

MODULAR POSITIONS- AND SIGNAL LANTERN CONTROL AND MONITORING SYSTEM DPS 01



- System consists of:
 - base module AHD 901 G
 - 1 - 4 substations AHD 910 A (8 - 32 lamp circuits)
 - one or more control and display units AHD 406-2D (individual design according to instructions)
 - parallel display(s), if necessary
- suitable for all common lamp voltages (24 V DC/AC to 250 VAC)
- lamps are connected directly with the substations (no further terminal block required)
- lamp circuits are protected from two sides
- connection of parallel displays possible
- even in case of electronic failure, operation of the lanterns is still possible.
- LEDs in the display unit can be arbitrarily assigned to the position and signal lanterns
- modules control each other
- dimming of display elements with photo resistor
- display and operating panel AHD 406-2D can be delivered with front-cap (protection IP 54)
- type approved by GL

1. Construction

The unit consists of :

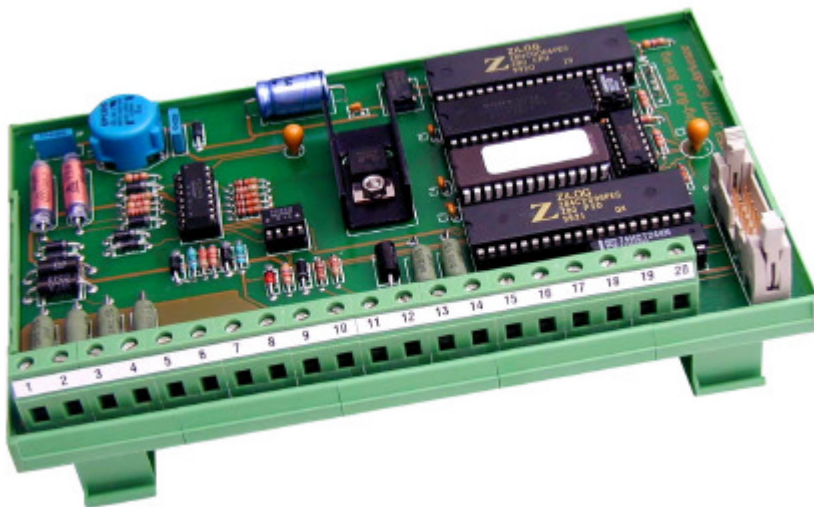
- 1 base module AHD 901 G
- 1 to 4 substation modules AHD 910 A with 8 lamp circuits each
- 1 display- and control unit AHD 406-2D
- 1 selector switch
- parallel display(s) AHD 406-2D and/or further switch(es), if necessary

The devices are connected with each other by ribbon cables.

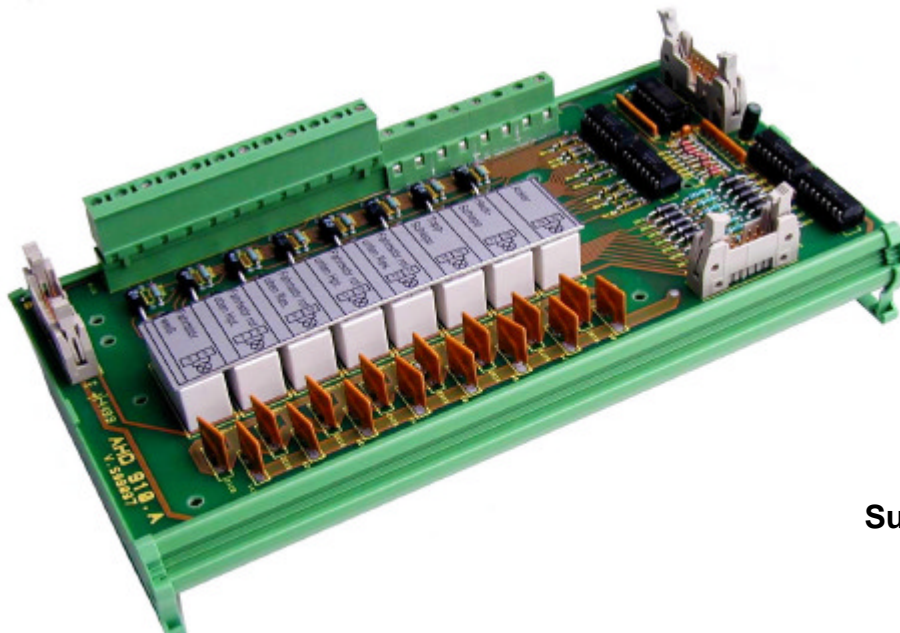
2. Function

Main and emergency power supply, as well as the selector switch, are connected to the base module AHD 901 G. The base module monitors the main and emergency supply and communicates serially with the substation modules and the control unit.

