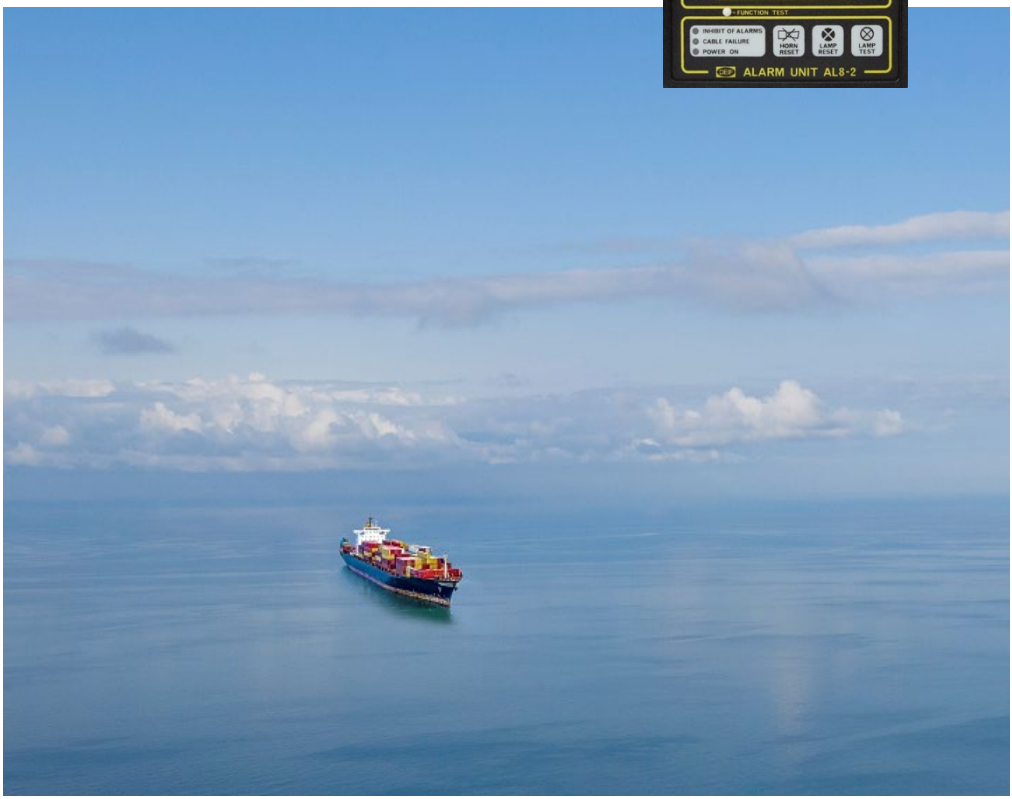
AL8-2

4189320003F

Alarm panels

Programming manual

Improve Tomorrow



CONTENTS:

On delivery, the AL8-2 alarm panel is programmed to the following functions:

Individual functions

- Alarm on **closed** signal contact (N/O)
- **No** activation of output relays A and B on an alarm condition
- Inhibit function **NOT** activated
- **No** alarm on cable failure
- **Immediate** registration of an alarm condition (i.e. time delay 0 sec.)

Common functions

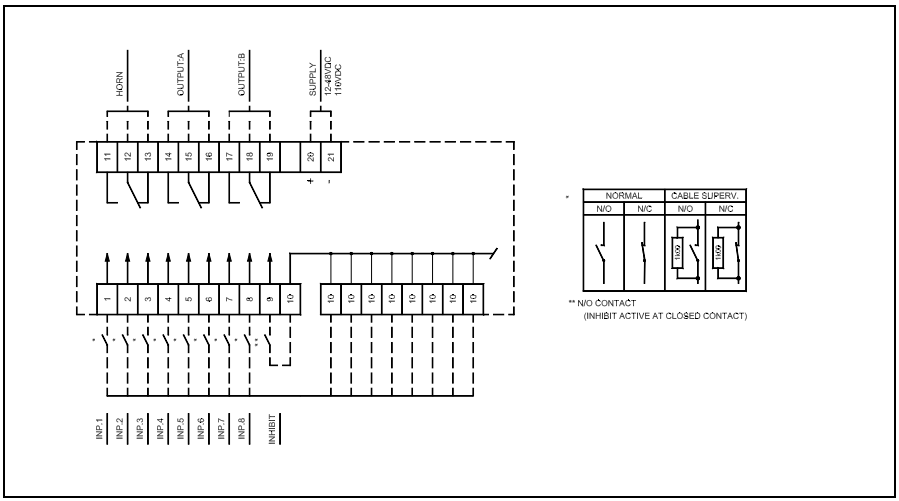
- Output relays A and B **activated** on an alarm condition (N/O)
- Duration of activation is **unlimited** (i.e. time limit 0 sec.)
- **No** delay of cancellation of inhibit function (i.e. time delay 0 sec.)

