



Power supply system DSOP24V

for PAVIRO system by BOSCH



**MTP Gold Medal
Securex 2018**





System features

- Compliant with requirements of EN 54-4 and EN12101-10 standards and pt. 12.2 of Regulation of Minister of Interior and Administration of Republic of Poland of 20.06.2007
- CONFIDSO is a program for designers that has been designed with BOSCH to support DSO configuration
- Calibration of batteries using installer interface
- Internal memory of last 30 events is available via LED display
- LED optical indication:
 - Output voltage readings
 - Readings of output current during battery operation
 - Resistance of battery circuit readings
 - Failure codes with history
- Ethernet communication:
 - Built-in powerful web server
 - Online remote monitoring of operating parameters for a period of around 100 days: voltage, current, and resistance in battery circuit
 - Event log of up to 32768 power system failures
 - Automatic email notifications about power failures
 - SSL email encryption
 - Remote battery test
 - Battery operating temperature readings from period up to 5 years
 - Communication using MODBUS protocol – a list of registers is available
 - A real-time clock (RTC) with battery backup
 - RTC synchronization with external NTP server
- PSG3LA LED panel for optical and acoustic indication compliant with PN-EN54-16 standard for evaluating DSO system operation
- LZxxxx safety strip with overcurrent fuses, surge arresters and a dummy connector
- Single-phase or 3-phase power supply
- 230VAC LDxxxx voltage distribution terminal
- Grounding terminals
- Full wiring of housing adjusted individually for each configuration
- Dimensions of RACK cabinets: 24U (600×600), 42U (600×600, 600×800), 45U (600×600, 600×800), and 50U (600×800)
- Protection Class: IP30
- Batteries included
- Mounting bracket for batteries
- Mounting shelves for sound system equipment (controller, routers, amplifiers)
- Support for up to 2 strings of batteries
- 27,6VDC Uninterruptible Power Supply
- High efficiency (up to 90%)
- 320W-1000W power supply units of PS24DSOxxxx series
- Independently protected outputs for OUT1...9 amplifiers
- Three independently protected power supply outputs for ROUTER1...6 router outputs
- Fuse status control
- LED indication of fuse failure for all outputs
- Microprocessor-based automation system
- Measurement of resistance of battery circuit
- Automatic temperature compensation of battery charging
- Battery test
- Two-phase battery charging
- Accelerated battery charging function
- Battery electrical continuity control
- Battery voltage control
- Battery fuse status control
- Battery charge and maintenance control
- Under-voltage protection (UVP)
- Battery overload protection
- Battery output protection against short-circuit
- Battery discharge current control
- Output voltage control
- Acoustic indication of failure
- Adjustable indication time of 230VAC power failure indication
- ALARM – technical output of collective failure
- Technical input of collective failure EXTi
- Technical outputs – relay type
- EPS – technical output of 230VAC power failure indication
- PSU – technical output of power supply failure indication
- APS technical output of battery failure indication
- Protection types:
 - SCP short-circuit protection
 - OLP overload protection
 - OHP overheat protection
 - Surge protection
- Shelf for firefighter's microphone – optional accessory
- DSOS24V firefighter's microphone power supply unit compliant with EN 54-4 and EN12101-10 standards, and article 12.2 of Regulation of Minister of Interior and Administration of Republic of Poland of 20.06.2007 – optional accessory
- Enclosure of DSOS24V-PU firefighter's microphone – available as an option
- AWO506 End of Line (EOL) Supervision Board – available as an option
- Forced cooling – fan panel with a thermostat, optional accessory for 24U, standard for 42U, 45U, and 50U
- Warranty:
 - Power supply unit – 3 years from production date but not more than 42 months from date of manufacture
 - Batteries – 1 year from installation date

DSOP24V power supply system

DSOP24 power supply system is designed for uninterrupted supply of Voice Alarm Systems requiring stabilized voltage of 24VDC (-15%, +20%).



