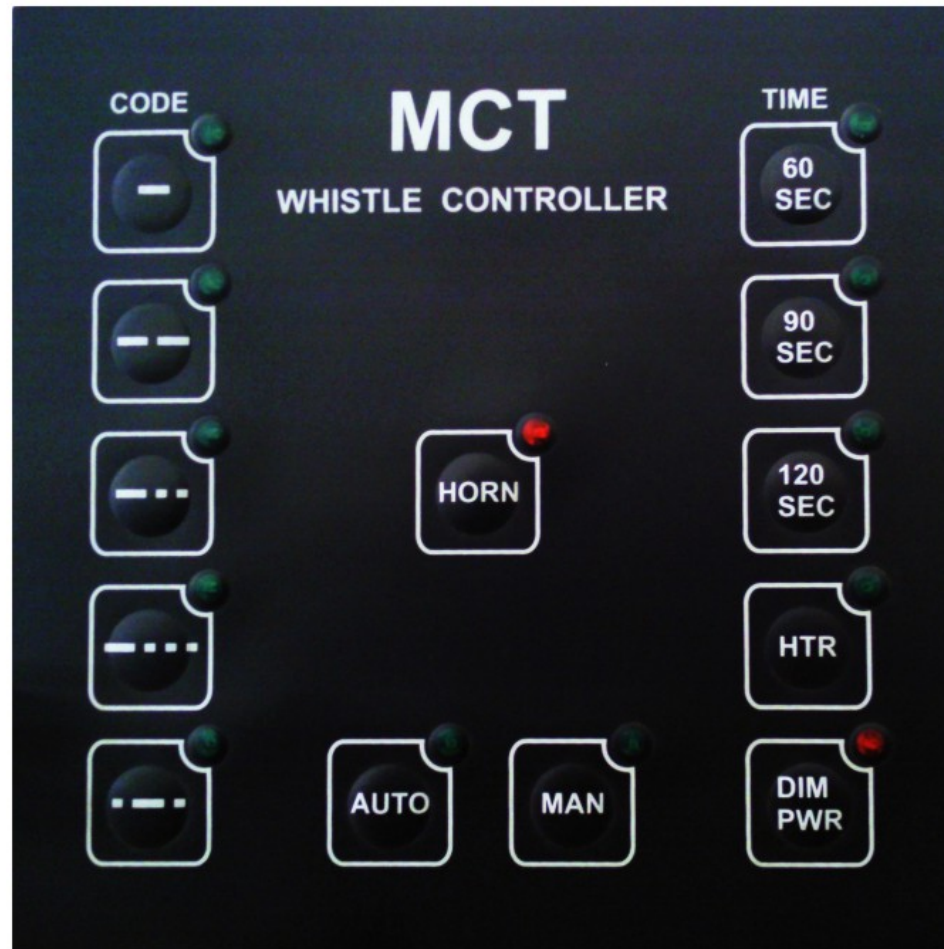


MCT WHISTLE CONTROLLER



WHISTLE CONTROLLER Designed and manufactured to comply with IMO COLREGs 1972 (Convention on the International Regulations for Preventing Collisions at Sea) RULE 35.

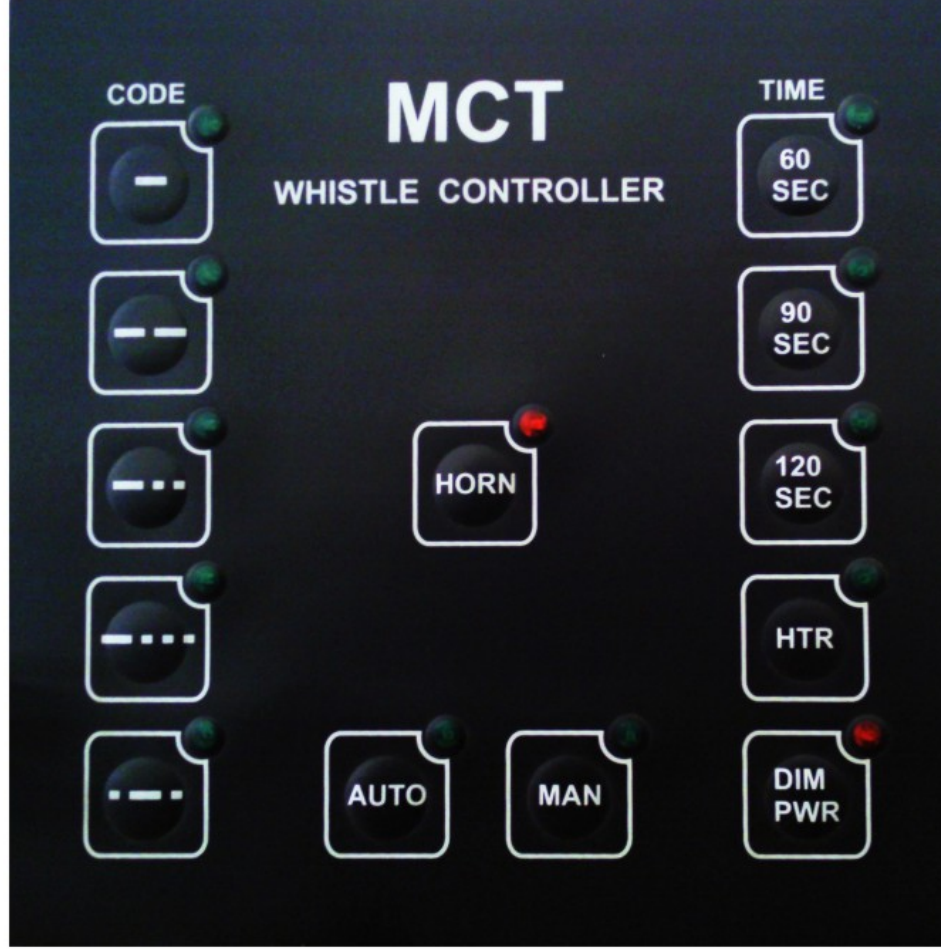
MCT Whistle Controller is a compact, and flush mount type electronic device for automatic control of the ship's horn. It provides an easy installation and connection. Control panel of the equipment is water-proof. Beside restricted visibility codes it incorporates an "at-will" push button on the front panel.

MCT Whistle Controller contributes to the safe operation of both commercial and pleasure crafts.

Other features :

- ~ Start/Stop automatic function on time intervals selected
- ~ Integrated "At-Will" push button
- ~ LED illuminations of the selected functions.
- ~ Additional push buttons can be integrated.
- ~ Both 24 Volt D.C. and 230 Volt.A.C. 50 or 60 Hz Voltages can be connected.
- ~ Dry contact outputs make flexible of air solenoid , heater and morse light supply voltage.

