



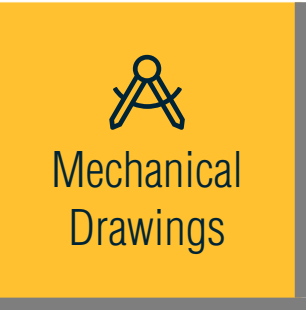
USER MANUAL



PRC-16-205
PRC-16-312

Rack mount cage

Bookmark Page



Important Safety Instructions

Class II apparatus construction.

The equipment should be operated only from the power source indicated on the product.

To disconnect the equipment safely from power, remove the power cord from the rear of the equipment, or from the power source. The MAINS plug is used as the disconnect device, the disconnect device shall remain readily operable.

There are no user-serviceable parts inside of the unit. Removal of the cover will expose dangerous voltages. To avoid personal injury, do not remove the cover. Do not operate the unit without the cover installed.

The appliance must be safely connected to multimedia systems. Follow instructions described in this manual.

Ventilation

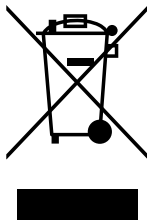
For the correct ventilation and to avoid overheating, ensure enough free space around the appliance. Do not cover the appliance, leave the ventilation holes free and never block or bypass the ventilators (if there are any).

WARNING

To prevent injury, the apparatus is recommended to be securely attached to the floor/wall, or mounted in accordance with the installation instructions. The apparatus shall not be exposed to dripping or splashing, and no objects filled with liquids, such as vases, shall be placed on the apparatus. No naked flame sources, such as lit candles, should be placed on the apparatus.

Waste Electrical & Electronic Equipment (WEEE)

This marking shown on the product or its literature indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources. Household users should contact either the retailer where they purchased this product or their local government office for details of where and how they can take this item for environmentally safe recycling. Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.



Common Safety Symbols

Symbol	Description
	Direct current
	Alternating current
	Protective conductor terminal
	Equipotential Connector
	On (Power)
	Off (Power)
	Double insulation
	Caution, possibility of electric shock
	Caution
	Laser radiation
	Warning, Rotating fan
	Caution: for indoor use only

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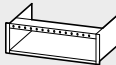
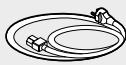
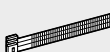
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1

Introduction

Thank you for choosing Lightware's Rack mount cage. In the first chapter we would like to introduce the device by highlighting the most important features in the sections listed below:

▶ Description	6
▶ Box Contents	6

	Supplied Accessories						
							
	Rack mount cage with rack ears (2x) and cable guides (2x)	Safety and Warranty Info, QSG	IEC Power Cable	Extender bracket (16x)	M3x5mm PH screw, flat head (32x)	M4x8mm PH screw, D head (16x)	Cable tie (32x)
PRC-16-205	✓	✓	✓	✓	✓	✓	✓
PRC-16-312	✓	✓	✓	✓	✓	✓	✓

2

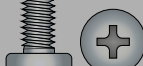
Installation

The chapter is about the installation of the device and connecting to other appliances, presenting the mounting options:

▶ Screw Types of the Powered Rackmount Cage	8
▶ Assembly Steps for the Mounting of the Extenders	8
▶ Assembly of the Rack Ears and the Cable Guides	9
▶ Transposition of the Rack Ears	9
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▶ Adjusting the Length of the Cable Guide	10
▶ Status LED	10

2.1. Screw Types of the Powered Rackmount Cage

The device contains several different screw types. The following table makes a comparative list about the accessory and built-in screws of the cage.

