

IO-ISO 3 I/O PLUS MAINS I/O

MANUAL 210526



MADE IN PORTUGAL - EU

GLOBAL FIRE EQUIPMENT S.A.

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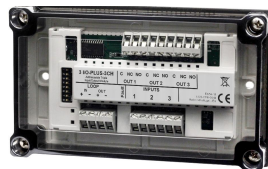
PROGRAMMING MANUAL

INTRODUCTION

This manual explains in detail how to use and program the following modules:



IO-ISO



3 I/O PLUS *all variants*



MAINS I/O

PROGRAMMING MODE

In order to set the module in programming mode first POWER OFF your module then set DIL Switches 1 to 7 to OFF and Switch 8 to the ON position, as indicated on the image below. Finally POWER ON your module.



Switches 1-7 - Used to select programming parameter and assigned value.

Switch 8 - Programming Mode.

When in programming mode the 2 LEDs will flash alternatively. The unit will remain in programming mode while SW 8 is in the ON position. When Switch 8 goes from ON to the OFF position the settings indicated on Switches 1 through 7 will be recorded on the non-volatile memory of the module. If a new parameter has been accepted, the Green LED for **IO-ISO** or Yellow LED for **MAINS I/O** or **3 I/O PLUS** modules, will flash 4 times. When programming is not accepted the Red indicator will remain on for an extra 3 seconds.

Programmable Options

In order to program the different functions available use Switches 1 through 7 as shown below:



A - The first 3 Switches select the function to be programmed.

B - Switches 4 through 7 select the value for the function to be programmed.

OUTPUT CONFIGURATION

Output will activate when the programmed delay has elapsed. Alternatively an activation period can be programmed during which the output will be active. The output relay will revert to the OFF position once the time has elapsed.

The table below shows the available functions and correspondent values, as well as the DIL Switch configuration needed to obtain the desired output configuration:



In order to program the different functions available use Switches 1 through 7 as shown below:

FUNCTION				VALUE				
DIL SWITCH	SW1	SW2	SW3	DIL SWITCH	SW4	SW5	SW6	SW7
OUTPUT MODE FUNCTION	ON	OFF	OFF	NORMAL (<i>Default</i>)	OFF	OFF	OFF	OFF
				TIMED	ON	OFF	OFF	OFF
				DELAYED	OFF	ON	OFF	OFF
OUTPUT TIMER FUNCTION	OFF	ON	OFF	30s (<i>Default</i>)	OFF	OFF	OFF	OFF
				60s	ON	OFF	OFF	OFF
				90s	OFF	ON	OFF	OFF
				120s	ON	ON	OFF	OFF
				150s	OFF	OFF	ON	OFF
				180s	ON	OFF	ON	OFF
				210s	OFF	ON	ON	OFF
				240s	ON	ON	ON	OFF
				270s	OFF	OFF	OFF	ON
				300s	ON	OFF	OFF	ON
				360s	OFF	ON	OFF	ON
				420s	ON	ON	OFF	ON
				480s	OFF	OFF	ON	ON
				540s	ON	OFF	ON	ON
				600s	OFF	ON	ON	ON

Step by step OUTPUT configuration example

OUTPUT MODE FUNCTION

Let's assume that the desired OUTPUT MODE FUNCTION configuration is a delayed output.

To obtain this configuration the following steps need to be taken:

STEP 1: Remove power from the module.

STEP 2: Set DIL Switched 1 to 7 to the OFF position and DIL Switch 8 to the ON position.

STEP 3: Power up the module. The two LEDs flashing alternatively will indicate that the module is in programming mode.

STEP 4: Set the DIL Switches 1 to 3 to OUTPUT MODE FUNCTION (SW1: ON, SW2: OFF SW3: OFF).

STEP 5: Set the DIL Switches 4 to 7 to DELAYED (SW4: OFF, SW5: ON, SW6: OFF & SW7: OFF).

STEP 6: Set the Switch 8 to the OFF position. The Green LED will flash 4 times.

The module's Output is now programmed with a delay of 30s, which is the default Output Timer value.

OUTPUT TIMER FUNCTION

Now that the module's output is programmed to have a 30s delay, let's assume that desired delay value is 120 seconds.

In order to configure the timer, the following steps need to be taken:

STEP 1: Remove power from the module.