MCT WHISTLE CONTROLLER



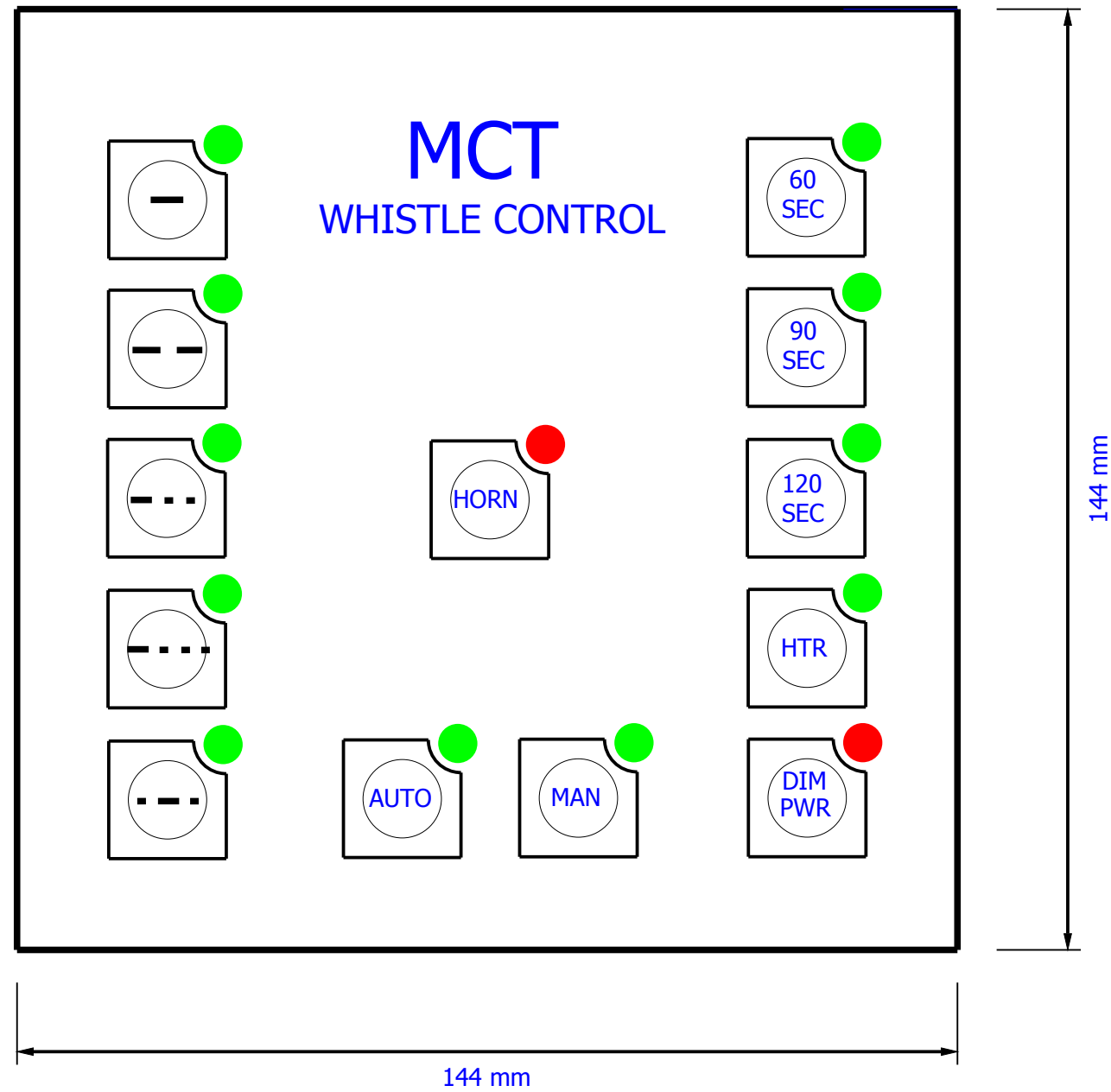
WHISTLE CONTROLLER IMO COLREGs 1972 (Convention on the International Regulations for Preventing Collisions at Sea) RULE 35 kurallarına uygun olarak tasarlanmış ve üretilmiştir.

MCT Whistle Controller gemi düdüğünün otomatik kontrolü için flaş montaj tipinde elektronik bir cihazdır. Cihaz, kolay montaj ve bağlantı imkanı verir. Kontrol paneli su geçirmezdir. Ön panelde, kısıtlı görüş kod butonları ile birlikte, istendiğinde basılabilen bir düdük butonu da vardır. MCT Whistle Controller, ticari gemilerin ve yatların emniyetli seyirlerine yardımcıdır.

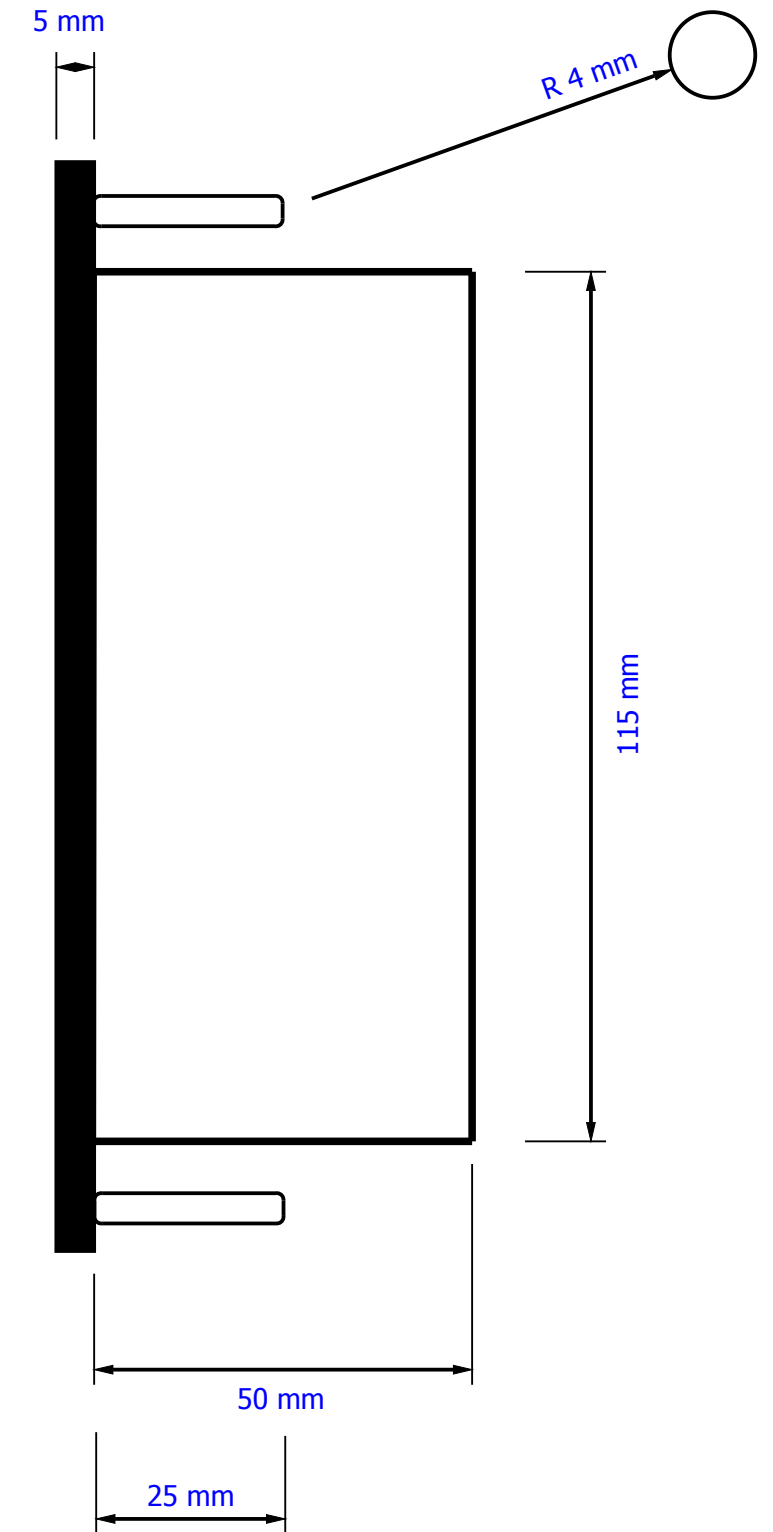
Diğer özellikleri:

- ~ Seçilen sürelerde otomatik start/stop çalışma
- ~ Seçilen fonksiyonların LED ler ile gösterilmesi
- ~ İlave butonların bağlanabilmesi
- ~ 24 Volt D.C. ve 230 Volt.A.C. 50 or 60 Hz besleme girişleri
- ~ Röle çıkışları , düdük selonoid valf , hiter ve mors lamba voltajlarının istenildiği gibi seçilebilmesini sağlar.

FRONT



SIDE



Weight : 605 gr.