The position lanterns are controlled with switches in the control unit and auxiliary relays on the substations. Up to 8 lamps can be connected to each of the four possible substation modules AHD 901 A. Thus, 32 lamp circuits can be controlled and monitored by one system. The lamp circuits are protected bipolarly. The fuses are located directly behind the relays that belong to the lamp circuit. Melting fuses are used for 230V-lanterns, and automatically resetting semiconductor fuses for 24V-lanterns. The principle construction of the system enables installation of several control units with displays, which is sometimes required.



Basic module AHD 901G, 24VDC



Submodule AHD 910A, 24VDC

The electronics distinguishes between the following conditions:

- lamp is switched off
- lamp is switched on and is glowing
- lamp is switched on and is not glowing (alarm, if main-switch is not in „OFF“-position)

This information is processed in the base module AHD 901 G and serially transmitted to the display and control unit AHD 406 2D. The condition of the lamps is displayed here as follows:

- lamp is switched off, „Display-LED off“
- lamp is switched on and is glowing, „Display-LED on“
- lamp is switched on, but is not glowing and main switch is not in „OFF“-position, " Display-LED is flashing"

A buzzer is installed in the display and control unit, which is switched-on at every alarm and that can be acknowledged with a push button. The LEDs that indicate the state of the position lanterns can not be acknowledged optically, as otherwise, switched-on and glowing lamps might be confused. The mentioned LEDs are automatically dimmed by a photo cell.

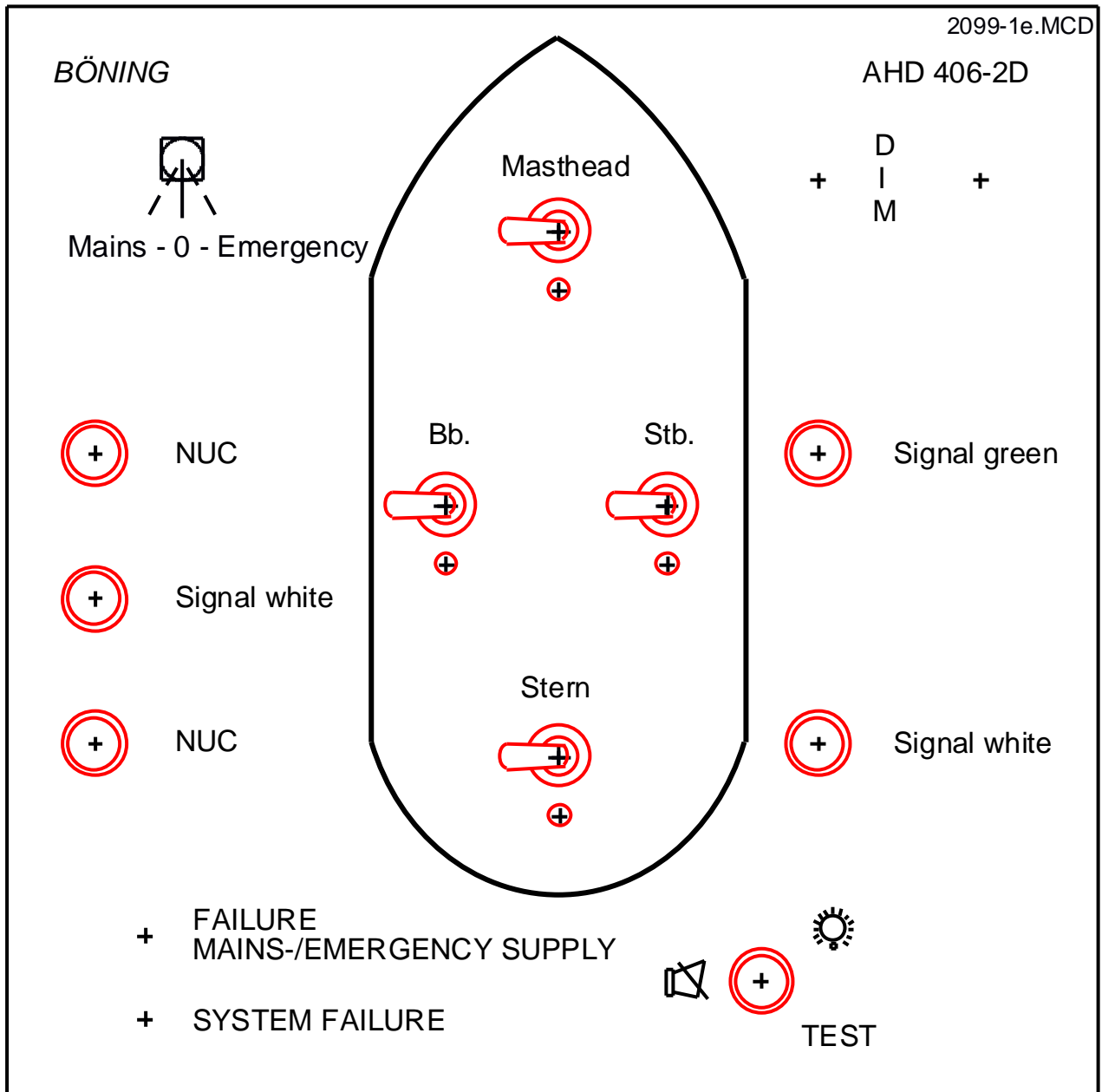
The display- and control unit AHD 406-2D is designed according to the customer's order and is adapted to the respective requirements. Serially, it has the front dimensions 144mm X 144mm or 192mm X 144mm. The front panel that is made of aluminum has a black basic color with white print on it.

