

# Manual

## MS5B Alarm unit



 **AMI** | MARINE

  
**MARBLE**  
*Full Control!*

## **Safety Instructions**

### **Important**

Before starting with installation of the MS5B Alarm Unit, we recommend you to read the important information beneath.

### **Qualification**

The installation of the product detailed in this manual must be done by a certified installation company. If not, the warranty becomes void.

### **Caution:**

Before installing the MS5B Alarm Unit, check if all parts are present.

The package includes:

- MS5B
- Manual MS5B
- Mounting Clips (2x)

### **Disclaimer:**

Marble Automation will not be responsible for any damage or loss of profit resulting from the use of this equipment.

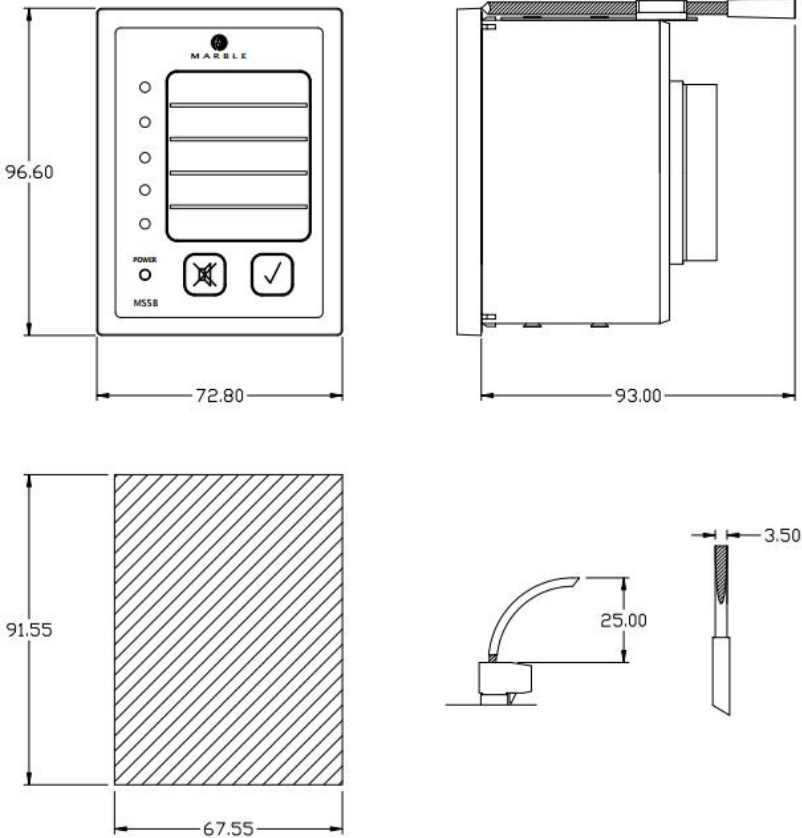
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## 1. Installation Manual

### Mechanical Installation

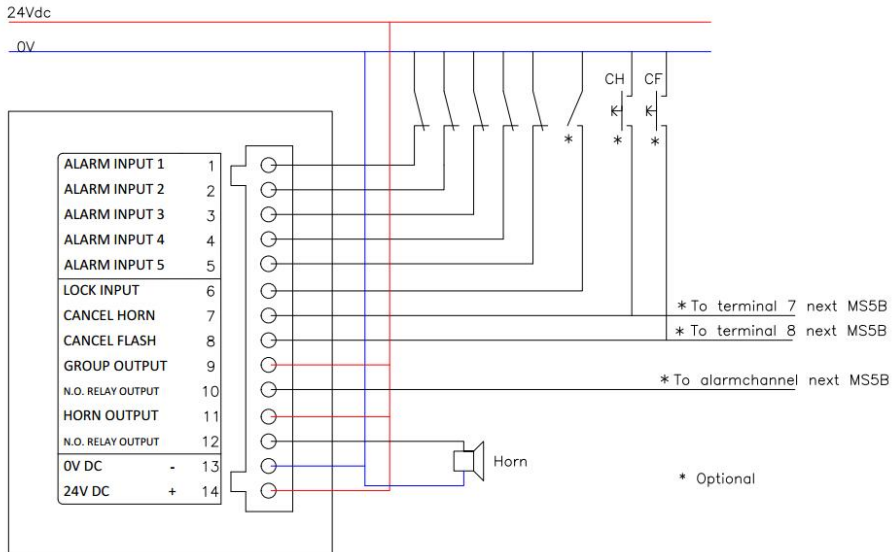
The MS5B Alarm Unit is specially designed for mounting in a switchboard or desk. The unit can be mounted in the panel or desk with two mounting clips which are included. Beneath you will find the dimensions needed to mount the MS5B unit.