Design of Voice Alarm System

Design and all components of DSO are based on RACK 19" cabinet (Protection Class: IP30), containing all components of system. Depending on system and number of devices, height of cabinet is adjusted individually. Available dimensions are: 24U (600×600), 42U(600×600, 600×800), 45U (600×600, 600×800), 50U (600×800).



LZxxxx safety strip

Safety strip is fitted with circuit breakers, surge arresters, and maintenance socket. Main circuit breaker disconnects 230V/400V mains from all system devices. In addition, power supply circuit is fitted with circuit breaker allowing its disconnection, without disconnecting other devices of DSO, e.g. for maintenance purposes. In addition to main switch, it is fitted with „type 3" surge arresters compliant with EN 61643-11 standard.



230VAC LDxxxx voltage distribution terminal

Voltage distribution terminal is equipped with 230V connection sockets and it is used to supply components of DSO. Depending on number of devices and amount of power consumption, terminal can have 1-phase or 3-phase connection. 3-phase version enables more uniform load per phase of power grid. Terminal is placed in back of cabinet.



PSG3LA panel for optical and acoustic indication

Panel for optical and acoustic indication compliant with EN54-16 standard indicates status of entire DSO system. It is equipped with three LEDs, sounder and reset button of acoustic indication.



Fan unit with thermostat

for RACK cabinets: 42U / 45U / 50U – standard equipment
for RACK cabinets: 24U – available as option

DSO cabinet is equipped with ventilation panel located in upper part of cabinet to force air flow to devices emitting heat. Fans are controlled by a nearby bimetallic thermostat that allows setting activation temperature in range 0-60°C with adjustment knob. Fans are powered from 230V mains; in case of power loss, they are switched off.



Reserve supply circuit

Power supply is equipped with intelligent charging and battery control circuits that enable adequate maintenance and monitoring of their condition. System allows connection of 1 or 2 strings (circuits) of batteries, each with up to 230Ah, which allows for total capacity of 460Ah. Protection types of reserve supply circuit include:

- Battery Detection
- Battery output protection against short-circuit
- Deep discharge battery protection (UVP).
- Battery test – automatically every five minutes or forced
- Measurement of resistance of battery circuit
- Battery operating temperature readings
- Calibration of batteries



PS24DSOxxxx power supply unit (320W ÷ 1000W)

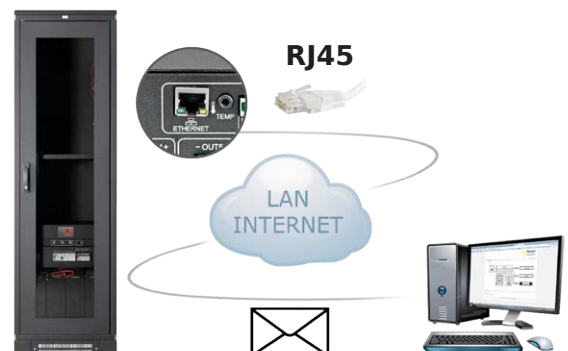
Power supply unit is based on high performance AC / DC inverter with integrated power factor correction PFC. Microprocessor system is responsible for complete diagnostics of parameters of PSU and batteries. In maximum configuration, power supply unit is equipped with independently protected outputs for:

- 9 amplifiers
- 6 routers
- 1 controller



Remote monitoring

Power supply is equipped with additional Ethernet module with 10Base-T/100Base-TX interface to connect to Internet. Such configuration enables remote monitoring of Voice Alarm System via Internet from anywhere. Ethernet module has built-in powerful web server that allows remote monitoring of current status of power supply in browser of any PC computer. In addition, email alert allows sending information about system status in case of certain events. Time periods between alerts and types of initiating events are individually configured by user.



