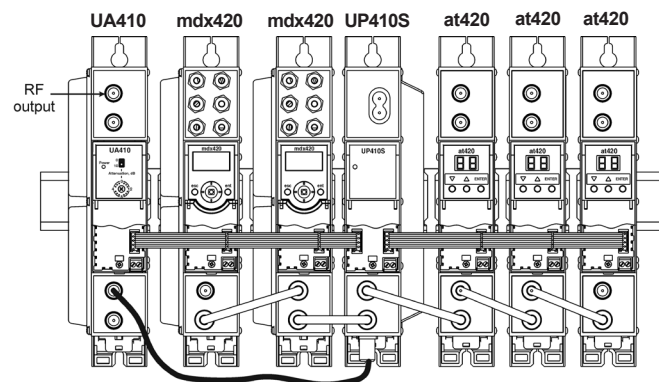


## Installation example



UA410 - output amplifier  
 mdx420 - DVB-T modulator  
 at420 - TV channel amplifier

## Power supply UP410S

### Product description

Switch mode power supply unit (PSU) UP410S is intended to supply modular system. UP410S has integrated 2 inputs RF combiner to combine RF signals from modules of modular system.

The PSU is intended for indoor use only.

### Safety instructions

Installation of system must be done according IEC60728-11 and national safety standards.

The PSU is powered from mains 230 V~. This voltage is dangerous to life.

Any repairs must be done by a qualified personnel.

PSU is double isolated from the mains 230 V~.

Do not remove the cover without disconnecting PSU from the mains.

Do not plug the PSU into the mains supply if the power cord or plug is damaged.

To disconnect the PSU from the mains completely, disconnect plug from the mains socket.

The mains socket must be easily accessible.

PSU shall not be exposed to dripping or splashing water and no objects filled with liquids, such as vases, shall be placed on it.

Avoid placing PSU next to central heating components and in areas of high humidity.

No naked flame sources, such as lighted candles, should be placed on PSU.

If the PSU has been kept in cold conditions for a long time, keep it in a warm room no less than 2 hours before plugging into the mains.

Do not insert any objects into ventilation openings.

The ventilation should not be impeded by covering the ventilation openings with items, such as newspapers, table-cloths, curtains.

Mount the PSU in vertical position.

From top, front and bottom of installed PSU must be at least 10 cm free space.

### External view

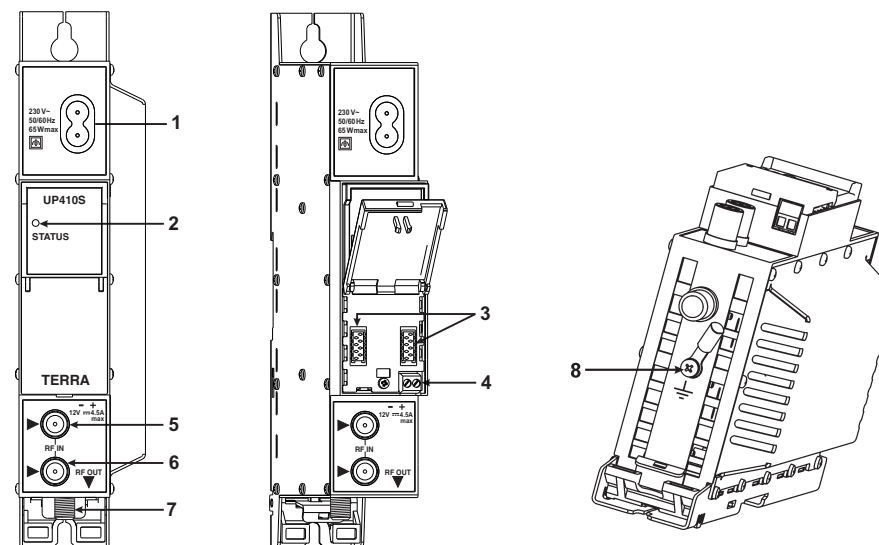


Figure 1. External view of the PSU

- 1 - mains connector
- 2 - status indicator (at normal conditions glows green, at overload glows red)
- 3 - power distribution bus connectors
- 4 - 12 V output (screw terminal)
- 5 - RF input 1
- 6 - RF input 2
- 7 - RF output
- 8 - functional grounding clamp



Caution!



This product complies with the relevant clauses of the European Directive 2002/96/EC. The unit must be recycled or discarded according to applicable local and national regulations.



Equipment is double insulated from the mains, with functional earthing.



Functional earthing. Crimp Cu wire cross section (1.5-2.5) mm<sup>2</sup> and connect to main potential equalization.



Equipment intended for indoor usage only.



TERRA confirms, that this product is in accordance to following norms of EU: EMC norm EN50083-2, safety norm EN60065 and RoHS norm EN50581.



TERRA confirms, that this product is in accordance with Custom Union Technical Regulations: "Electromagnetic compatibility of technical equipment" CU TR 020/2011, "On safety of low-voltage equipment" CU TR 004/2011.



TERRA confirms, that this product is in accordance with safety standard AS/NZS 60065 and EMC standards of Australia.

## Installation

Read the safety instruction first.

Installation of system according standard IEC60728-11 ensures safety of personnel and prevents apparatus against damaging due to lightning or other sources of overvoltage surges.

Recommended to install PSU between modules in center using gap formers one from left side and two from right side of PSU, as shown in Figure 5.

