

PHONTECH

by ZENITEL GROUP

USER HANDBOOK

CIS 3100/3101/3102



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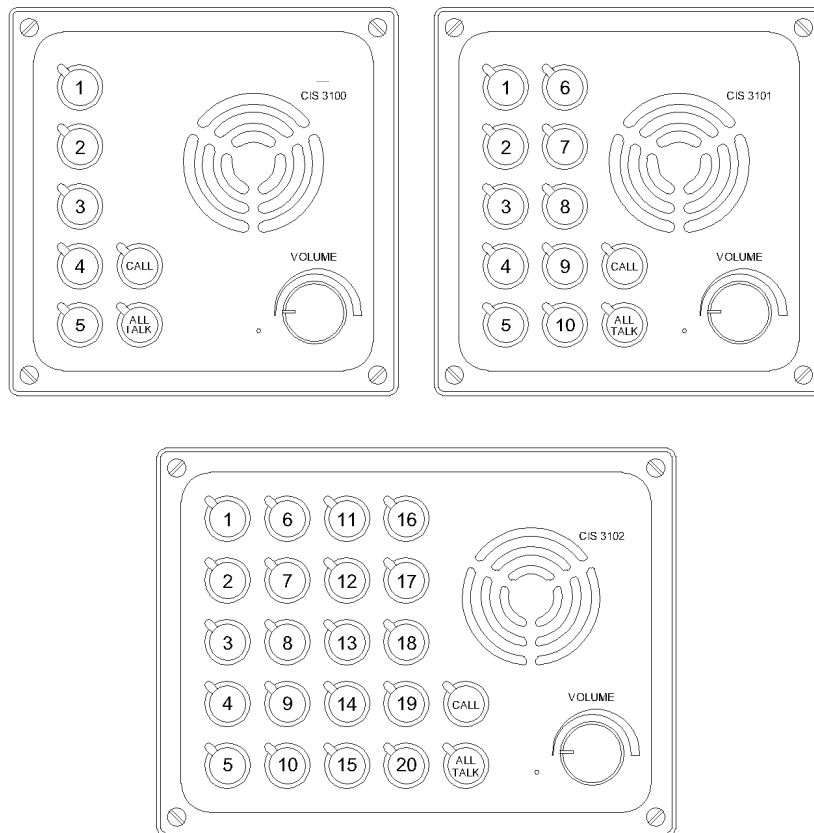
SERVICE AND WARRANTY

Zenitel warrants that the product sold by Zenitel substantially confirm with said products written specifications for a period of up to 24 (twenty-four) months after invoice date. Notice of claims shall be made to Zenitel within 30 (thirty) calendar days after receipt of the product. The claim must be registered either online at www.zenitel.com/customer-service/claims or on RMA form provided by Zenitel through claims@zenitel.com.

- a) Delivered batteries are generally not covered by Zenitel warranty terms.
- b) Buyer also has an option to extend the 24 (twenty-four) (24) months warranty time at a separate charge. The details for this are found in the valid pricelist, and has to be settled before delivery of the products.
- c) The product must have been properly stored, installed and used to claim under the warranty.
- d) Within the warranty period, the Buyer shall give prompt written notice, if any part of the product is proven defective in material or workmanship, online either at www.zenitel.com/customer-service/claims or on RMA form provided by Zenitel through claims@zenitel.com.
- e) Zenitel shall not be liable to Buyer or third party claims relevant to accidental or improper use, wrong installation performed by uncertified technicians, from damage to the product, or from other circumstances beyond Zenitel's control.
- f) The product shall be returned to Zenitel, subject to prior written consent from Zenitel, in the form of a RMA reference number (Return Merchandise Authorization). The product shall be returned immediately, and no later than 60 days after RMA reference number has been received. Returned products in lack of such reference, will not be accepted by Zenitel and returned to Buyer at Buyer's cost.
- g) The cost of the return shipment is to be covered by the Buyer. Zenitel will cover the cost of shipment for replacement parts.
- h) Zenitel decides whether a defective part shall be replaced, returned to factory for repair or being repaired onboard the vessel or on site.
- i) If repair/change of parts is to be done onboard the vessel or on site, Zenitel shall approve by certification the company/technician doing the labor on their behalf.
After the repair is done onboard the vessel or on site, Zenitel will, based on the repair report, decide if the mentioned repair is a warranty matter or not. If it is a warranty matter, Zenitel will cover labor time up to 4 hours, and spare parts to correct the fault. Service technician's preparation, travelling time and travelling expenses, if any, are for the account of the Buyer.
- j) If Zenitel has to deliver new parts to solve a warranty matter before the claimed product is received for inspection and acceptance, Zenitel will invoice the new part with standard order terms at shipment, and then issue a credit note when the defective part has been received by Zenitel and approved as warranty by quality department.
- k) Repair or replacement of parts in a configuration done by Zenitel during the warranty period, has no effect on the expiration of the warranty for a complete project delivery, and does not give rise to a renewal or extension of the warranty period for the configuration.

UTILIZATION:

This equipment is not to be disposed in normal waste, but be handled in accordance with applicable waste disposal regulations in the country where the equipment is used



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STRAPPING AND CONNECTION POINTS LOCATION.
*LOKALISERING AV LINKER OG KONTAKTPUNKTER***

1.0 INTRODUCTION / INTRODUKSJON

Eng.:

A command intercom system (CIS) consist of one MASTER station (3100 series), most often located on the ships bridge, and distributed SUBSTATIONS (9000 series) in cabins, engine room, engine control room a.s.o.

The CIS may also comprise port and starboard side BRIDGE WING stations.

The CIS may also be interconnected with the PHONTECH small public address and alarm system (SPA).

The CIS serves as two-way command and intercom system.

The communication channels is to/from the master station and the substations. Please note that communication between the substations is not possible.

The compact design makes the CIS easy to install. The mounting is for 3100/3101 DIN 144 x 144mm, 3102 DIN 192 x 144 mm. flush mounting, or wall mounting. (wallmount backbox required)

No.:

Et kommando intercom system (CIS) består av en MASTER stasjon (3100 serie), som oftest plassert på båten bro, og distribuerte understasjoner (9000 serie) i lugarer, motorrom, motor kontrollrom osv.

CIS kan også omfatte babord og styrbord broving stasjoner.

Systemet kan også tilkobles til PHONTECH "small public address and alarm system" (SPA).

CIS tjener som et to-veis kommando kommunikasjonssystem, med oppkallsmulighet begge veier.

Kommunikasjonen går mellom master og understasjoner, dvs. at kommunikasjon mellom understasjoner ikke er mulig.

Det kompakte designet gjør systemet lett å installere. Montering er for 3100/3101 DIN 144 x 144mm, 3102 DIN 192 x 144 mm. innfelt montering eller på vegg montasje. ting. Veggmontering krever ekstra bakkoks som er ekstra utstyr.

2.0 GENERAL DESCRIPTION / GENERELL BESKRIVELSE

Eng.:

The CIS is delivered as follows:

MASTER STATIONS

- 3100 CIS MASTER STATION max. 5 extensions. Amplifier capacity 10W.
- 3101 CIS MASTER STATION max. 10 extensions. Amplifier capacity 20W.
- 3102 CIS MASTER STATION max. 20 extensions. Amplifier capacity 40W.

SUBSTATIONS, ACCESSORIES

- 9001 substation for cabins and/or accommodation areas.
- 9003 substation for headset with relay.
- 9004 call unit for loudspeaker, weatherproof.
- 9009 call unit for portable loudspeaker, weatherproof.
- 9011 plug box, weatherproof.
- 9016 call unit for loudspeaker, loudspeaker on/off switch, weatherproof.

- 0035 engine control room phone. (handset)
- 0005 headset 10 m. cable and plug.
- 0006 additional handset.
- 0010 portable loudspeaker cable and plug.
- 0012 gooseneck microphone unit, PTT, flush mounting.
- 0013 microphone box, bridge wing connection.
- 0017 hand microphone cable and plug.
- 0019 line amplifier.

The MASTER stations contains the electronics required in an CIS.

As an extended value added feature, the CIS 310X units are supplied with a "loudspeaker as substation / automatic call disable" facility. This makes the installer able to connect plain loudspeakers directly as substations. During power on the CIS 310X unit will detect such configurations and prevent calls from this positions.

No.:

CIS leveres som følger:

MASTER STASJONER:

- 3100 CIS MASTER STASJON maks. 5 linjer. Forsterker kapasitet 10 W.
- 3101 CIS MASTER STASJON. maks. 10 linjer. Forsterker kapasitet 20 W.
- 3102 CIS MASTER STASJON. maks. 20 linjer. Forsterker kapasitet 40 W.

UNDERSTASJONER/UTSTYR:

- 9001 understasjon for lugar/ oppholdsrom.
- 9003 understasjon for hodesett med rele.
- 9004 oppkallsenhet for høyttaler, værsikker.
- 9009 kalleenhet for bærbar høyttaler, værsikker.
- 9011 plugg boks værsikker.
- 9016 kalleenhet for høyttaler, høyttaler bryter, værsikker.

- 0035 maskinkontroll rom telefon. (håndsett)
- 0005 hodesett med 10m kabel og plugg.
- 0006 ekstra handsett.
- 0010 bærbar høyttaler, med kabel og plugg.
- 0012 svane-hals mikrofon enhet, tal knapp, innfelt montering.
- 0013 mikrofonboks for broving tilkobling.
- 0017 håndmikrofon med kabel og plugg.
- 0019 linjeforsterker.

MASTER stasjonene inneholder stort sett all elektronikken som kreves i et CIS system.

I tillegg er alle CIS 310X enheter utstyrt med funksjonen "høyttaler som understasjon / automatisk oppkalls-hindring.

Dette gir installatøren mulighet til å tilkoble høyttalere direkte til understasjon linjer. Ved påslag vil CIS 310X enheten oppdage dette og i ettertiden hindre oppkall fra disse posisjonene.

3.0 FACILITY LIST

Eng.:

(see figure 1)

CIS 3100:

- Connection for 5 substation lines.

CIS 3101:

- Connection for 10 substation lines.

CIS 3102:

- Connection for 20 substation lines.

COMMON:

- Loudspeaker as substation / automatic call disable
- Connection for port and starboard bridge wing stations.
- Connection for phonTECH SPA system.
- Built-in wide-band loudspeaker.
- Built-in condenser microphone.
- Automatic gain control for speech level.
- Loudspeaker volume control
- Bi-coloured key indicator leds.
- Call key.
- Talk key.
- Automatic all call function.
- Extra signal organ output for line 1-4.

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- External loudspeaker output connections.

OPTIONS.

- Line engagement time out.
- Optional extra signal organ output for all lines (up to 10)
- Optional line amplifier connection.
- Gooseneck/handheld microphone connection.

No.:

CIS 3100:

- Tilkobling for 5 understasjoner.

CIS 3101:

- Tilkobling for 10 understasjoner.

CIS 3102:

- Tilkobling for 20 understasjoner.

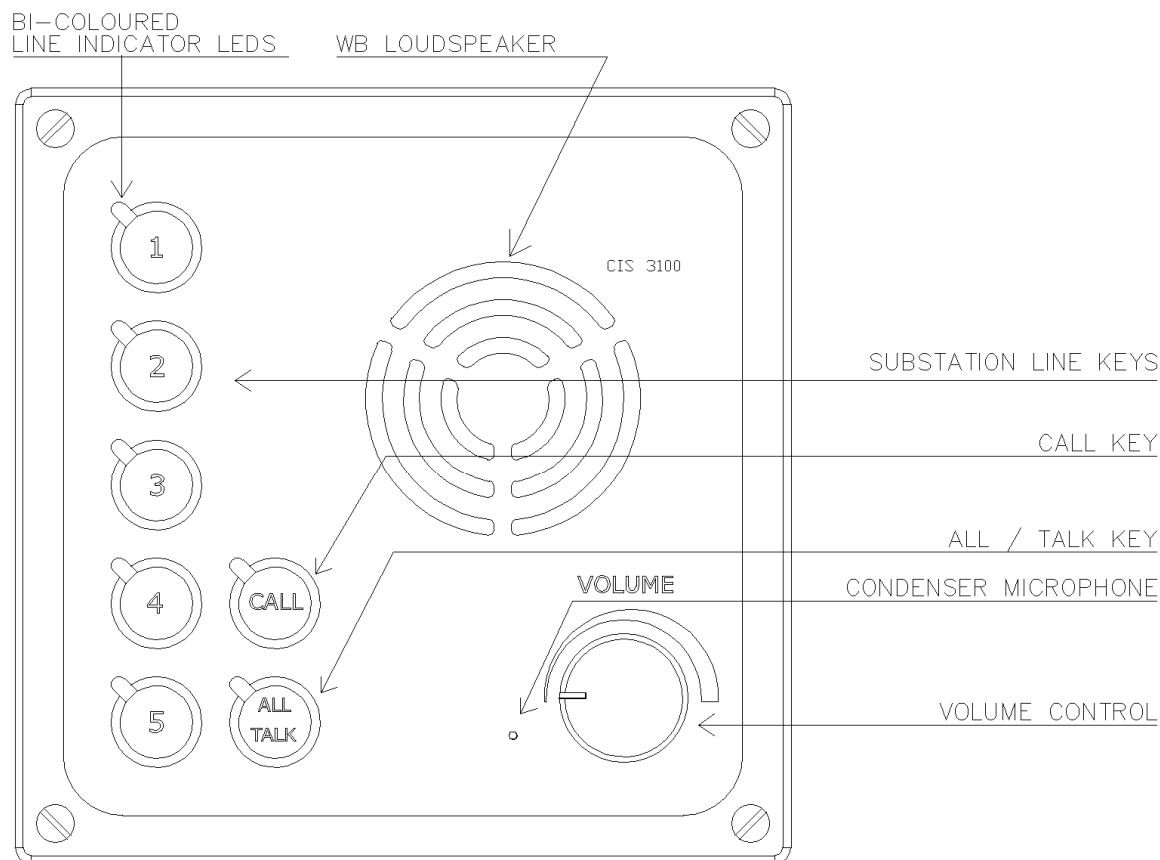
FELLES:

- Høytaler som biapparat / automatisk oppkalls-hindring
- Tilkobling for babord og styrbord broving stasjoner.
- Tilpasset for sammenkobling med phonTECH SPA system.
- Innebygget bredbånds høytaler.
- Innebygget kondensator mikrofon.
- Automatisk nivå kontroll krets for tale.
- Høytaler volum kontroll.
- To-fargede linje indikasjons lysdioder.
- Kalle tast.
- Tale tast.
- Automatisk allekall funksjon.
- Ekstra signal giver utgang for linje 1-4.
- Ekstern høytaler utgang.