1 BEFORE YOU START PROGRAMMING

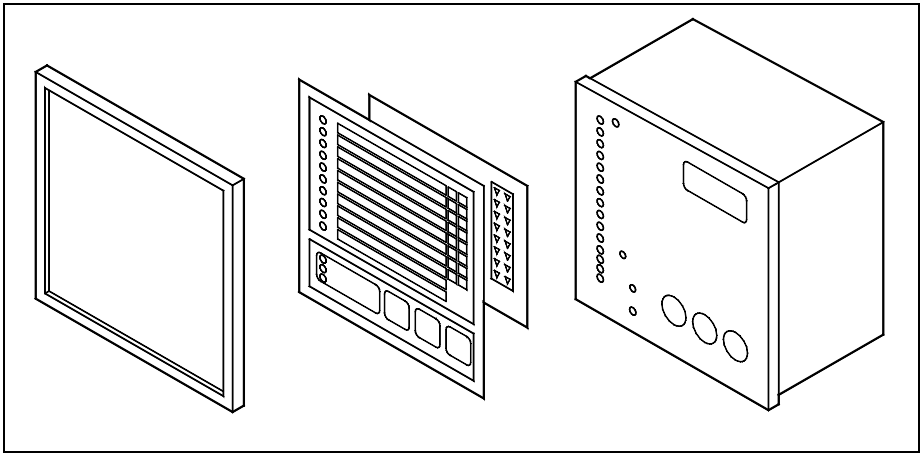
Programming the DEIF alarm panel AL8-2 requires only few and simple preparations:

Firstly, auxiliary voltage should be connected (indicated by green light in the LED marked "POWER ON").

CONNECTIONS



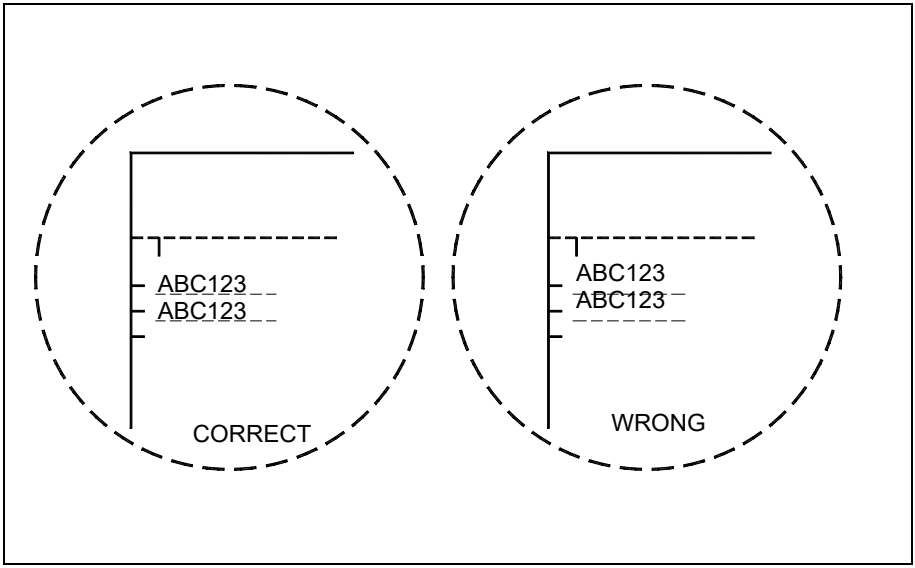
Secondly, the bezel and front sheet are removed to give access to the programming front plate.