EVEN IN THE EVENT OF BREAKDOWN OF THE ELECTRONICS, THE LANTERNS CAN STILL BE CONTROLLED.

3. Commissioning

- a) Switch selector switch into position „Main Supply“.
- b) Switch on the lanterns separately and check each time, if the correct lantern goes on.
- c) Switch on all lanterns in sequence, open the relevant circuit and check, if the alarm is released.
Check horn reset together with lamp test.
- d) Switch selector switch into position „zero“ and switch on one lantern. The lantern must not glow and there must not be any alarm.
- e) Switch selector switch into position „Emergency Supply“ and switch on one lantern. The lantern must glow.
- f) Alternately switch off main and emergency supply. In both cases, the alarm „Main/Emergency Supply“ must be released.

Example for front view:



Individual lanterns are operated with an illuminated push button that can be red, yellow or green.

Double lanterns are controlled with a dip-switch with 0-position. Underneath, there is a red, yellow or green LED.

Marking of lanterns with indication of color.

406d2e.mcd

Customer	:	
Order-no.	:	Voltage :

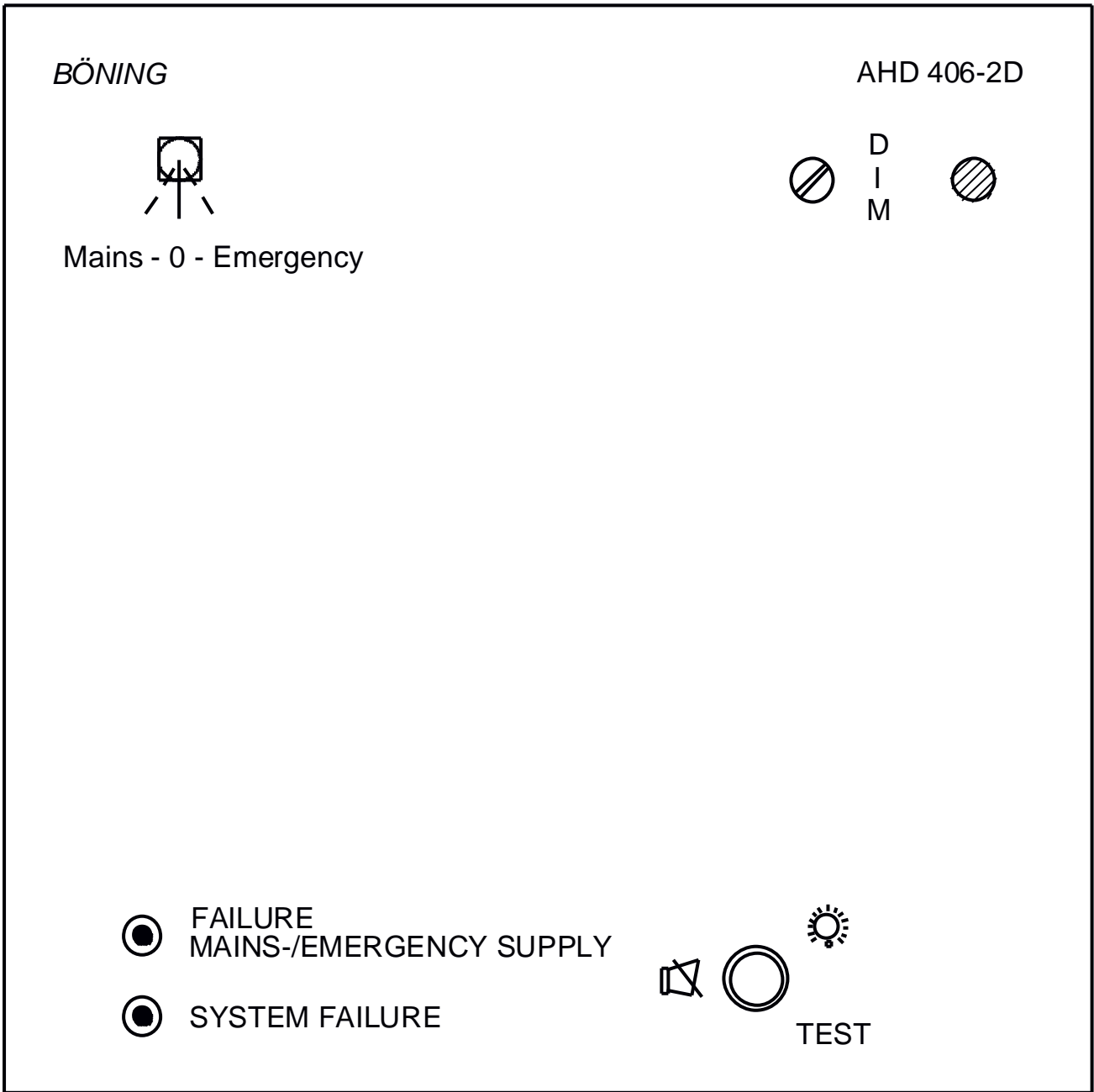
Submodule 1			Submodule 2		
No.	Marking of lamps	Color ¹⁾	No.	Marking of lamps	Color ¹⁾
1			1		
2			2		
3			3		
4			4		
5			5		
6			6		
7			7		
8			8		

Submodule 3			Submodule 4		
No.	Marking of lamps	Color ¹⁾	No.	Marking of lamps	Color ¹⁾
1			1		
2			2		
3			3		
4			4		
5			5		
6			6		
7			7		
8			8		

¹⁾ red, yellow or green

Frontlayout for operating units with front dimensions of 144mm x 144mm

406d2e.MCD



Please enter your draft with arrangements of lanterns.

