



**AWZ 523**

v.2.1

**AWZ 24VAC/0,4A/M**

**PSU module for CCTV.**

EN\*

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## Features:

- output voltage 24VAC/0,4A
- power supply 230VAC
- thermostat-operated heater
- mounting in a CCTV camera enclosure
- LED indication
- protections:
  - SCP short-circuit protection
  - OLP overload protection
  - surge protection
- warranty – 5 year from the production date

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## 1. Technical description.

### 1.1. General description

The AC/AC **AWZ523** PSU module is intended for supplying devices that require voltage of **24V AC**. The module is designed as a supplying component in CCTV systems. It is intended for camcorders mounted in external enclosures, series: GL606, THxx, TSHxx and others that fit the A-A mounting holes and the dimensions.

The module has two outputs to deliver voltages:



**24VAC/0,4A for supplying the CCTV camera**

**24VAC/0,4A max. for supplying the enclosure's heater**

(the heater's circuit is automatically switched on by a bi-metallic thermostat: ton=15°C, toff=25°C (+/- 4°C).

### 1.2. Block diagram (fig.1).

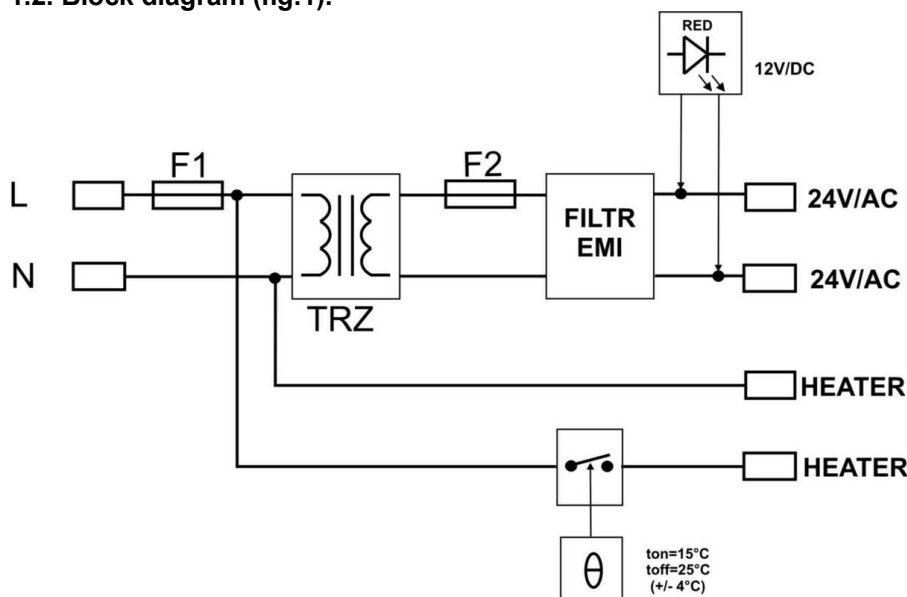


Fig.1. Block diagram of the PSU module.

### 1.3 Description of components and connectors

Table 1. The components of the PSU module (see fig. 2).

Element no.	Description
[1]	F1 fuse in the primal circuit of the transformer and the enclosure's heater
[2]	230V /AC L-N 230V/AC power output
[3]	HEATER 230V/AC N-H power output of the transformer's heater, the supply voltage depends on the mains supply, temperature of switching on/off the thermostat: ton=15°C, toff=25°C (+/- 4°C)
[4]	Temperature detector - bi-metallic
[5]	Transformer: TRZ
[6]	LED 24V/AC LED indication – of 12V/DC output
[7]	24V/AC AC power camera output
[8]	F2 fuse in the DC circuit