Optional equipment

DSOS24V – Firefighter’s microphone power supply for Voice Alarm Systems 24V

DSOS24V is designed for uninterruptible power supply of call stations (firefighter’s microphone) used in DSO (Voice Alarm Systems) requiring stabilized voltage of 24VDC (-5%/+5%). In case of main power loss, PSU immediately switches to battery power. Power supply unit is placed in metal enclosure (color red RAL 3001) with space for 7Ah / 12V battery. Power supply unit uses maintenance – free, AGM or gel batteries (7Ah/12V).

Available as option
in CONFIG-DSO



PSU features

- Compliant with requirements of EN 54-4 and EN12101-10 standards and article 12.2 of Regulation of Minister of Interior and Administration of Republic of Poland from 20.06.2007
- Power supply for call station of DSO system, e.g. PVA-15CST and two PVA-20CSE extensions by BOSCH
- 24VDC uninterruptible power supply
- Single battery power supply (7Ah /12V)
- Wide range of supply voltage (176÷264VAC)
- Low ripple voltage
- Microprocessor-based automation system
- Measurement of resistance of battery circuit
- Automatic temperature compensation of battery charging
- Battery test
- Two-phase battery charging
- Accelerated battery charging
- Battery electrical continuity control
- Battery voltage control
- Battery fuse status control
- Battery charge and maintenance control

- Deep discharge battery protection (UVP)
- Battery overload protection
- Battery output protection against short-circuit and reverse polarity connection
- Output voltage control
- Acoustic indication of failure
- Technical inputs/outputs with galvanic isolation
- Technical outputs – relay type
- ALARM – technical output of collective failure
- EPS – technical output of 230VAC power failure indication
- PSU – technical output of power supply failure indication
- APS – technical output of battery failure indication
- LED Optical indication
- Protection types:
 - SCP short-circuit protection
 - OLP overload protection
- Convection cooling
- Warranty – 3 years from production date

DSOS24VPU – Enclosure for firefighter’s microphone for DSO (Voice Alarm System)

DSOS24VPU metal enclosure is designed for mounting PVA-15C ST call station of PAVIRO by BOSCH and up to two PVA-20CSE call station extensions.

Available as option
in CONFIG-DSO

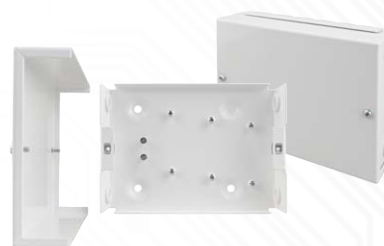


AWO506 – Enclosure for loudspeaker line supervision of DSO system Presideo, Paviro, and Plena by BOSCH

Enclosure is designed for mounting loudspeaker line supervision systems by Bosch used in Voice Alarm Systems. Design of enclosure allows mounting Praesideo, Plena, and Paviro systems by BOSCH.

Enclosure is fitted with four cable glands allowing connecting loudspeaker wires with maximum diameter of 10mm.

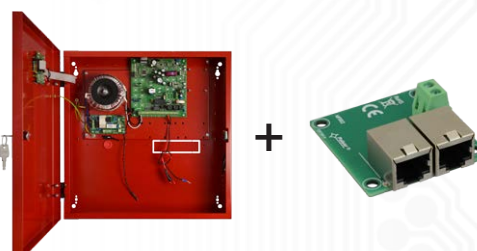
Available as option
in CONFIG-DSO



EN54-2A17 + AWZ627 – Power supply for fire alarm systems + power adapter of firefighter’s microphone

Power adapter for firefighter’s microphone and EN54-2A17 power supply unit are both designed to supply PVA-15CST call station of PAVIRO by BOSCH. This device should be used when call station is installed at a considerable distance from VAS power supply system, which may cause excessive voltage drops on power lines. Adapter allows EN54-2A17 power supply to be connected to MIC output used for connecting call station.