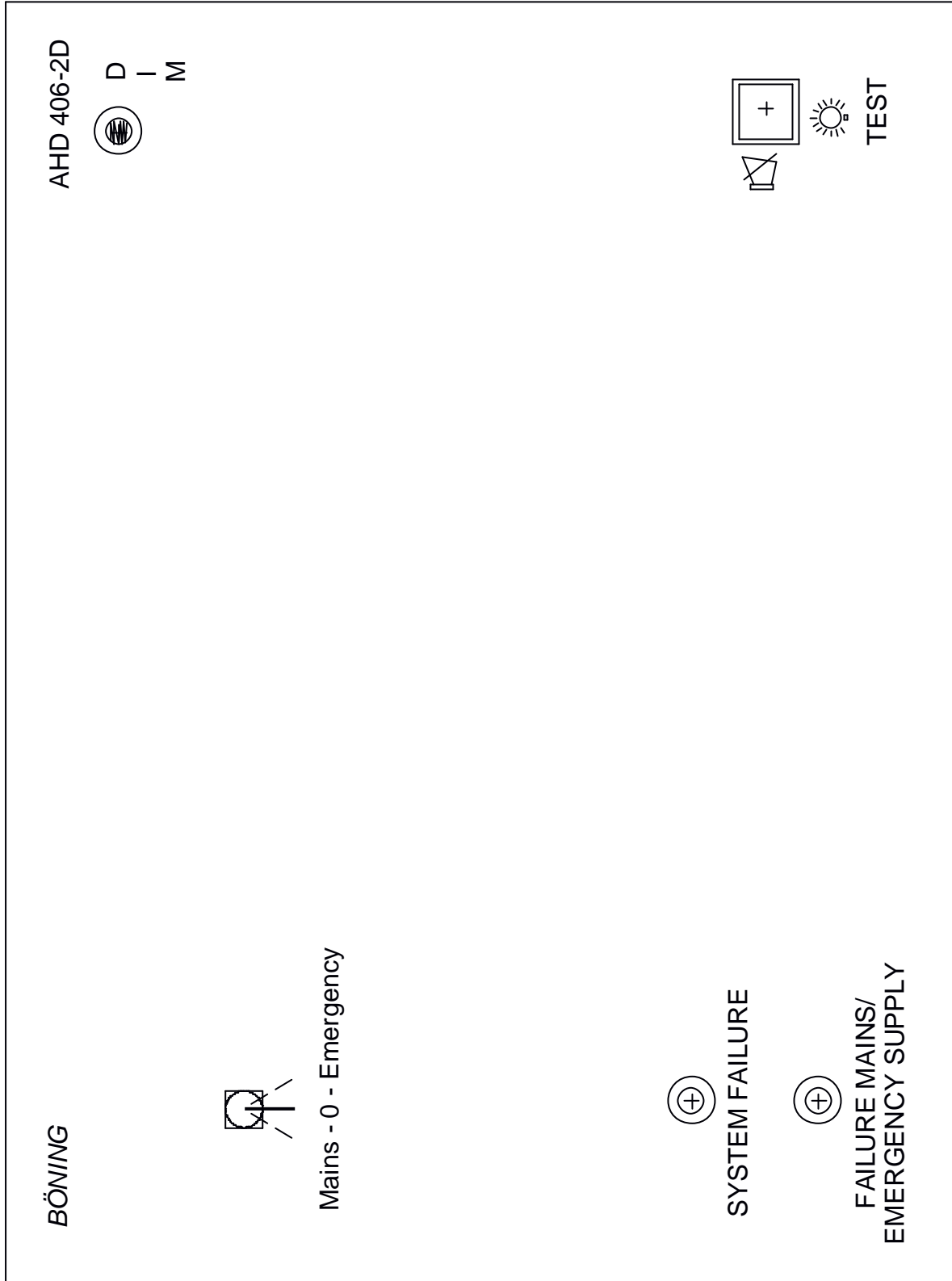
In case only individual lanterns are used, this symbol is inapplicable



Mains - 0 - Reserve

Frontlayout for operating units with front dimensions of 192mm x 144mm