VALGBART:

- Automatisk tidsstyrt linje nedkobling
- Ekstra signal utgang for alle linjer. (opp til 10)
- Linje forsterker tilkobling.
- Svane Hals /håndmikrofon tilkobling

FIGURE 1 / FIGUR 1



NOTE:
ALL CALL: PRESS TALK WITH NO LINE BUTTONS ACTIVE

4.0 MOUNTING / INSTALLATION / SCREEN CONNECTION **MONTERING / INSTALLASJON OG SKJERMTERMINERING**

Eng.:

MOUNTING:

The master stations 3100/3101/3102 is delivered for flush mounting.
On request the units may be delivered with wall-mounting box. (option)

Front plate dimensions 3100 and 3101:	144 x 144 mm. (HxW)
3102:	144 x 192 mm. (HxW)
Cut- out dimensions for flush-mounting 3100 and 3101:	115 x 115 mm. (HxW)
3102:	115 x 163 mm. (HxW)
Depth, all types	100 mm.
flush mounted:	100 mm.
wall mounted:	100 mm.

INSTALLATION:

The installation should be planned in details before starting. The cables should be listed in a cable plan, with number of pairs a.s.o.

The location of each unit in the intercom system should be planned to obtain maximum performance and user ability.

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The master station location/ orientation with regards to the operator must be taken especially into consideration. Please note the gooseneck mic (if installed) is "close talk". A close talk microphone has the ability to reduce surrounding noise to a minimum. The drawback is that the operator has to speak no more than 5-10 cm away from the microphone.

SCREEN CONNECTION.

In order to obtain maximum performance after installation, it is necessary to terminate the cables and ground the screens in a good manners. The cables is to be de-isolated by removing approximately 250 mm of the outer insulation. Then the screen braid is cut off appr. 30 mm longer than the outer isolation. The conductors is de-isolated and fitted with end-crimps before they are inserted into the terminal. The outer screen is clamped to the cable fixing arcs inside the cabinet. Cable ties of a conductive type is recommended for best result.

Please see figure 2 for more details.

No.:

*Hoved stasjonene 3100/3101/3102 leveres som standard for innfelt montering.
På forespørsel kan veggboks leveres for utvendig montering*

Front plate dimensjoner 3100 and 3101:	144 x 144 mm. (HxB)
3102:	144 x 192 mm. (HxB)
Utstansingsmål for innfelt montering, 3100 and 3101:	115 x 115 mm. (HxB)
3102:	115 x 163 mm. (HxB)
Dybde, alle typer	100 mm.
innfelt montering:	100 mm.
utvendig montering:	100 mm.

INSTALLASJON:

Installasjonen bør planlegges i detalj før start. Kablene bør listes i en kabel plan med nummererte par etc. Plasseringen av hver enhet i intercom systemet bør kartlegges for å oppnå maksimal bruksvennlighet og ytelse. Det bør legges spesiell vekt på plassering av hovedstasjon i forhold til operatøren. Viktig å vite er at dersom det installeres en svanehals mikrofon (gooseneck microphone) er denne ofte "close-talk", dvs. med direktiv virkning. En direktiv mikrofon har den fordel at den er lite følsom for omgivelsesstøy. Ulempen er at operatøren må svært nær for å tale (5-10 cm).

SKJERM TERMINERING:

For å oppnå maksimal lyd kvalitet er det meget viktig med god og riktig terminering av skjerm. Kablene skal avisoleres ved å fjerne den ytre beskyttelses kappen i en lengde på ca 250mm. Deretter kuttet ytterskjermen slik at denne stikker ca. 30 mm ut fra kabelisolasjonen. Lederne avisoleres og helst påmonteres termineringshylser for å oppnå best og varig kontakt i skrutermineralene. Ytterskjermen klemmes inntil de dertil egnede feste punktene på innsiden av bakkboksen. For å oppnå best kontakt bør festebånd av elektrisk ledende materiale benyttes.

Ref. figur 2 for detaljer

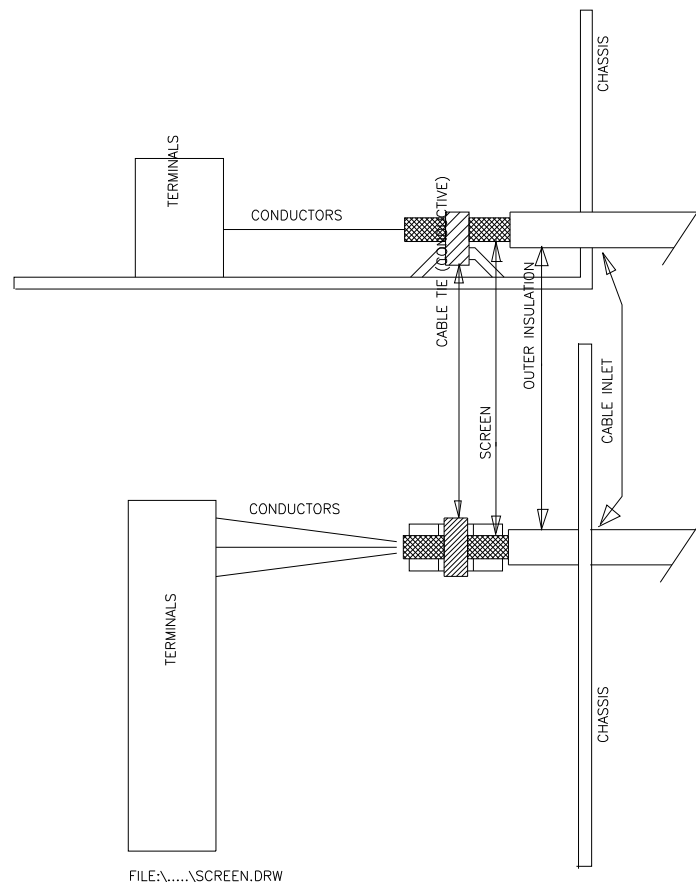
FIGURE 2 / FIGUR 2

Eng.:

The cable outer screens is to be terminated as shown. Conductive type of cable ties is recommended to obtain best possible screen connections.

No.:

Kabelens ytterskjerm skal termineres som vist. Festebånd av ledende materiale bør benyttes for å oppnå best kontakt mellom skjerm og chassis.



5.0 CABLE REQUIREMENTS / KRAV TIL KABEL

Eng.:

To substations: one pair, twisted, outer screen.
If extra signal organ: one pair extra.
To bridge wings: two pairs, individually twisted, outer screen.
Power cables: one pair, gnd.
Minimum conductor area all cable types: 0.75 mm².

**IMPORTANT: TO SECURE UN-INTERFERED OPERATION DO NOT COMBINE SIGNAL CABLES WITH OTHER CABLE TYPES SUCH AS MAINS SUPPLY.
THE CABLING FOR THE CIS SYSTEM SHOULD BE A SEPARATE NETWORK.**

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Consult drawings 97301-007-EC (CIS 3100), 97301-002-EC (CIS 3101) and 97301-013-EC (CIS 3102) for further cabling information.

No.:

Til understasjoner: ett par revolvert, utvendig skjermet.

Ved ekstra signal organ: et ekstra par.

Til broving: to par, individuelt revolvert, utvendig skjerm.

Kraft kabler: ett par, jord.

Minimum tverrsnitt alle typer: 0,75 mm².

**VIKTIG: FOR Å SIKRE UFORSTYRRET DRIFT, IKKE KOMBINER SIGNAL KABLER MED KABLER FOR ANNET UTSTYR SOM F.EKS. NETTKABLER OSV.
KABLINGEN FOR CIS SYSTEMET SKAL VÆRE ET EGET NETT.**

I dokumentene 97301-007-EC (CIS 3100), 97301-002-EC (CIS 3101) og 97301-013-EC (CIS 3102) finnes ytterligere informasjon.

6.0. SELECTIVE CALLS / SELEKTIVE ANROP

Eng.:

This chapter describes the operation of the CIS master stations. In idle status / after power-up, the master station line indicator leds illuminates dim green as night orientation light.

No.:

Dette kapittelet beskriver bruken av hovedstasjonene. I hvilestilling og etter påslag lyser hovedstasjonens lysdioder svakt grønt . (bakbelysning)

6.1. MASTER CALL TO A SUBSTATION / HOVEDSTASJON ANROPER UNDERSTASJON

Eng.:

- Select the line by operating the appropriate line key. The line indicator led turns red.
- Now press the CALL key. This will generate an attention tone in the substation unit loudspeaker and activate the extra signal device if any.

Note: several lines may be called simultaneously.

No.:

- *Velg ønsket linje ved å trykke inn linjeknappen. Linje indikator lysdiode skifter til rødt fullt lys.*
- *Trykk CALL knappen. Dette starter en oppmerksomhetstone i understasjonens høyttaler/ hodesett. Eventuelt ekstra signal organ starter også.*
- *NB: flere linjer kan kalles samtidig.*

6.2. MASTER CALL TO ALL SUBSTATIONS / HOVEDSTASJON ANROPER ALLE UNDERSTASJONER

Eng.:

- Press the ALL/TALK key without any lines engaged. The master station automatically enters the all-call mode. All the leds illuminates red colour.
- Speak into the microphone.

No.:

- *Trykk ALL/TALK knappen uten noen linjer aktive. Hovedstasjonen velger automatisk alle-kall modus. Alle lysdiodene tenner rødt lys, også lysdiode for ALL/TALK knappen.*
- *Snakk direkte inn i mikrofonen.*

6.3 A SUBSTATION ANSWER THE CALL FROM THE MASTER / UNDERSTASJONEN SVARER PÅ ANROP FRA HOVEDSTASJON

Eng.:

When the attention tone is heard in the loudspeaker and / or the extra signal organ is activated:

- Press the talk-key and answer the call.
- Keep the TALK key pressed all time during the conversation.

No.:

Når oppmerksomhetstonen høres i høyttaleren / eller ekstra signal giver aktiveres:

- *Trykk på TALK knappen for å svare oppkallet.*
- *Hold TALK knappen inne hele tiden mens samtalen pågår.*

6.3. THE MASTER TALKING TO THE SUBSTATION / HOVEDSTASJONEN SNAKKER TIL EN UNDERSTASJON

Eng.:

When the call is answered:

- Operate the TALK key on the master and talk into the microphone / loudspeaker.
- Release the talk-key to return to listen-mode.

No.:

Når understasjonen svarer oppkallet:

- *Trykk TALK knappen og snakk inn i mikrofonen / høyttaleren.*
- *Slipp TALK knappen for å returnere til lytte-modus.*

6.5. SUBSTATION CALL TO MASTER / UNDERSTASJON OPPKALL TIL HOVEDSTASJON

Eng.:

- Press the CALL button on the substation / call unit. This generates an attention tone in the master station as long as the call-button is kept pressed. Simultaneously the appropriate line indicator led turns full light green to indicate which substation made the call.

Note: If a call occurs during an on-going conversation, the attention tone is disabled, but the line indicator led change to green colour full intensity.

No.:

- Trykk på CALL knappen på understasjonen. Dette starter oppkallstonen i hovedstasjonen, og denne lyder så lenge understasjonen prøver å kalle opp. Samtidig tenner linjens lysdiode grønn, fullt lys, for å indikere hvilken understasjon som kaller.

Viktig: hvis et oppkall inntreffer under pågående samtale, aktiveres ikke kalletonen, men lysdioden tenner fullt grønt lys.

6.6. THE MASTER ANSWER THE CALL FROM A SUBSTATION / HOVEDSTASJONEN SVARER PÅ ANROP FRA UNDERSTASJONEN

Eng.:

To answer the call from a substation:

- Press the appropriate line key. The line indicator led turns green full intensity.
- Press the talk key and speak into the microphone.
- Release the TALK key to return to listen mode.

No.:

For å svare et oppkall fra en understasjon.

