

Electronic Bell and Gong BG 300

Operating and installation manual



Electronic Bell and Gong
Ref. no. 20142020



Power amplifier BG 300
Ref. no. 24801484

General Information

According to the International Regulations for Preventing Collisions at Sea 1972, Rule 33, vessels of 12m in length or more shall be equipped with a bell, and vessels of 100m or more shall, in addition, be provided with a gong with the tone and sound which cannot be confused with that of the bell. The device shall produce a sound pressure level of not less than 110 dB at 1 metre. The electronic Bell & Gong system is especially developed to meet these regulations.

The Bell and Gong sound emitters are identical and electro-dynamic. They are, also, small and compact compared with many other loudspeaker designs. The design is advantageous from different aspects — not only the aesthetic.

By means of modern electronics, a power amplifier BG 300 supplies the sound emitters with the signal characters stipulated by regulation for “ship aground” and “ship at anchor”. To emit the prescribed signal characters, the Bell and Gong units are activated by buttons on the Signal Activator TI65-M.

Operating

The Signal Activator TI65-M has 2 manual push buttons, each for bell and gong, and one 3 way switch knob for automatic activation of the repeating character shown to the right. The switch knob has also an off function in the middle position. Just turn the knob to desired character and the Electronic Bell & Gong will start automatically.

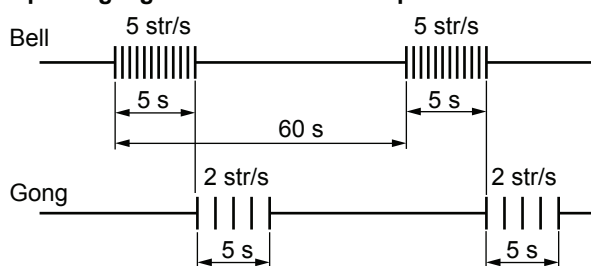
By using the manual push buttons each Bell or Gong can be operated.

Power Amplifier BG 300

The power amplifier BG 300 is developed by using the latest amplifier technology. The sound for bell and gong is recorded and synthesized from real bell and gong instruments and has a very authentic characteristic. It only requires 24V DC (7A) and max. output power is 2 x 120W.

The Power Amplifier BG 300 is to be mounted indoors and protected against water.

Repeating signal characters for ship at anchor



Repeating signal characters for ship aground



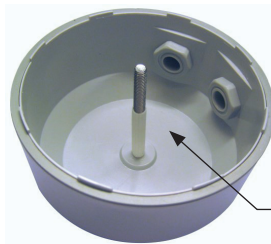
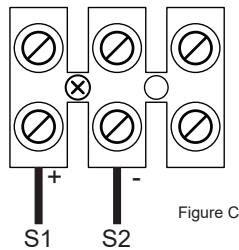
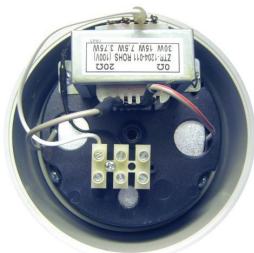
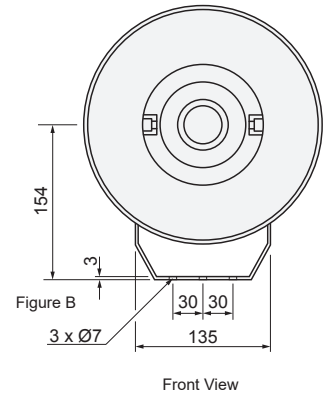
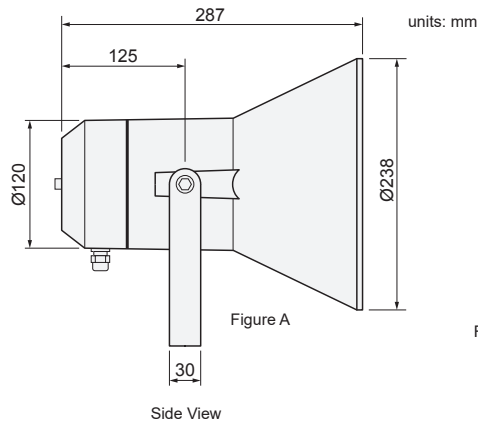
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Technical Data

Sound emitter modules are made of ABS plastic with UV inhibitors.
Made for roof or wall mounting via stainless steel U-bracket.

Temperature range: -55°C to + 60°C
Weight: ca. 2.3 kg
Colour: RAL 7035
Electrical connection: 2 x 1.5 mm² (shielded)
Cable outer diameter: Ø 6-9mm
Protection class: IP66



Observe the isolation tube before assembling.