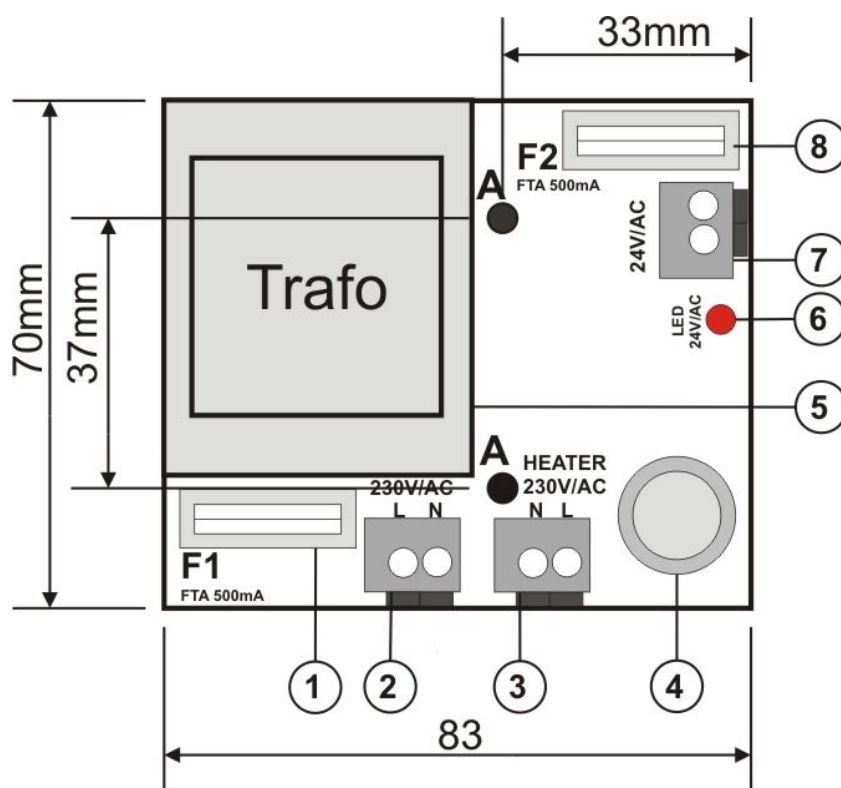


Fig. 2. The view of the PSU module

#### 1.4. Specifications:

- electrical specifications (tab.3)
- mechanical specifications (tab.4)
- operating specifications (tab.5)

#### Electrical specifications (tab. 3).

Supply voltage	230V/AC (-15%/+10%)
Current consumption	0,07A max.
Power frequency	50Hz
PSU module's power	10VA max.
Output voltage	24V-29V/AC (-15%/+10%)
Output current	0,4A
Short-circuit protection SCP	24V/AC: T 500mA fuse, damage requires fuse-element replacement

	<b>HEATER:</b> T 500mA fuse, damage requires fuse-element replacement
Overload protection OLP	<b>24V/AC:</b> T 500mA fuse, damage requires fuse-element replacement <b>HEATER:</b> T 500mA fuse, damage requires fuse-element replacement
Heater's circuit specifications:	
-mains supply	230V/AC (-15%/+10%)
-output current	0,4A max.
- on/off temperature of the HEATER output (thermostat)	ton=15°C, toff=25°C (+/- 4°C)
F1 fuse	T 500mA/250V
F2 fuse	T 500mA/250V

**Mechanical specifications (tab. 4).**

Pcb dimensions	70 x 83 x 42 (WxLxH)
Fixing	37 x 33 (W1xL1) mounting holes x 2
Net/gross weight	0,35kg/0,38kg
Connectors	Φ0,41÷1,63 (AWG 26-14)

**Operating specifications (tab.5).**

Operating temperature	-10°C...+40°C
Storage temperature	-20°C...+60°C
Relative humidity	20%...90%, without condensation
Vibrations during operation	unacceptable
Impulse waves during operation	unacceptable
Direct insolation	unacceptable
Vibrations and impulse waves during transport	PN-83/T-42106

**2. Installation.****2.1 Requirements**

The PSU module is to be mounted by a qualified installer, holding relevant permits and licenses (applicable and required for a given country) for 230V/AC interference and low-voltage installations. The unit should be mounted in accordance with the 2nd environmental class, with normal relative humidity (RH=90% maximum, without condensation) and temperature from -10°C to +40°C.

