CONFI-DSO

PRAESENSA

EN

Edition: 1 from 05.05.2021
Supercedes the edition ----

TABLE OF CONTENTS

1. **General description.**

CONFI-DSO software is a power supply design tool for DSO voice alarm systems. Configurator is designed for BOSCH's PRAESENSA systems.

Based on implemented design parameters, program selects a complete power supply system taking into account the required backup time.

2. **Main panel of program.**

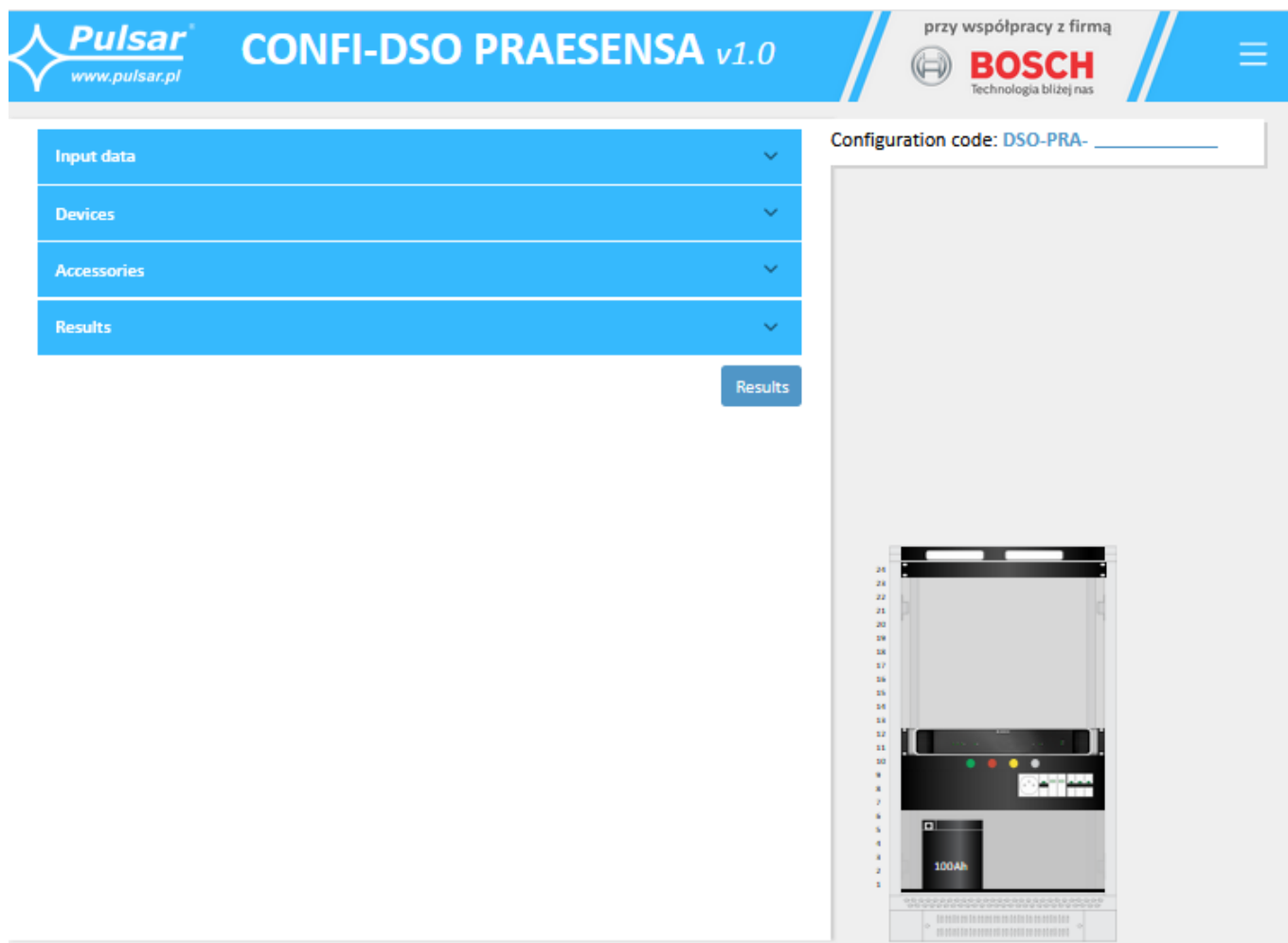View of main panel of CONFIG-DSO program.