- *Trykk inn gjeldende linjeknapp. Lysdioden tenner fullt rødt lys.*
- *Trykk inn TALK knappen og snakk inn i mikrofonen.*
- *Slipp TALK knappen for å returnere til lytte-modus.*

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6.7. TERMINATING THE CONVERSATION / AVSLUTTE SAMTALEN

Eng.:

The conversation is terminated by de-activating the line:

- Operate the line key once more. The line indicator led turn green half-light intensity. (backlight)

No.:

Samtalen avsluttes ved å legge linjen ut igjen:

- *Trykk linjeknappen en gang til. Lysdioden skifter til grønt baklys (hvilestilling).*

7.0. ALL CALL / ALLEKALL

Eng.:

The master station CIS 3100/3101/3102 may perform an ALL CALL to the substations.

- Operate the ALL/TALK key. (no lines active) A special attention tone (1kHz chopped) is distributed to all the substations for about 2-3 seconds. Simultaneously all the extra signal organ outputs is activated for 2-3 seconds. All the line indicator leds turns red colour. The call key indicator led illuminate red during this interval (2-3 seconds.)

When this led turns off again the system is ready to use.

- Give the message and release the ALL/TALK key.

No.:

Hovedstasjonene CIS 3100/3101/3102 kan utføre alle kall til understasjonene.

- *Trykk inn ALL/TALK knappen når hovedstasjonen er i hvilestilling (ingen linjer aktivert). En spesiell tone 1kHz pulset (viktig melding), distribueres til alle understasjonene i cirka. 2-3 sekunder. Samtidig aktiveres alle ekstra signal utganger i cirka 2-3 sekunder. Alle linje indikator lysdioder tenner rødt. Call knappens lysdiode tenner rødt i 2-3 sekunder. Når CALL knappens lysdiode slukker er systemet klart til bruk.*
- *Snakk inn i mikrofonen og slipp TALK knappen etter meldingen.*

8.0 BRIDGE WING - EXTERNAL PAGING / BROVING - EKSTERNT AKTIVERT ANROP

Eng.:

Two separate external audio and key lines are provided for remote paging. These interfaces are as default intended for bridge wing paging, port and starboard. In this mode they interface a loudspeaker/microphone/key configuration. The paging can be done in 2 ways. Either prepared in advance on the master station making the bridge wing able to communicate with the selected substations (conversation mode). Or the system can be keyed directly from idle into the all call paging mode. In both situations the master station loudspeaker will relay the activity.

The starboard bridge wing interface has an alternative mode; the emergency allcall mode. It can be redefined as an interface to other equipment (Phontech SPA 1500 system) or be activated from an emergency microphone position. In the emergency all call mode it will generate an ALL CALL situation independent of prior status (idle or busy) (Ref. chapter 9 - priority and chapter 14 or 15 - Strapping and connection point locations).

Both speech audio and alarms may be fed to this input.

No.:

To separate eksterne audio og nøklings linjer er tilgjengelig for fjernstyring av anrop. Disse linjene er primært ment brukt til anrop fra broving, babord og styrbord. Linjene interfacer en høyttaler/mikrofon/nøklings konfigurasjon. Anropet kan gjøres på 2 måter. Enten kan et linjevalg settes opp i forkant. På denne måten kan brovingene samtale med understasjonene i begge retninger (konversasjons modus). Eller systemet kan nøkles direkte fra hvilesituasjon til allekall/fellesanrop. I begge tilfelle vil hovedstasjonens høyttaler monitorere samtale begge veier. Styrbord broving linje kan omdefineres til en nød allekall modus. Linjen kan omdefineres for tilkobling enten til annet utstyr (Phontech SPA 1500 system) eller den kan aktiveres fra en nødmikrofon. I nød allekall modus vil systemet generere et allekall/fellesanrop uansett status på forhånd (ledig/opptatt). (ref. kapittel 9 - Prioritet og kapittel 14 eller 15 - Lokalisering av linker og kontaktpunkter). Både tale og alarmtoner kan tilføres denne linjen.

9.0 PRIORITY / PRIORITET

Eng.:

- The master station normally has first priority.
 - If the external emergency paging is enabled this will have an intermediate first priority and override existing calls.
- After this first priority override activation the master station regains priority and can place calls of any type.

No.:

- Hovedstasjonen har normalt første prioritet.
- Dersom eksternt nød allekall aktiveres vil dette likevel ha midlertidig første prioritet og overstyre eventuelle eksisterende anrop. Etter første gangs aktivering vil hovedstasjonen gjenerobre første prioritet og kan gjøre anrop av alle typer.

10.0 CALLS DURING AN EXTERNAL ALL-CALL / ANROP UNDER EKSTERNT ALLEKALL

Eng.:

Line selections during emergency all call (press any substation line key even if this is already busy (led indicator) causes all other lines to disable and a two-way conversation can be made.
Alternatively the talk key can be activated immediately causing substation audio to be replaced by the master station message.

When the talk key is released, the external emergency all call will be re-engaged.

No.:

Dersom linjer velges under et eksternt nød allekall (aktiver understasjon linjer selv om linjeindikatoren lyser rødt) vil de øvrige linjene deaktiveres slik at en to-veis samtale med valgt linje fan skje. Alternativt kan hovedapparat operatøren trykke TALK direkte og erstatte understasjon audio med egen melding. Når TALK tasten slippes gjeninnføres det eksterne nød allekall.

11.0 INTENTIONALLY LEFT OUT / UTELATT

12.0 INTENTIONALLY LEFT OUT / UTELATT

13.0 TECHNICAL DATA.

CIS 3100.

Operation voltage / driftsspenning:

24 VDC

Current drain / strømtrekk:

1 A max.

Line capacity / linjekapasitet:

5 lines.

Power amp. capacity / forsterkerkapasitet:

10 W total

Up to 10 W per line.

Frequency range / frekvens område:

Better than 400-6000 Hz (-3dB)

Distortion / forvrengning:

Better than 2.5% typ.

Extra signal organ output / ekstra signal giver utgang:

+ 24 VDC, max 150mA

Open collector output to GND

Bridge wing microphone input / Broving mikrofon nivå:

200 Ohm / 10 mV typ.

Bridge wing loudspeaker output / Broving høyttaler utgang:

8 Ohm / 5W typ.

Line level, Stb. Bridge wing Emergency paging level /

Linje nivå, Styrbord broving Nød melding nivå:

775 mV (0dBm) typ.

CIS 3101.

Operation voltage / driftsspenning:

24 VDC

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Current drain / <i>strømtrekk</i> :	2 A max.
Line capacity / <i>linjekapasitet</i> :	10 lines.
Power amp. capacity / <i>forsterkerkapasitet</i> :	20 W total Up to 10 W per line.
Frequency range / <i>frekvens område</i> :	Better than 400-6000 Hz (-3dB)
Distortion / <i>forvrengning</i> :	Better than 2.5% typ.
Extra signal organ output / <i>ekstra signal giver utgang</i> :	+ 24 VDC, max 150mA Open collector output to GND
Bridge wing microphone input / <i>Broving mikrofon nivå</i> :	200 Ohm / 10 mV typ.
Bridge wing loudspeaker output / <i>Broving høyttaler utgang</i> :	8 Ohm / 5W typ.
Line level, Stb. Bridge wing Emergency paging level / <i>Linje nivå, Styrbord broving Nød melding nivå</i> :	775 mV (0dBm) typ.
CIS 3102	
Operation voltage / <i>driftsspenning</i> :	24 VDC
Current drain / <i>strømtrekk</i> :	3 A max.
Line capacity / <i>linjekapasitet</i> :	20 lines.
Power amp. capacity / <i>forsterkerkapasitet</i> :	40 W total Up to 10 W per line.
Frequency range / <i>frekvens område</i> :	Better than 400-6000 Hz (-3dB)
Distortion / <i>forvrengning</i> :	Better than 2.5% typ.
Extra signal organ output / <i>ekstra signal giver utgang</i> :	+ 24 VDC, max 150mA Open collector output to GND
Bridge wing microphone input / <i>Broving mikrofon nivå</i> :	200 Ohm / 10 mV typ.
Bridge wing loudspeaker output / <i>Broving høyttaler utgang</i> :	8 Ohm / 5W typ.
Line level, Stb. Bridge wing Emergency paging level / <i>Linje nivå, Styrbord broving Nød melding nivå</i> :	775 mV (0dBm) typ.

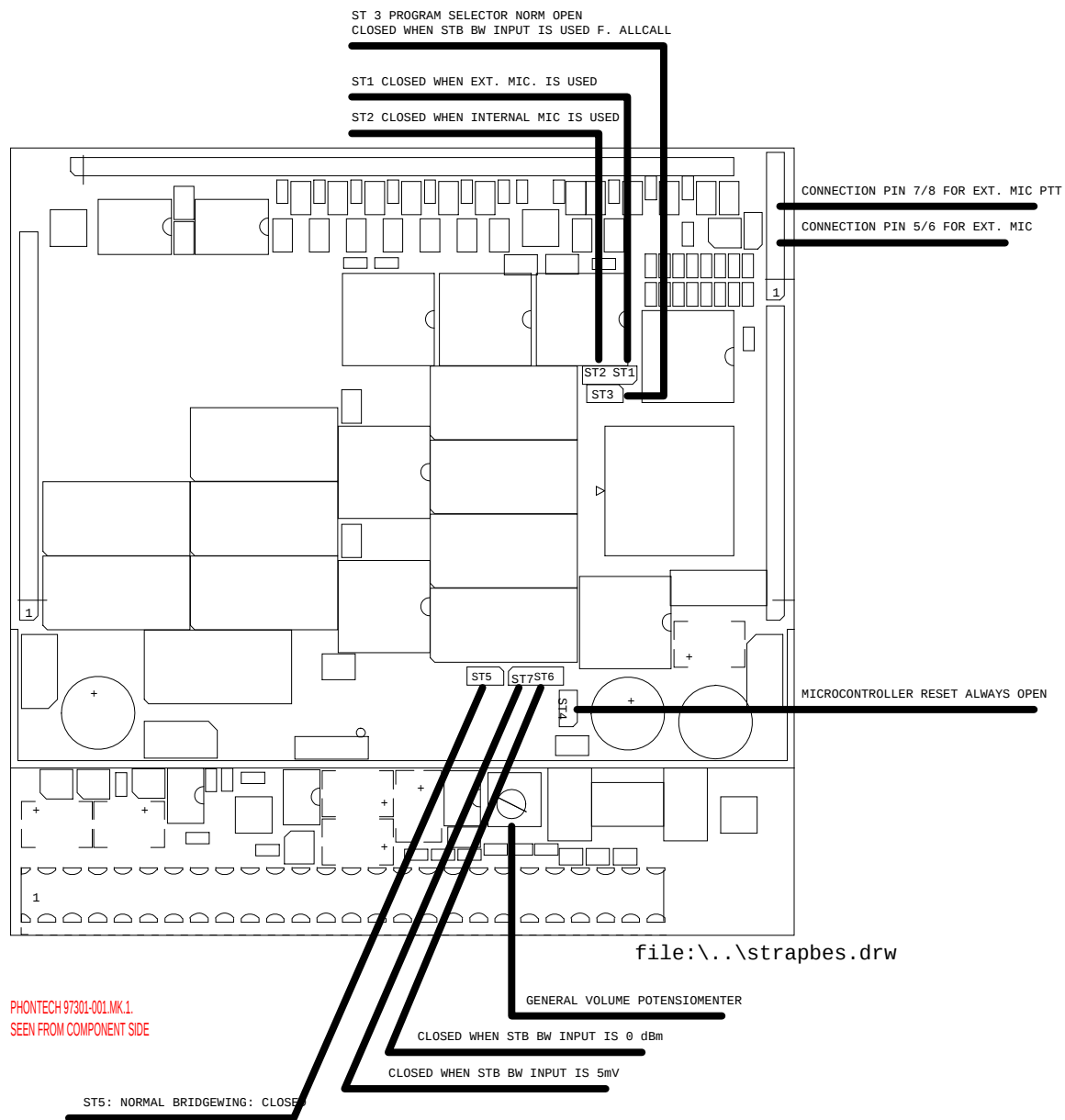
14.0 SYSTEM BOARD 97301-001 (CIS 3100/3101)
STRAPPING AND CONNECTION POINT LOCATIONS /
LOKALISERING AV LINKER OG KONTAKTPUNKTER.

