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# U 100 SNT eco+

Power supply for U 100 base units



## Operating Manual

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## Before starting operation of the device

**HINWEIS:** Read this operating manual attentively! It contains important information about installation, ambient conditions and maintenance of the device. Keep this operating manual for future use and for handover in the event of a change of owner. A PDF version of this manual is available to download on the ASTRO website (there may be a more recent version).

The ASTRO company confirms that the information in this manual was correct at the time of printing, but it reserves the right to make changes, without prior notice, to the specifications, the operation of the device and the operating manual.

## Symbols and conventions used

### Symbols used in these instructions

Pictograms are visual symbols with specific meanings. You will encounter the following pictograms in this installation and operating manual:

Warning about situations in which electrical voltage and non-observance of the instructions in this manual pose a risk of fatal injuries.



Warning about various dangers to health, the environment and material.



Warning about thermal dangers (risk of burns).



Recycling symbol: indicates components or packaging materials which can be recycled (cardboard, inserts, plastic film and bags). Used batteries must be disposed of at approved recycling points. Batteries must be completely discharged before being disposed of.



This symbol indicates components which must not be disposed of with household rubbish.



### Copyright information

Parts of the software used with this product originate from third-party vendors and were developed under a variety of licensing conditions. Detailed information on the licences can be found on the device's web user interface. If you select the menu item "Licensing" on the web browser interface of the device, you will find a link to a page with detailed information.

You can obtain the source code for licence-free parts of the software upon request and against payment of a processing fee.

Please contact us at:

[kontakt@astro-strobel.de](mailto:kontakt@astro-strobel.de)

ASTRO Bit Kommunikationssysteme

Olefant 1-3

D-51427 Bergisch Gladbach (Germany)

Tel.: (+49) 2204 405-0

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## Proper use

The U 100 SNT eco+ can only be used for power supply of modules of the U 100 series. Modification of the devices or use for any other purpose is not permitted, and will immediately void any guarantee provided by the manufacturer.

## Target group of this manual

### Installation and starting operation

The target group for installation and starting operation of the ASTRO headend technology are qualified experts who have training enabling them to perform the work required in accordance with EN 60728-11 and EN 60065. Unqualified person are not allowed to install and start operation of the device.

### Device configuration

Target group for the configuration of the ASTRO headend are persons who have received instructions and have training enabling them to perform a configuration. Knowledge of EN 60728-11 and EN 60065 is not necessary for configuration.

## Device description

The delivery consists of the following parts:

- ☐ U 100 SNT eco+ power supply unit
- ☐ Operating manual

- [1] Fan
- [2] Backside with contact pins

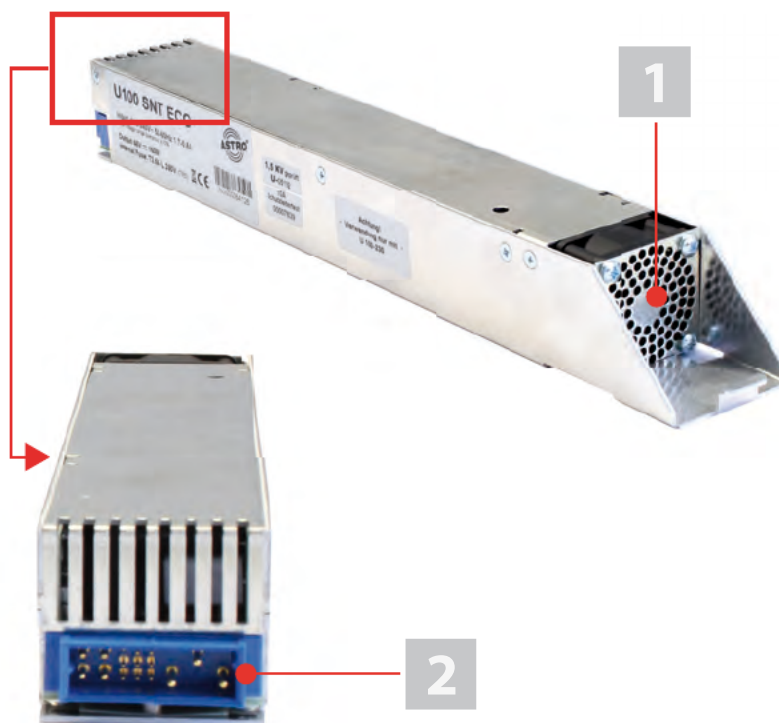


Figure 1: U 100 SNT eco+ power supply unit

The U 100 SNT eco+ features a CE marking. This confirms that the products conform to the relevant EC directives and adheres to the requirements specified therein.