### Technical specifications

Description	Specification
Supply voltage	18-36 V DC
Power consumption	2,2 Watt
Digital inputs	5 (NC/NO)
Digital lock inputs	1 (NC/NO)
Group outputs	1 (NC/NO)
Relay output	1 (NC/NO)

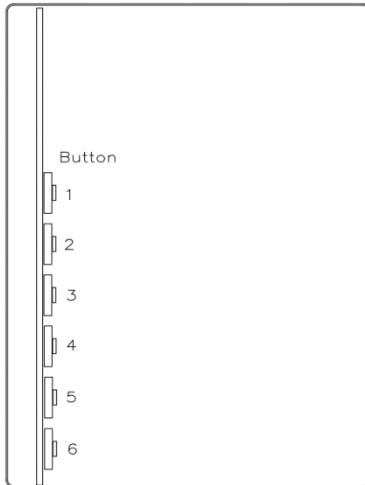
### Electrical Installation



## 2. Configuring the MS5B Alarm Unit

### General procedure

The MS5B Alarm Unit can be configured by six buttons located on the PCB right behind the front panel. Remove the black frame and front panel to access the buttons inside.



The default settings are:

Function	Default setting
Alarm input	NC
Alarm/Status	Alarm
Horn relay	Level
Group	No group
Lock	No lock
Input delay	1 s

If one of the buttons is pressed you will enter program mode.

First choose the channel to be modified ( 1 to 5 ). Press this button once for the channel settings ( See table 1 ) and wait for the RUN LED to stop blinking before pressing the buttons again.

Table 1	Channel settings	
Button	LED OFF	LED ON
1	Alarm input NC	Alarm input NO
2	Input set as alarm	Input set as status
3	Horn relay set as level	Horn relay set as dip
4	Alarm input not linked to lock input	Input linked to lock input
5	Alarm input not linked to group output	Input linked to group output
6	All alarm/lock/group settings to default	

To save the chosen parameters, wait for four seconds without operating any buttons.

### Set Channel NO or NC

To set a channel to accept an NO or NC contact, press switch 1-5 once to select the channel. Wait till the RUN LED stops blinking and press button 1 to select.

### Set Alarm or Status

To set a channel to Alarm or Status press switch 1-5 once to select the channel. Wait till the RUN LED stops blinking and press button 2 to select. When Status is selected, the LED will show the status of the input and the horn will not sound.

### Set horn relay level or dip

To set the Horn relay to Level or Dip press switch 1-5 once to select the channel. Wait till the RUN LED stops blinking and press button 3 to select.

When set to Dip the horn relay will be de-activated for 1 second when the selected channel becomes active.

### Link channel to lock input

To link a channel to the Lock input press switch 1-5 once to select the channel. Wait till the RUN LED stops blinking and press button 4 to select.

### Link channel to the group output

To link a channel to the Group output press switch 1-5 once to select the channel. Wait till the RUN LED stops blinking and press button 5 to select.

### Set all channels settings to default

To set the channel settings to default press any switch 1-5 once. Wait till the RUN LED stops blinking and press button 6.

### Set alarm input delay

First choose the channel to be modified. Press this button ( 1 to 5) twice while the RUN LED is still blinking and wait for the RUN LED to stop blinking before pressing the second button.

Select the delay time according to table 2.

Table 2	Alarm Input Delay settings
Button	Set alarm input delay
1	1 second
2	5 seconds
3	10 seconds
4	15 seconds
5	20 seconds
6	25 seconds

To save the chosen parameters, wait for four seconds without operating any buttons.

### Set lock and group

Press this button 6 once while the RUN LED is still blinking and wait for the RUN LED to stop blinking before pressing the second button. ( See table 3 )

Table 3	Lock/Group settings		
Button	LED OFF	LED ON	LED BLINK
1	Lock input NC	Lock input NO	
2	Direct lock input	*Delayed lock input	LED Sync option
3	* On delay	*Off delay	
4	Group output NO	Group output NC	
5	Group output level	Group output dip	
6	Horn NO	Horn NC	

To save the chosen parameters, wait for four seconds without operating any buttons.