J2 Terminal / pin No. - J2 Terminal / pin. nr.	Function / Equipment	Funksjon / tilkoblet utstyr
1 & 2	Volume potensiometer	Volum potensiometer
3 & 4	Unit loudspeaker	Apparat høyttaler
5 & 6	Microphone	Mikrofon element
7 & 8	TALK activator	Tale knapp

Strap	Condition Tilstand	Description / Functionality Beskrivelse / Funksjon	Standard
ST2 ST1 ● ●---●	ST1 closed ST2 open ST1 lukket ST2 åpen	Using an additional microphone, the integrated microphone is not used Benytter tilleggsmikrofon, integrert mikrofon benyttes ikke	
ST2 ST1 ●---● ●	ST1 open ST2 closed ST1 åpen ST2 lukket	Using the integrated microphone, an additional unit microphone is not mounted Benytter integrert mikrofon, tilleggsmikrofon på enheten er ikke montert	✓
ST3 ● ●	ST3 open ST3 åpen	Starboard bridge wing interface is used as bridge wing interface - NORMAL Styrbord broving interface benyttes som broving - NORMAL	✓
ST3 ●---●	ST3 closed ST3 lukket	Starboard bridge wing interface is used as input for external PRIORITY ALL CALL Styrbord broving interface benyttes som inngang for eksternt PRIORITERT ALLE KALL	
ST4 ● ●	ST4 open ST4 åpen	Microcontroller RESET: Always open during normal working conditions Mikrokontroller RESET: Skal alltid være åpen i normal drift	✓
ST4 ●---●	ST4 closed ST4 lukket	Only to be used by service personnel: Always open during normal working conditions Benyttes kun av service personell: Skal alltid være åpen i normal drift	
ST5 ● ●	ST5 open ST5 åpen	Disable loudspeaker audio to the starboard bridge wing interface. This facility is used in line feed conditions. i.e PA-system, PABX etc. Frakoble høyttaler audio til styrbord broving interface. Benyttes ved tilkobling til eksternt nøklingsutstyr f.eks. PA-system, PABX etc.	
ST5 ●---●	ST5 closed ST5 lukket	Enable loudspeaker audio to the starboard bridge wing. This facility is used in NORMAL bridge wing operation Tilkoble høyttaler audio til styrbord broving. Benyttes ved NORMAL broving funksjon	✓
ST7 ST6 ● ●---●	ST6 closed- ST7 open ST6 lukket- ST7 åpen	The starboard bridge wing is connected to a line level (0dBm) interface, i.e. PA system, PABX etc. Styrbord broving er tilkoblet linje nivå (0dBm) interface. F.eks. PA system, PABX etc.	
ST7 ST6 ●---● ●	ST6 open- ST7 closed ST6 åpen- ST7 lukket	The starboard bridge wing is connected to a microphone level interface, i.e. bridge wing microphone, microphone for PRIORITY ALL CALL Styrbord broving er tilkoblet mikrofon nivå interface, f.eks. broving mikrofon, mikrofon for PRIORITERT ALLE KALL	✓

Doc.No.: 08300-007-DE

FIGURE 3 / FIGUR 3

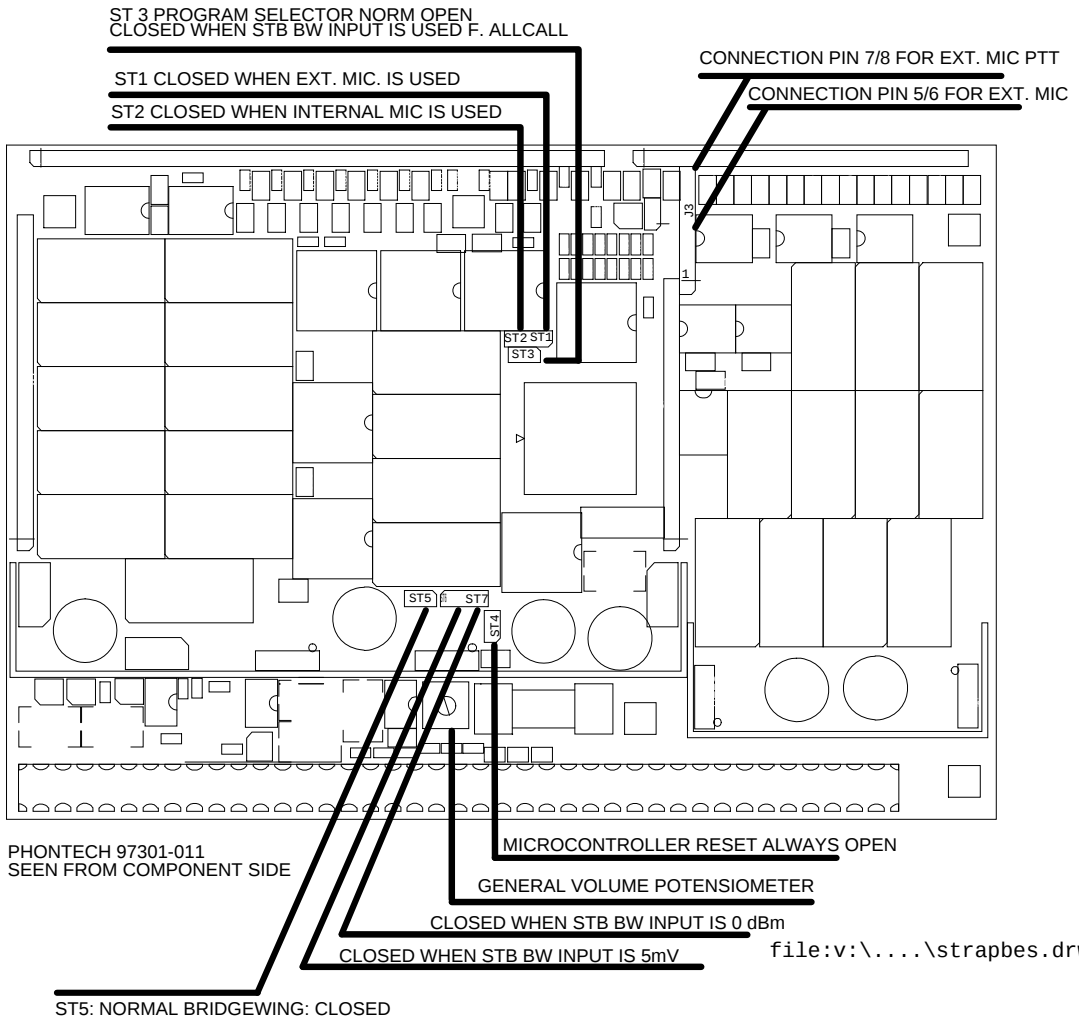


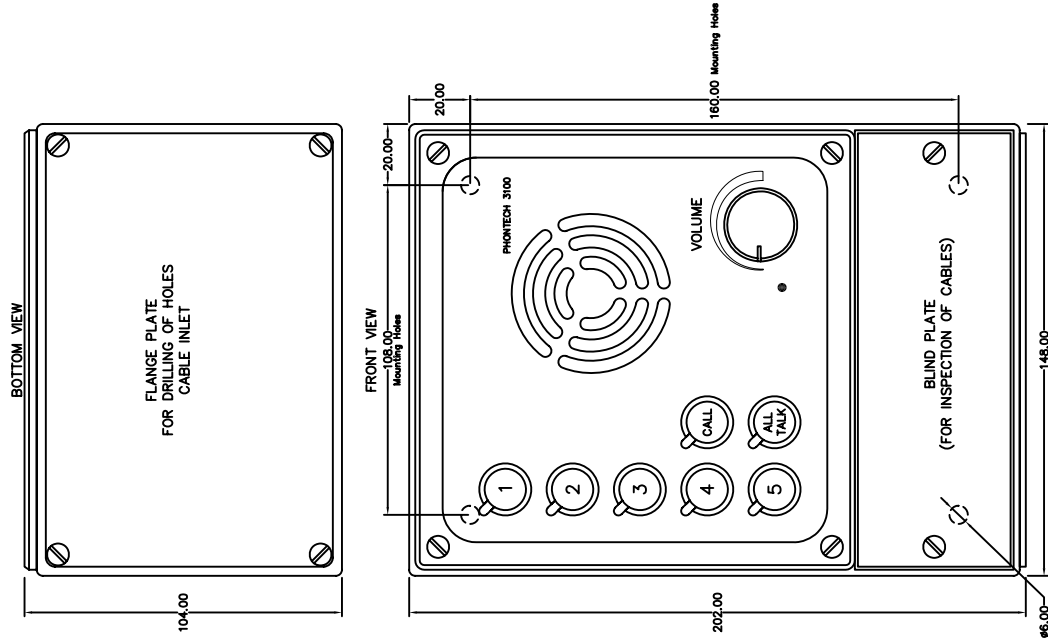
15.0 **SYSTEM BOARD 97301-011 (CIS 3102)**
STRAPPING AND CONNECTION POINTS LOCATION /
LOKALISERING AV LINKER OG KONTAKTPUNKTER.

J3 Terminal / pin No. - J3 Terminal / pin. nr.	Function / Equipment	Funksjon / tilkoblet utstyr
1 & 2	Volume potensiometer	Volum potensiometer
3 & 4	Unit loudspeaker	Apparat høyttaler
5 & 6	Microphone	Mikrofon element
7 & 8	TALK activator	Tale knapp

Ref. strap descriptions under chapter 14.0
Ref. link beskrivelser under kapittel 14.0

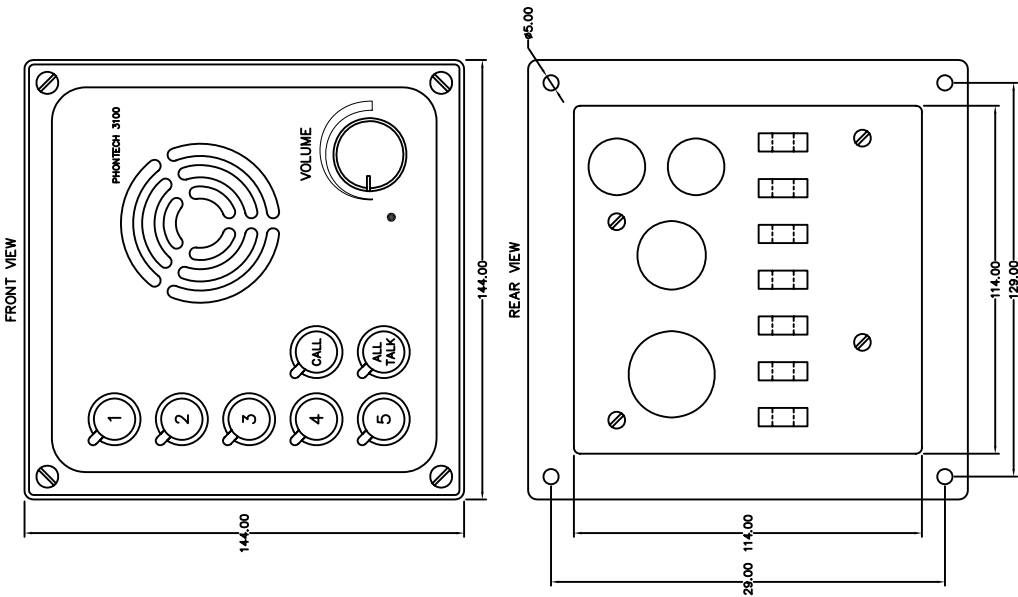
FIGURE 4 / FIGUR 4





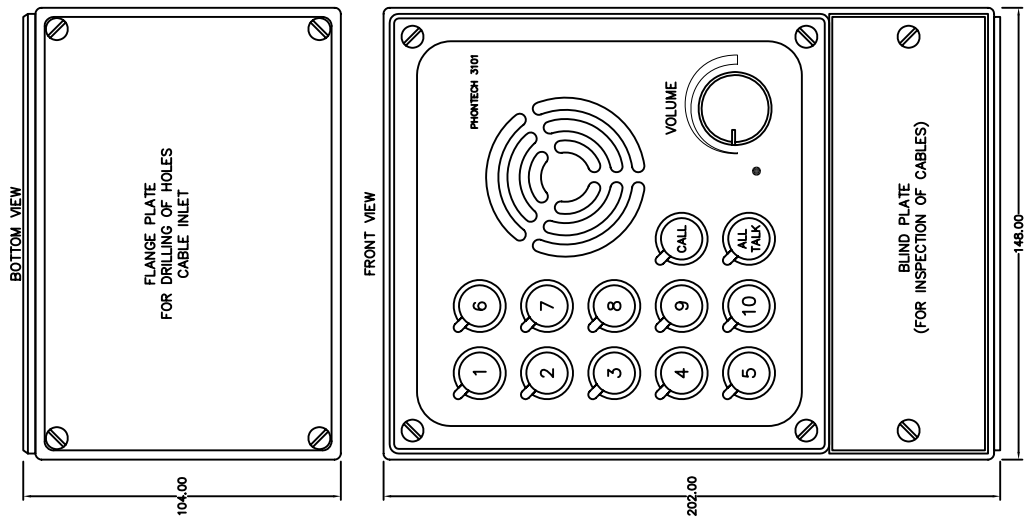
NOTES:

- MATERIAL: ALUMINIUM 57S.
- COLOUR: BLACK (RAL 9005).
- IP GRADE: IP-22
- WEIGHT: APP. 3.00Kg.
- POWER: 24VDC.
- Mounting: 4pcs. M5 Bolt.