Supply Voltage : 20 ... 30 VDC

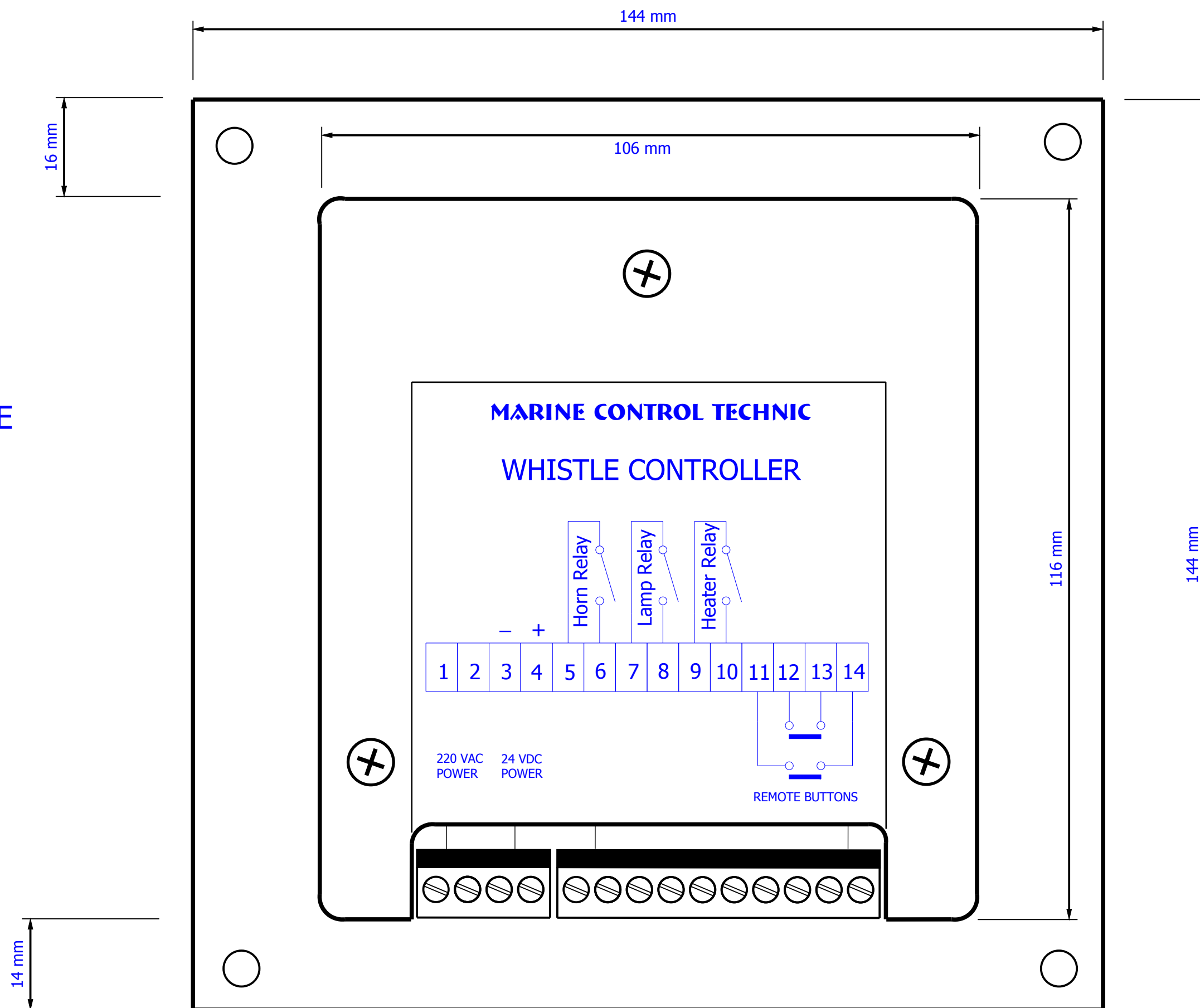
Current Consumption at standby (power on) : 12 mA

Current Consumption at all LED and relay activated : 130 mA

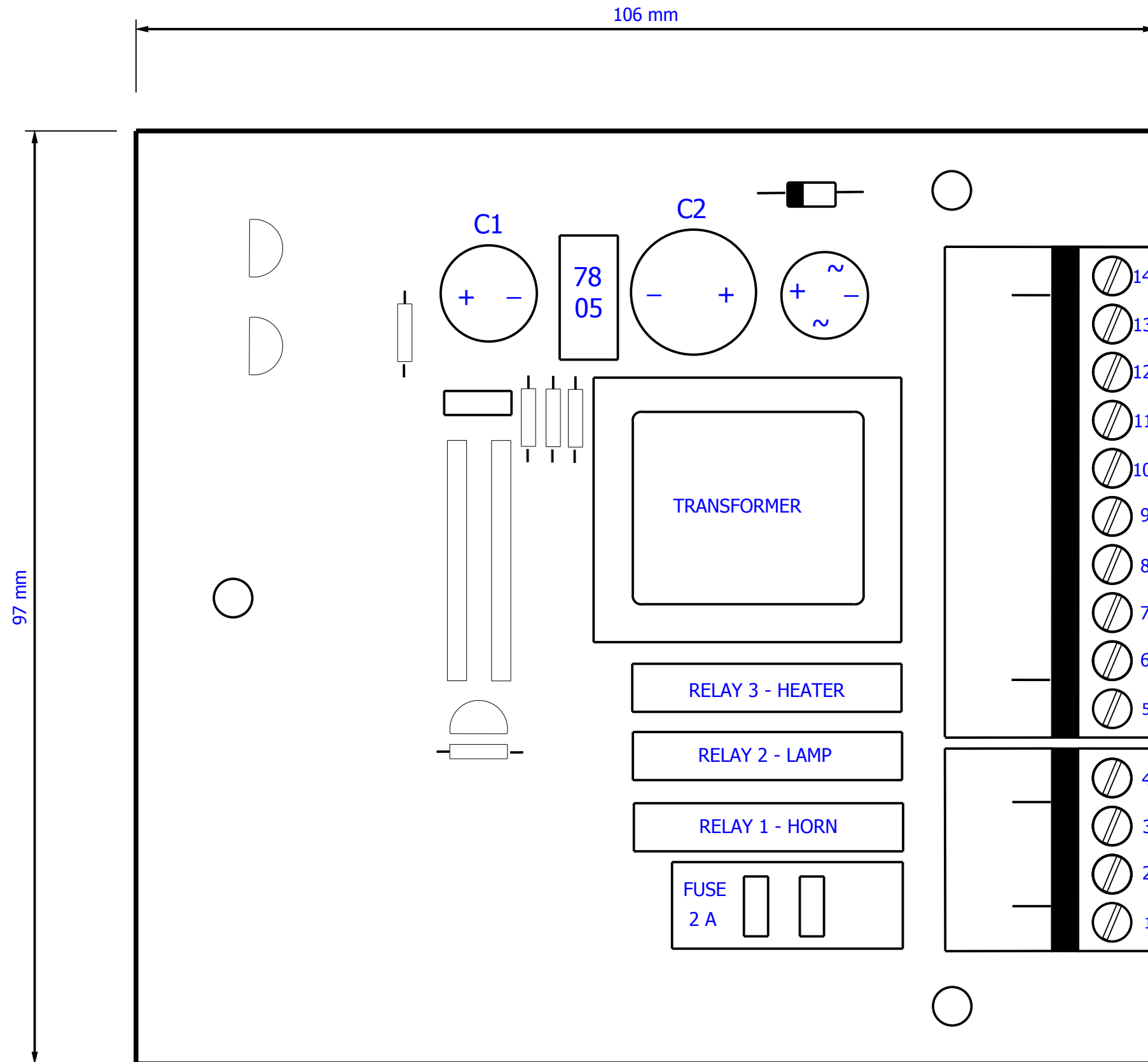
Total power Consumption : 3 Watt

Relay contact current rate : 6 A / 250 VAC

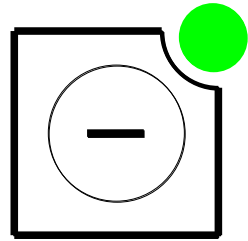
BACK SIDE



PCB

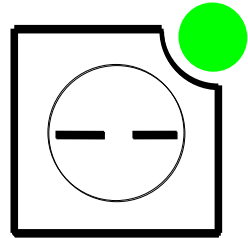


INTERNATIONAL REGULATIONS FOR PREVENTING COLLISIONS AT SEA, 1972 /Rule 35



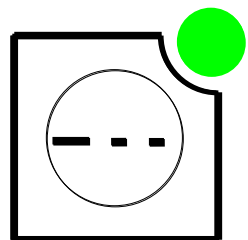
VESSEL UNDER WAY

a) A power-driven vessel making way through the water shall sound at intervals of not more than 2 minutes one prolonged blast.



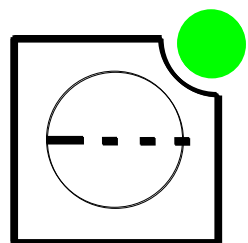
VESSEL UNDER WAY BUT STOPPED

b) A power-driven vessel underway but stopped and making no way through the water shall sound at intervals of not more than 2 minutes two prolonged blasts in succession with an interval of about 2 seconds between them



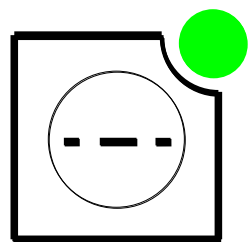
VESSEL RESTRICTED IN ABILITY TO MANEUVER

c) A vessel not under command, a vessel restricted in her ability to manoeuvre, a vessel constrained by her draught, a sailing vessel, a vessel engaged in fishing and a vessel engaged in towing or pushing another vessel shall, instead of the signals prescribed in paragraphs (a) or (b) of this Rule, sound at intervals of not more than 2 minutes three blasts in succession, namely one prolonged followed by two short blasts.



VESSEL BEING TOWED

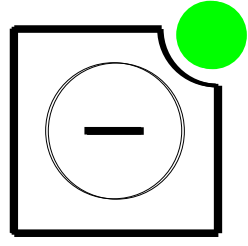
e) A vessel towed or if more than one vessel is towed the last vessel of the tow, if manned, shall at intervals of not more than 2 minutes sound four blasts in succession, namely one prolonged followed by three short blasts. When practicable, this signal shall be made immediately after the signal made by the towing vessel.