	M3x5, flat head, PH, black	M3x6, flat head, PH, unpainted	M4x8, flat head, Allen, black	M4x8, D head, PH, unpainted
				
Quantity	32 pcs	8 pcs	8 pcs	16 pcs
Original location	Supplied as accessory	Assembled in the device	Assembled in the device	Supplied as accessory
Required tool	PH2 screwdriver	PH1 screwdriver	Allen key, 2.5 mm (7/64")	PH1 screwdriver
Used for	Fastening of the extender bracket to the extender	Fastening of the cable guide to the enclosure or the rack ear	Fastening of the rack ear to the enclosure	Fastening of the extender with the bracket to the mounting slot

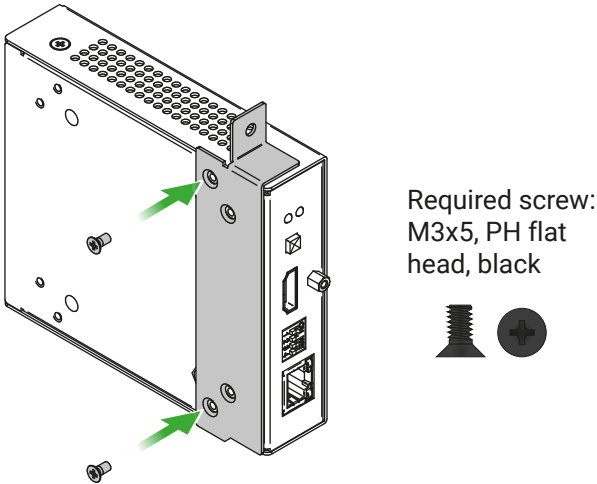
WARNING! Always use the black M3x5 screws for fastening the bracket to the extender. Longer screws may damage the interior parts of the device.

2.2. Assembly Steps for the Mounting of the Extenders

The following step-by-step assembly guide helps install the signal extenders correctly.

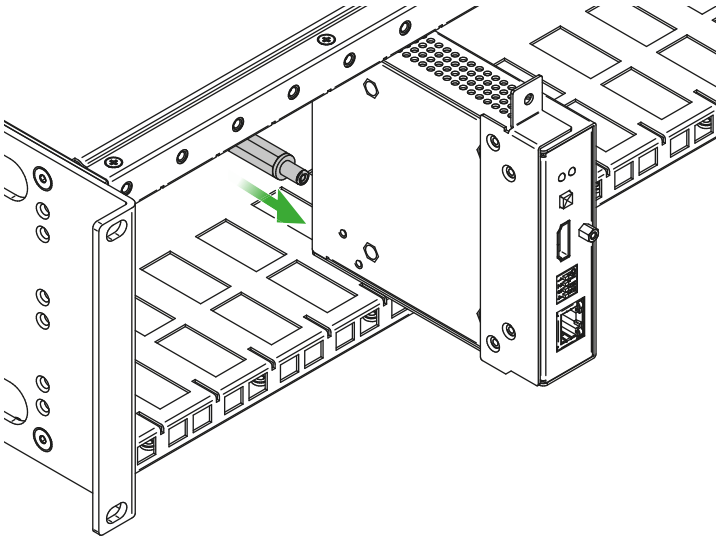
Step 1 - Assembly of the extender bracket.

Fasten the mounting bracket (highlighted with grey) onto the bottom of the extender with the provided M3x5mm PH flat head black screws (2 pcs per bracket) with a **PH2 screwdriver**.



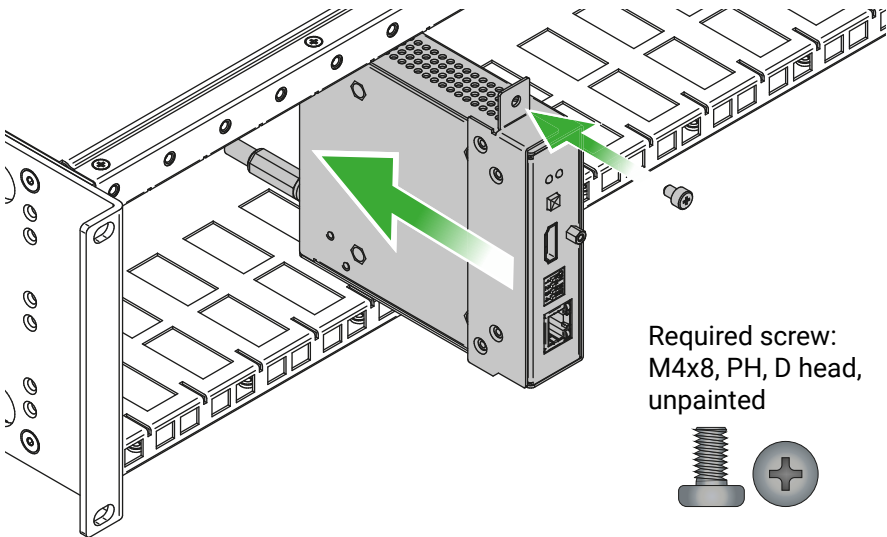
Step 2 - 5V / 12V DC power cable connection.