The descriptive text for alarm channels 1-8 and the output channels A and B is written/set on the shown text label.

We recommend using "letter-press" to set the text (height: 2.7mm) or typing the text on the label.

Please note that the horizontal lines at both sides of the label indicate lines to be written <u>on</u>. Do <u>not</u> write <u>between</u> the lines.



The horizontal line at the top of the label indicates the left margin.

The text label is mounted behind the front sheet which has an adhesive rear. Label and front sheet are easily separated and put together again, though.

NOTE: For marine applications, the front sheet is always to be glued in order to prevent unauthorised personnel from changing the settings subsequently.

The arrows at the right side of the label indicate the connection of the individual alarm channel to output relay(s) A and/or B, if any – see the arrows on the front sheet. Not applicable arrows can be deleted using black ink.

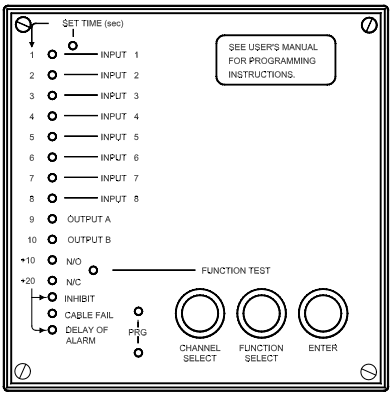
NOTE: The LED indicating "POWER ON" according to the text on the front sheet is the same LED which, on the programming front plate, is designated "DELAY OF ALARM". The LED will of course continue being lit even though the front sheet and the bezel are removed, provided that auxiliary voltage is connected and the unit is in operation.

2 THE PRINCIPLE OF PROGRAMMING

Programming of the alarm panel is carried out by means of the 3 push-buttons **CHANNEL SELECT, FUNCTION SELECT** and **ENTER**, positioned at the lower right corner of the front plate.

The principle of programming is as follows:

"Point" to the requested channel (by means of **CHANNEL SELECT**); then "point" to the requested function (by means of **FUNCTION SELECT**); finally select, i.e. enter, the requested function (by means of **ENTER**).



The LEDs will, as described in the following, indicate which channel/function is being programmed at the moment. The channels/functions are shown in a certain order. The CHANNEL SELECTOR first points to channel 1, repeated pressing of the push-button enables stepping through the channels 1-2-3-4-5-6-7-8-1-2-3, etc. Likewise you step through the various functions. The order of these appears from the following pages of this manual.

3 WHICH FUNCTIONS MAY BE PROGRAMMED?

It is possible to program 5 functions for each of the input channels 1 to 8.

Furthermore, programming of 4 common functions is possible.

The individual functions are as follows:

1) Registration of alarm on open or closed signal contact
    a. i.e. selection between N/C or N/O.
2) Activation of output(s) A and/or B on an alarm condition
    a. "OUTPUT A", "OUTPUT B"
3) Inhibit of incoming alarms
    a. "INHIBIT"
4) Detection and indication of cable failure
    a. "CABLE FAILURE"
5) Time delayed registration of an alarm condition.
    a. The time delay "DELAY OF ALARM" can be set within the range 0 to 40 secs at intervals of 1 sec.

The common functions are as follows:

1) Activation/deactivation of relay for output A on an alarm condition
    a. (N/O, N/C)
2) Time limited activation/deactivation of output A.
    a. The time limit can be set within the range 1..10 secs at intervals of 1 sec.
3) Activation/deactivation of relay for output B on an alarm condition
    a. (N/O, N/C)
4) Time limited activation/deactivation of output B.
    a. The time limit can be set within the range 1..10 secs at intervals of 1 sec.

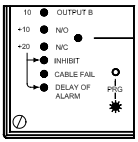
5) Delayed cancellation of inhibit function.

    a. The delay can be set within the range 0..40 secs at intervals of 1 sec.