Before mounting the PSU module, perform a load balance. During normal operation, total current drawn by the receivers cannot exceed the **maximum parameters**.

The module has two outputs and delivers voltages of:



**24VAC/0,4A for supplying the CCTV camera**  
**24VAC/0,4A max. for supplying the enclosure's heater**

As the PSU module is designed for a continuous operation and is not equipped with a power-switch, therefore an appropriate overload protection shall be guaranteed in the power supply circuit. Moreover, the user shall be informed about the method of unplugging (most frequently through separating and assigning an appropriate fuse in the fuse-box). The electrical system shall follow valid standards and regulations.

The PSU module should be installed in a metallic enclosure. In order to meet the LVD and EMC requirements, the rules concerning: supply, development and shielding ought to be followed- accordingly to the application.

### Typical application AWZ523 (fig.3).

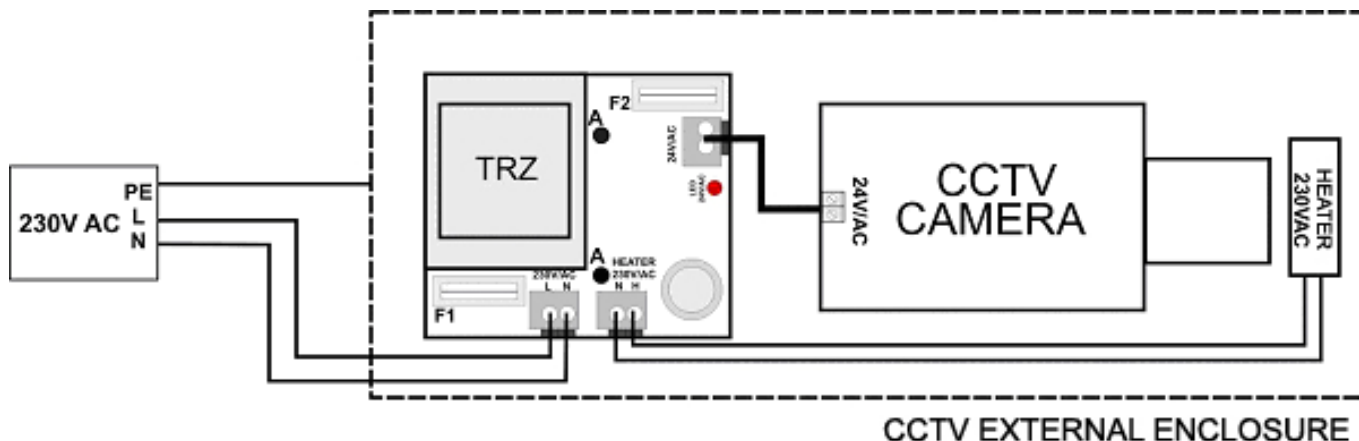


Fig.3. PSU module connection: 12VDC camcorder and 230VAC heater in an external enclosure.

### 2.2 Installation in a CCTV camera enclosure

1. Before installation, make sure that the voltage in the 230V power-supply circuit is cut off.
2. Dismantle the original thermostat and the terminal strip from inside the enclosure.
3. Mount the PSU module by screwing it with the original cheese head screws (bolts) through the mounting holes.
4. Connect the heater's cables to the **HEATER 230V/AC N-H terminals**.
5. Mount the camera's enclosure in the intended place and lay the connection and signal leads through the cable ducts.
6. Connect the power cables to the **230V/AC L-N terminals** of the PSU module. Electric shock protection conductor should be connected to the terminal marked with the 'PE' earth symbol on the camera's enclosure.



