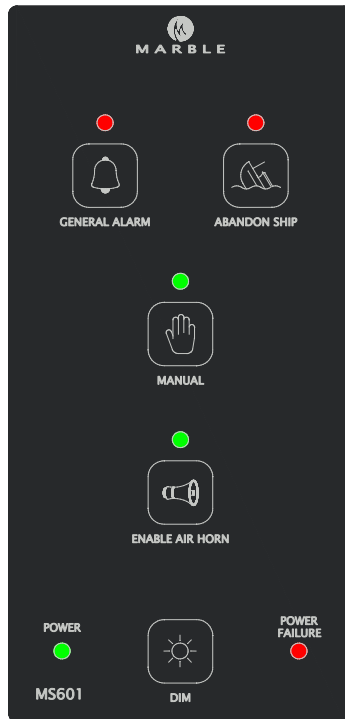


# Manual

## MS601 Signal Unit



## **Safety Instructions**

### **Important**

Before starting with installation of the MS601, please read the important information below.

### **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 starting with installing the MS601 Signal Unit, check if all parts are present.

The package includes:

- MS601
- Installation/User Manual MS601
- 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. Description**

The MS601 is designed to generate alarm signals, is intended for use on sea going vessels and will be mounted in the bridge.

The device generates signals of different forms according to the IMO rules as described in Code on Alerts and Indicators 2009.

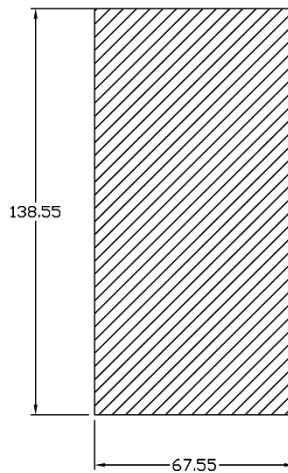
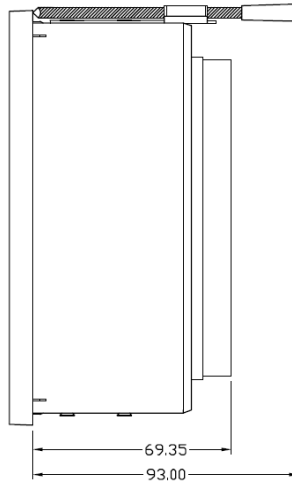
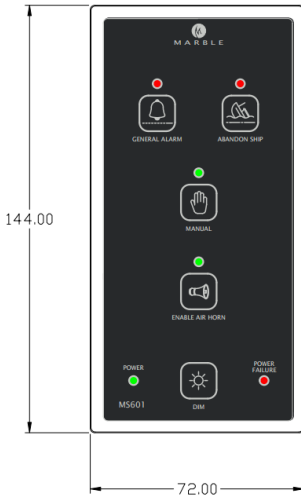
The MS601 has a standard DIN housing of 144 x 64 mm. For redundancy, it is possible to connect two different power sources. The main power source is 24 V DC and the secondary power source is 24V DC from the batteries. An alarm is generated when one of these power supplies has failed.

The two power sources are merged to create the power for the Alarm Bells output. Also the power supply for the system itself is taken from this source.

At the front there are buttons for :

- General Alarm
- Abandon ship
- Manual control
- Enable Air horn
- Backlight Dim control