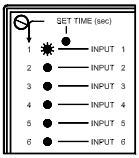
NOTE: When common functions are programmed, no channel is selected, only functions. Individual functions may be programmed before common functions or vice versa. The description of the programming of common functions starts on page 15.

4 HOW TO PROGRAMME INDIVIDUAL FUNCTIONS (INPUTS 1 TO 8)

Set AL8-2 to programming status:



Press the **PRG** button. This button is slightly countersunk when compared with the front plate, and a thin, sharp tool like e.g. a small screwdriver, a needle or the like must be applied to press this button. Do not use a pencil. The lead may break and fall behind the front plate.



After having pressed the PRG push-button, the LED below the push-button will be lit (green), indicating that the alarm panel has been set to the programming status and that programming may be started. The LED for "DELAY OF ALARM" (i.e. "POWER ON") is switched off when the unit is set to programming status.

The moment the "PRG" LED is lit (green), the LED for input channel 1 (INPUT 1) is lit (green) to indicate that this channel may now be programmed.

When pressing the channel selector **CHANNEL SELECT**, the LED for channel 1 (INPUT 1) is switched off and the LED for channel 2 (INPUT 2) is lit (green), etc.

First step of the programming is thus to select input channel. When the requested input channel is indicated, i.e. the relevant LED is lit (green), the **FUNCTION SELECT** push-button is pressed.

NOTE: The LED for the selected input channel will continue being lit (green) throughout the complete programming procedure for the relevant channel.

FUNCTION SELECT points to the individually programmable functions in the following order:

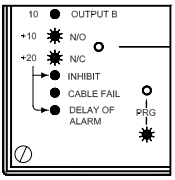
1) N/O, N/C
2) OUTPUT A, OUTPUT B
3) INHIBIT
4) CABLE FAILURE
5) DELAY OF ALARM

I.e., after the first push of FUNCTION SELECT, N/O, N/C is selected.

4.1 ALARM ON OPEN OR CLOSED SIGNAL CONTACT (N/C, N/O)

The "N/O" and "N/C" LEDs indicate the actual function as follows:

NOTE: Both LEDs are lit simultaneously.



EITHER:	***GREEN*** N/O	FUNCTION:
	RED N/C	Alarm on closed signal contact
OR:	***RED*** N/O	FUNCTION:
	GREEN N/C	Alarm on open signal contact

By pressing the **FUNCTION SELECT** push-button, the LEDs switch from one indication to the other – thus changing the function.

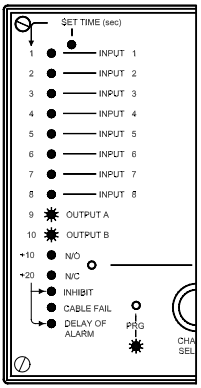
When the indication of the LEDs shows the requested function, this is entered into the programme memory by pressing the **ENTER** push-button.

Pressing ENTER results in the next function in the order being automatically pointed to: selection of output relay.

4.2 SELECTION OF OUTPUT RELAY (OUTPUT(S) A AND/OR OUTPUT B)

The LEDs for "OUTPUT A", "OUTPUT B" indicate the actual function as follows

NOTE: Both LEDs are lit simultaneously.



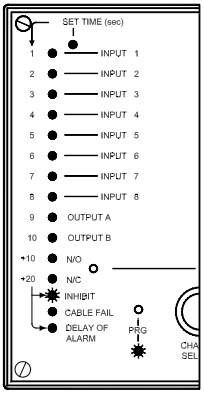
EITHER:	***RED***	OUTPUT A	FUNCTION:
	RED	OUTPUT B	No output relays are activated on alarm
OR:	***GREEN***	OUTPUT A	FUNCTION:
	RED	OUTPUT B	Output relay A is activated on alarm
OR:	***RED***	OUTPUT A	FUNCTION:
	GREEN	OUTPUT B	Output relay B is activated on alarm
OR:	***GREEN***	OUTPUT A	FUNCTION:
	GREEN	OUTPUT B	Both output relays A and B are activated on alarm

Pressing the FUNCTION SELECT push-button will cause a change from the actual LED indication/function to the next in the order, and so the **FUNCTION SELECT** push-button is pressed, till the requested function is indicated by the LEDs. The requested function is entered into the programme memory by pressing the **ENTER** push-button.