Fig. 1. Main panel of program.

You should start working with software by entering in input data tab required system backup time and additional space in RACK cabinet.

In next step, indicate devices of DSO system that will be powered from system power supply. During data input, CONFI-DSO makes ongoing calculations based on which minimum configuration of power supply system is automatically selected. These effects can be observed both in graphic part and in output data area where technical parameters are additionally displayed.

After completing the system configuration, user is able to print prepared documentation, which they can use later as an appendix to documentation of designed DSO system.

In upper part of programme window there is a configuration number, which by means of an automatically generated sequence of digits identifies designed DSO system unambiguously.

2.1 „Input data" tab.

In „Input data" tab, basic parameters should be configured depending on requirements of designed DSO system.

Input data	^

Hold time [h]	24 ▾
Alarm time [h]	0.5
Incl. safety [%]	30
Extra space U in the cabinet	0 ▲▼
Rack depth [mm]	ℹ 600 ▾

Backup time – operating time of voice alarm system using backup power (battery-assisted operation). Following times are available: 6h, 24h, and 72h. Default value is 24h.

Alarm time – constant value; alarm time of voice alarm system using backup power (battery-assisted operation). Default value is 0.5h = 30 minutes.

Safety factor – factor taking into account decrease in battery capacity due to ageing.

Additional "U" space in cabinet – free space in RACK cabinet that can be used to install other additional devices, e.g. music player.

Caution! Additional devices cannot be powered from backup power source. If connected elements are source of thermal energy, this should be taken into account in final calculations.

Cabinet depth – for RACK 42U and 45U cabinets, 600mm and 800mm cabinet depths are available. 24U cabinet is available in 600x600 only, while 50U in 600x800 only.

2.2 „Device's" tab.

„Devices" tab consists of 6 clusters. Each cluster consists of a PRA-MPS3 power supply and receivers, which can be: system controller, amplifiers, PoE switch, call stations and other DSO devices.

Devices	^

Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6

| **Description**	**Device**	
Multifunction Power Supply	PRA-MPS3	
	Active Ethernet ports on MPS	0 ▲▼
	Active SFP ports on MPS	0 ▲▼
24VDC output	- ▾	
48VDC output 1	- ▾	
48VDC output 2	- ▾	
48VDC output 3	- ▾	
Call station desktop/wallmount	PRA-CSLD / PRA-CSLW	
Call station desktop	PRA-CSLD	0 ▲▼
Call station wallmount	PRA-CSLW	0 ▲▼
Call station extension	PRA-CSE	0 ▲▼
	Active PoE ports (total of all CST`s)	0 ▲▼
	Amount of CST`s with class Emergency	0 ▲▼

[🔋 change battery]   [🧹 Cluster]

Configuration consists in assigning a suitable device to power supply output (24V or 48V) from drop-down menu. After making selection, you must enter additional parameters related to this device, e.g. for the amplifier it will be „total loudspeaker load" and indicate how many network ports will be active.

Based on selected devices, programme calculates all parameters and selects a battery for back-up operation from available range.
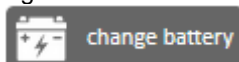
Button allows you to change manually the capacity of battery. Only the larger capacities can be selected. Please note that a battery with a larger capacity will have larger external dimensions, which may affect the size of RACK cabinet and may change arrangement of batteries on shelves.
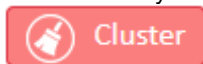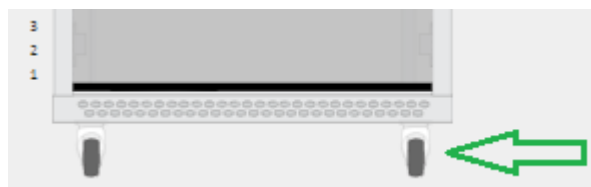
Button allows you to quickly delete data in current cluster.