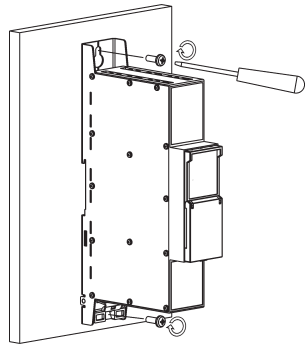
## Warning!

1. Connecting or disconnecting powering of modules must be done when PSU is disconnected from the mains.
2. Do not exceed maximum ambient temperature and maximum output current values of PSU.

## MOUNTING

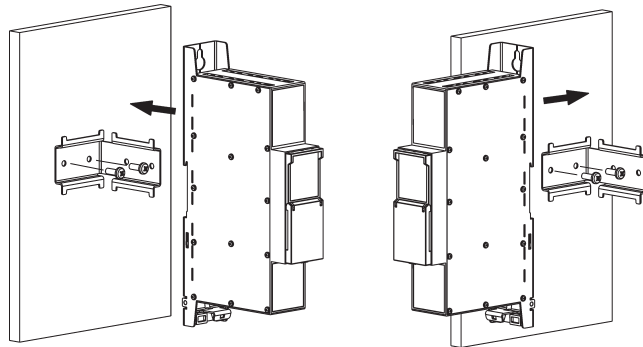
The module or mounting bracket must be fixed with steel screws  $\varnothing$  3.5-4 mm. The screws are not included in a package.

### Mounting on a wall by screws



Perpendicular to the wall

### Mounting on a bracket (supplied)



Parallel to the wall

Figure 2. Mounting of the PSU

## Technical characteristics

Supply voltage limit values	187-250 V~ 50/60 Hz	
Output voltage	12 V $\pm$ 0.5 V	
Power consumption	65 W max.	
Output current	---0-4.5 A short circuit protected	
Ripple, 100 Hz	< 10 mVpp	
Noise	< 50 mVpp	
Frequency range of RF combiner	47 MHz - 2.4 GHz	
Insertion loss	47-1000 MHz	$\leq$ 4.5 dB
	1 GHz-2.4 GHz	$\leq$ 6 dB
Isolation	47-1500 MHz	$\geq$ 20 dB
	1500-2400 MHz	$\geq$ 15 dB
Return loss	$\geq$ 15 dB	
Temperature range	-20...50°C	
Dimensions/Weight (packed)	198x107.5x36 mm/0.97 kg	

## Mounting on a DIN rail

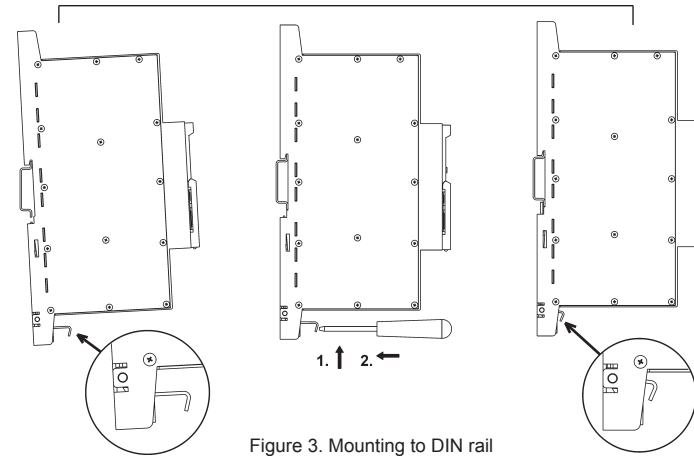


Figure 3. Mounting to DIN rail

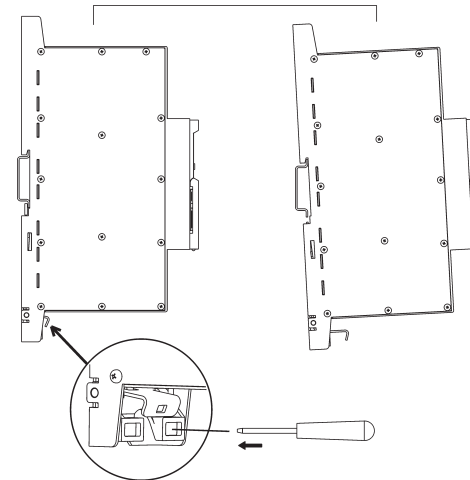


Figure 4. Mounting from DIN rail

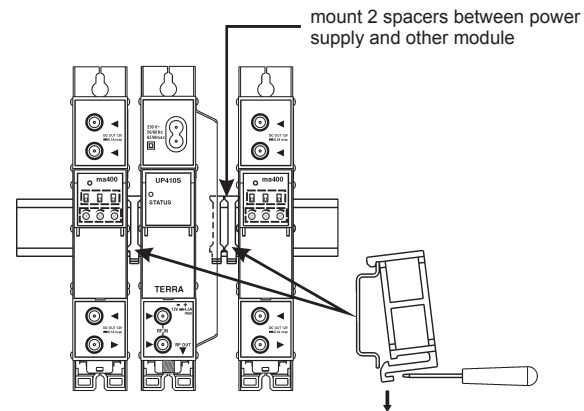


Figure 5. Mounting or removing to/from DIN rail of plastic spacers (supplied).