

The power supplies **ZDSO400-DR1**, are dedicated to work with voice alarm systems (VAS). They act as battery charger and supervision device for external batteries for backup voltage 24 V, according to the standard EN 54-4 + AC + A1 + A2. On a front panel are located: LED signalization, control push button and USB socket, which allows to control and test operating parameters of power supply. All connections are to be done on a back panel, which has two optional designs: all 6 outputs providing the same current (model 1), 2 out of 6 having increased current-carrying capacity (model 2) or 4 outputs providing the same current (model 3).

Power supplies **ZDSO400-DR1** meet all requirements of the Regulation of the European Parliament and of the Council of Europe No.: 305/2011 of 9 March 2011 [CPR].



- Certificate of constancy of performance No. 1438-CPR-496
- Declaration of performance No. DWU-MX-11



APPLICATION

- voice alarming systems (VAS)
- fire alarm systems
- smoke and heat control system for environmental class 1 (SHE).

CHARACTERISTIC FEATURES

- compliance with EN 54-4 + AC + A1 + A2
- compliance with EN 12101-10 + AC environmental class 1
- built-in DC power distribution panel and low voltage disconnect device LVDD
- possibility to start by push button with only battery power, w/o mains source present – so called cold start
- built-in meter of battery circuit resistance
- UI characteristics of battery charging
- ability to work in floating mode or with discontinuous battery charging
- single phase power with the PFC
- controlled by a microprocessor
- digital communication via USB connector
- operation with various acid batteries

FUNCTIONS OF THE POWER SUPPLY

- temperature dependence of floating voltage and charging voltage
- charging mode with current limitation depending on initially chosen battery capacity
- operation in charging modes: bulk, balancing and supplementary charging
- monitoring of low and high battery voltage
- monitoring battery circuits continuity as well as measurement of battery circuits resistance
- battery bank protection against too deep discharge
- monitoring the output fuses
- monitoring operation of the charger
- monitoring the proper operation of the charger
- measurement of inner temperature
- digital measurement of voltages, current and temperature
- optical and remote indication of faults
- possibility to accept and manage the external fault signal
- possibility to set up the initial capacity of cooperating battery by DIP switch on the back panel
- possibility to set up the level of maximum battery circuit resistance by DIP switch on the back panel

STANDARD EQUIPMENT

- 4 LEDs indication of the power supply's operation
- Push button to choose cold start and reset faults
- USB connector on the front panel



24V power supplies for Voice Alarm Systems (VAS)

ZDSO400-DR1

- screw terminals M8 for batteries connection
- four standard outputs to power the amplifiers
- two outputs with increased current capacity to power the amplifiers
- six additional outputs of uninterruptible voltage
- standard blade fuses (car style) on all outputs
- internal device to disconnect battery – low voltage disconnect device (LVDD)
- terminals for remote indication (three contacts for each signal): general fault, battery fault and mains failure
- two input connectors for external fault signals (one with normally open contacts and the other with normally closed contacts referenced to the common negative bus)
- socket for an external temperature probe (the probe is included)
- the IEC terminal to connect the mains
- internal fans, activated by the controller
- Ethernet communication module (optional)

MAIN PARAMETERS OF THE DEVICE

	ZDSO400-DR1		
	Model 1	Model 2	Model 3
Mains power	230 V, 50/60 Hz, max 2.7 A, PF 0.94		
Output's parameters			
Load capacity of standard outputs to amplifiers	4 x 40 A	6 x 40 A	4 x 40 A
Load capacity of outputs with increased current	2 x 60 A	-	-
Load capacity of auxiliary outputs ^{*1)}	4x 5 A		2 x 5 A
Auxiliary outputs current possible when mains power is present I _{max a} ^{*1)}	12 A max.		10 A max
Total battery current sourced from all outputs when mains power is not present	200 A max.		
Battery operation			
Floating voltage at 25°C	27.1 V		
Maximum capacity of the external battery bank ^{*1)}	270 Ah		
Charging current ^{*2)}	4...16 A		
Maximum resistance value of battery circuit resistance ^{*3)}	15...50 mΩ		
Other			
Dimensions (H x W x D) [mm]	43(1U) x 483(19") x 330		
Weight	4.9 kg		
Range of operational temperature / cooling method	-5°C ...45°C / forced by fans		
Ingress protection code	IP20 ^{*4)}		
Standard compliance			
Electrical safety	EN 62368-1 + A11 cl. I		
EMC Emission	EN 61000-6-3 EN 55032		
EMC Immunity	EN 50130-4 + A1		
Functionality	EN 54-4 + AC + A1 + A2 EN 12101-10 environmental class1 EN 12101-10 functional class A		

*1) Current sourced from auxiliary outputs has impact on possible capacity of used batteries

*2) Maximum value of charging current depends on capacity of connected batteries

*3) Required value within the given range can be set up by DIP switch accessible for a user

*4) For compliance with the standard EN 54-4 + AC + A1 + A2 the power supplies have to be mounted in 9" rack cabinets of IP30.

MANUFACTURER

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The manufacturer reserves the right to introduce changes without notice

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