2.3 „Accessories" tab.

In „Accessories" tab it is possible to complement cabinet with additional optional equipment.
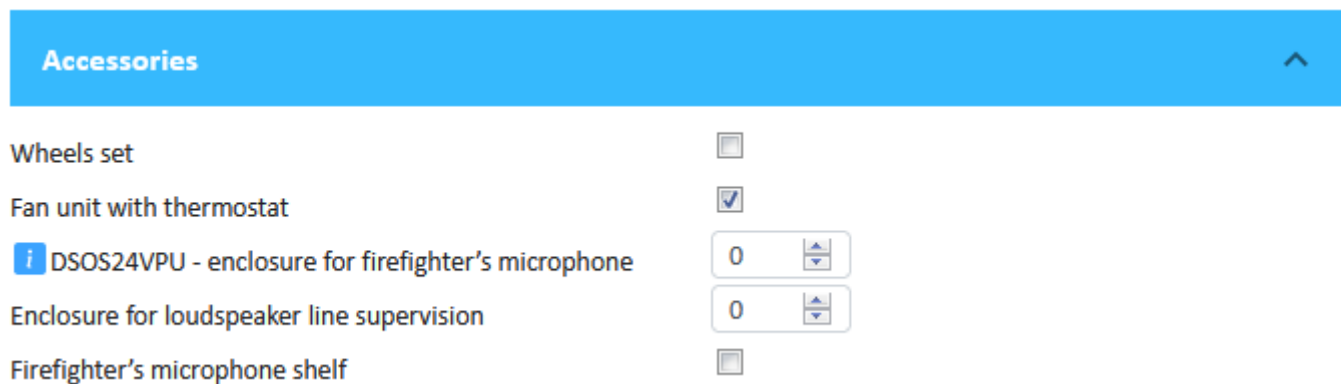

Set of wheels - selecting this option equips cabinet with transport wheels.

Ventilation panel with thermostat – in 24U RACK cabinets, fan is an optional accessory. If it is not required in planned system due to acceptable thermal expenditure of installed devices, then this option should be deselected. Together with deselecting fan, we gain an additional 1U spot resulting from lack of a cover, which is normally installed under fan in order to facilitate air flow.


DSOS24VPU enclosure – DSOS24VPU housing is intended for a situation where call stations will be installed outside RACK cabinet in an external housing, but are still powered from DSO system. Inside, housing can accommodate one PRA-CSLD station and up to two PRA-CSE extensions.
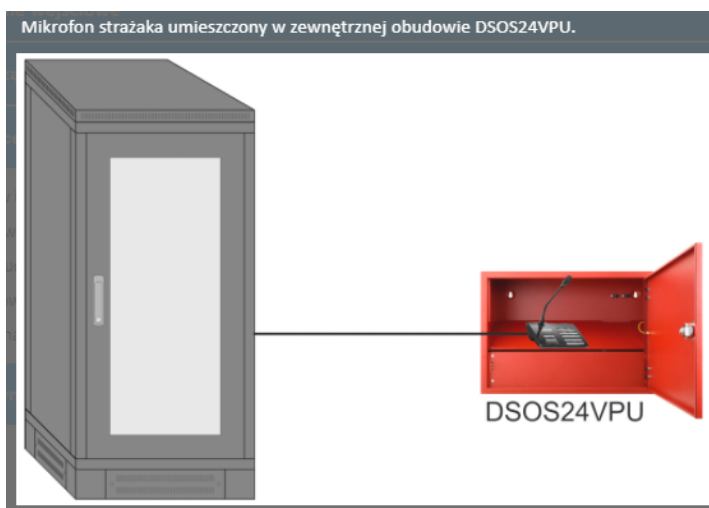
End of Line (EOL) Supervision Board – number of boards to be added to order. Board is designed for mounting loudspeaker line supervision systems by Bosch used in Voice Alarm Systems.