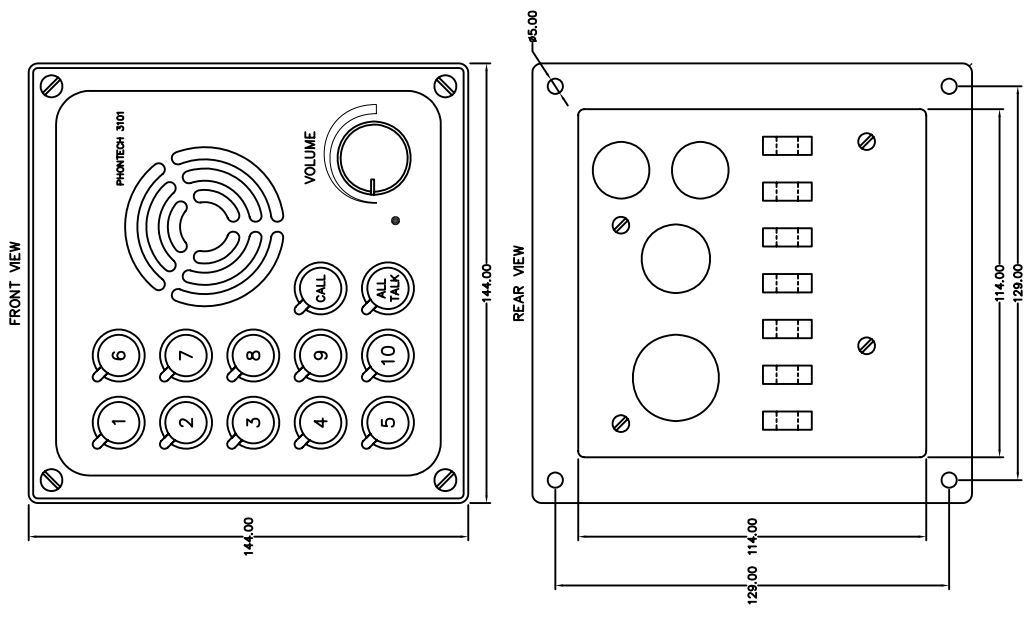


NOTES:

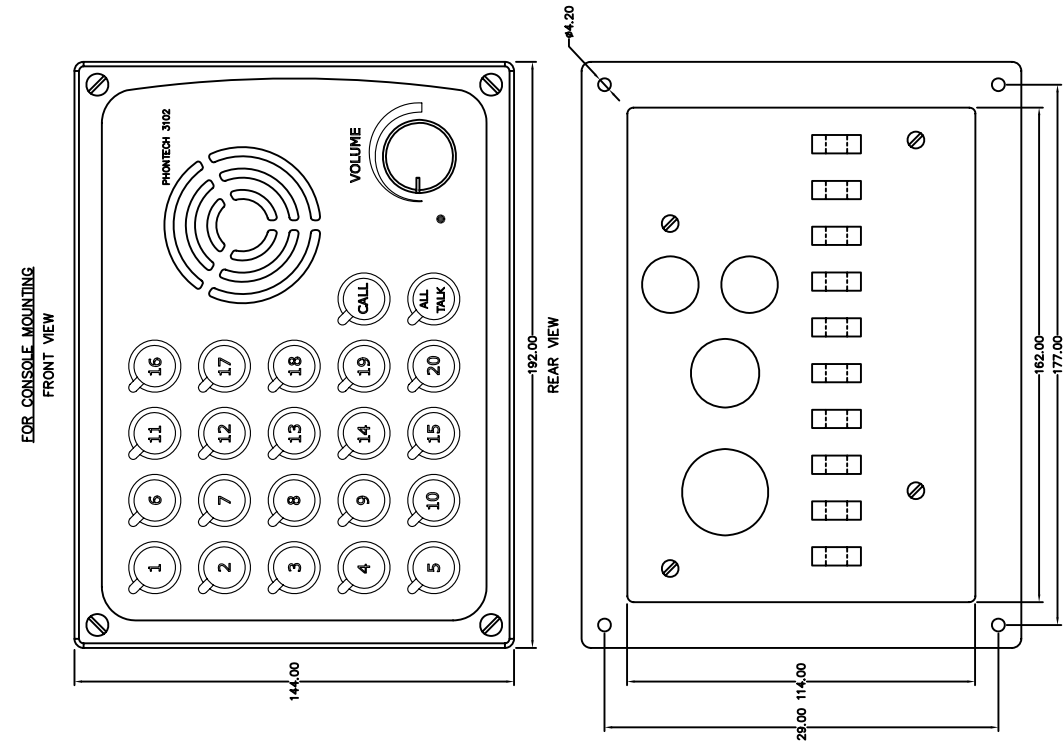
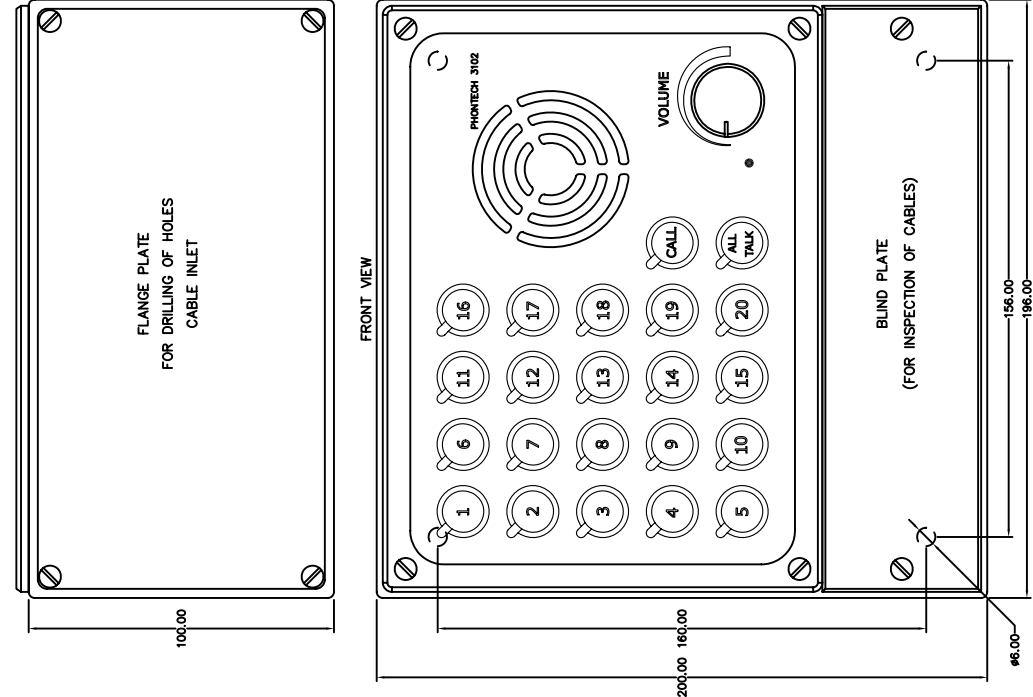
- MATERIAL: ALUMINIUM 57S.
- COLOUR: BLACK (RAL 9005).
- IP GRADE: IP-22
- WEIGHT: APP. 2.50Kg.
- POWER: 24VDC.
- DEPTH: 100,00mm. EX. FRONT.
- Mounting: 4pcs. M4 Bolt.



NOTES:
-MATERIAL: ALUMINIUM 57S.
-COLOUR: BLACK (RAL 9005).
-IP GRADE: IP-22
-WEIGHT: APP. 3.00Kg.
-POWER: 24VDC.

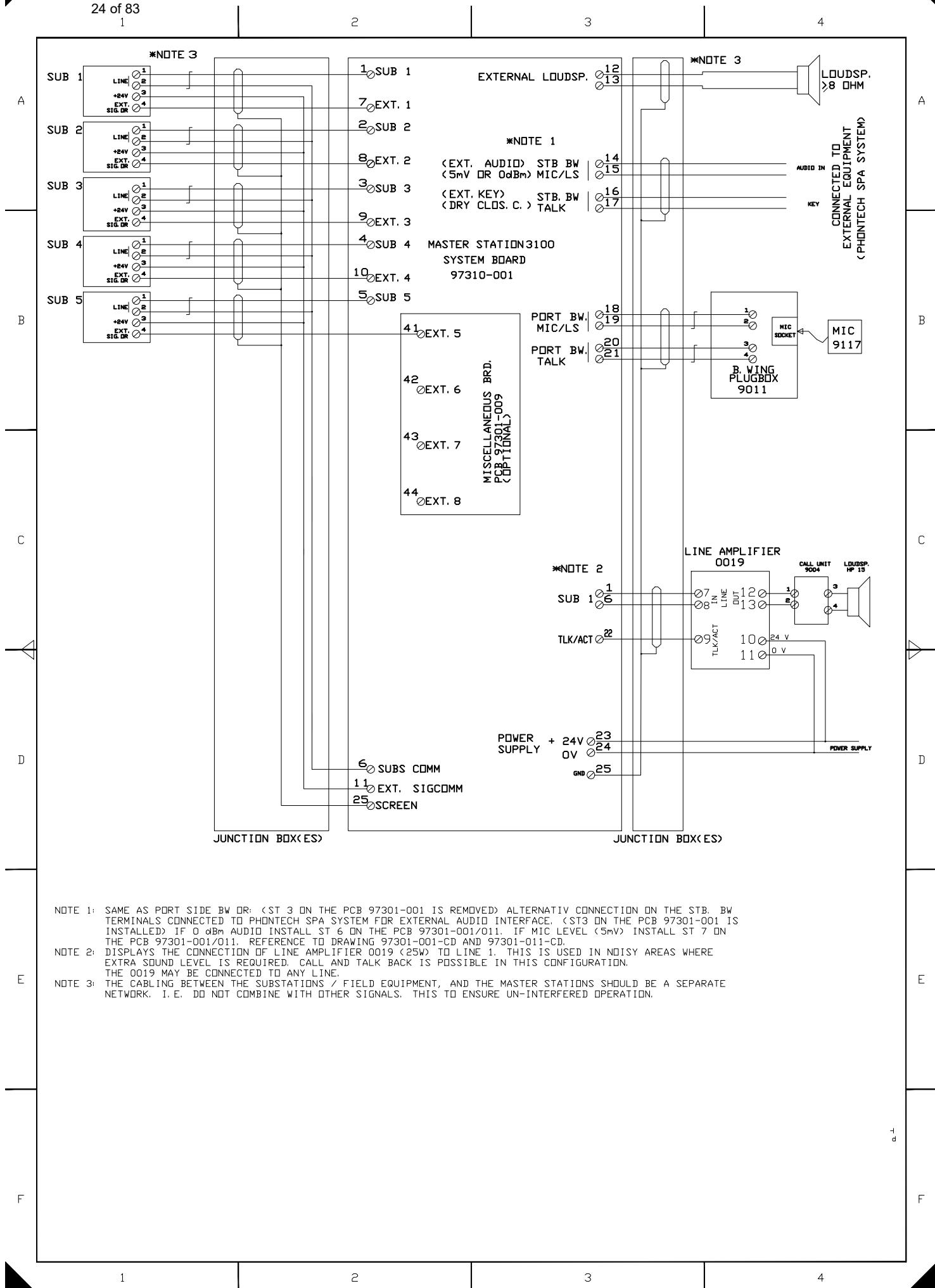


NOTES:
-MATERIAL: ALUMINIUM 57S.
-COLOUR: BLACK (RAL 9005).
-IP GRADE: IP-22
-WEIGHT: APP. 2.50Kg.
-POWER: 24VDC.
-DEPTH: 100,00mm. EX. FRONT.