Pull out the 5V DC (in case of PRC-16-205) or 12V DC (in case of PRC-16-312) power cable (highlighted with grey) that belongs to the desired slot from the enclosure and connect it to the power connector of the extender.



Step 3 - Fastening the extender in the mounting slot.

Place the extender (highlighted with grey) into the desired mounting slot and fasten the extender bracket with 1 pc M4x8mm PH D head unpainted screw with a **PH1 screwdriver**. Pay attention to the guide rails of the cage when placing the extender.



2.3. Assembly of the Rack Ears and the Cable Guides

The following typical application drawings demonstrate examples for three different installations of the rack ears and the cable guides in the Powered Rackmount Cage.

Figure 1 - Front Installation (Default State)

INFO: It is recommended if you have a shallow rack and all cabling is done on the rear side.

The rack ears (highlighted with blue) are fixed to the front side and they are positioned in line with the extenders. One cable guide (highlighted with green) is fixed to the rear side in the lower position.

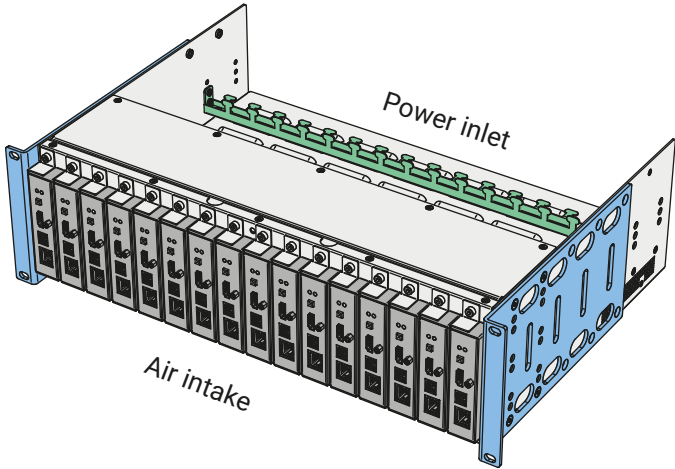


Figure 2 - Front and Rear Installation

INFO: It is recommended if you have a deep rack and you need cabling on the front and the rear side as well.

The rack ears (highlighted with blue) are fixed to the front side in the foremost position. Two cable guides (highlighted with green) are fixed to the device, one is to the front side in the middle position, the second one is to the rear side in the lower position.