## Important safety information

To avoid any potential risks to the greatest extent possible, you must adhere to the following safety information:

**ACHTUNG:** *Failure to observe this safety information may result in personal injury due to electrical and thermal dangers!*

### Proper use

- ☐ Only use the device at the approved operating sites and in the ambient conditions allowed (as described in the following), and only for the purpose described in the section "Proper use".

### Before starting operation of the device

**HINWEIS:** *Read this operating manual attentively! It contains important information about installation, ambient conditions and maintenance of the device. Keep this operating manual for future use and for handover in the event of a change of owner or operator. A PDF version of this manual is available to download on the ASTRO website (there may be a more recent version).*

- ☐ Check the packaging and the device for transport damage immediately. Do not start operation of a device that has been damaged.
- ☐ Transporting the device by the power cable may damage the mains cable or the strain relief, and is therefore not permitted.

### Installation and operation

- ☐ The device may only be installed and operated by qualified persons (in accordance with EN 60065) or by persons who have been instructed by qualified persons. Maintenance work may only be carried out by qualified service personnel.
- ☐ The installation site must be planned in a way that prevents children from playing with the device and its connections.
- ☐ For operating the U 100-230 with the U 100 SNT eco+ (protection class I) connection to wall outlets with protective conductor terminal is mandatory.
- ☐ In order to prevent inadmissible operating statuses from occurring, only the components described in this manual, or components approved by the manufacturer for the base unit, may be used.
- ☐ The electrical connection conditions must correspond to the specifications on the device type plate.
- ☐ The ambient temperature limit is 0...45 °C (ETS 300 019-1-3 Class 3.1).
- ☐ The base unit is primarily designed for operation in metallically conductive 19" racks with sufficient air convection. It must be operated aside from radiated heat and other heat sources
- ☐ To avoid trapped heat, ensure there is good ventilation on all sides (minimum interval of 20 cm to other objects). Installing the device in a niche or covering the ventilation openings is not permitted.
- ☐ No objects may be placed on the device.
- ☐ The device does not feature protection against water and may therefore only be operated and connected in dry rooms. It must not be exposed to splash water or drip water, condensation or similar effects of water, as this may impair the isolation from the mains voltage.
- ☐ The ambient temperatures specified in the technical data for the base unit must be complied with, even when climatic conditions change (e.g. due to sunlight). If the device overheats, the insulation used to isolate the mains voltage may be damaged.
- ☐ Do not install the unit in locations with excessive dust formation, as this may impair the isolation from the mains voltage.
- ☐ The device and its cables must only be operated asied from radiated heat and other heat sources.
- ☐ The subscriber network must be earthed in accordance with EN 60728-11, and must remain earthed even when the device is removed. Furthermore, the earth connection on the device can be used. Devices within hand's reach must be integrated into the potential equalisation together. Operating the device without an earth conductor, without earthing the device or without using device potential equalisation is not permitted.





- ☐ All adhere to all applicable national safety regulations and standards.
- ☐ Both mains plugs of the U 100-230 base unit are used as a mains voltage disconnect unit in the event of servicing and in the event of danger, and must therefore be accessible and be able to be operated at any time. The device is operational as soon as one mains plug is connected to the mains voltage. If both power supply units of the base unit are in operation, the base unit is supplied by both units.
- ☐ Excess mechanical loads (e.g. falling, impacts, vibrations) may damage the insulation used to provide protection from mains voltage.
- ☐ High excess currents (lightning strike, surges in the power utility grid) may damage the insulation used to provide protection from mains voltage.
- ☐ If there is no information about intended use (e.g. operating site, ambient conditions), or the operating manual does not include the corresponding information, then you must consult the manufacturer of this device to ensure that the device may be installed. If you do not receive any information on this from the manufacturer, do not start operating the device.

#### Electromagnetic compatibility (EMC)

In order to avoid malfunctions from occurring when operating radio and telecommunications equipment, as well as other operating units or broadcasting services, the following points must be observed:

- ☐ Before installation, the device must be checked for mechanical damage. Damaged or bent covers or housings may not be used.
- ☐ During operation, the device must always be covered by the components provided for this purpose. Operation with an opened cover is not permitted.

#### Maintenance

- ☐ Read carefully: EN 60728-11 – Part 1, Safety requirements / No service tasks during electrical storms!
- ☐ Even after disconnecting from the mains, dangerous contact voltages can still be present in the power supply unit for several minutes. You must therefore not open the device or the power supply units.