\* ‘On delay’ or ‘Off delay’ can only be selected when ‘Delayed lock input’ is selected.

### Set lock input NO or NC

To set the Lock input to NO or NC press button 6 once. Wait till the RUN LED stops blinking and press button 1.

### Set lock input Direct, Delayed or LED sync.

To set the Lock input to Direct, Delayed or LED sync pulse button 6 to the desired on/off/blink position. Wait till the RUN LED stops blinking and press button 2. When the LED sync. option is used, the Lock input expects a 500 ms pulse. The alarm LEDs will blink with this pulse. This is used when multiple MS5B units are placed next to each other. In that case, all units must have the same power supply.



### Set lock input On delay or Off Delay

To set the Lock input to On delay or off Delay press button 6 once. Wait till the RUN LED stops blinking and press button 3.

### Set group output NO or NC.

To set the Group Output to NO or NC press button 6 once. Wait till the RUN LED stops blinking and press button 4.

### Set group output Level or Dip.

To set the Group Output to Level or Dip press button 6 once. Wait till the RUN LED stops blinking and press button 5.

### Lock delay

**This functions works only when in the previous setting the “Delayed Lock Input “is selected.**

Press this button 6 twice while the RUN LED is still blinking and wait for the RUN LED to stop blinking before pressing the second button.

Table 4	Lock input delay
Button	Set lock input delay
1	1 second
2	5 seconds
3	10 seconds
4	15 seconds
5	20 seconds
6	25 seconds

To save the chosen parameters, wait for four seconds without operating any buttons.

### Set Lock delay

To set the Lock delay press button 6 twice. Wait till the RUN LED stops blinking and select the delay time according to table 4.

### 3. User manual

The MS5B from Marble automation is a flexible solution to build an alarm circuit with five digital inputs. These inputs can be shown as alarm or status messages.

The MS5B is easy to configure on site.

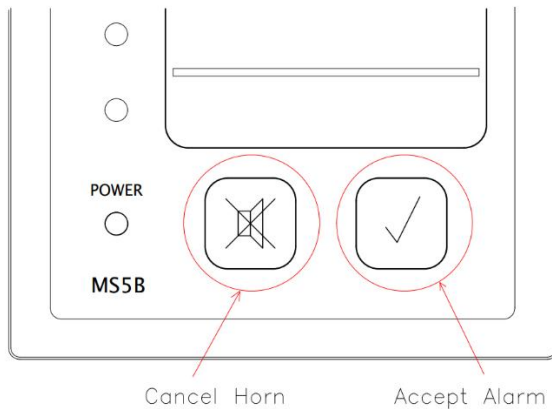
A lock input is provided to inhibit the five alarm channels. The MS5B can be applied in maritime as well as industrial applications.

The MS5B is equipped with six galvanic separated digital inputs, five inputs are alarm inputs and one input to lock alarm inputs. The inputs of the MS5B can be used as alarm or status inputs. The MS5B has two potential free relay outputs for the horn and the group output.

#### Operation

##### Accepting alarms

To cancel the horns, press the 'Cancel Horn' button. After that the 'Accept Alarm' button can be pressed. This will cause the LED to light steady or turn off if the alarm has recovered.



##### Dimming

The power LED can be dimmed by holding the 'Cancel horn' button. Hold down the 'Cancel Horn' button for a few seconds to set the amount of dimming.

##### LED-test

The LED lights can be tested by pressing the 'Cancel Horn' and 'Accept' buttons simultaneously. All LED lights should light up and after 2 seconds the horn relay will be triggered.

#### 4. Maintenance

The MS5B unit is maintenance free. It is permitted to clean the front of the MS5B unit with a damp cloth.

#### 5. Troubleshooting

Symptom	Possible cause	Test and remedies
Green LED is not flashing	Power supply is not connected	Check if power supply is connected
Green light gives a steady light	Micro controller is in error.	Reset the Power Supply
	Processor is faulty	Contact Marble Automation
Alarm is not triggered	Sensor is faulty.	Repair/replace faulty sensor.
	Electrical installation is broken	Check electrical installation
All alarm inputs are active, no response on open/ closing input contact.	Broken wire common 0Vdc	Check your electric installation for loose wire.