VESSEL AT ANCHORE

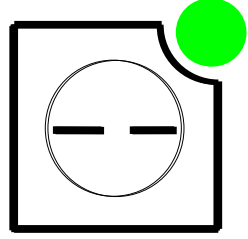
g) A vessel at anchor shall at intervals of not more than one minute ring the bell rapidly for about 5 seconds. In a vessel of 100 metres or more in length the bell shall be sounded in the forepart of the vessel and immediately after the ringing of the bell the gong shall be sounded rapidly for about 5 seconds in the after part of the vessel. A vessel at anchor may in addition sound three blasts in succession, namely one short, one prolonged and one short blast, to give warning of her position and of the possibility of collision to an approaching vessel.

INTERNATIONAL REGULATIONS FOR PREVENTING COLLISIONS AT SEA, 1972 / Rule 35



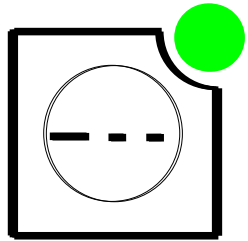
TEKNE YOLDA

(a) Üzerinde yol bulunan kuvvetle yürütülen bir tekne iki dakikadan fazla olmayan aralıklarla bir uzun düdük çalacaktır.



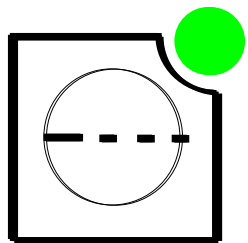
TEKNE YOLDA FAKAT DURDU

(b) Yolda olan fakat durup su üzerinde ilerlemeyen, kuvvetle yürütülen bir tekne iki dakikadan fazla olmayan aralıklarla birbiri ardından iki uzun düdük çalacak ve bu iki düdük arasında da yaklaşık iki saniyelik süre bulunacaktır.



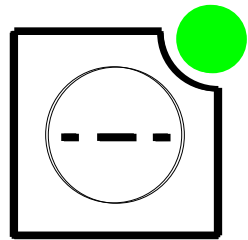
TEKNE KUMANDA DIŞI

(c) Kumanda altında bulunmayan, manevra yapma gücü kısıtlı olan, su çekimi nedeniyle kısıtlı olan, yelkenli tekne balıkçılıkla uğraşan diğer bir tekneyi çekerek veya yedekleme işi ile uğraşan bir tekne, bu kuralın (a) veya (b) paragraflarında belirtilen işaretler yerine aralarında iki dakikadan fazla bir süre olmayan aralıklarla üç düdüğü birbiri ardından çalacak ve bu üç düdükten birisi uzun olacak ve bunu iki kısa düdük takip edecektir.



TEKNE ÇEKİLMEKTE

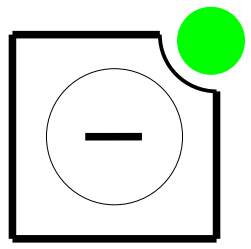
(e) Bir tekne veya birden fazla tekne yedekleniyorsa, yedeklenen son tekne eğer içinde adam varsa aralarında iki dakikadan fazla bir süre olmayan aralıklarla 4 düdüğü birbiri ardından çalacak ve bu dört düdükten biri uzun olacak ve bunu üç kısa düdük takip edecektir. Eğer mümkün olursa bu işaret, yedekleyen teknenin verdiği işaretten hemen sonra verilecektir.



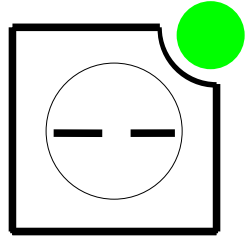
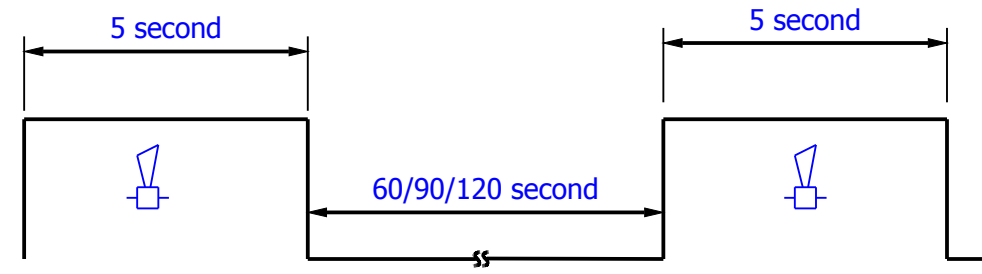
TEKNE DEMİRDE

(g) Demirli olan bir tekne bir dakikadan daha uzun olmayan aralıklarla, seri bir şekilde ve yaklaşık olarak beş saniye süre ile bir kampana çalacaktır. Boyları 100 metre veya daha uzun olan teknelerde kampana teknenin baş tarafından ses verecek ve kampananın çalınmasından hemen sonra teknenin kıç tarafından bir gong yaklaşık olarak, beş saniye süre ile ses verecektir. Demirli olan bir tekne ek olarak, yaklaşan bir tekneye bulunduğu yeri ve çatışma olasılığını ihtar etmek üzere, bir kısa bir uzun ve yine bir kısa olmak üzere birbiri ardından üç düdük çalabilir.

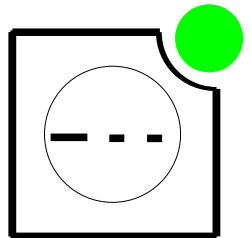
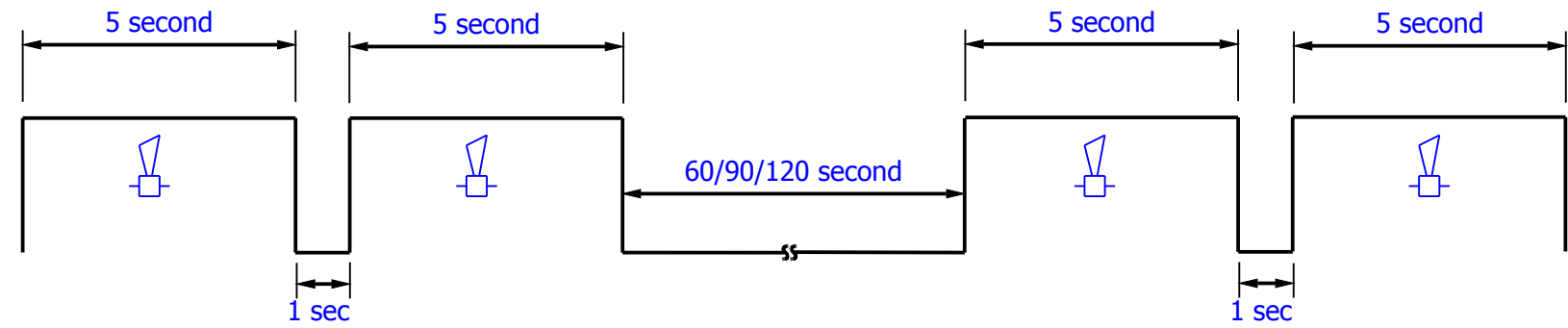
INTERNATIONAL FOG HORN SIGNALS



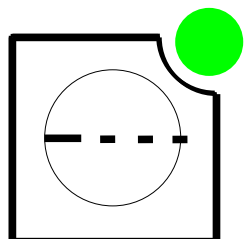
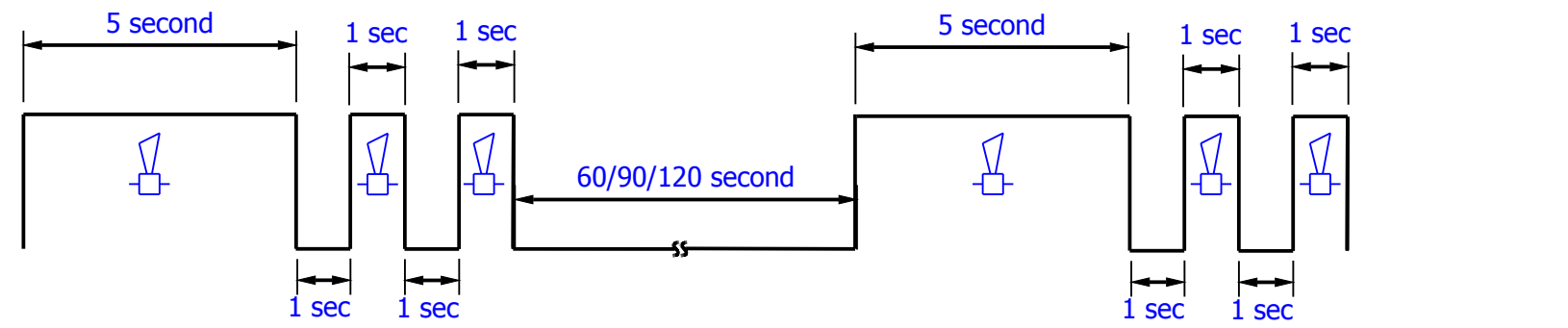
VESSEL UNDER WAY