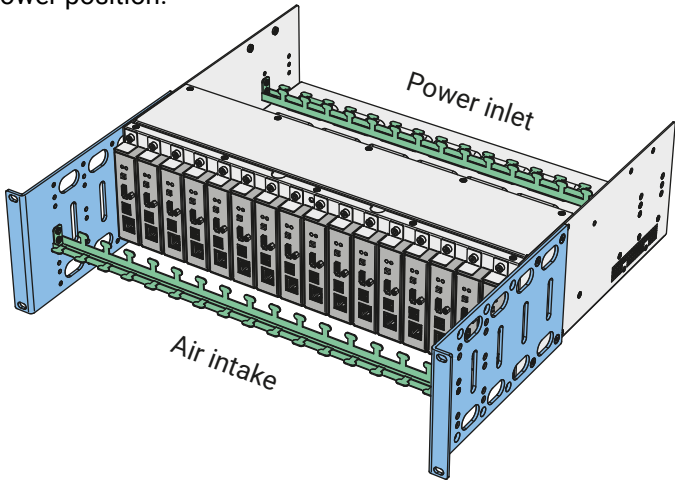
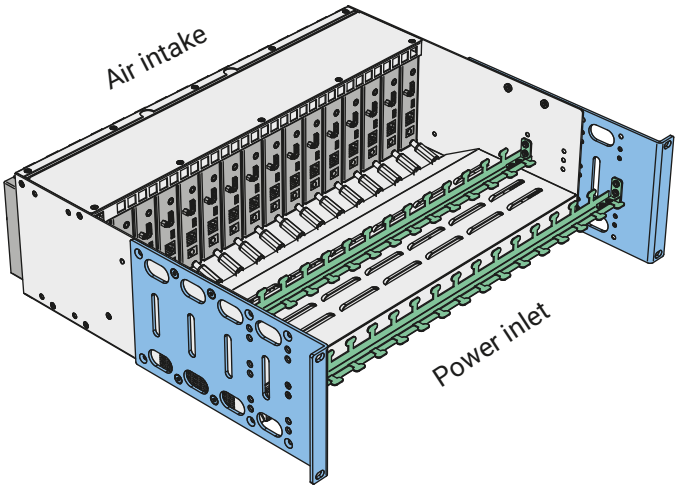


Figure 3 - Rear Installation

INFO: It is recommended if you have a deep rack and all cabling has to be accessed from the front.

The rack ears (highlighted with blue) are fixed to the rear side in the rearmost position. Two cable guides (highlighted with green) are fixed to the rear side of the device in the middle position.



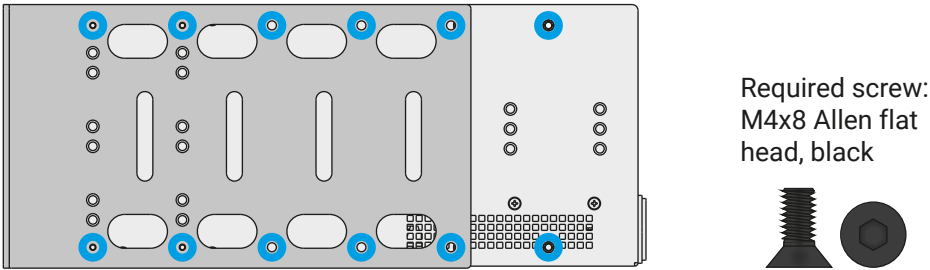
2.4. Transposition of the Rack Ears

The rack ears of the cage can be moved to various positions. One rack ear is built with 10 screw holes and the enclosure has 12 screw positions per side, which can provide several different positions of the device in the rack shelf - see examples in the [Mechanical Drawings](#) section.

The rack ears can be fixed on the front or the rear sides depending on the current usage of the extenders.

ATTENTION: Always fasten the rack ears with at least 4 screws per ear.

The screw holes of the enclosure (light grey) where the rack ears (dark grey) can be fixed are highlighted with blue on the side view figure below.

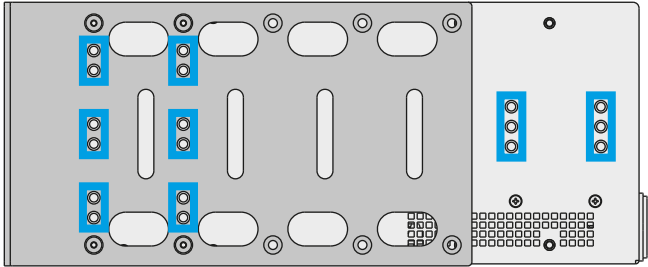


2.5. Transposition of the Cable Guides

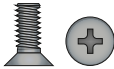
The cage is assembled with 2 cable guides that can be moved to various locations in the enclosure for the most comfortable usage. The cable guides can be fixed to the enclosure and the rack ears as well in 10 different positions.

WARNING! Always fasten the cable guide with at least 4 screws per guide.