Available as option
in CONFIG-DSO



CONFI-DSO program for designers

Configure DSOP24 power supply system in few steps

1. Enter basic input data
2. Select desired PAVIRO systems by BOSCH
3. Select optional accessories
4. CONFI-DSO software will automatically select appropriate components of power system
5. Enter customer data
6. Completed configuration can be saved / printed / exported



①

Pulsar
www.pulsar.pl

Input data

Hold time [h] 24

Alarm time [h] 0.5

Extra space U in the cabinet 2

Rack depth 600

Power mode after power failure standby

②

Devices

Main Others

PVA-2P500 Amplifier 2

Amplifier - reserve 2

PVA-4CR12 Controller 1

PVA-4R24 Router 2

PVA-15CST firefighter microphone

option 1 1 extension 0

option 2 0

option 3 0

option 4 1 extension 0

option 5 1 extension 0

③

Devices

Main Others

Enclosure for loudspeaker line sup 0

Fan unit with thermostat 1

④

Output data

Max. Power of sound [W]	2000
Max. Number of speaker lines	60
PSU power	320
Type of batteries [Ah]	100/12V
Number of batteries [pcs]	2
Battery capacity [Ah]	3.42
Power connection [V]	1-fazowe 230
Max. Current consumption [A]	1x10
Max. Heat output to the environment [W]	668
Fuse protection [A]	1x16
Free space in RACK [U]	8
Rack height [U]	42
Rack height [mm]	2103
Rack size [mm]	600x600
Rack weight [kg]	89
Battery weight [kg]	60.8
Installation scale (with batteries and appliances)[kg]	197.02

Pulsar www.pulsar.pl

CONFI-DSO v 2.2 in cooperation with the company **BOSCH** Technologia brzożej nas

menu

Input data

Hold time [h] 24

Alarm time [h] 0.5

Extra space U in the cabinet 2

Rack depth 600

Power mode after power failure standby

Devices

Main Others

PVA-2P500 Amplifier 2

Amplifier - reserve 2

PVA-4CR12 Controller 1

PVA-4R24 Router 2

PVA-15CST firefighter microphone

option 1 1 extension 0

option 2 0

option 3 0

option 4 1 extension 0

option 5 1 extension 0

Speaker Line Control Method

20 kHz pilot tone [W] 2000

The installed loudspeaker power [W] 2000

The available system power [W] 2000

Firefighter's microphone mounted outside

DSO524V

ENS4-2A17

Output data

Max. Power of sound [W]	2000
Max. Number of speaker lines	60
PSU power	320
Type of batteries [Ah]	100/12V
Number of batteries [pcs]	2
Battery capacity [Ah]	3.42
Power connection [V]	1-fazowe 230
Max. Current consumption [A]	1x10
Max. Heat output to the environment [W]	668
Fuse protection [A]	1x16
Free space in RACK [U]	8
Rack height [U]	42
Rack height [mm]	2103
Rack size [mm]	600x600
Rack weight [kg]	89
Battery weight [kg]	60.8
Installation scale (with batteries and appliances)[kg]	197.02

Configuration no.: DSOP24V-12-22-24/1706111121

show a summary

documentation

address data

send question

⑤

Controlling company

Company name

Address

City

Phone

E-mail

ZIP

Investment

Amount of the investment

Order/Order Designer

Address

City

Phone number

Phone number

Press # to enter printing values

⑥

show a summary

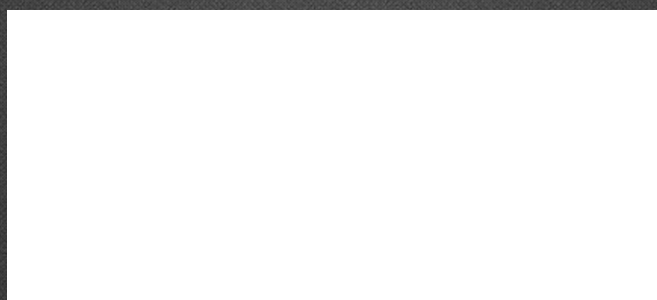
documentation

address data

send question

Notes

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