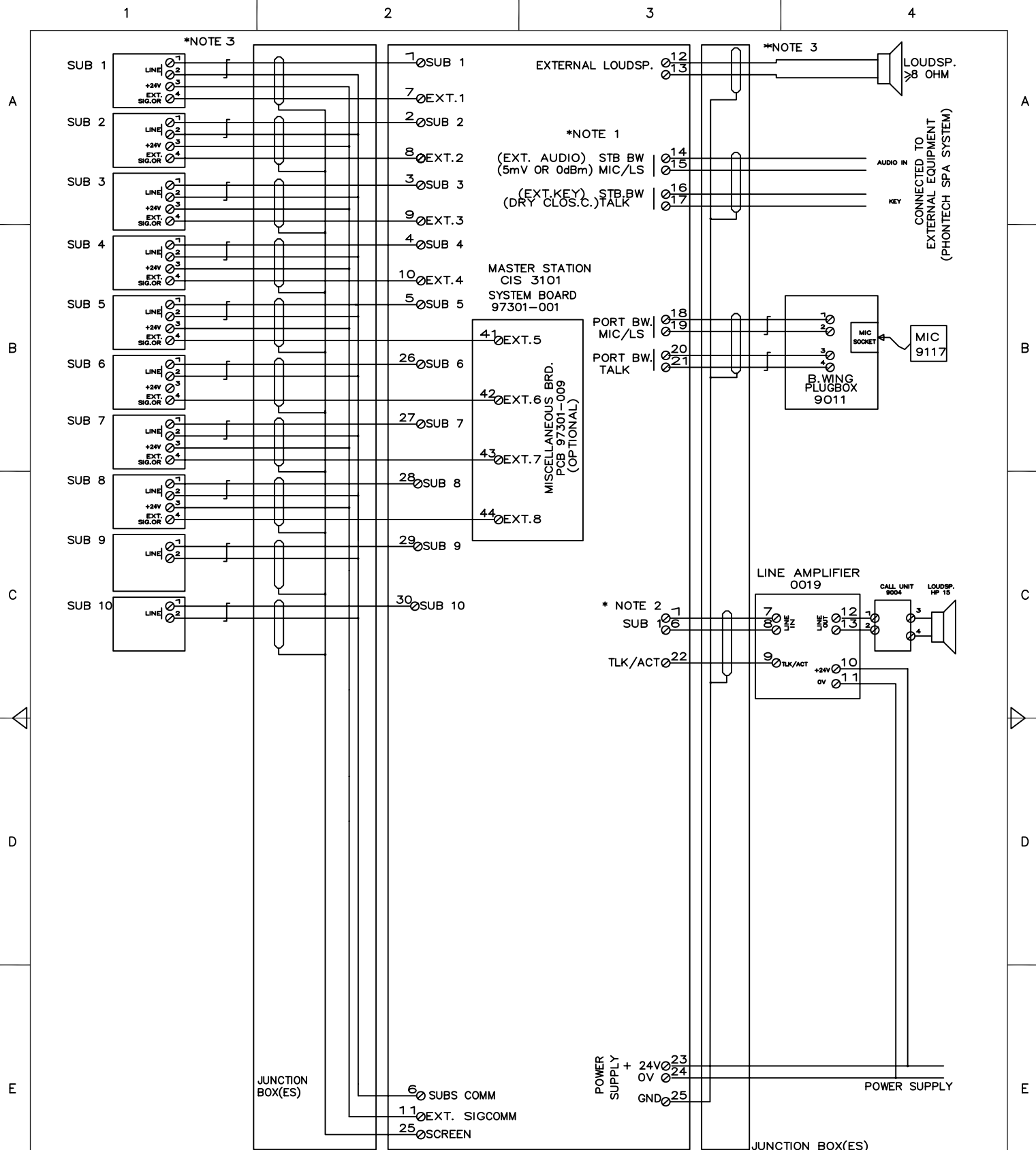


EQUIPMENT DATA:	
MANUFACTURER	: PHONTECH AS.
MODEL/TYPE	: INTERCOM SYSTEM.
RACK/BOX SUPPL.	: PHONTECH AS.
RACK/BOX TYPE	: NA.
MATERIAL	: ALUMINIUM 57S.
COLOUR	: RAL 9005.
WEIGHT OF UNIT	: APP. 3.00Kg.
MOUNTING	: TO CONSOLE/WALL.

FIXING DETAILS	
ACCESS	: 4pcs. M4 BOLT.
CABLE ENTRY	: REAR/FRONT.
GLAND TYPE	: NA./YARD SUPPLY.
PROTECTION IP	: IP-22
POWER SUPPLY	: 24VDC.
POWER CONSUMP.	: NA.
HEAT DISSIPATION	: NA.



- NOTE 1: SAME AS PORT SIDE BW OR: (ST 3 ON THE PCB 97301-001 IS REMOVED) ALTERNATIV CONNECTION ON THE STB. BW TERMINALS CONNECTED TO PHONTECH SPA SYSTEM FOR EXTERNAL AUDIO INTERFACE. (ST3 ON THE PCB 97301-001 IS INSTALLED) IF 0 dBm AUDIO INSTALL ST 6 ON THE PCB 97301-001/011. IF MIC LEVEL (5mV) INSTALL ST 7 ON THE PCB 97301-001/011. REFERENCE TO DRAWING 97301-001-CD AND 97301-011-CD.
- NOTE 2: DISPLAYS THE CONNECTION OF LINE AMPLIFIER 0019 (25W) TO LINE 1. THIS IS USED IN NOISY AREAS WHERE EXTRA SOUND LEVEL IS REQUIRED. CALL AND TALK BACK IS POSSIBLE IN THIS CONFIGURATION. THE 0019 MAY BE CONNECTED TO ANY LINE.
- NOTE 3: THE CABLING BETWEEN THE SUBSTATIONS / FIELD EQUIPMENT, AND THE MASTER STATIONS SHOULD BE A SEPARATE NETWORK. I. E. DO NOT COMBINE WITH OTHER SIGNALS. THIS TO ENSURE UN-INTERFERED OPERATION.



NOTE 1:
SAME AS PORT SIDE BW OR: (ST3 ON THE PCB 97301-001 IS MOUNTED) ALTERNATIVE CONNECTION ON THE STB. BW. TERMINALS CONNECTED TO PHONTECH SPA SYSTEM FOR EXTERNAL AUDIO INTERFACE. (ST3 ON THE PCB 97301-001 IS REMOVED).

NOTE 2:
DISPLAYS THE CONNECTION OF LINE AMPLIFIER 0019 (25W) TO LINE 1. THIS IS USED IN NOISY AREAS WHERE EXTRA SOUND LEVEL IS REQUIRED. CALL AND TALK BACK IS POSSIBLE IN THIS CONFIGURATION. THE 0019 MAY BE CONNECTED TO ANY LINE.

NOTE 3:
THE CABELING BETWEEN THE SUBSTATIONS/FIELD EQUIPMENT AND THE MASTER STATIONS SHOULD BE A SEPARATE NETWORK. I.E. DO NOT COMBINE WITH OTHER SIGNALS. THIS TO ENSURE UNINTERFERED OPERATION.

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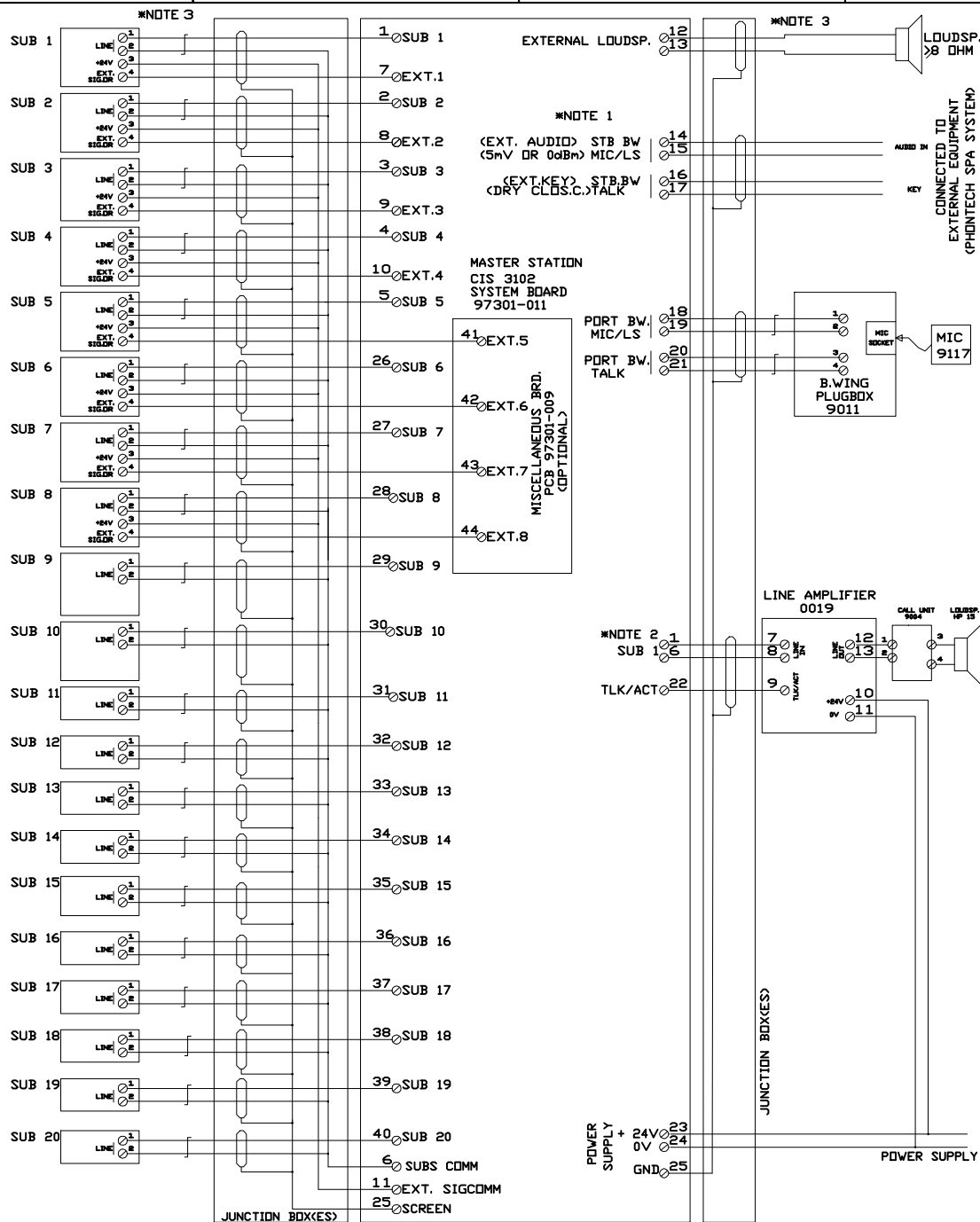
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- NOTE 1: SAME AS FOR THE PORT SIDE BW OR: (ST 3 ON THE PCB 97301-001 IS MOUNTED)
ALTERNATIVE CONNECTION ON THE STB.BW. TERMINALS CONNECTED TO PHONTECH SPA SYSTEM FOR EXTERNAL AUDIO INTERFACE.
(ST 3 ON THE PCB 97301-001 IS REMOVED)
- NOTE 2: DISPLAYS THE CONNECTION OF LINE AMPLIFIER TYPE 0019 (25W) TO LINE 1.
THIS IS USED IN NOISY AREAS WHERE EXTRA SOUND LEVEL IS REQUIRED.
THE 0019 MAY BE CONNECTED TO ANY LINE.
- NOTE 3: TWISTED PAIRS THE CABELING BETWEEN THE SUBSTATIONS / FIELD EQUIPMENT AND THE MASTER STATION
SHOULD BE A SEPARATE NETWORK.
I.E. DO NOT COMBINE WITH OTHER SIGNALS. THIS TO ENSURE UNINTERFERED OPERATION.

NOTES:

CABLE REQUIREMENTS:
TWISTED PAIR WITH OUTHER SCREEN.

RECOMMENDED CONDUCTOR AREA ALL CABLE
TYPES: 0,75 sqmm.

DO NOT COMBINE SIGNAL CABLES WITH OTHER
CABLE TYPES SUCH AS MAIN SUPPLY.

THE CABLING FOR THIS SYSTEM SHOULD BE A
SEPARATE NETWORK.

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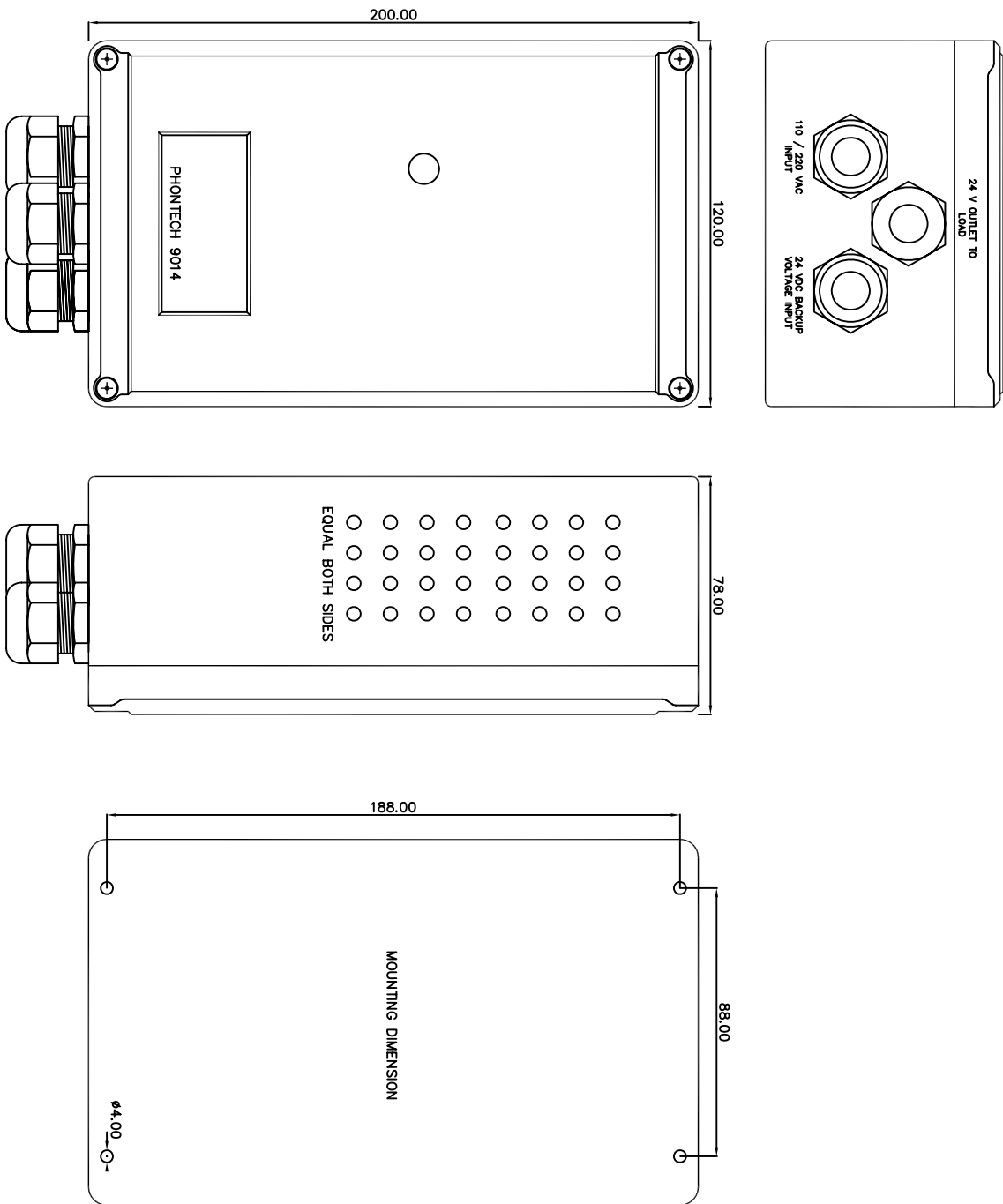
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EQUIPMENT DATA:

MANUFACTURER : PHONTECH AS.
MODEL/TYPE : BACKUP POWER 9014.
RACK/BOX SUPPL. : BOPLA.
RACK/BOX TYPE : EUROMAS II, ET-221.
MATERIAL : ABS.
COLOUR : RAL 7035, GREY.
WEIGHT OF UNIT : APP. 1,00Kg.
MOUNTING : TO WALL.