STEP 2: Set DIL Switched 1 to 7 to the OFF position and DIL Switch 8 to the ON position.

STEP 3: Power up the module. The two LEDs flashing alternatively will indicate that the module is in programming mode.

STEP 4: Set the DIL Switches 1 to 3 to OUTPUT TIMER FUNCTION (SW1: OFF, SW2: ON & SW3 OFF).

STEP 5: Set the DIL Switches 4 to 7 to 120s (SW4: ON, SW5: ON, SW6: OFF & SW7 OFF).

STEP 6: Set the Switch 8 to the OFF position. The Green LED will flash 4 times.

The module's Output Timer is now programmed to 120s.

OUTPUT LED BEHAVIOUR

The LED associated with each output operates as follows:

	OUTPUT LED
OFF	OUTPUT OFF
ON	OUTPUT ON
FLASHING	DURING ACTIVATION DELAY

INPUT CONFIGURATION

There is a **Delayed Input Activation Mode** available. If this configuration is programmed, the Input will only report an Alarm after the input delay time has elapsed.

Besides the delay, the Input can also be programmed to:

1. **4K7 CLOSE TO ALARM:** Normally Open (NO) Contact Activation. This is the most common case. It monitors the EOL 22k ohm resistor, and trigger ALARM if applied 4k7 resistor in parallel;
2. **SHORT CIRCUIT TO ALARM:** Short Circuit (SC) Activation. This mode is constantly monitoring 22k EOL, in case of SC it will trigger ALARM, in case of OC it will trigger FAULT;
3. **OPEN CIRCUIT TO ALARM:** Open Circuit (OC) Activation. This mode is constantly monitoring the 22k EOL, in case of OC it will trigger ALARM, in case of SC it will trigger FAULT;
4. **4K7 OPEN TO ALARM:** Normally Closed (NC) Contact Activation. This mode applies to Normally Closed contacts. It monitors the normally closed connected 4k7 resistor in parallel with 22k EOL. In case of SC or OC it will trigger FAULT. In case of 4k7 disconnection (by keeping the 22k) it will trigger ALARM.

INPUT BEHAVIOUR

The table below shows the input behaviour for the different programmable configurations:

INPUT	ANALOGUE VALUE			
	Short Circuit	4K7 // 22K	22K	Open Circuit
4K7 CLOSE TO ALARM	4	64	16	4
SHORT CIRCUIT TO ALARM	64	64	16	4
OPEN CIRCUIT TO ALARM	4	4	16	64
4K7 OPEN TO ALARM	4	16	64	4

NOTE: Analogue value 4 = FAULT; Analogue value 16 = OK; Analogue value 64 = ALARM.

The table below shows the available functions and correspondent values, as well as the DIL Switch configuration needed to obtain the desired output configuration.



FUNCTION				VALUE				
DIL SWITCH	SW1	SW2	SW3	DIL SWITCH	SW4	SW5	SW6	SW7
INPUT ACTIVATION MODE	ON	ON	OFF	4K7 CLOSE TO ALARM <i>(Default)</i>	OFF	OFF	OFF	OFF
				SHORT CIRCUIT TO ALARM	ON	OFF	OFF	OFF
				OPEN CIRCUIT TO ALARM	OFF	ON	OFF	OFF
				4K7 OPEN TO ALARM	ON	ON	OFF	OFF
ACTIVATION FINPUT DELAYED UNCTION	OFF	OFF	ON	0s <i>(Default)</i>	OFF	OFF	OFF	OFF
				10s	ON	OFF	OFF	OFF
				20s	OFF	ON	OFF	OFF
				30s	ON	ON	OFF	OFF
				40s	OFF	OFF	ON	OFF
				50s	ON	OFF	ON	OFF
				60s	OFF	ON	ON	OFF
				70s	ON	ON	ON	OFF
				80s	OFF	OFF	OFF	ON
				90s	ON	OFF	OFF	ON
				100s	OFF	ON	OFF	ON
				110s	ON	ON	OFF	ON
				120s	OFF	OFF	ON	ON
				130s	ON	OFF	ON	ON
				140s	OFF	ON	ON	ON
150s	ON	ON	ON	ON				

Step by step INPUT configuration example

INPUT ACTIVATION MODE

Let's assume that the desired INPUT ACTIVATION MODE configuration is SHORT CIRCUIT TO ALARM. To obtain this configuration the following steps need to be taken:

STEP 1: Remove power from the module.