Pressing ENTER results in the next function in the order being automatically pointed to: Inhibit function.

4.3 INHIBIT OF INCOMING ALARM (INHIBIT)

The "INHIBIT" LED indicates the actual function as follows:



EITHER: ***RED*** INHIBIT FUNCTION:

Inhibit function is NOT active for this input channel

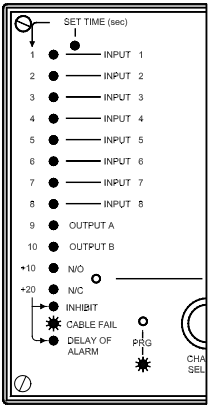
OR: ***GREEN*** INHIBIT FUNCTION:

Inhibit function is active for this input channel

Pressing **FUNCTION SELECT** causes a change from one function to the other. When the required function is indicated, enter this into the programme memory by pressing **ENTER**. Pressing ENTER results in the next function in the order being automatically pointed to: Alarm on cable failure.

4.4 ALARM ON CABLE FAILURE (CABLE FAILURE)

The LED for "CABLE FAILURE" indicates the actual function as follows:



EITHER: ***RED*** CABLE FAILURE FUNCTION:

No alarm on cable breakage

OR: ***GREEN*** CABLE FAILURE FUNCTION:

Alarm on cable breakage

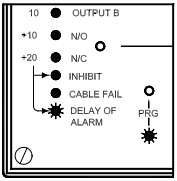
Pressing **FUNCTION SELECT** causes the indication/function to change from one to the other. When the required function is indicated, enter this into the programme memory by pressing **ENTER**.

Pressing ENTER results in the next function in the order being pointed to: time delay.

NOTE: A resistor (1kΩ) should be mounted across the external alarm contact to obtain alarm on cable failure (see connection diagram).

4.5 TIME DELAYED REGISTRATION OF AN ALARM CONDITION (DELAY OF ALARM)

The LED for "DELAY OF ALARM" indicates the actual function as follows:



EITHER: ***RED*** DELAY OF ALARM FUNCTION:

Immediate registration of an alarm condition

OR: ***GREEN*** DELAY OF ALARM FUNCTION:

Delayed registration of an alarm condition

Pressing **FUNCTION SELECT** causes a change from one indication/function to the other. When the required function is indicated, enter this into the programme memory by pressing **ENTER**.

If immediate registration of an alarm condition was selected (i.e. LED for "DELAY OF ALARM" is lit with red light), the programming of this input channel is hereby finished.

If so, you are back at the beginning of the programming routine, i.e. at selection of channel (by means of CHANNEL SELECT) and the channel selector points to – i.e. green light still in the LED for – the channel for which the programming has just been finished. This is made as it is easier to change a just entered but unwanted function of the relevant channel.

If changing of the just entered function is not requested, press **CHANNEL SELECT** to step through the channels to find the next to be programmed.

You may also terminate the programming by pressing **PRG**, resulting in the alarm panel returning to normal function. If PRG is pressed, the LED for "PRG" and the LED for the channel just pointed to are switched off, and the LED for "DELAY OF ALARM" indicating "POWER ON" is lit (green light).

If delayed registration of an alarm condition was selected (the LED for "DELAY OF ALARM" is lit with green light), the requested time delay is to be programmed now. The time delay can be set within the range 0..40 secs at intervals of 1 sec.

4.6 SELECTION OF REQUESTED TIME DELAY (SET TIME)

When the function "delayed registration of an alarm condition" has been entered by pressing **ENTER** (i.e. LED for "DELAY OF ALARM" is lit with green light), the LED for "SET TIME" is lit (green light) and the LED for "DELAY OF ALARM" continues being lit (green light).