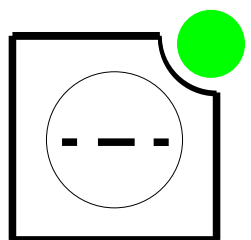
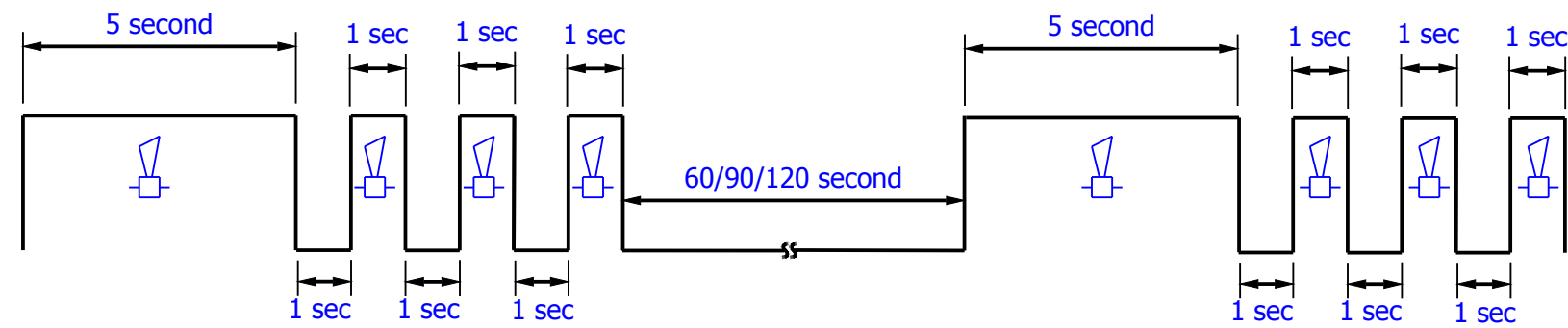
VESSEL UNDER WAY BUT STOPPED



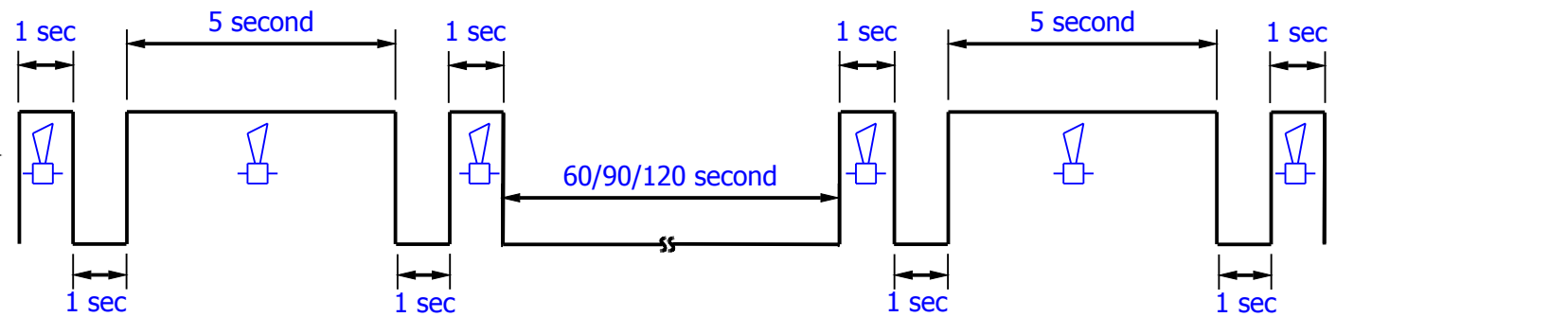
VESSEL RESTRICTED IN ABILITY TO MANEUVER



VESSEL BEING TOWED



VESSEL AT ANCHORE

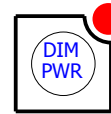


WHISTLE CONTROLLER USING INSTRUCTION

WHISTLE CONTROLLER Designed and manufactured to comply with IMO COLREGs 1972 (Convention on the International Regulations for Preventing Collisions at Sea) RULE 35.

TURN ON THE WHISTLE CONTROLLER

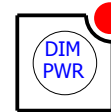
WHISTLE CONTROLLER is powered on by pressing to PWR push button for 5 SECOND.



When WHISTLE CONTROLLER is powered on , an automatic self test sequence is started to check LED indicators , output relays and CPU are healthy or not. While self test , LED indicators and output relays (except horn relay and LED) energised in order.After 2 laps , all LED indicators and relays flash 3 times at the end of self test.

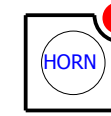
TURN OFF THE WHISTLE CONTROLLER

WHISTLE CONTROLLER is powered off by pressing to PWR push button for 5 SECOND.



MANUAL RUN

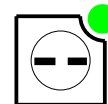
WHISTLE CONTROLLER has a manual push button (HORN) to start whistle any time and quickly. HORN push button is pressed to activate whistle as manual.



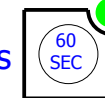
AUTOMATIC FOG HORN PROGRAMMING

WHISTLE CONTROLLER can be programmed as a automatic fog horn device. 5 Different signals and 3 different time intervals can be selected.

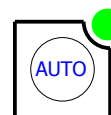
To create an automatic fog code , one code button is selected on left side and pressed



, time interval option is selected on right side buttons



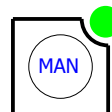
, at the end , auto button pressed



, after this step , auto fog horn code signal starts.

CANCEL OR ESCAPE OF AUTOMATIC FOG HORN PROGRAM

MAN button is pressed to cancel or escape of automatic fog horn program.

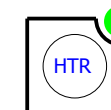


OUTPUT RELAYS

WHISTLE CONTROLLER , has 3 output relays and offers 3 dry contacts to drive horn , mors light and internal horn heater. Mors light relay energises with horn relay.

HEATER FUNCTION

WHISTLE CONTROLLER , has a dry output contact to run horn internal heater. Function is controlled by HTR button. HTR button functions as a toggle switch.



WHISTLE CONTROLLER KULLANMA KLAVUZU

WHISTLE CONTROLLER IMO COLREGs 1972 (Convention on the International Regulations for Preventing Collisions at Sea) RULE 35 kurallarına uygun olarak tasarlanmış ve üretilmiştir.

WHISTLE CONTROLLER ' I AÇMA

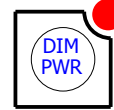
WHISTLE CONTROLLER PWR butonuna 5 saniye basılı tutularak açılır.



WHISTLE CONTROLLER açıldığında , sistem bir selft test işlemi başlatır. Tüm LED'leri ve çıkış rölelerini sıra ile enerjilendirir , işlemcisini test eder ve giriş çıkış elemanlarının sağlamlığından emin olur. Sıralı 2 tekrardan sonra tüm LED ve röleleri toplam 3 kez aynı anda enerjiler (flaş yapar) . Test sonunda cihaz manual moda geçerek , standby olarak bekler.

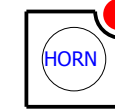
WHISTLE CONTROLLER ' I KAPATMA

WHISTLE CONTROLLER PWR butonuna 5 saniye basılı tutularak kapatılır.



MANUAL ÇALIŞTIRMA

WHISTLE CONTROLLER 1 adet HORN butonuna sahiptir ve istenen anda bu butona basılarak gemi düdüğü çaldırılabilir.



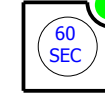
OTOMATİK SİS DÜDÜĞÜ PROGRAMLAMA VE ÇALIŞTIRMA

WHISTLE CONTROLLER otomatik sis düdüğü kodları oluşturacak şekilde programlanabilir. 5 farklı kod sinyali ve 3 farklı zaman aralıkları seçilebilir.

Otomatik bir kod oluşturmak için önce sol bölümden istenen kod tipi seçilir ,



, zaman aralığı sağ bölümden belirlenir.



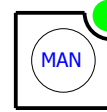
daha sonra AUTO butonuna basılarak otomatik program başlatılır.



, gemi düdüğü belirlenen aralıklarla seçilen koda göre çalmaya başlar.

OTOMATİK PROGRAMDAN ÇIKMA YA DA İPTAL

MAN butonuna basılarak otomatik programdan çıkılır.