The screw holes of the enclosure (light grey) and the rack ears (dark grey) where the cable guides can be fixed are highlighted with blue on the side view figure below.



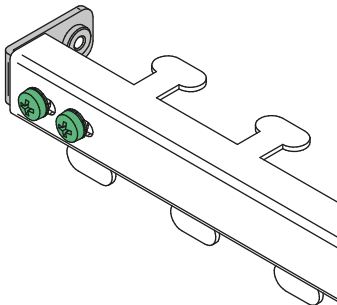
Required screw:
M3x6, PH flat
head, unpainted



2.6. Adjusting the Length of the Cable Guide

The distances between the sides of the enclosure and the two rack ears are different. The length of the cable guide can be adjusted using the following method:

- Step 1.** Loosen (do not screw off) the two screws on the bottom of the cable guide (highlighted with green) with a **PH1 screwdriver**.
- Step 2.** Set up the length by moving the fastening part (highlighted with grey) to the left or right.
- Step 3.** Fasten both screws.



WARNING! Always use the unpainted M3x6 screws for fastening the cable guides to the enclosure or the rack ears.

2.7. Status LED

There is a status LED located at the front side of the PRC:



The LED shows the following states:

STATUS		
	on (green)	Device is powered on and operational.
	on (red)	The power supply load is close to the allowed maximum value. It is highly recommended to decrease the load on the PSU.

3

Appendix

Tables, drawings, guides, and technical details as follows:

▸ Specifications	12
▸ Mechanical Drawings	13
▸ Temperature Sensor	14
▸ Ventilation	14
▸ Further Document Information	15
▸ Limited Warranty Statement	15

3.1. Specifications

INFO: Specifications are subject to change without notice.

General

Compliance	CE, UKCA
EMC (Emission)	EN 55032:2015+A1:2020
EMC (Immunity)	EN 55035:2017+A11:2020
Safety	EN 62368-1:2020
RoHS	EN 63000:2018
Warranty	3 years
Operating temperature	0 to +50°C (+32 to +122°F)
Operating humidity	10% to 90%, non-condensing
Cooling	Blowers (8x)
Protection against	Short circuit / Overload

Enclosure

Rack mountable	Yes, 3U high
Material	1.5 mm steel
Mounting slots	16
Dimensions with rack ears (mm)	482.6W x 319D x 132.5H
Dimensions with rack ears (inch)	19W x 12.5D x 5.2H
Dimensions with maximum depth (mm)	482.6W x 454D x 132.5H
Dimensions with maximum depth (inch)	19W x 17.9D x 5.2H
Dimensions of the rack ear (mm)	20.3W x 235D x 132.5H
Dimensions of the rack ear (inch)	0.8W x 9.2D x 5.2H
Net weight	7.8 kg / 17.2 lbs
Weight with loaded 16 extenders	13.8 kg / 30.4 lbs

Power

Power supply	Internal
Power source	100-240 V AC 50/60 Hz
Nominal power consumption - PRC-16-205	200 W
Nominal power consumption - PRC-16-312	320 W

5V DC Power Plugs - PRC-16-205

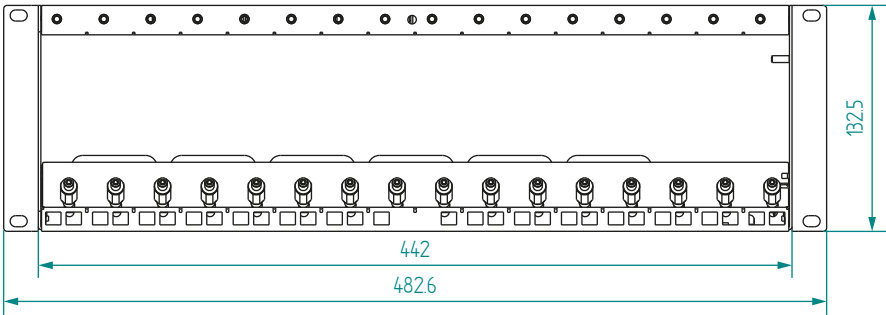
Plug type	5V DC plug
DC output voltage	5 V
Rated current per output port	2.5 A
Total DC output	40 A