STEP 2: Set DIL Switched 1 to 7 to the OFF position and DIL Switch 8 to the ON position.

STEP 3: Power up the module. The two LEDs flashing alternatively will indicate that the module is in programming mode.

STEP 4: Set the DIL Switches 1 to 3 to INPUT ACTIVATION MODE (SW1: ON, SW2: ON & SW3: OFF).

STEP 5: Set the DIL Switches 4 to 7 to SHORT CIRCUIT TO ALARM (SW4: ON, SW5: OFF, SW6: OFF & SW7: OFF).

STEP 6: Set the Switch 8 to the OFF position. The Green LED will flash four times.

The module's is now programmed to trigger an alarm when a short circuit is applied to the input.

INPUT DELAYED ACTIVATION FUNCTION

Let's assume that a delayed input with a 70 seconds delay is needed.
In order to configure the timer, the following steps need to be taken:

STEP 1: Remove power from the module.

STEP 2: Set DIL Switched 1 to 7 to the OFF position and DIL Switch 8 to the ON position.

STEP 3: Power up the module. The two LEDs flashing alternatively will indicate that the module is in programming mode.

STEP 4: Set the DIL Switches 1 to 3 to INPUT DELAYED ACTIVATION FUNCTION (SW1: OFF, SW2: OFF & SW3: ON).

STEP 5: Set the DIL Switches 4 to 7 to 70s (SW4: ON, SW5: ON, SW6: ON & SW7: OFF).

STEP 6: Set the Switch 8 to the OFF position. The Green LED will flash 4 times.

The module's Output Timer is now programmed to 120s.

INPUT LED BEHAVIOUR

The LED associated with each Input operates as follows:

	INPUT LED
OFF	INPUT OFF
ON	INPUT ON
FLASHING	DURING ACTIVATION DELAY

In order to record new parameter value in the non-volatile memory, reset Switch 8 to the OFF position.

ONE ADDRESS MODE (3 I/O PLUS 2 and 3 Channel only)

There is a **ONE ADDRESS MODE** available for 3 I/O PLUS 2 and 3 Channel. In this mode, the module will monitor all inputs but respond only with one address to the Addressable Panel. The module will report as follows:

- **FAULT:** If any of the inputs has a Short or Open circuit fault present the module will report analogue value 4 to the Panel.
- **ALARM:** If any of the inputs has been activated, the module will repost analogue value 64 to the Panel.
- If there is no Faults or Alarms present, the module will report analogue value 16 to the Panel.
- If an output activation as been sent by the Panel all 3 outputs will activate.

The Table below shows the DIL Switch values in order to configure the ONE ADDRESS MODE configuration.



FUNCTION				VALUE				
DIL SWITCH	SW1	SW2	SW3	DIL SWITCH	SW4	SW5	SW6	SW7
ONE ADDRESS MODE	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
				ON	ON	OFF	OFF	OFF

Step by step INPUT configuration example

INPUT ACTIVATION MODE

Let's assume that the desired ONE ADDRESS MODE configuration is ON.

To obtain this configuration the following steps need to be taken:

STEP 1: Remove power from the module.

STEP 2: Set DIL Switched 1 to 7 to the OFF position and DIL Switch 8 to the ON position.

STEP 3: Power up the module. The two LEDs flashing alternatively will indicate that the module is in programming mode.

STEP 4: Set the DIL Switches 1 to 3 to ONE ADDRESS MODE (SW1: ON, SW2: OFF & SW3: ON).

STEP 5: Set the DIL Switches 4 to 7 to ON (SW4: ON, SW5: OFF, SW6: OFF & SW7: OFF).

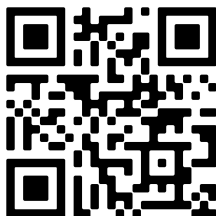
STEP 6: Set the Switch 8 to the OFF position. The Green LED will flash four times.

The module's is now programmed to function with one address only.

FACTORY DEFAULT VALUES

In order to clear all programmed values and reset module to factory defaults please execute the following steps:

- First ensure module is set in programming mode, first by placing DIL Switches 1 to 7 to OFF followed by setting Switch 8 to ON.
- Set all Switches from 1 to 7 to ON.
- Finally reset Switch 8 to the OFF position.



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