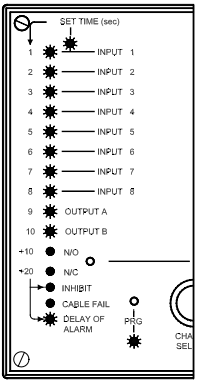
The requested time delay is programmed by first selecting a "basic time" and then an "additional time".

The BASIC time is indicated by the LEDs marked 1-10.

The ADDITIONAL time is indicated by the LEDs marked +10 and +20 (N/O and N/C LED respectively).

4.6.1 SELECTION OF BASIC TIME:

The actual time delay is indicated by the LEDs 1-10 as follows:



After entering the function "delayed registration of an alarm condition" by pressing ENTER, all LEDs 1-10 are lit.

Green light in an LED indicates that an actual (basic) time delay has been selected corresponding to the secs indicated by the number to the left of the relevant LED.

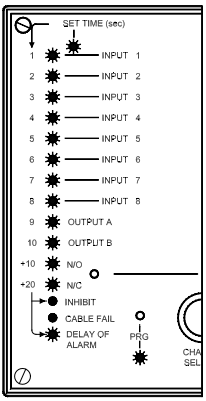
The remaining 9 LEDs indicating basic time are lit with a red light to indicate that these times are not included in the time delay. So all 10 LEDs for basic time delay will be lit, but green light in no more than one - the remaining are red. If the actual basic time delay is 0, all LEDs are red.

NOTE: As the LED indicating which channel is selected – and being presently programmed – is also applied to indicate the basic time delay, it will flash, green or red depending on whether the actual time is included (green) or not (red) in the actual time delay.

Press **FUNCTION SELECT** until the requested basic time – 0..10 secs – is indicated by the LEDs marked 1-10. Enter the basic time into the programme memory by pressing **ENTER**. The LEDs for additional time will not be lit until the basic time has been entered.

SELECTION OF ADDITIONAL TIME:

When the basic time has been entered by pressing ENTER, the LEDs marked "+10" and "+20" are lit. The LEDs for basic time will remain lit.



The LEDs "+10" and "+20" indicate the actual time delay as follows:

NOTE: Both LEDs are lit simultaneously.

EITHER:	+10	***RED***	FUNCTION:
	+20	***RED***	Additional time 0 sec.
OR:	+10	***GREEN***	FUNCTION:
	+20	***RED***	Additional time 10 secs.
OR:	+10	***RED***	FUNCTION:
	+20	***GREEN***	Additional time 20 secs.
OR:	+10	***GREEN***	FUNCTION:
	+20	***GREEN***	Additional time 30 secs.

Pressing FUNCTION SELECT causes a change from one indication/function to another. So, press **FUNCTION SELECT**, until the requested additional time is indicated, and enter the time into the programme memory by pressing **ENTER**.

The complete programmed time delay is the sum of basic time and additional time.

The programming of the presently selected channel is hereby finished. After the last pressing of ENTER, only one LED (apart from the one for "PRG") is lit (green): the LED for the input channel for which the programming has just been finished.

You may now choose between 3 possibilities:

1) Select a new input channel by means of **CHANNEL SELECT** and continue programming one or more functions as described above.

2) Programming of one or more common functions is requested. For description of this part of the programming, please see the following pages.

3) Terminate the programming by pressing **PRG**. The unit returns to normal function. Only the LED for "DELAY OF ALARM" will then be lit (green), as

this LED is applied for indication of "POWER ON" after the front sheet has been mounted.

NOTE: If one or more input channels are not to be applied, this/these channels should be programmed to N/O and no alarm on cable breakage (i.e. the LED for "CABLE FAILURE" is red). On delivery, all input channels have this status.

5 PROGRAMMING OF COMMON FUNCTIONS

If the alarm panel has been set to programming status (LED for "PRG": green), press **FUNCTION TEST** to set the unit to programming status for common functions. The LED for "PRG" remains lit (green) to indicate that the unit has been set to programming status.

It is of course possible to set the unit to programming status for common functions direct from normal operational mode: press **PRG**, then press **FUNCTION TEST**.