FIXING DETAILS : 4pcs. M4 BOLT.
ACCESS : FRONT.
CABLE ENTRY : BOTTOM.
GLANG TYPE : 3pcs. PG-13,5.
PROTECTION IP : IP-20.
POWER SUPPLY : 110/220VAC.
POWER CONSUMP. : 70 mA /(IDLE).
HEAT DISSIPATION : NA.

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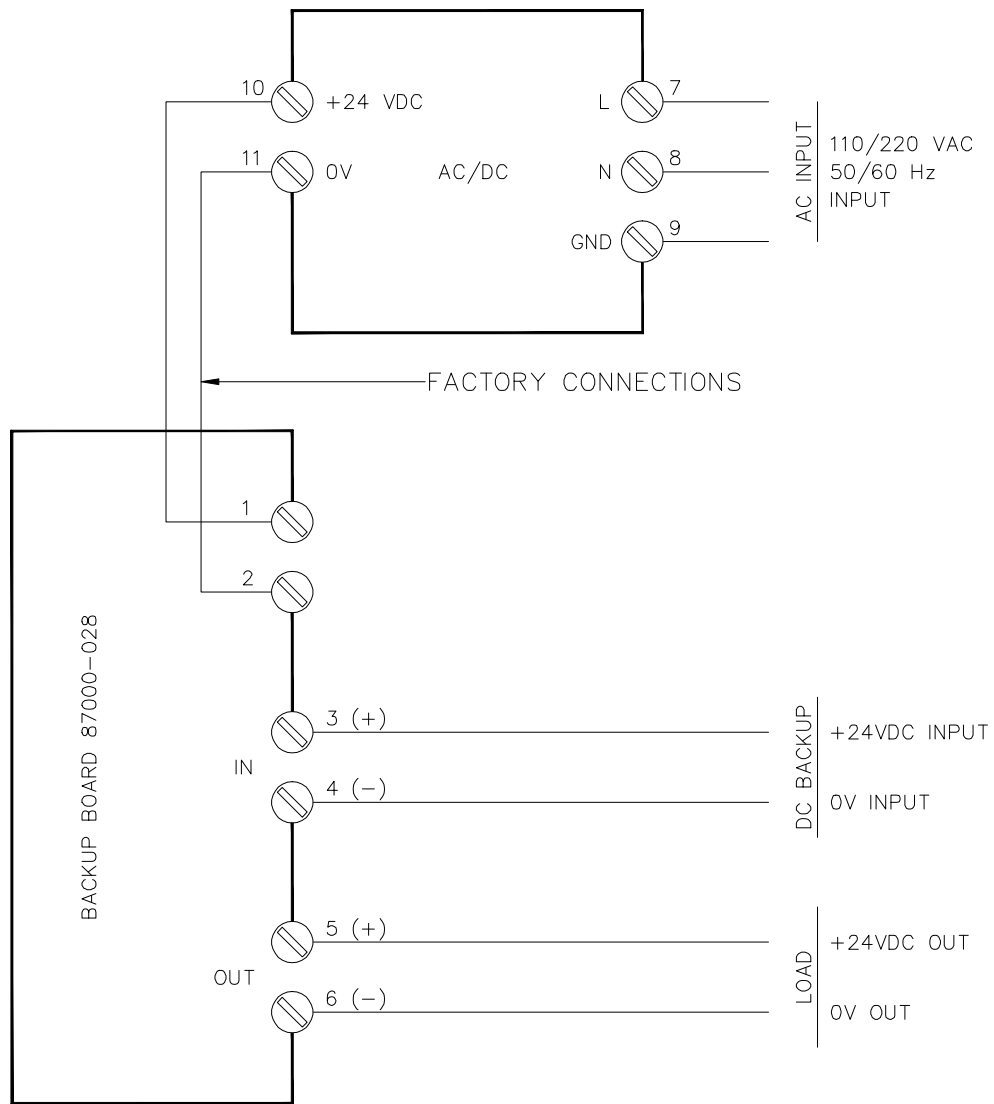
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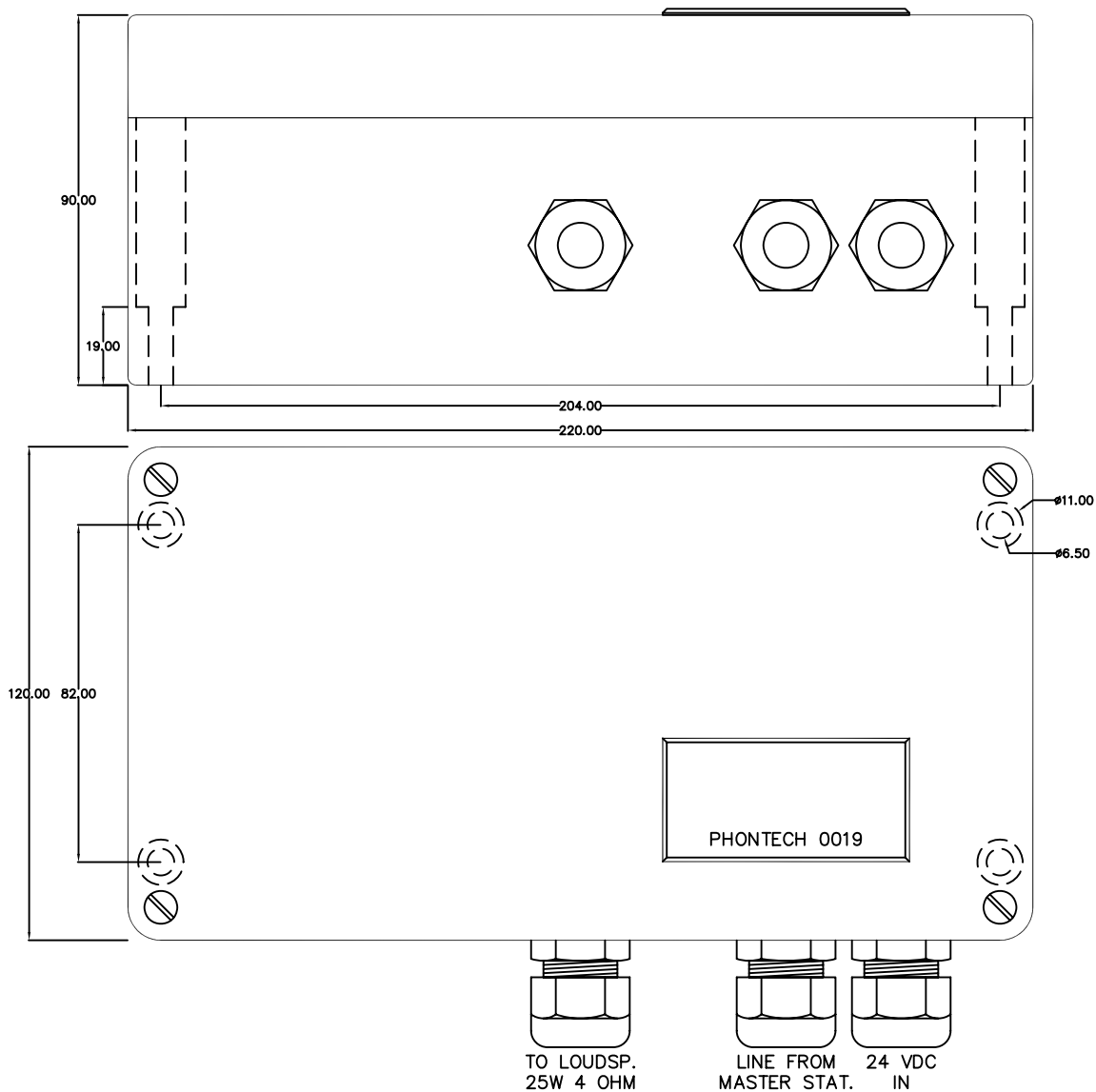
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EQUIPMENT DATA:

MANUFACTURER : PHONTECH AS.
MODEL/TYPE : LINE AMPLIFIER.
RACK/BOX SUPPL. : POK 5 127760.
RACK/BOX TYPE : POLY BOX.
MATERIAL : GRP.
COLOUR : RAL 7001.
WEIGHT OF UNIT : 1,65Kg.
MOUNTING : TO WALL.

FIXING DETAILS : 4pcs. M5 BOLT.
ACCESS : FRONT.
CABLE ENTRY : BOTTOM.
GLAND TYPE : 3pcs. PG-11.
PROTECTION IP : IP-65.
POWER SUPPLY : 24VDC.
POWER CONSUMP. : NA.
HEAT DISSIPATION : NA.

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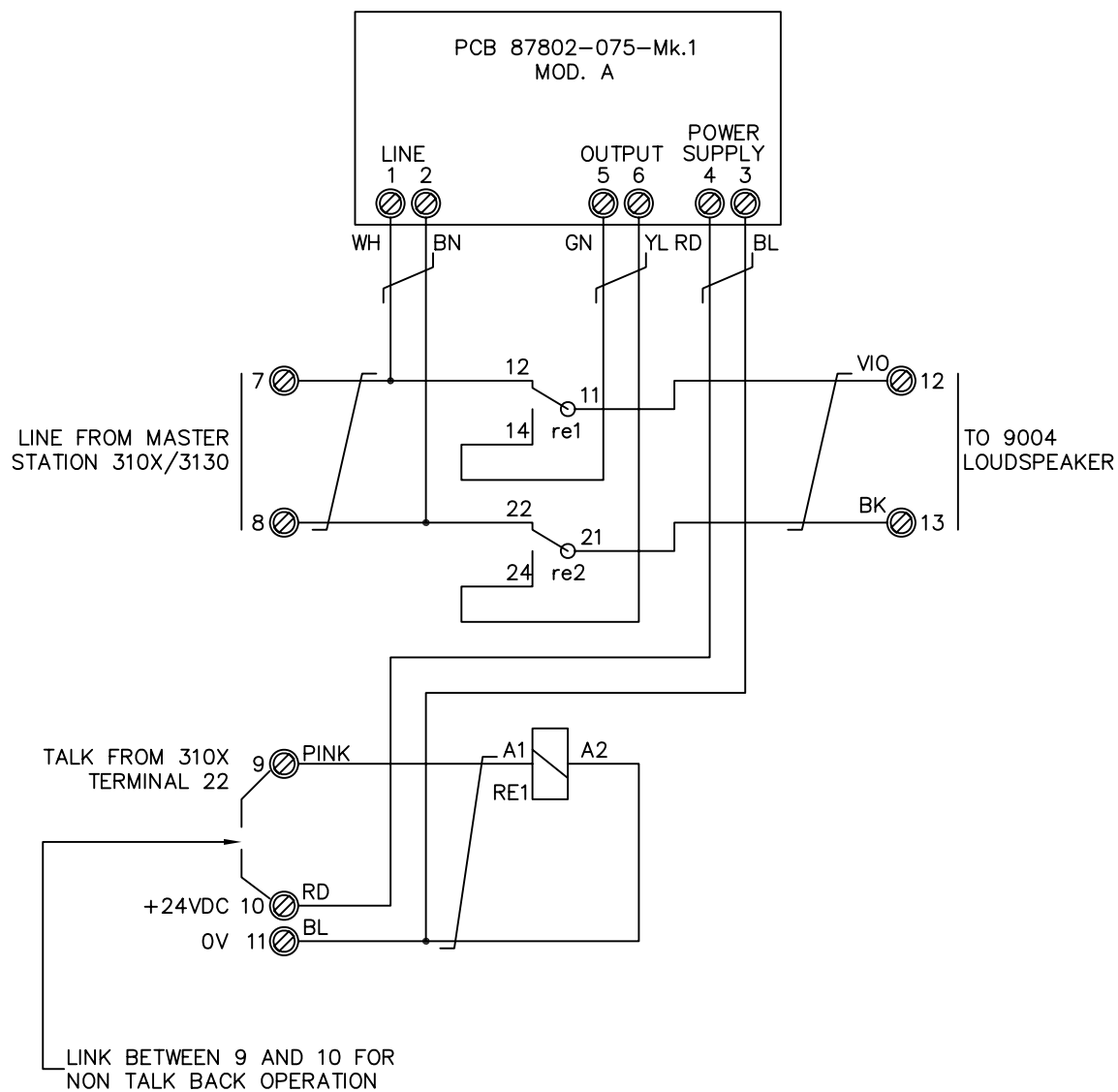
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Cable 0.25mm²