#### Repair

- ☐ Repairs may only be performed by the manufacturer. Improperly performed repairs may result in considerable dangers for the user.
- ☐ Do not start operating devices with a damaged power cable, and instead have them repaired by the manufacturer.
- ☐ If malfunctions occur, the device must be disconnected from the mains and authorised experts must be consulted. The device may need to be sent to the manufacturer.



### General information

- ☐ Store or use the device in a safe location, well out of reach of small children. It may contain small parts that can be swallowed or inhaled. Dispose of any small parts that are not needed.
- ☐ Plastic bags may have been used for packaging the device. Keep these plastic bags away from babies and children in order to avoid any danger of suffocation. Plastic bags are not toys.
- ☐ Do not store the device near chemicals or in places in which a leakage of chemicals may occur. Organic solvents or fluids in particular may cause the housing and/or cables to melt or disintegrate, presenting a danger of fire or electric shock. They may also cause device malfunctions.
- ☐ Do not connect the mains adapter provided to any other products.

## Warranty conditions

The general terms and conditions of ASTRO Bit GmbH apply. You will find these in the current catalogue or on the Internet under "www.astro-kom.de".

## Disposal

All of our packaging material (cardboard boxes, inserts, plastic film and bags) is completely recyclable. Electronic devices must not be disposed of with household waste, but rather – according to DIRECTIVE 2002/96/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL from 27 January 2003, on waste electrical and electronic equipment – must be properly disposed of. When it is no longer of use, please bring the device for disposal to one of the public collection points for this purpose.

ASTRO Bit is a member of the Elektro system solution for the disposal of packaging materials. Our contract number is 80395.

## Performance description

The U 100 series serves the task to convert IP data streams into CATV signals. The U 100 SNT eco+ power supply unit is a plugin module for U 100-230 base units and may only be used for power supply of these base units.





## Connecting and installing the power supply unit

Observe the instructions on installation and connection described in the section "Important!"

### Plugging the power supply into the base unit

Before plugging a U 100 SNT power supply into a U 100-230 base unit, you must first remove the front cover of the power supply compartment (see position [1] in the figure below). To do so loosen the screws at the front cover and put the cover off.

You can plug up to two U100 SNT power supplies into the base unit. Pull the power supply into one of the two slots (position [2] or [3]) as can be see in the figure below. When the strap at the front side of the U 100 SNT is flush to the front end of the base unit's housing the contact pins at the U 100 SNT's backside and the jack inside the base unit are connected.

After plugging the power supply unit you must screw the front cover on to the base unit's housing again..

- [1] Front cover of the power supply compartment
- [2] Power supply slot 1
- [3] Power supply slot 2