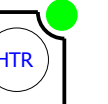


ÇIKIŞ RÖLELERİ

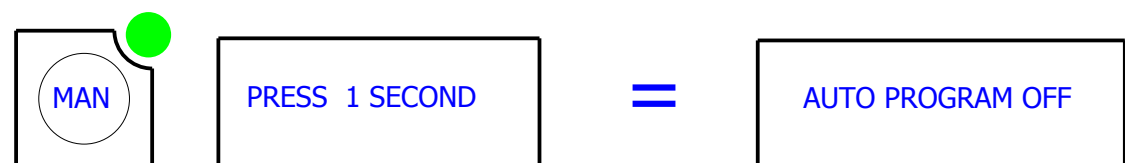
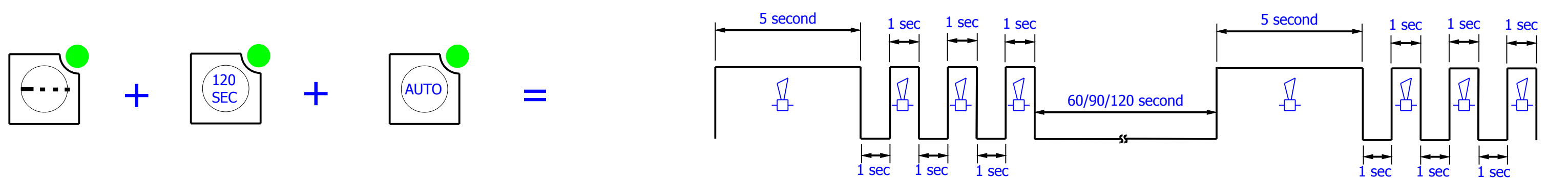
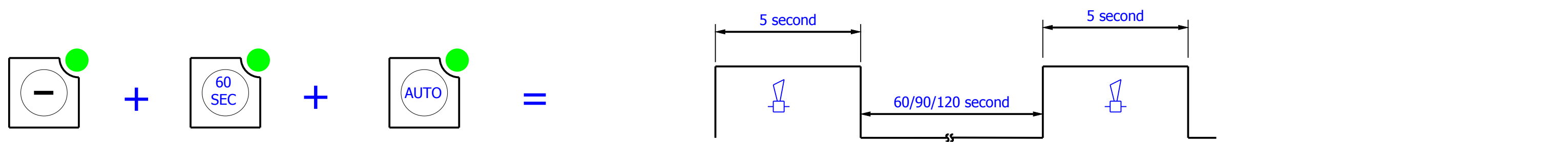
WHISTLE CONTROLLER 3 adet çıkış rölesine sahiptir ve gemi düdüğünü , mors ışığını , düdük dahili hiterini sürmek için 3 adet kuru kontak sunar.

HİTER FONKSİYONU

WHISTLE CONTROLLER , gemi düdüğü dahili hiterini sürmek için 1 adet kuru kontak çıkışına sahiptir. HTR butonuna basıldığında çıkış kontaktarı kapanır , HTR butonuna tekrar basıldığında kontaktar açılır.



AUTOMATIC FOG HORN SAMPLE PROGRAM



INTERNATIONAL REGULATIONS FOR PREVENTING COLLISIONS AT SEA, 1972 / Rule 35

Sound Signals in restricted Visibility

In or near an area of restricted visibility, whether by day or night, the signals prescribed in this Rule shall be used as follows:

(a) A power-driven vessel making way through the water shall sound at intervals of not more than 2 minutes one prolonged blast.

(b) A power-driven vessel underway but stopped and making no way through the water shall sound at intervals of not more than 2 minutes two prolonged blasts in succession with an interval of about 2 seconds between them.

(c) A vessel not under command, a vessel restricted in her ability to manoeuvre, a vessel constrained by her draught, a sailing vessel, a vessel engaged in fishing and a vessel engaged in towing or pushing another vessel shall, instead of the signals prescribed in paragraphs (a) or (b) of this Rule, sound at intervals of not more than 2 minutes three blasts in succession, namely one prolonged followed by two short blasts.

(d) A vessel engaged in fishing, when at anchor, and a vessel restricted in her ability to manoeuvre when carrying out her work at anchor, shall instead of the signals prescribed in paragraph (g) of this Rule sound the signal prescribed in paragraph (c) of this Rule.

(e) A vessel towed or if more than one vessel is towed the last vessel of the tow, if manned, shall at intervals of not more than 2 minutes sound four blasts in succession, namely one prolonged followed by three short blasts. When practicable, this signal shall be made immediately after the signal made by the towing vessel.

(f) When a pushed vessel and a vessel being pushed ahead are rigidly connected in a composite unit they shall be regarded as a power-driven vessel and shall give the signals prescribed in paragraphs (a) or (b) of this Rule.

(g) A vessel at anchor shall at intervals of not more than one minute ring the bell rapidly for about 5 seconds. In a vessel of 100 metres or more in length the bell shall be sounded in the forepart of the vessel and immediately after the ringing of the bell the gong shall be sounded rapidly for about 5 seconds in the after part of the vessel. A vessel at anchor may in addition sound three blasts in succession, namely one short, one prolonged and one short blast, to give warning of her position and of the possibility of collision to an approaching vessel.

ULUSLARARASI 1972 DENİZDE ÇATIŞMAYI ÖNLEME TÜZÜĞÜ / Kural 35

Kısıtlı Görüş Hallerinde Verilecek Ses İşaretleri

Görüş şartları kısıtlı olan bir alan içinde veya yakınında, gece veya gündüz, bu Kuralda belirtilen işaretler aşağıda yazılı olduğu gibi kullanılacaklardır :

(a) Üzerinde yol bulunan kuvvetle yürütülen bir tekne iki dakikadan fazla olmayan aralıklarla bir uzun düdük çalacaktır.

(b) Yolda olan fakat durup su üzerinde ilerlemeyen, kuvvetle yürütülen bir tekne iki dakikadan fazla olmayan aralıklarla birbiri ardından iki uzun düdük çalacak ve bu iki düdük arasında da yaklaşık iki saniyelik süre bulunacaktır.

(c) Kumanda altında bulunmayan, manevra yapma gücü kısıtlı olan, su çekimi nedeniyle kısıtlı olan, yelkenli tekne balıkçılıkla uğraşan diğer bir tekneyi çekerek veya yedekleme işi ile uğraşan bir tekne, bu kuralın (a) veya (b) paragraflarında belirtilen işaretler yerine aralarında iki dakikadan fazla bir süre olmayan aralıklarla üç düdüğü birbiri ardından çalacak ve bu üç düdükten birisi uzun olacak ve bunu iki kısa düdük takip edecektir.

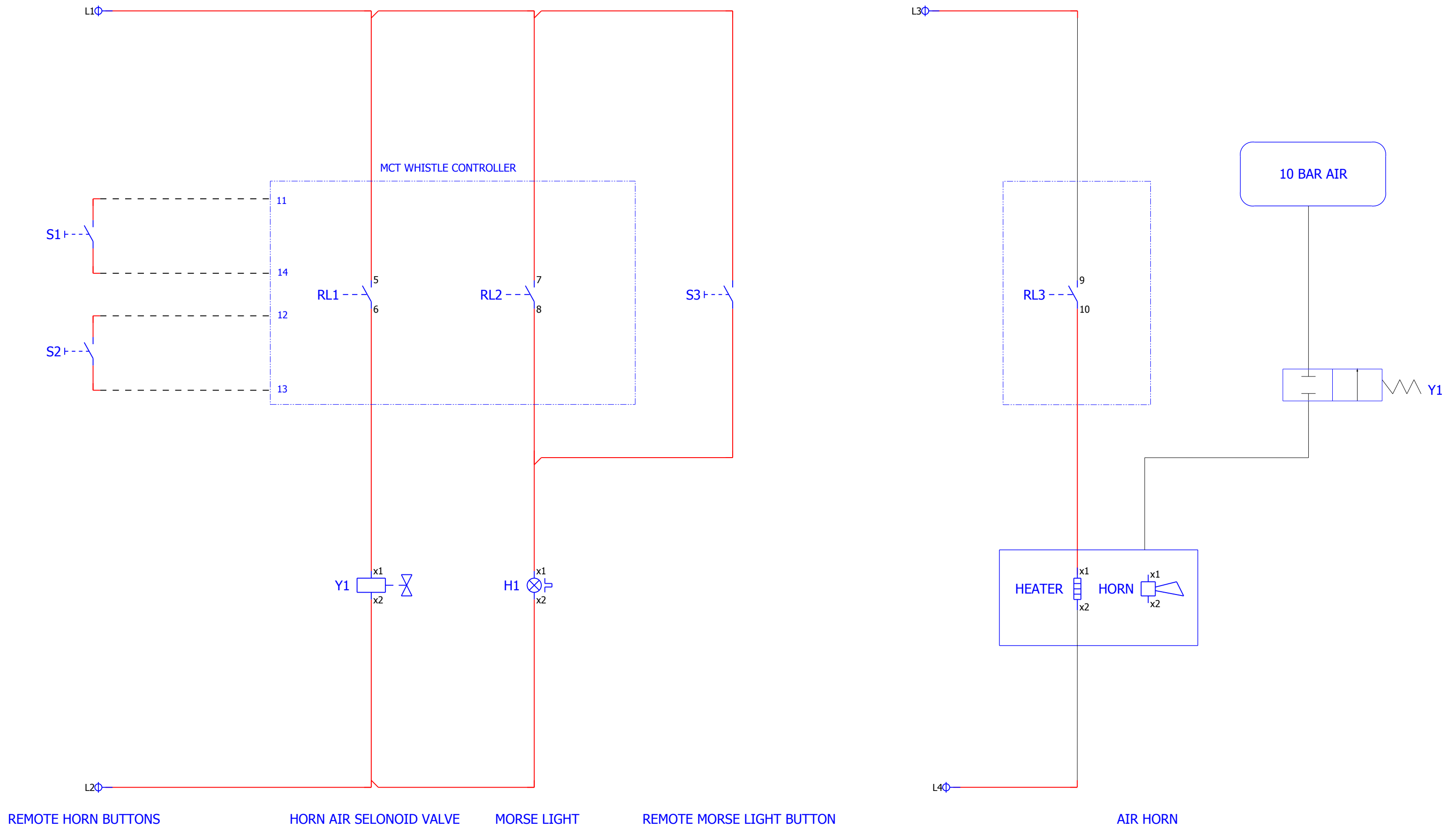
(d) Balıkçılıkla uğraşan bir tekne demirde iken ve demirde işini yaparken manevrası kısıtlı olan bir tekne bu Kuralın (g) paragrafında belirtilen işaretler yerine bu Kuralın (c) paragrafında belirtilen ses işaretini verecektir.