## 2. Mechanical Installation

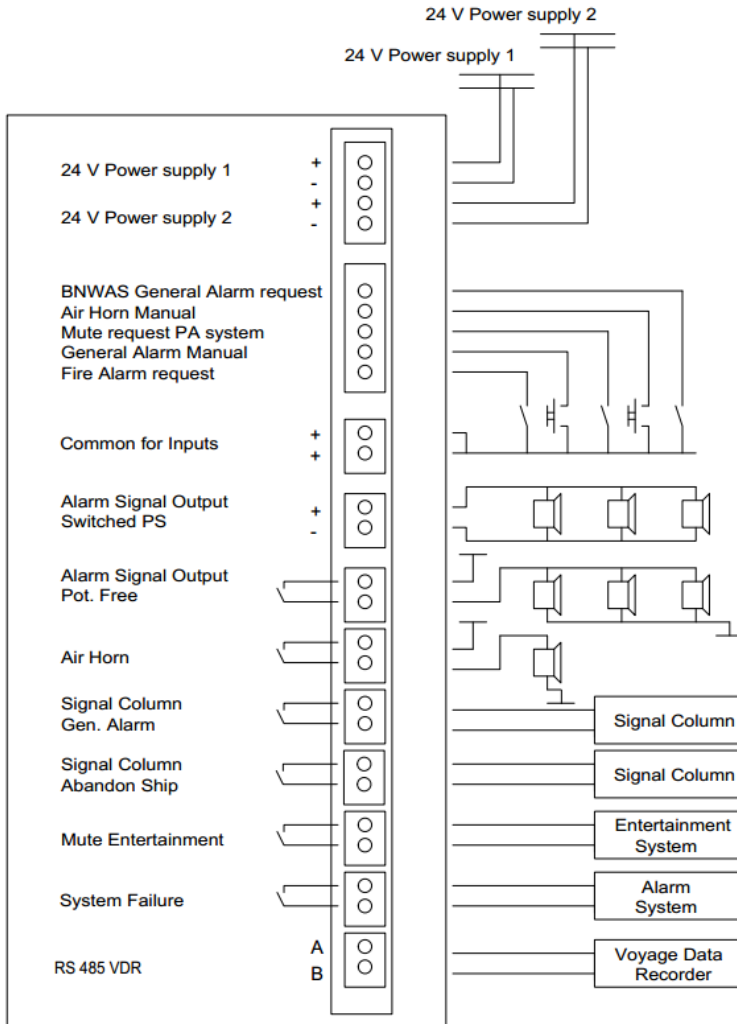


### Technical specifications

Description	Specification
Supply voltage	18-30 V DC
Power consumption	2 Watt
General alarm output switched	NO / 2A
General alarm output pot. free	NO / 2A
Air Horn output	NO / 2A
Signal Column	NO / 2A
Mute entertainment	NO / 2A
RS485	4800/N/8/1
Dry heat	70 °C
Damp heat	55 °C @ 95 % RH
Cold	-25 °C
Vibration	IEC 60068-2-6-Fc

### 3. Electrical Installation

#### Connection example



## Connections features

### Power supply

The MS601 units needs a 24V supply which is connected to the 24V positive and negative terminals. A second power supply can be connected to create redundancy.

The failure contact will open when one of the two power supplies is missing.

### Inputs

The inputs expect a 24V signal from the two common input supply terminals.

### Alarm Signals outputs

There are two alarm signals outputs available. The first has an internal connected power supply made available by merging the two main power supplies.

The horns can be connected directly to these terminals.

The second alarm output is a potential free contact which can be used to power the bells from an independent power supply.

The relay outputs will generate the according set signals when

- The General Alarm button is pressed
- The input "General Alarm" is active
- The input "BNWAS GA request" is active

The input "Mute from PA" pauses all outgoing alarm signals.

The input "Fire" creates a continuous signal as long as the input is active.

### Air Horn

A potential free relay contact is available for the air horn. This contact will close if the input "Air Horn" is active". The contact will also relay the alarm signals if the option "Enable Air Horn" is activated

### Signal Column

A potential free relay contact for the signal column which is closed if the General Alarm signal is active.



### Mute entertainment

This contact will close if any alarm signal is generated.

### System failure

This contact is normally closed. The contact will open if

- One of the power supplies is not present
- The CPU is stopped

### NMEA string

The RS485 A and B terminals are used for the VDR connection.

The NMEA string is send every 1 hour and on event.

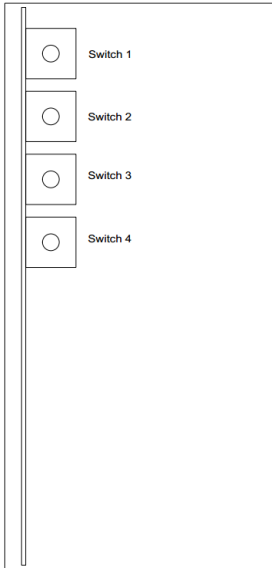
The string looks like this:

\$MS601,	Identifier
0,0,0,	Software version
000,	Active sound
000,	From internal or external
0,	DIP switch setting
0000,	BCD switches value
00,	Power supply
00000,	Internal buttons
00000,	External signals
0,	Air Horn enabled
*	Start checksum
00	Checksum
[CR][LF]	End of string

#### 4. User settings

The MS601 is designed to meet the demands of the user. This is achieved by using four internal switches which can be set to different configuration options.

Open the unit from the front side by removing the edge and the front panel.



FRONT VIEW

It is possible to configure the signals of the “General Alarm” Button and the “Abandon Ship” button with the four switches according the table below.

It is also possible to change the duration of the pulses.

The long pulse is seven time a short pulse.

Position	Switch 1	Switch 2	Switch 3	Switch 4
	General Alarm Button	General Alarm Button	Abandon ship Button	Abandon ship Button
	Signal type	Short pulse time	Signal Type	Short pulse time
0	7 short, 1 long	0.5 s	7 short, 1 long	0.5 s
1	1 short, 1 long	+ 100ms	1 short, 1 long	+ 100ms
2	Manual	+ 200ms	Manual	+ 200ms
3		+ 300ms		+ 300ms
4		+ 400ms		+ 400ms
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				
Default	0	0	1	0

## 5. Maintenance

The MS601 unit is maintenance free. It is permitted to clean the front of the MS601 unit with a damp cloth.