NOTE: Both buttons – PRG and FUNCTION TEST – are positioned behind the front plate of the alarm panel and are activated by means of a thin screwdriver, a needle or the like. Do not use a pencil!

Note that when set to programming status for common functions, none of the LEDs for input channels is lit, as programming is now carried out for common functions, not individual channels.

The unit is now ready to be programmed for the first common function of the order.

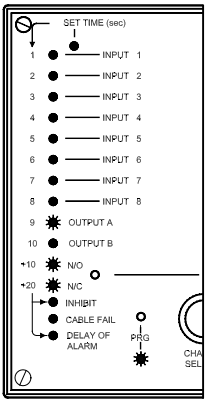
5.1 *SELECTION OF ACTIVATION/DEACTIVATION OF OUTPUT RELAY A ON AN ALARM CONDITION (N/O, N/C)*

After pressing PRG and FUNCTION TEST, the LED "OUTPUT A" is lit (green).

The "N/O" and "N/C" LEDs indicate the actual function as follows:

NOTE: Both LEDs are lit simultaneously.

EITHER:	***GREEN*** N/O	FUNCTION:
	RED N/C	Relay output A activated on alarm
OR:	***RED*** N/O	FUNCTION:
	GREEN N/C	Relay output A deactivated on alarm

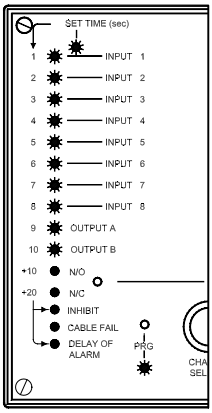


Pressing **FUNCTION SELECT** causes a change from one indication/function to the other.

When the requested function is indicated, enter this into the programme memory by pressing **ENTER**.

5.2 SELECTION OF TIME LIMITED ACTIVATION/DEACTIVATION OF OUTPUT RELAY A

When the requested function as regards activation/deactivation of output relay A has been entered, the LED for "SET TIME" is lit (green) and the LEDs 1-10 are lit (red/green – see below).



The time limit can be set within the range 0..10 secs at intervals of 1 sec. The LEDs 1-10 indicate the actual time limit as follows:

All 10 LEDs are red: the time limit is 0 sec., and output relay A will be activated or deactivated (depends on selection above) as long as one or more alarms are registered and the inputs for these are connected to output A.

I.e. the duration of the activation/deactivation of output relay A is unlimited and continues until alarm reset is carried out.

One of the LEDs 1-10 is green: duration of activation/deactivation of output relay A is limited when an alarm is registered and the input for this is connected to output A.

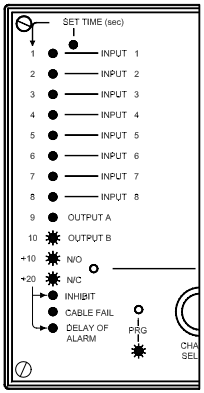
NOTE: As the "OUTPUT A" LED is applied to indicate the time delay as well, it will flash (green or red, depending on whether the actual time is included in the actual time delay or not).

Press **FUNCTION SELECT**, until the requested time limit is indicated and enter this into the programme memory by pressing **ENTER**.

The "OUTPUT B" LED will then be lit (green) and programming of relay output B like the one just carried out for A may now be carried out.

5.3 *SELECTION OF ACTIVATION/DEACTIVATION OF OUTPUT RELAY B ON AN ALARM CONDITION (N/O, N/C)*

When output relay A has been programmed, the "OUTPUT B" LED is lit (green) and the "N/O" and "N/C" LEDs indicate the actual function as follows:



NOTE: Both LEDs are lit simultaneously.

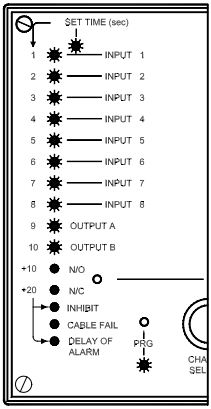
EITHER:	***GREEN*** N/O	FUNCTION:
	RED N/C	Output relay B is activated on alarm
OR:	***RED*** N/O	FUNCTION:
	GREEN N/C	Output relay B is deactivated on alarm

Pressing **FUNCTION SELECT** causes a change from one indication/function to the other.