(e) Bir tekne veya birden fazla tekne yedekleniyorsa, yedeklenen son tekne eğer içinde adam varsa aralarında iki dakikadan fazla bir süre olmayan aralıklarla 4 düdüğü birbiri ardından çalacak ve bu dört düdükten biri uzun olacak ve bunu üç kısa düdük takibedecektir. Eğer mümkün olursa bu işaret, yedekleyen teknenin verdiği işaretten hemen sonra verilecektir.

(f) İterek yedekleyen bir tekne ile bunun önünde ileri itilerek yedeklenen bir teknenin birleşik bir birim teşkil etmek üzere birbirine sıkıca bağlandıkları durumda bunlar kuvvetle yürütülen bir tekne gibi sayılacak ve bu kuralın (a) veya (b) paragraflarında belirtilen işaretleri göstereceklerdir.

(g) Demirli olan bir tekne bir dakikadan daha uzun olmayan aralıklarla, seri bir şekilde ve yaklaşık olarak beş saniye süre ile bir kampana çalacaktır. Boyları 100 metre veya daha uzun olan teknelerde kampana teknenin baş tarafından ses verecek ve kampananın çalınmasından hemen sonra teknenin kıç tarafından bir gong yaklaşık olarak, beş saniye süre ile ses verecektir. Demirli olan bir tekne ek olarak, yaklaşan bir tekneye bulunduğu yeri ve çatışma olasılığını ihtar etmek üzere, bir kısa bir uzun ve yine bir kısa olmak üzere birbiri ardından üç düdük çalabilir.

MCT WHISTLE CONTROLLER INSTALLATION AND WIRING

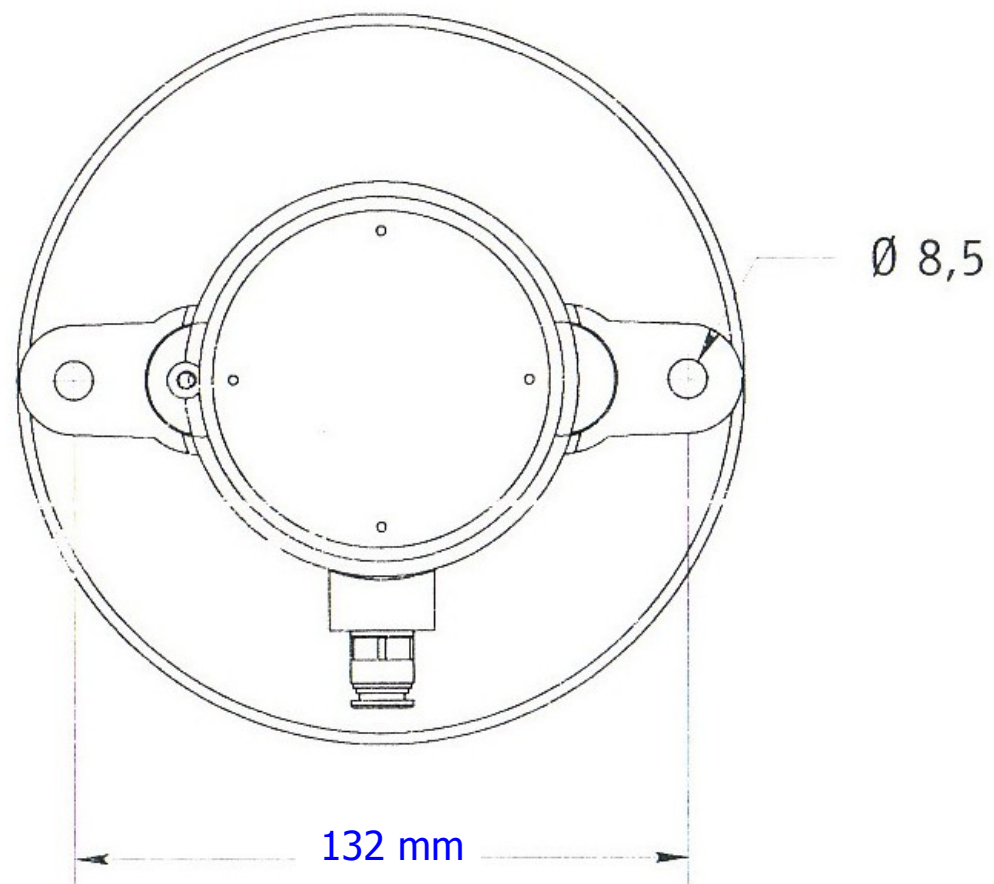
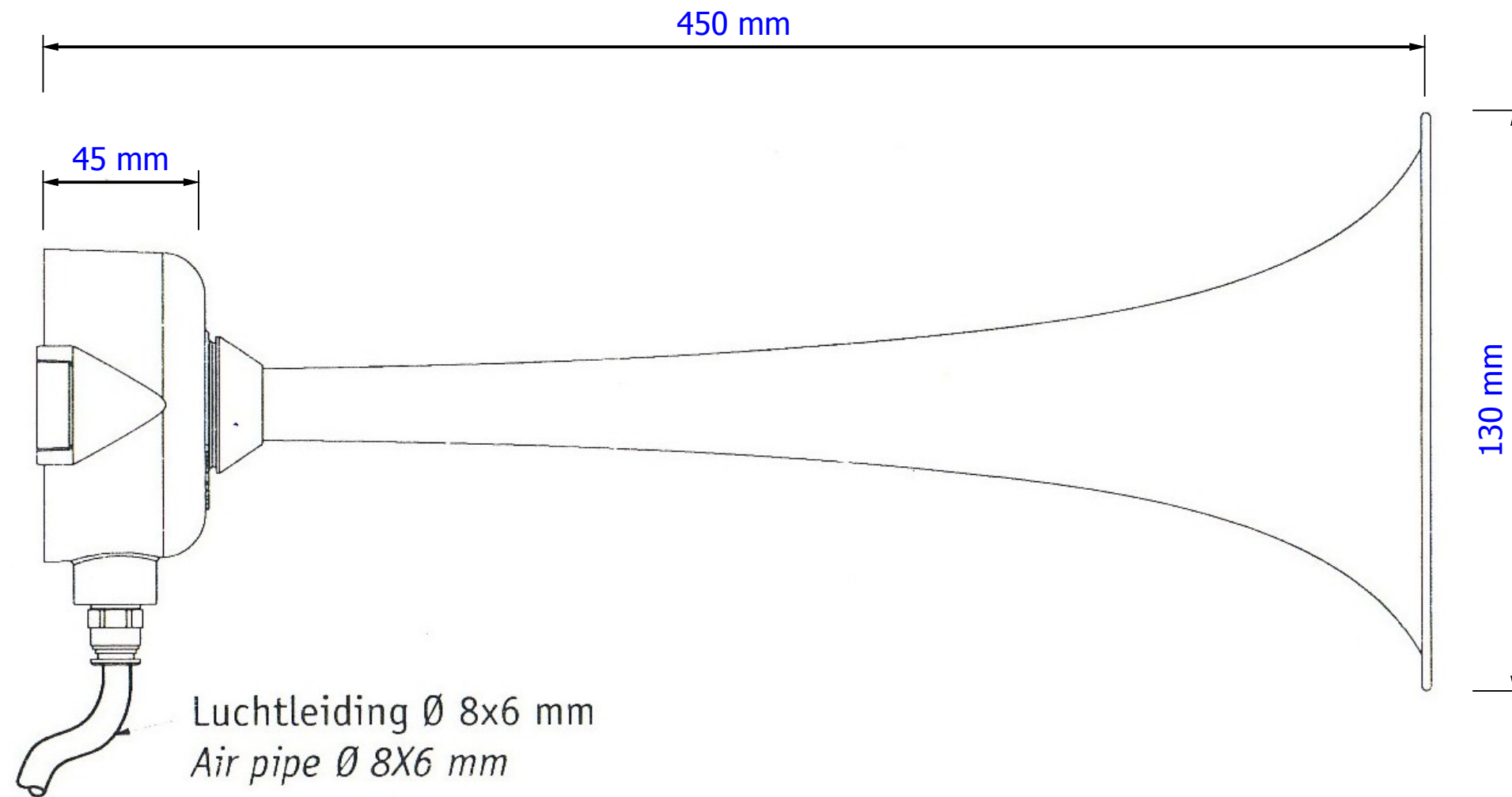