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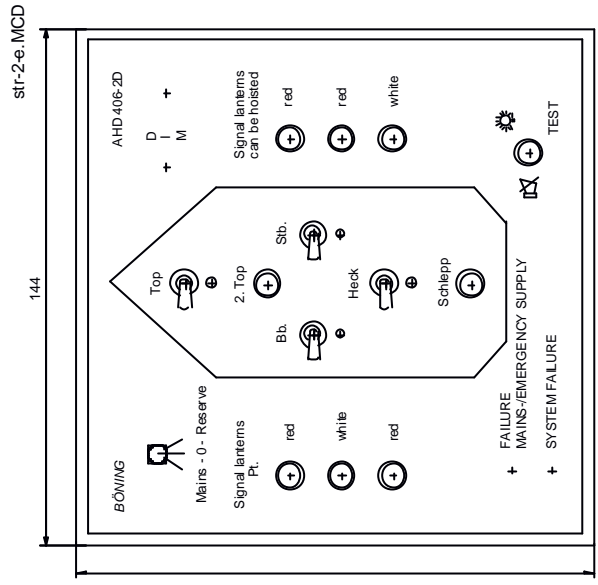
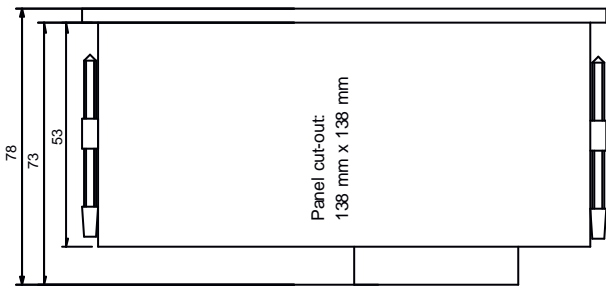


Please enter your draft with arrangements of lanterns.