12V DC Power Plugs - PRC-16-312

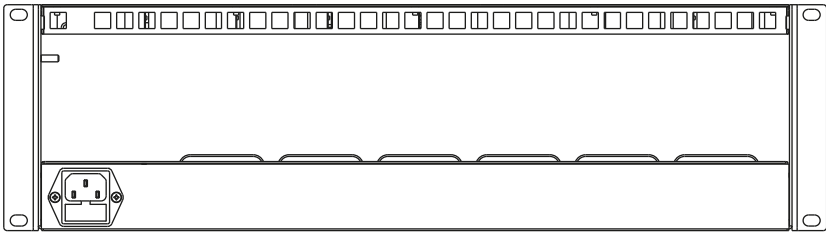
Plug type	12V DC plug
DC output voltage	12 V
Rated current per output port	2.5 A
Total DC output	26 A

3.2. Mechanical Drawings

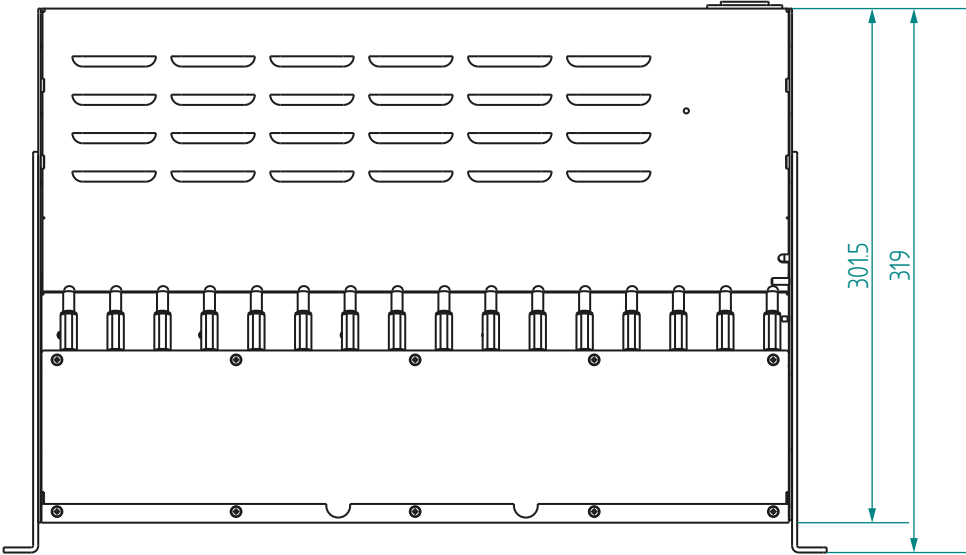
Front view



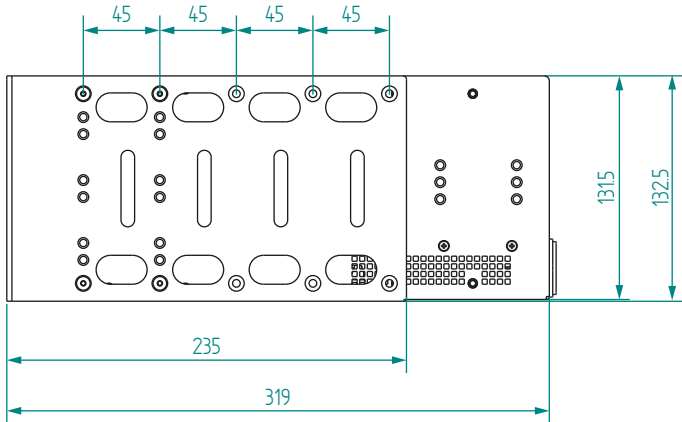
Rear view



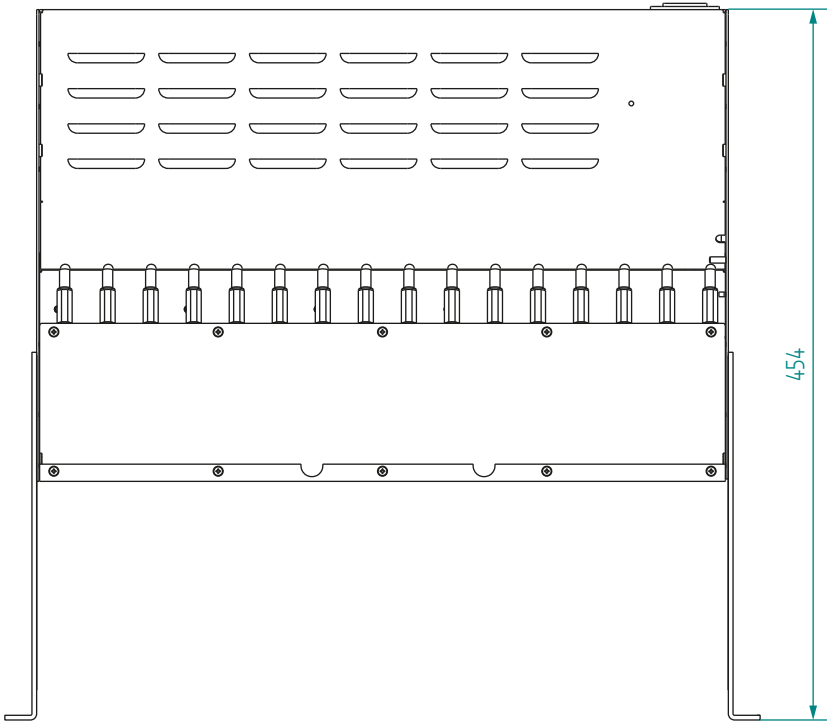