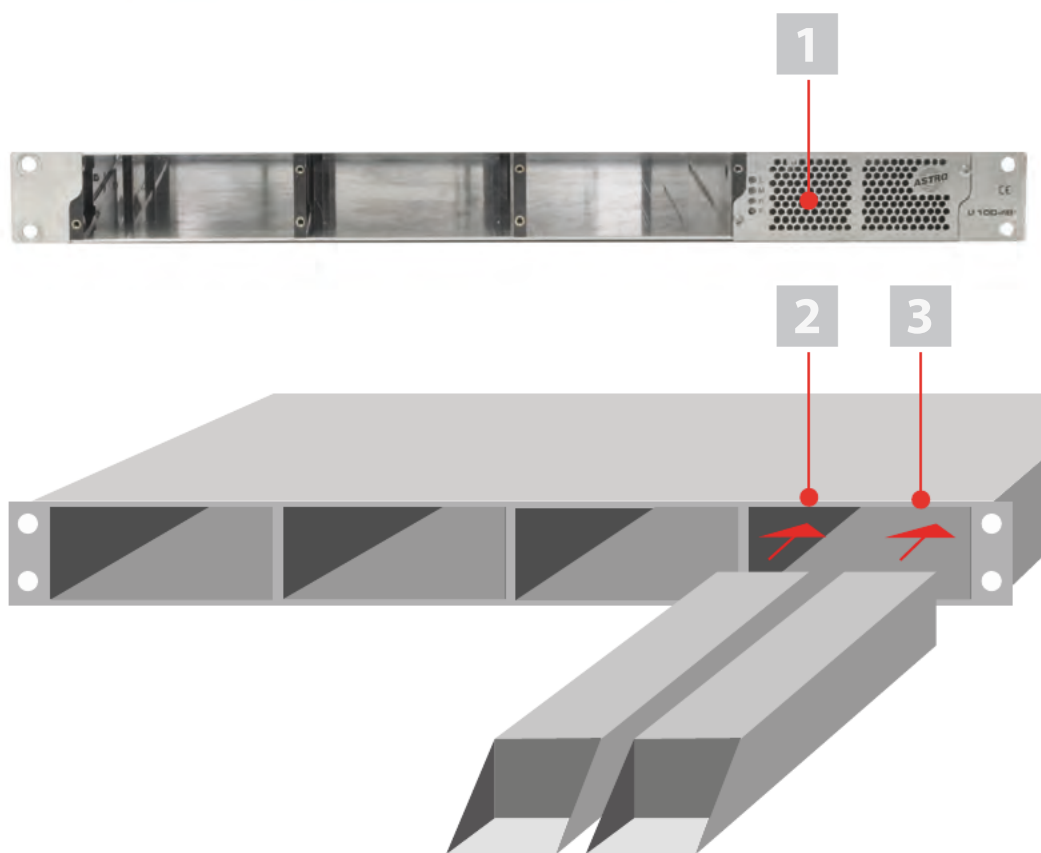


Figure 2: Plugging the power supply into the base unit

## Troubleshooting

If the device is not functioning correctly, please perform the following checks:

- ☐ Check whether the device is connected to the required grid voltage (230 V~, 50 Hz for the U 100 base unit, and 48 V for the U 100-48 base unit).
- ☐ Check whether the signal cable is connected correctly, and that there are no breaks or short circuits in the connectors.

If the problem cannot be resolved, please contact the ASTRO customer service.

## Maintenance and repair

**ACHTUNG:** *The following safety information must be observed when performing maintenance and repair work. Failure to observe this safety information may result in personal injury due to electrical and thermal dangers!*

- ☐ The cover for the power supply unit is designed to prevent accidental contact with voltages that are dangerous to touch, and must not be removed.
- ☐ Housing components near the cooling fins at the rear, or actual the cooling fins, may become very hot.
- ☐ Read carefully: EN 60728 - Part 1 Safety requirements: No service work during thunderstorms.
- ☐ A defective device may only be repaired by the manufacturer to ensure that components with the original specification are used (e.g. power cable, fuse). Improperly performed repairs may result in considerable dangers for the user or installer. If malfunctions occur, the device must therefore be disconnected from the mains and authorised experts must be consulted. The device may need to be sent to the manufacturer.

## Service tasks

The following tasks, which involve the removal of screw connections, can be performed by appropriately instructed service personnel: Removal and installation of signal converters and power supply units, even when the U 100 is operating.

### Replacing power supply units

After removing the screws from the cover of the power supply chamber (ASTRO logo), the power supply unit can be pulled forwards by hand using the mounting tab. When installing power supply units, do not touch the fan or fan grille and only use the mounting tab affixed to the power supply unit. When the tasks are complete, the cover of the power unit chamber must be replaced. Continuous operation of the device is not permitted without this cover.

**ACHTUNG:** *Do not put your hand or any objects into the power unit chamber!*

**HINWEIS:** *The U 100-230 base unit must only be operated with the original power unit(s)!*

### Replacing converter modules

Converter modules can be pulled out to the front after removing the safety screw in the front covers (see section "Connecting and installing the module")



# Technical Data

Type		U 100 SNT eco+
Order number		380 130
EAN-Code		4026187195069
Common data		
Mains voltage	[V]	100 - 240 AC
Mains frequency	[Hz]	50 - 60
Mains voltage tolerance		± 10 %
Switching impulse	[A]	< 5
Power input at full load		Ps typ. 182 VA (@ 110 V); 180 VA (@ 230 V) Pw typ. 178 W (@ 110 V); 174 W (@ 230 V)
Output voltage	[V]	balanced to 48,25 at 0,5 A load (adjustable from ca. 45 - 53 via trimmer)
Output current	[A]	0 - 3,33 A
Overload switch off at		3,5 - 4,9 A (HICCUP)
Overall degree of efficiency		94 % at 230 V supply and 3,3 A load at 48 V



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These operating instructions have been written by:

ASTRO Bit Kommunikationssysteme GmbH

Olefant 3, D-51427 Bergisch Gladbach (Bensberg) Germany

Phone: +49 2204/405-0, Fax: 02204/405-10

eMail: [kontakt@astro-kom.de](mailto:kontakt@astro-kom.de)

Internet: [www.astro-kom.de](http://www.astro-kom.de)

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