LIGHTNING PROTECTION UNIT

Type DNP508; DNP5082

Instruction Manual

(Revision.3/10)

1. GENERAL DESCRIPTION

Lightning protection units DNP508 and DNP5082 and are designed to protect electronic devices from electromagnetic pulse of lightning.

The device is available in two versions:

- DNP508 - to protect inputs of the lines of conventional Fire Control Panels;
- DNP5082 - to protect inputs of the loops of Fire Control Panel IFS7002, manufactured by UniPOS.

Lightning protection unit DNP508 (DNP5082) is to be mounted close to the Fire Control Panel or at a place, where the fire alarm lines (loops) are extended beyond the building (outdoors).

2. TECHNICAL DATA

	DNP508	DNP5082
2.1. Nominal voltage	28V DC	-
2.1.1. Signal Loop	-	33V DC
2.1.2. Power Loop	-	28V DC
2.2. Maximum current pulse $I_{S\,8/20}$	20 kA	
2.3. Response time	1 ns	
2.4. Maximum resultant voltage at $I_{S8/20}$	45.7V	-
2.4.1. Signal Loop $I_{S\,8/20}$	-	72.2V
2.4.2. Power Loop $I_{S\,8/20}$	-	53.3V
2.5. Operating temperature range	from minus 10ºC to 60ºC	
2.6. Storage temperature	from minus 40ºC to 70ºC	
2.7. Relative humidity resistance	(92^{+3}_{-2})% at 40ºC	
2.8. Degree of protection	IP40	
2.9. Overall dimensions	162x120x72 mm	
2.10. Weight	0,3 kg	

3. STRUCTURE AND FUNCTIONALITY

3.1. Structure

Lightning protection unit type DNP508 (DNP5082) consists of two main parts: a base set – an electronic unit and a cover. The electronic unit contains a printed circuit board with screwing terminals, used for connection of the fire alarm lines.

The cover is fixed by the base my means of four screws.

3.2. Functionality

When lightning strikes, DNP508 limits the maximum voltage of the line to 150/180V, and the terminals of the Control Panel to 46V for DNP508 (and 72/53V for DNP5082).

4. INSTALLATION

Mount the base of DNP508 (DNP5082) to the wall by means of dowels and self-tapping screws.

Separate the cover from the base. Fix the base to the wall by dowels and wood screws. Then perform the electrical installation in accordance with item 4. Place the cover to the base and screw the four fixings.

4.1. Connecting method (fig.1 DNP 508) (fig.2 DNP 5082)

4.1.1. Connect the fire alarm lines (loops) to terminals FD.

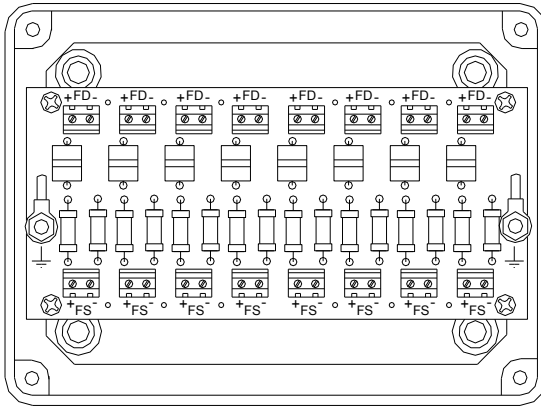**4.1.2.** Connect terminals FS to the respective terminals of the Control Panel.
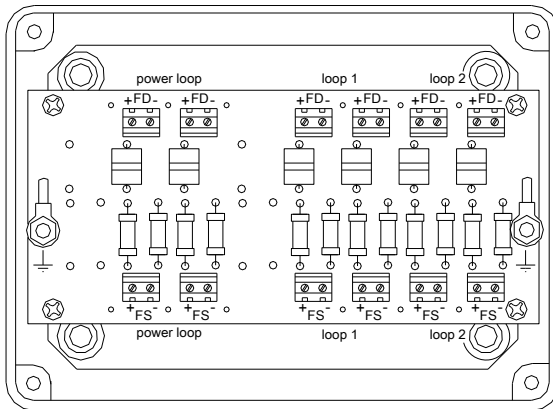
Fig.1

Fig.2

4.1.3. Performing Installation:
- for lines / loops   - by means of wire $(0.8\text{-}2.5)\text{mm}^2$;
- for grounding   - by means of wire $(1.5\text{-}2.5)\text{mm}^2$.

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WARNING! For the reliable operation of the lightning protection unit, it is necessary to realize a secure electrical connection from the grounding terminals to the housing of the Control Panel. The housing of the Control Panel must be grounded to the power supply switchboard with a separate wire with minimum cross section 1.5 mm2. The supply switchboard must have a standard grounding.

When installing the lightning protection unit into a place, where the fire alarm lines are extended beyond the building, the grounding wire must be connected to the grounding bus of the building or a standard grounding to be made for that purpose.

4.2.   Satisfactory operation test in real conditions

Consecutively short each line(loop) for a while - The Control Panel must "FAULT CONDITION".

5. SERVICE SCHEDULE

	Procedure	Periodicity
1.	Inspection for visible physical damages	weekly
2.	Satisfactory operation test in real conditions	monthly
3.	Check and clean dust contamination	every six months

6. WARRANTY

The warrant period is 36 months from the date of the purchase. The manufacturer guarantees the normal operation of the devices, providing that the service requirements of the instruction manual herein have been observed.

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