Electrical connector inside sound emitter housing

Electrical connector

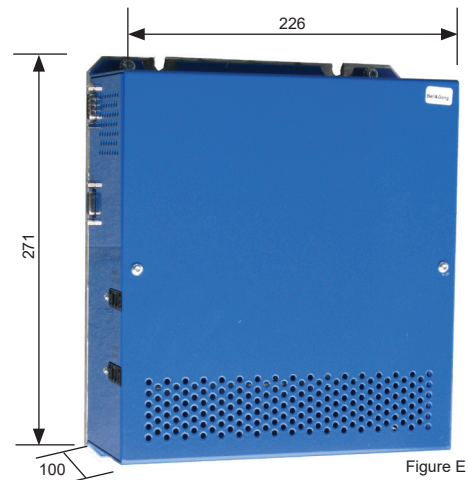
Sound emitter cover

Power Amplifier BG 300

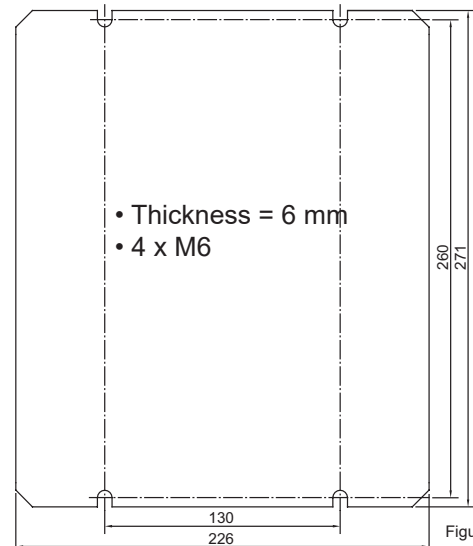
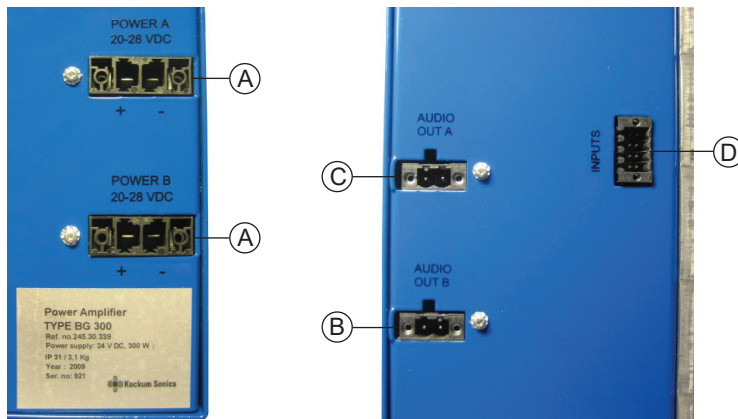
Ref. no. 24801484

Technical Data

Voltage: 24VDC
Current, operating: 7 A
Output power, max: 2 x 120W
Current, standby: <0,5A
Protection class: IP 31
Operating ambient temp: -25°C to +50°C
Dimensions: 271x226x100 mm
Weight: 3,1 kg
Colour: RAL5017



Connector positions:



Important!

The connectors can only be inserted in one position.
Connector C and D are also coded to avoid faulty insert positions.

(mounting plate on amplifier)

Signal Activator TI65-M

Ref. no. 24530189

Technical Data

- Switch knob (1,2) to choose OFF, AGROUND or ANCHOR signal
- 2 push buttons (3,4) for manual BELL or GONG signalling.