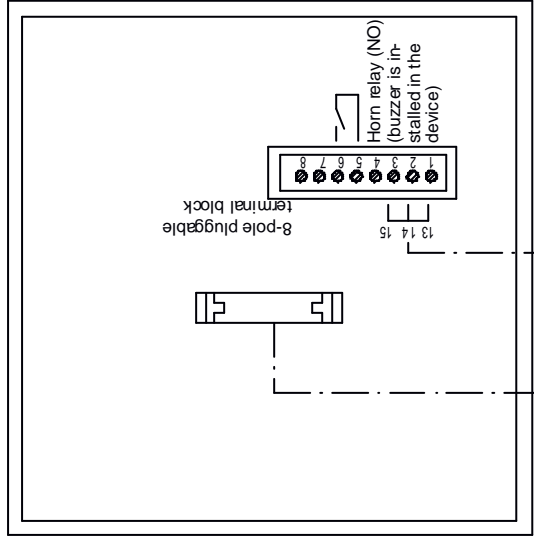
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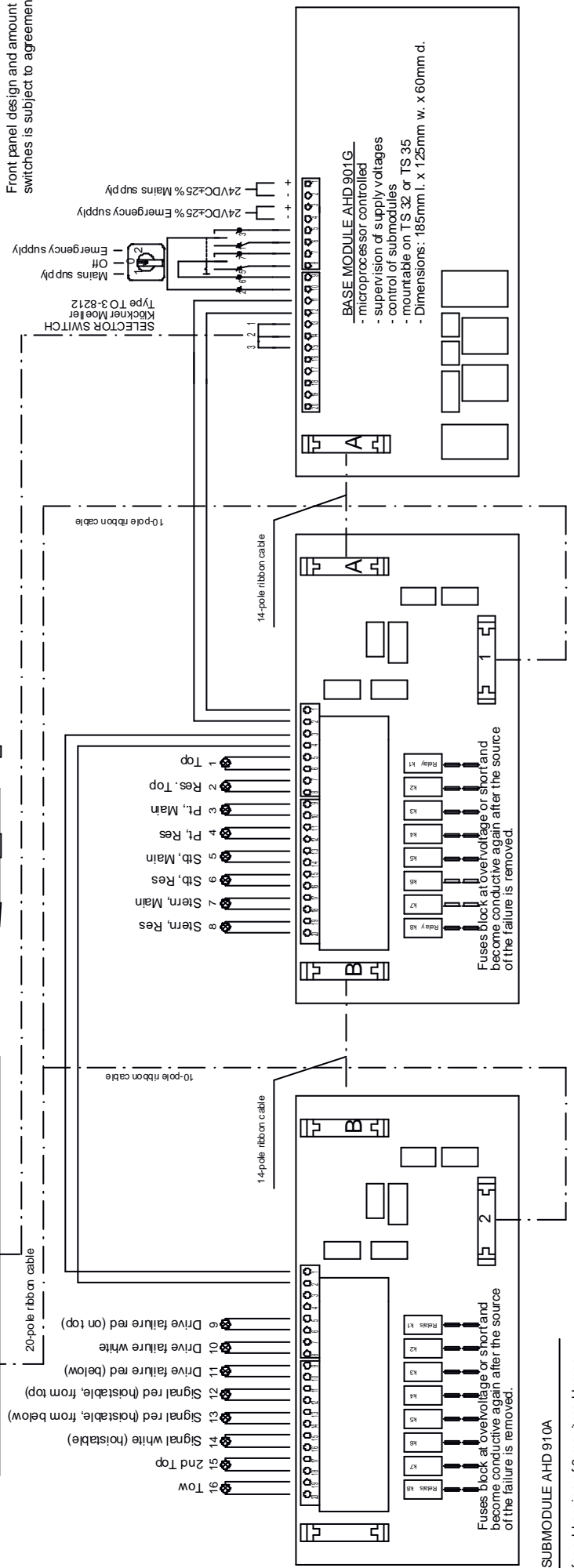
Mains - 0 - Emergency



Power cons. of the electronics app. 0.25A
(1 x AHD 901G, 2 x AHD 910A, 1 x 406-2D)



Front panel design and amount of switches is subject to agreement.



SUBMODULE AHD 910A

- for addressing of 8 monitored lamps
- mountable on TS 32 or TS 35
- dimensions: 235mm long x 125mm wide x 45mm deep

Function of the position lanterns is guaranteed even at failure of the electronic.