Shelf for firefighter's microphone – Fireman's microphone will be mounted inside DSO cabinet.
Installation of up to one microphone with one additional PRA-CSE extension.
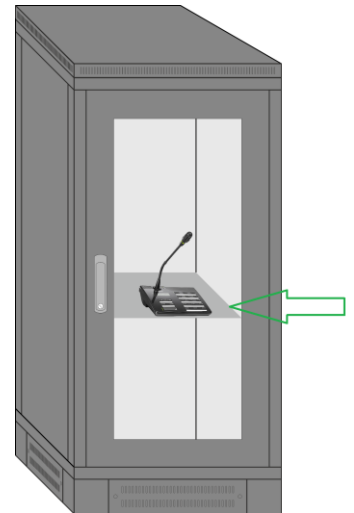
2.4 „Results" tab.

„Results" tab contains system parameters that are continuously updated as devices are added to RACK cabinet. Layout is a table with a division into individual clusters.

Results

Clusters		1	2	3	4	5	6
Required battery capacity incl. safety factor (100 - 230Ah)	[Ah]	103	0	0	0	0	0
Maximum battery current (check battery specification)	[A]	45	0	0	0	0	0
Mains current draw at 230 V AC (during alarm and maximum battery charging)	[A]	2.584	0	0	0	0	0
Mains current draw at 115 V AC (during alarm and maximum battery charging)	[A]	5.168	0	0	0	0	0
Battery selected automatically / by the user	[Ah]	120	0	0	0	0	0

		Active (idle)	Active
Total power loss of amplifiers	[W]	87	224
Total heat loss (heat dissipation within the rack)	[BTU/h]	297	765

|		
RACK cabinet height	[U]	24
RACK cabinet height	[mm]	1303
RACK size	[mm]	600x600
RACK cabinet weight	[kg]	66
Battery weight	[kg]	75.2
Installation weight (with batteries and devices)	[kg]	155

Results

From parameters it is possible to read, among others, information about calculated battery capacity, maximum current drawn from individual batteries or current drawn from mains.

Program also provides information about maximum heat output to environment from cabinet, taking into account all installed devices. This parameter can be useful when designing the cooling system of room in which DSO cabinet will be installed.

3. Program menu.

In upper right corner of main programme panel, there is a „menu"   , button which allows the user to perform several basic actions.

New

Save

Open

About program

Documents

Address data

Results
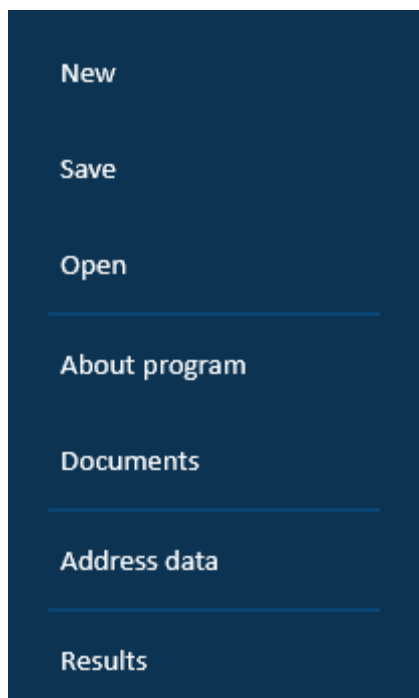
„New configuration"   – Function clears all data entered into cells in project. After operation is completed, you can start working with a new project.

„Save"   – Saving project to a file on disk. This option saves project file in *.json format for reading CONFI-DSO application.

„Open"   – Opening a project from a file on hard drive. Option enables loading a *.json configuration file.

„About software"   – Software information.

„Documentation"   – after selecting this option, website www.pulsar.pl opens, where you can download documentation for RACK 19" „DSO-PRA" cabinet and for other components.

„Address details"   – Function opens an address form where we can enter address details of ordering party and

investment. In order to save them, press button   **Save form**

Entered address details appear on configuration summary form.

„Summary"   – Opens summary of created configuration. Summary contains most important information of project and enables saving to a text and graphic *.pdf file.