Figure G

Screw terminal on rear side

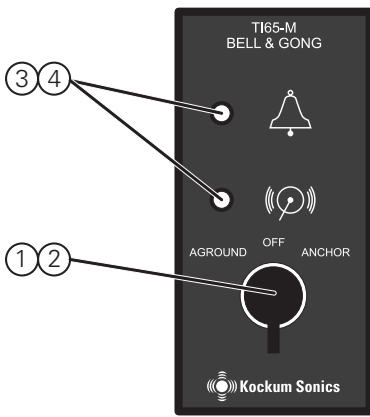


Figure H

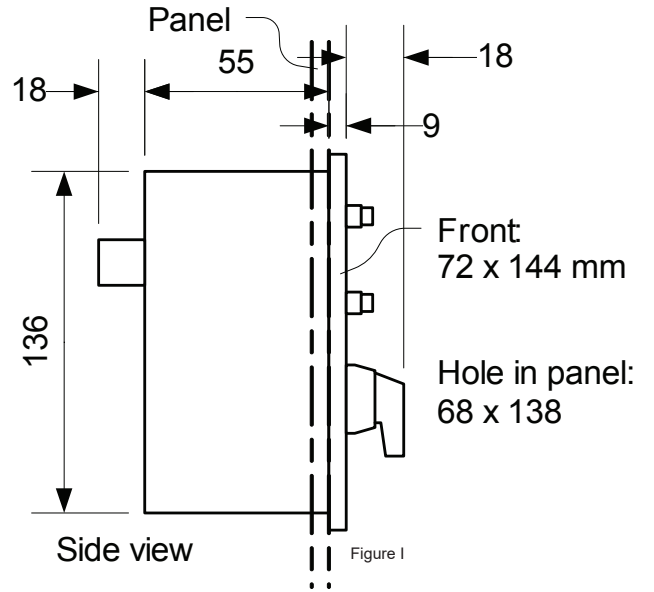


Figure I

External wiring diagram

Wiring Diagram

See last page for overview.
The inter-connection between the 4 sound-emitters should be done by using a connection-box, IP65 (yards supply).

The 24V DC supply should be protected by a 10 A slow fuse.

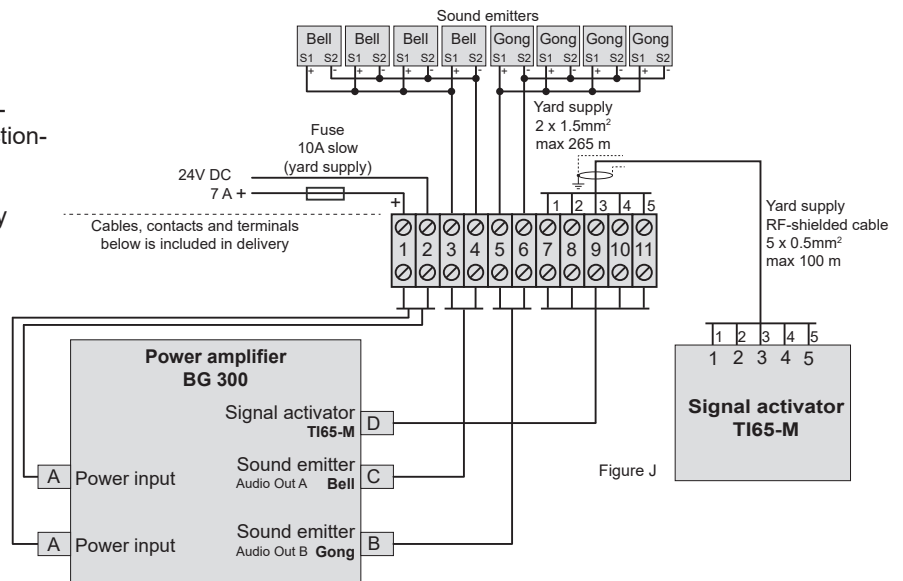


Figure J

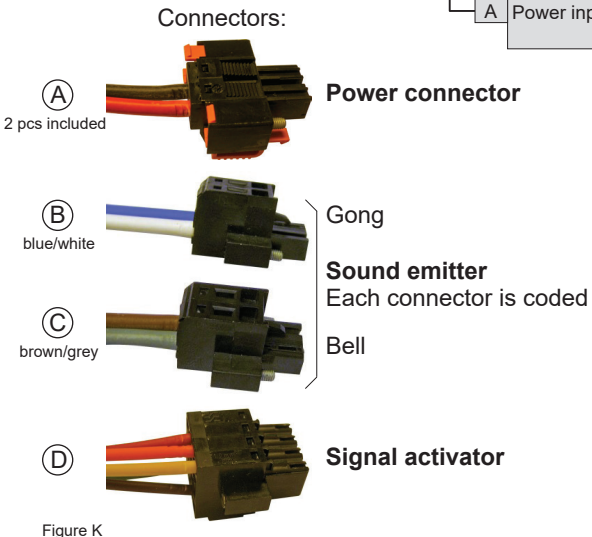
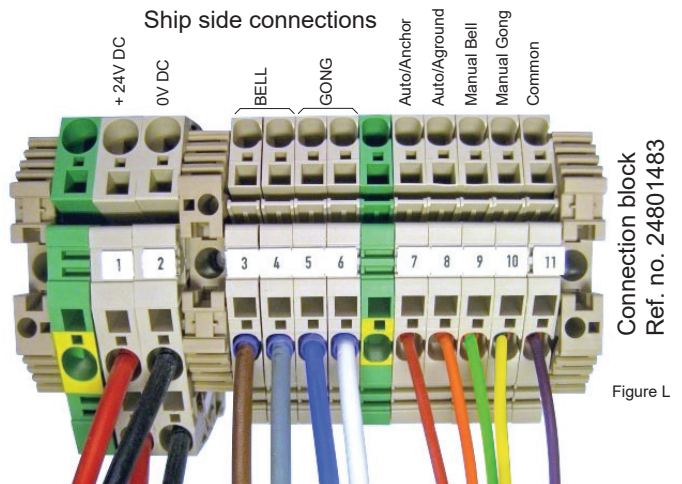