Top View with Minimum Depth



Side view

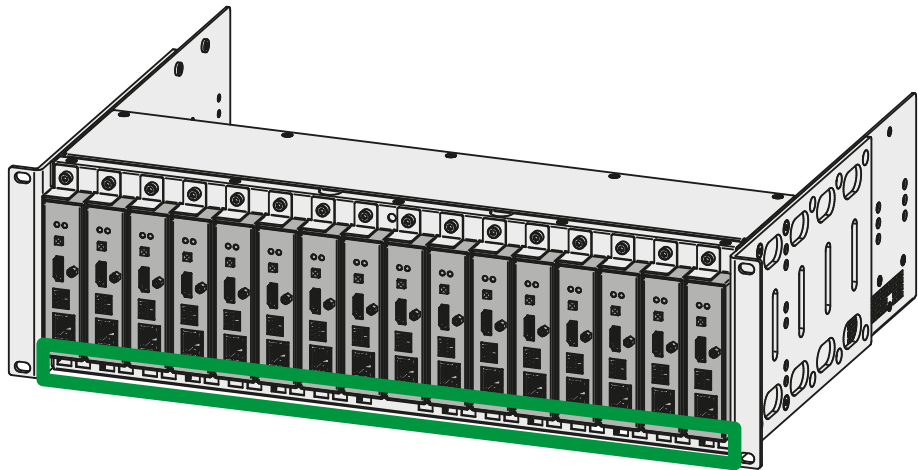


Top View with Maximum Depth



3.3. Temperature Sensor

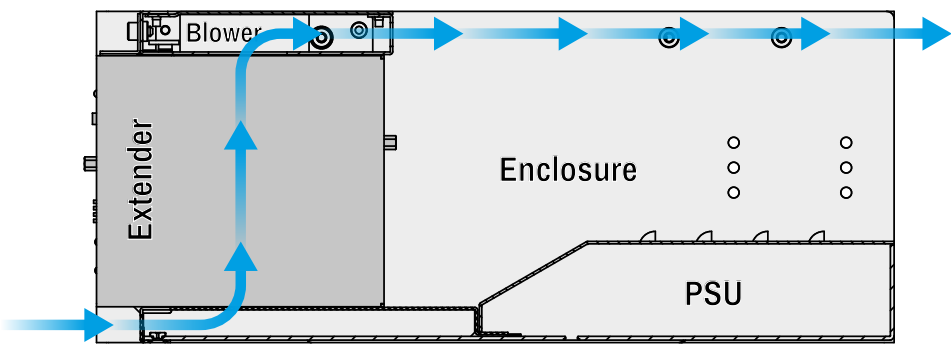
The device contains a built-in temperature sensor (highlighted with **green**), which continuously controls the blowers based on the outer temperature.