The shock protection circuit shall be performed with a particular care, i.e. the yellow and green wire coat of the power cable shall stick to one side of the terminal marked with the 'PE' earth symbol in the camera's enclosure. Operation of the camcorder without a properly made and fully operational shock protection circuit is **UNACCEPTABLE!** It can result in device damage or an electric shock.

7. Mount the CCTV camera (optionally with a lens) on the enclosure's mounting plate.
8. Connect the **24V/AC** output of the PSU module to the camera, using the intended wires.
9. Restore the main power supply and check (measure) the output voltages of the PSU module.
10. Check if the camera works properly, implement necessary adjustments.
11. Lock the camcorder's enclosure.

Notes:

Lock the enclosure cautiously not to damage the cables from the inside.

### 3. Operating status indication.

- **24V/AC**- red LED: indicates the AC supply status at the output of the PSU module. Under normal status, the diode is permanently illuminated. In case of a short circuit or overload the diode goes out.

### 4. Operation and use.

#### 4.1 Overload or short circuit

##### • 24V/AC outputs

In case of a short circuit or overload at the **24V/AC** output, the F2 fuse becomes damaged. Restoration of the output voltage requires replacement of the fuse.

##### HEATER outputs

In case of an overload or a short circuit at the **HEATER** output, the F2 fuse becomes permanently damaged. Restoration of the output voltage requires replacement of the fuse.

## 4.2 Maintenance

Any and all maintenance operations may be performed following the disconnection of the PSU module from the power supply network. The PSU module does not require performing any specific maintenance measures, however, in case of significant dust ingress, its interior is recommended to be cleaned with compressed air. In case of fuse replacement, use a replacement of the same parameters.

The PSU module does not require performing any specific maintenance measures, however, in case of dust, clean the surface with compressed air. In case of fuse replacement, use a replacement of the same parameters.



### WEEE MARK

According to the EU WEE Directive – It is required not to dispose of electric or electronic waste as unsorted municipal waste and to collect such WEEE separately.

### GENERAL WARRANTY CONDITIONS

1. Pulsar K. Bogusz Sp.j. (the manufacturer) grants a five-years warranty for the equipment, counted from the device's production date.
2. The warranty includes free-of-charge repair or replacement with an appropriate equivalent (the selection is at the manufacturer's discretion) if the malfunction is due to the manufacturer, includes manufacturing or material defects, unless such defects have been reported within the warranty period (item 1).
3. The equipment subject to warranty is to be brought to the place where it was purchased, or directly to the main office of the manufacturer.
4. The warranty applies to complete equipment, accompanied by a properly filled warranty claim with a description of the defect.
5. Should the claim be accepted, the manufacturer is obliged to provide warranty repairs, at the earliest convenience, however not later than within 14 days from the delivery to the service centre of the manufacturer.
6. The repair period mentioned in item 5 may be prolonged, if there are no technical possibilities to carry out the repairs, or if the equipment has been conditionally accepted, due to the breaking warranty terms by the claimant.
7. All the services rendered by force of the warranty are carried out at the service centre of the manufacturer, exclusively.
8. The warranty does not cover the defects of the equipment, resulting from:
  - reasons beyond the manufacturer's control,
  - mechanical damage,
  - improper storage and transport,
  - use that violates the operation manual or equipment's intended use
  - fortuitous events, including lightning discharges, power failures, fire, flood, high temperatures and chemical agents,
  - improper installation and configuration (in defiance with the manual),
9. The warranty is void in any of the following circumstances:
  - construction changes
  - repairs carried out by any unauthorized service center
  - damage or removal of warranty labels
  - modifications of the serial number
10. The liability of the manufacturer towards the buyer is limited to the value of the equipment, determined according to the wholesale prices suggested by the manufacturer on the day of purchase.
11. The manufacturer takes no responsibility for the defects that result from:
  - the damaging, malfunctioning or inability to operate the equipment
  - defects that result from using the equipment outside its stated specifications and operating parameters failing to abide by the recommendations and requirements contained in the manual, or the use of the equipment.

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