products to the PD-S15.
- Do not connect cables other than the dedicated DC power cable (sold separately).

7.2 Connecting devices

Since the DC output connectors support both DC 5 V and 12 V, prepared the needed DC power cables which are sold separately.

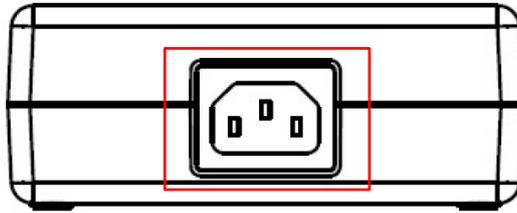
To connect the DC 12 V power cable to the PD-S15, insert the cable connector securely until it clicks. To remove the DC power cable, loosen the connector and pull the cable.



[Fig. 7.1] DC power cable

7.3 Connecting power cord

Connect the supplied power cord to the AC power adapter.



[Fig. 7.2] Power cord connector

7.4 Overcurrent protection

If a DC output connector detects overcurrent (exceeding DC 5 V 3 A), the connector stops supplying power temporarily. Once the overcurrent is recovered, the connector automatically restarts to supply power. In case if current exceeds DC 12 V 5 A, the internal fuse is blown and stop supplying power from the DC output connector, and it needs to be repaired. Please contact us.

In addition to overcurrent protection, the AC power adapter features protections from short circuit, over voltage, and overheat. If a problem is detected and the protection function is activated, the AC adapter stops supplying power. To activate the adapter, unplug it and wait for 10 seconds, and then plug it again. When the problem is solved, the AC adapter restarts to supply power.

8 Product specification

Item		Description
DC power output		15 outputs 5 VDC, 3 A or 12 VDC, 5 A (Maximum distribution power: 260 Watts)
Function		Overcurrent protection
General	Dimensions (Unit)	4.2 (W) × 2.4 (H) × 5.9 (D)" (106 (W) × 61 (H) × 150 (D) mm) (Excluding connectors and the like)
	Weight (Unit)	1.8 lbs. (0.8 kg)
	AC adapter	Input : 100 - 240 VAC ±10%, 50 Hz/60 Hz ±3 Hz Output : DC 12 V 24 A (A dedicated AC adapter is provided)
	Dimensions (AC adapter)	4.6 (W) × 1.9 (H) × 10 (D)" (116 (W) × 47 (H) × 254 (D) mm) (Excluding connectors and the like)
	Weight (AC adapter)	3.5 lbs. (1.6 kg)
	Power consumption	About 6.5 Watts
	Temperature	Operating : 32°F to 104°F (0°C to +40°C) Storage : -4°F to +176°F (-20°C to +80°C)
	Humidity	Operating/Storage: 20% to 90% (Non Condensing)

User Guide of PD-S15

Ver.1.0.0

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