WARNING! To ensure the correct device temperature control, do not cover the front panel.

3.4. Ventilation

To ensure the correct ventilation and avoid overheating, provide enough free space around the ventilation holes. The following cross-sectional view of the device shows the direction of the airflow (blue arrows).



3.5. Further Document Information

Symbol Legend

The following symbols and markings are used in the document:

- WARNING! Safety-related information that is highly recommended to read and keep in every case!**
- ATTENTION:** Useful information for performing a successful procedure; it is recommended to read.
- DIFFERENCE:** Feature or function that is available with a specific firmware/hardware version or product variant.
- INFO:** A notice, which contains additional information. Procedure can be successful without reading it.
- DEFINITION:** The short description of a feature or a function.
- TIPS AND TRICKS:** Ideas that you may have not known yet, but can be useful.

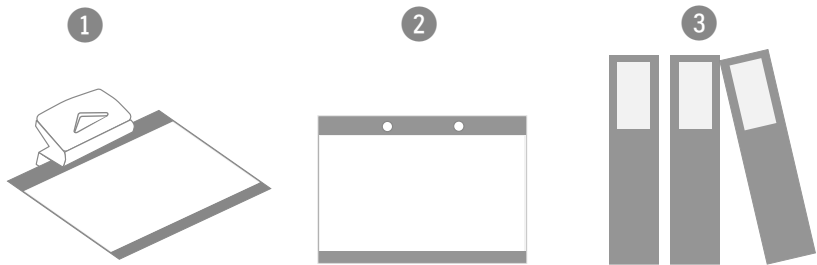
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3.6. Limited Warranty Statement

- Lightware Visual Engineering PLC (Lightware) warrants to all trade and end user customers that any Lightware product purchased will be free from manufacturing defects in both material and workmanship for three (3) years from purchase unless stated otherwise below. The warranty period will begin on the latest possible date where proof of purchase/delivery can be provided by the customer. In the event that no proof can be provided (empty 'Date of purchase' field or a copy of invoice), the warranty period will begin from the point of delivery from Lightware.
 - 25G and MODEX product series will be subject to a seven (7) year warranty period under the same terms as outlined in this document.
 - If during the first three (3) months of purchase, the customer is unhappy with any aspect of a Lightware product, Lightware will accept a return for full credit.
 - Any product that fails in the first six (6) months of the warranty period will automatically be eligible for replacement and advanced replacement where available. Any replacements provided will be warranted for the remainder of the original unit's warranty period.
 - Product failures from six (6) months to the end of the warranty period will either be repaired or replaced at the discretion of Lightware. If Lightware chooses to replace the product, then the replacement will be warranted for the remainder of the original unit's warranty period.
- The above-stated warranty and procedures will not apply to any product that has been:
 - Modified, repaired or altered by anyone other than a certified Lightware engineer unless expressly agreed beforehand.
 - Used in any application other than that for which it was intended.
 - Subjected to any mechanical or electrical abuse or accidental damage.
 - Any costs incurred for repair/replacement of goods that fall into the categories above (2.1., 2.2., 2.3.) will be borne by the customer at a pre-agreed figure.
- All products to be returned to Lightware require a return material authorization number (RMA) prior to shipment, and this number must be clearly marked on the box. If an RMA number is not obtained or is not clearly marked on the box, Lightware will refuse the shipment.
 - The customer will be responsible for in-bound, and Lightware will be responsible for out-bound shipping costs.
 - Newly repaired or replaced products will be warranted to the end of the originally purchased product's warranty period.