When the requested function is indicated, this is entered into the programme memory by pressing **ENTER**.

5.4 SELECTION OF TIME LIMITED ACTIVATION/DEACTIVATION OF OUTPUT RELAY B

When the requested function as regards activation/deactivation of output relay B has been entered, the "SET TIME" LED is lit (green) and the LEDs 1-10 are lit (red/green).



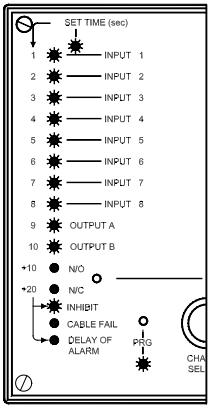
This time limit is programmed as described above for activation/deactivation of output relay A.

Consequently: Press **FUNCTION SELECT**, until the requested time limit for output relay B is indicated and enter this into the programme memory by pressing **ENTER**.

The "INHIBIT" LED is then lit (green) and the next function may be programmed.

5.5 DELAYED CANCELLATION OF INHIBIT FUNCTION (0..40 secs)

When the "INHIBIT" LED is lit (green), the LEDs 1-10 indicate the actual basic time for delayed cancellation of the inhibit function.



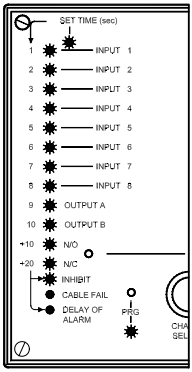
If all LEDs 1-10 are red, the actual time delay is 0 sec.

If one of the LEDs is green, the actual basic time delay corresponds to the figure to the left of the LED.

Press **FUNCTION SELECT**, until the requested basic time is indicated.

Press **ENTER** to enter the basic time.

When the basic time has been entered, the "+10" and "+20" LEDs are lit, indicating the additional time as follows:



NOTE: Both LEDs are lit simultaneously.

EITHER:	+10	***RED***	ADDITIONAL TIME:
	+20	***RED***	0 sec.
OR:	+10	***GREEN***	ADDITIONAL TIME:
	+20	***RED***	10 secs.
OR:	+10	***RED***	ADDITIONAL TIME:
	+20	***GREEN***	20 secs.
OR:	+10	***GREEN***	ADDITIONAL TIME:
	+20	***GREEN***	30 secs.

Pressing FUNCTION SELECT causes a change from the actual indication/function for additional time to the next in line.

So press **FUNCTION SELECT**, until the requested additional time is indicated and press **ENTER** to enter this into the programme memory.

The programming of common functions is hereby finished, and the alarm panel automatically returns to programming status for individual functions, i.e. the LED for the input channel to which it last was pointed is lit (green) and of course the LED for "PRG" is lit.

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You may now choose between 3 possibilities:

1) To return to the programming of common functions:

    a. Press **FUNCTION TEST** again.

2) To programme one or more individual functions (input channels 1-8):

    a. Press **FUNCTION SELECT** if the requested channel is being pointed to, or select a new channel by pressing **CHANNEL SELECT**.

3) To terminate the programming by pressing **PRG**, by which the unit returns to normal function. Only the LED for "DELAY OF ALARM" will then be lit (green), as this LED is applied to indicate "POWER ON" when the front sheet is mounted.

6 MAIN/EXTENSION CONFIGURATION

Up to 5 units may by means of branch connections on the rear be connected together in a main/extension configuration (max. distance between two units: 50 cm.). As regards programming, there is no difference between a main and an extension unit, and units applied as extension units are therefore programmed as described in this manual.

In a main/extension configuration, alarms and relay output for horn are reset centrally on the main unit.

Functional test by means of the FUNCTION TEST push-button is carried out locally but is reset centrally on the main unit by means of the HORN RESET and LAMP RESET push-buttons.

NOTE: Before connecting alarm panels to each other by means of the ribbon cable, ensure that the auxiliary supply to the units is disconnected during the procedure. Reconnect the auxiliary supply when the ribbon cable is secured.