Figure K

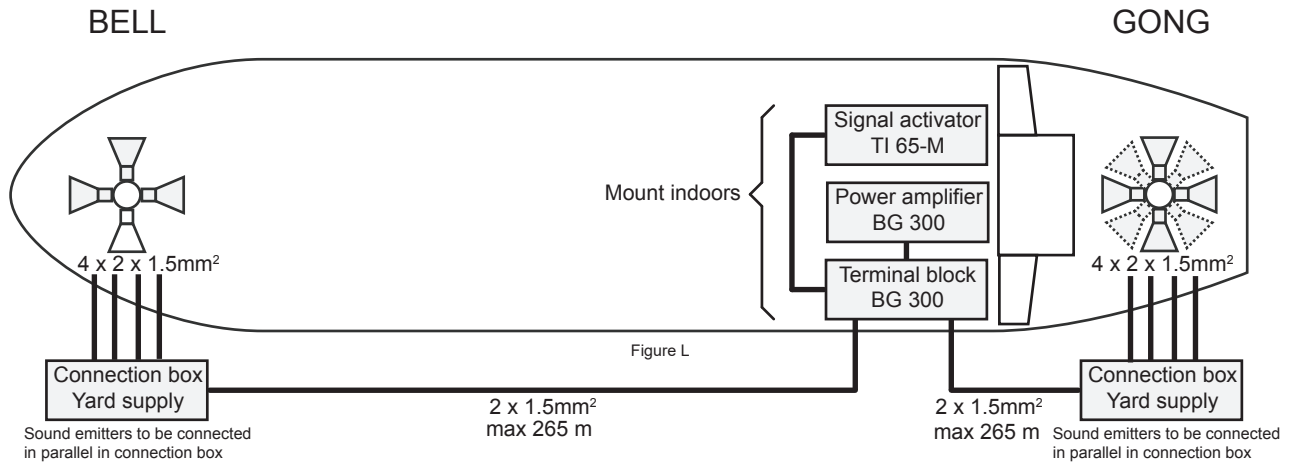
Position of plugs is shown in figure D and J.



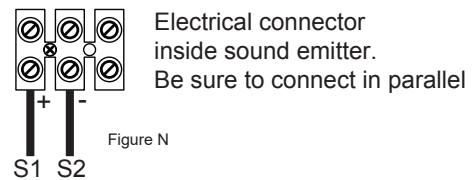
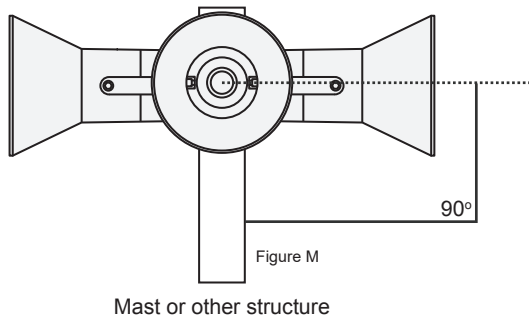
Connection block
Ref. no. 24801483

Figure L

Overview



Mount the sound emitters in horizontal position, 90°



Fault finding scheme

Symptoms	Fault	Solution
Anchor or Aground function not working	Cable fault	Check cable between TI65-M and connection block
Manual Bell or Gong not working	Cable fault	Check cable between TI65-M and connection block
No sound when activating	Cable fault	Check cable between TI65-M and connection block Check cable between connection block and sound emitters
- " -	No power supply	Check voltage on terminal 1 and 2 on the connection block

Recommended spare parts

Part name	Ref. No.
Switch knob	205.07.022
Switch block	205.02.007
Push button	205.07.020
Lens plate	205.07.021
Sound emitter	201.42.020

Spare Parts can be obtained from Kockum Sonics or their agents. When ordering, please, give reference number and part name.