WITH SOLENIOD VALVE UNIT

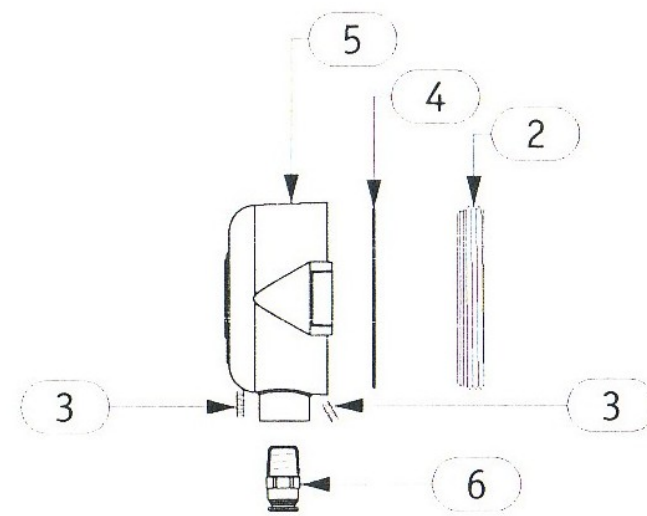


Applications

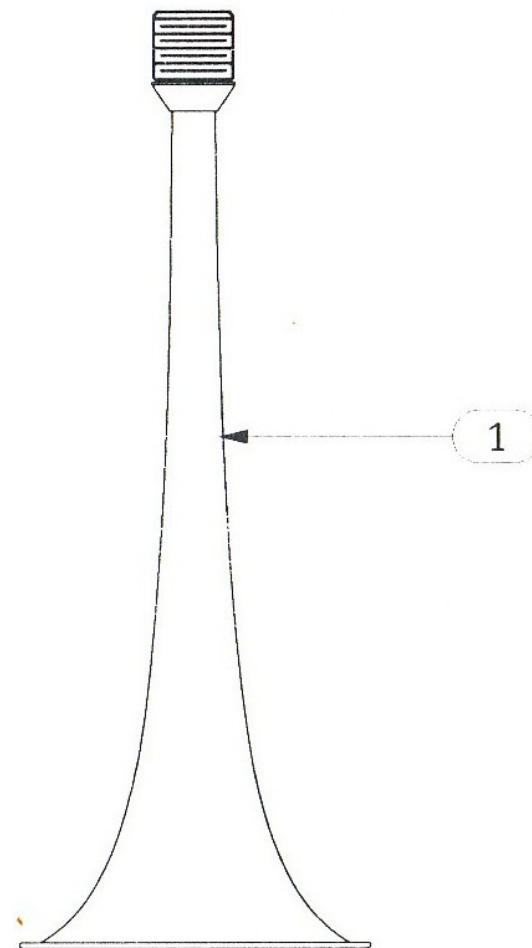
- Shipping industry
- On Oil-rigs for signalling purposes
- Railway
- As support for security services at industrial estates



BRAND : TDH
MODEL : TDH 450
AIR PRESSURE SUPPLY : 10 BAR
MATERIAL : MEMBRANE HOUSE STAINLESS STEEL 316
HORN , SOLID BRASS AND BLACK PAINTED
WEIGHT : 1,38 KG
AIR FLOW : 1,5 - 3,5 l/s
OUTPUT SOUND POWER : 132 dB
FREQUENCY : 307 Hz



SPARE PARTS



	Omschrijving /Description
1	TDE-HOORN 450 TDE-HORN 450
2	DEKSEL MEMBRAANHUIS LID DIAPHRAGM CASING
3	STELSCHROEF M4 CUP POINT M4
4	MEMBRAAN DIAPHRAGM
5	RVS MEMBRAANHUIS STAINLESS STEEL DIAPHRAGM CASING
6	INSTEKKOPPELING 1/4" PUSH COUPLING 1/4"

IMO REGULATIONS ABOUT SHIP WHISTLES

IMO — Two or more Whistles

1. If the whistles are fitted at a distance apart of more than 100 metres, it shall be so arranged that they are not sounded simultaneously.
2. Combined whistle systems are to be arranged when one single whistle is likely to have a zone of greatly reduced signal level, due to the presence of obstructions.
3. If the whistles are to be used as a combined system — fitted at a distance apart of not more than 100 metres — they shall be arranged to be sounded simultaneously. The frequency of any of the whistles shall differ from those of the others by at least 10 Hz.

IMO — Sound Distribution

A whistle shall be placed as high as practicable on a vessel in order to reduce interception of the emitted sound by obstructions and also to minimize hearing damage risks to personnel.

The sound level of the vessel's own signal at listening posts shall not exceed 110 dB(A) and as far as practicable should not exceed 100 dB(A).

IMO REGULATIONS ABOUT SHIP WHISTLES

Extracts from COLREG. 1972 part D — Sound and Light Signals Bell & Gong Signalling

Rule 33 Equipment for Sound Signals

(a) A vessel of 12 metres or more in length shall be provided with a whistle and a bell and a vessel of 100 metres or more in length shall, in addition, be provided with a gong, the tone and sound of which cannot be confused with that of the bell. The whistle, bell and gong shall comply with the specifications in Annex III to these Regulations. The bell or gong or both may be replaced by other equipment having the same respective sound characteristics, provided that manual sounding of the required signals shall always be possible.

Rule 35

(f) A vessel at anchor shall at intervals of not more than one minute ring the bell rapidly for about 5 seconds. In a vessel of 100 metres or more in length the bell shall be sounded in the forepart of the vessel and immediately after the ringing of the bell the gong shall be sounded rapidly for about 5 seconds in the after part of the vessel. A vessel at anchor may in addition sound three blasts in succession, namely one short, one prolonged and one short blast, to give warning of her position and of the possibility of collision to an approaching vessel.

(g) A vessel aground shall give the bell signal and if required the gong signal prescribed in paragraph (f) of this Rule and shall, in addition, give three separate and distinct strokes on the bell immediately before and after the rapid ringing of the bell. A vessel aground may in addition sound an appropriate whistle signal.

IMO REGULATIONS ABOUT SHIP WHISTLES

Annex III 2. Bell or gong

(a) Intensity of signal

A bell or gong, or other device having similar sound characteristics shall produce a sound pressure level of not less than 110 dB at 1 metre

(b) Construction

Bells and gongs shall be made of corrosion-resistant material and designed to give a clear tone. The diameter of the mouth of the bell shall be not less than 300 mm for vessels of more than 20 metres in length, and shall be not less than 200 mm for vessels of 12 to 20 metres in length. Where practicable, a power-driven bell striker is recommended to ensure constant force but manual operation shall be possible. The mass of the striker shall be not less than 3 per cent of the mass of the bell.

IMO REGULATIONS ABOUT SHIP WHISTLES

LENGTH OF VESSEL IN METER	SOUND POWER OF HORN IN dB	FREQUENCY IN Hz	AUDIBILITY ACC. TO IMCO DEFINITION , NAUTICAL MILES
20 m - 75 m	130 dB	250 - 700 Hz	1,0
75 m - 200 m	138 dB	250 - 700 Hz	1,5
OVER 200 m	143 dB	250 - 700 Hz	2,0