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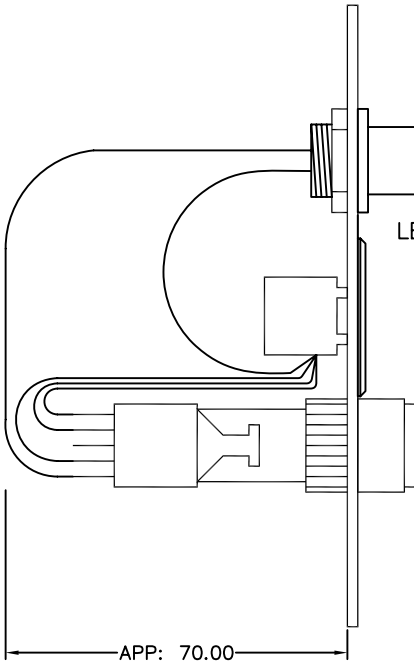
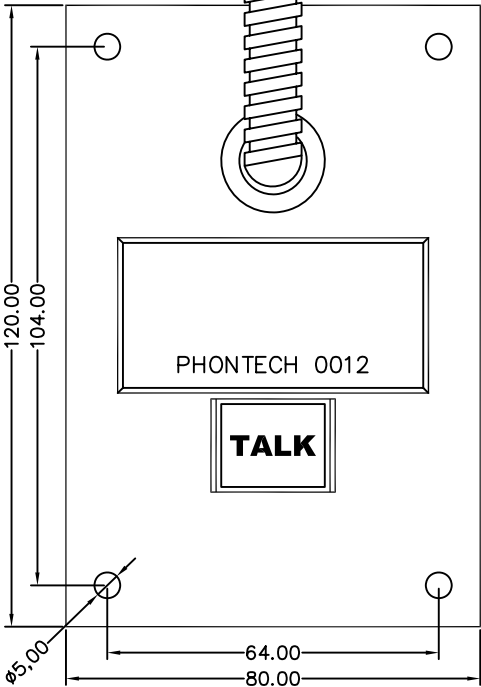
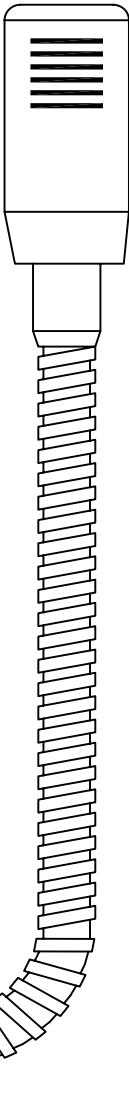
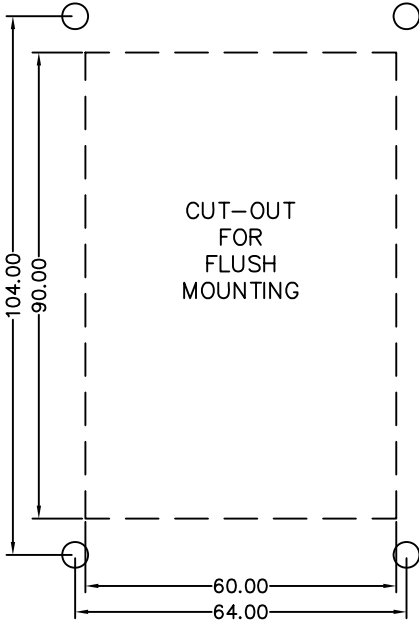
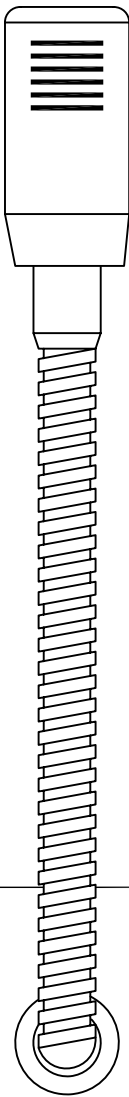
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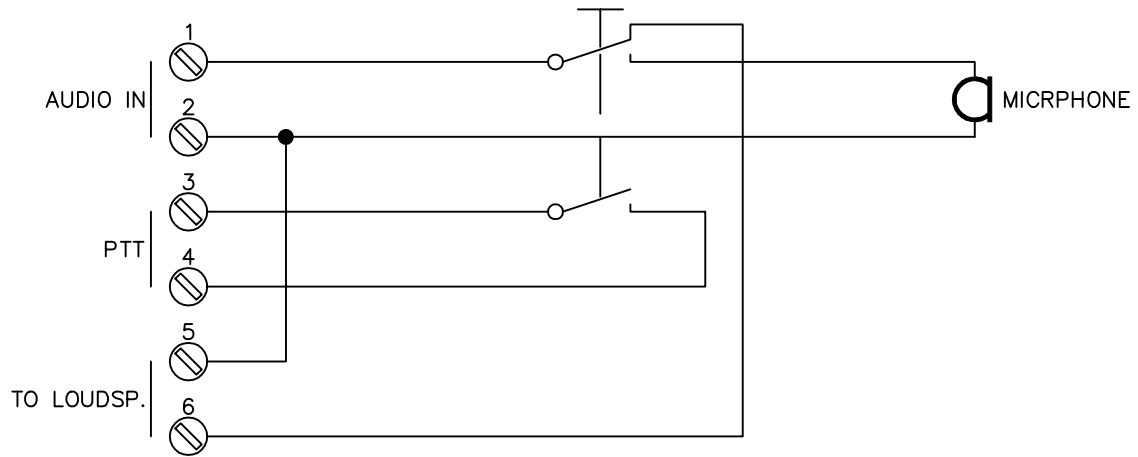
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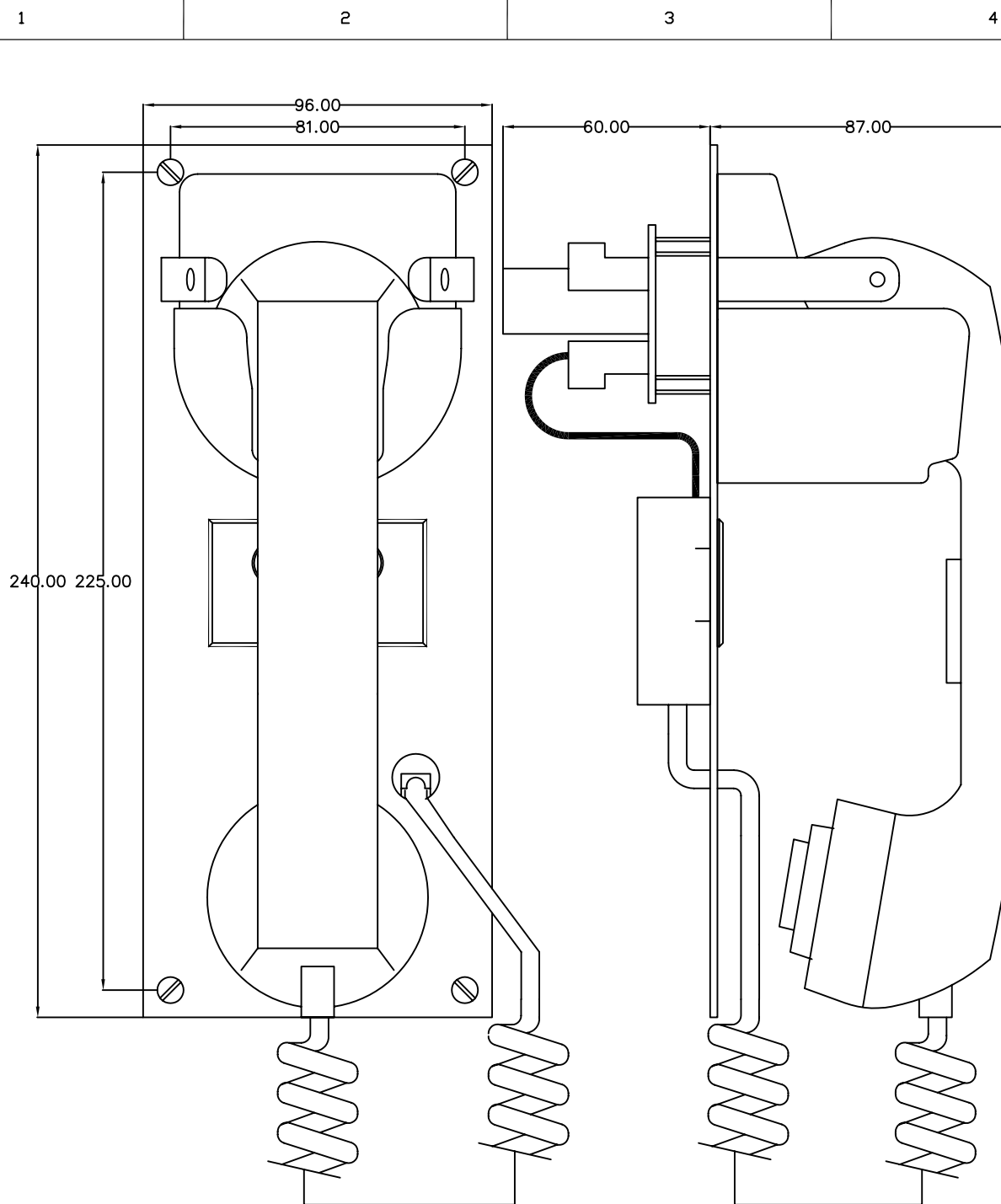
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NOTES:
 -REQUIRED OPENING FOR FLUSH-MOUNTING: 66 x 210mm.
 15,00mm IN FROM EACH SIDE.
 -COLOUR: FRONT: BLACK. TELEPHONE: BLACK.
 -WEIGHT: APP. 1,50Kg.
 -FIXING DETAILS: 4pcs. M4 SCREW.

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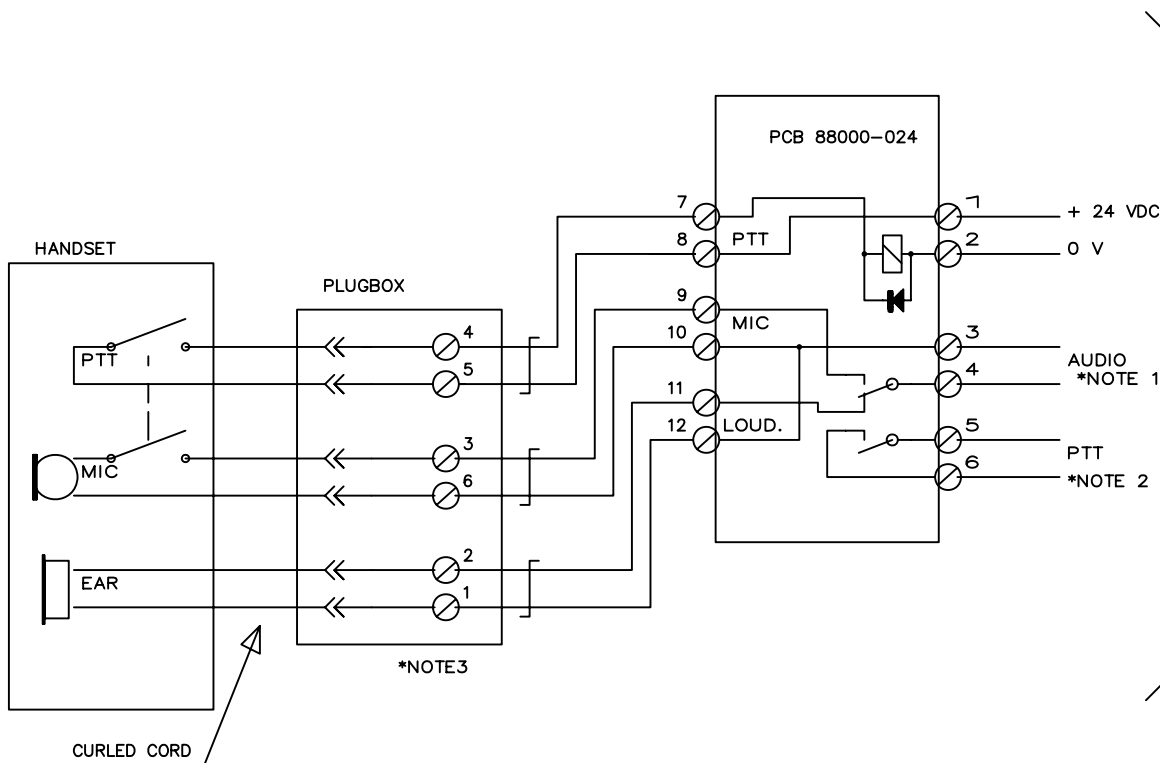
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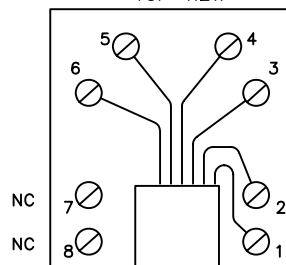
NOTE 1
AUDIO LINE TERMINALS
ON DIFFERENT MASTER UNITS

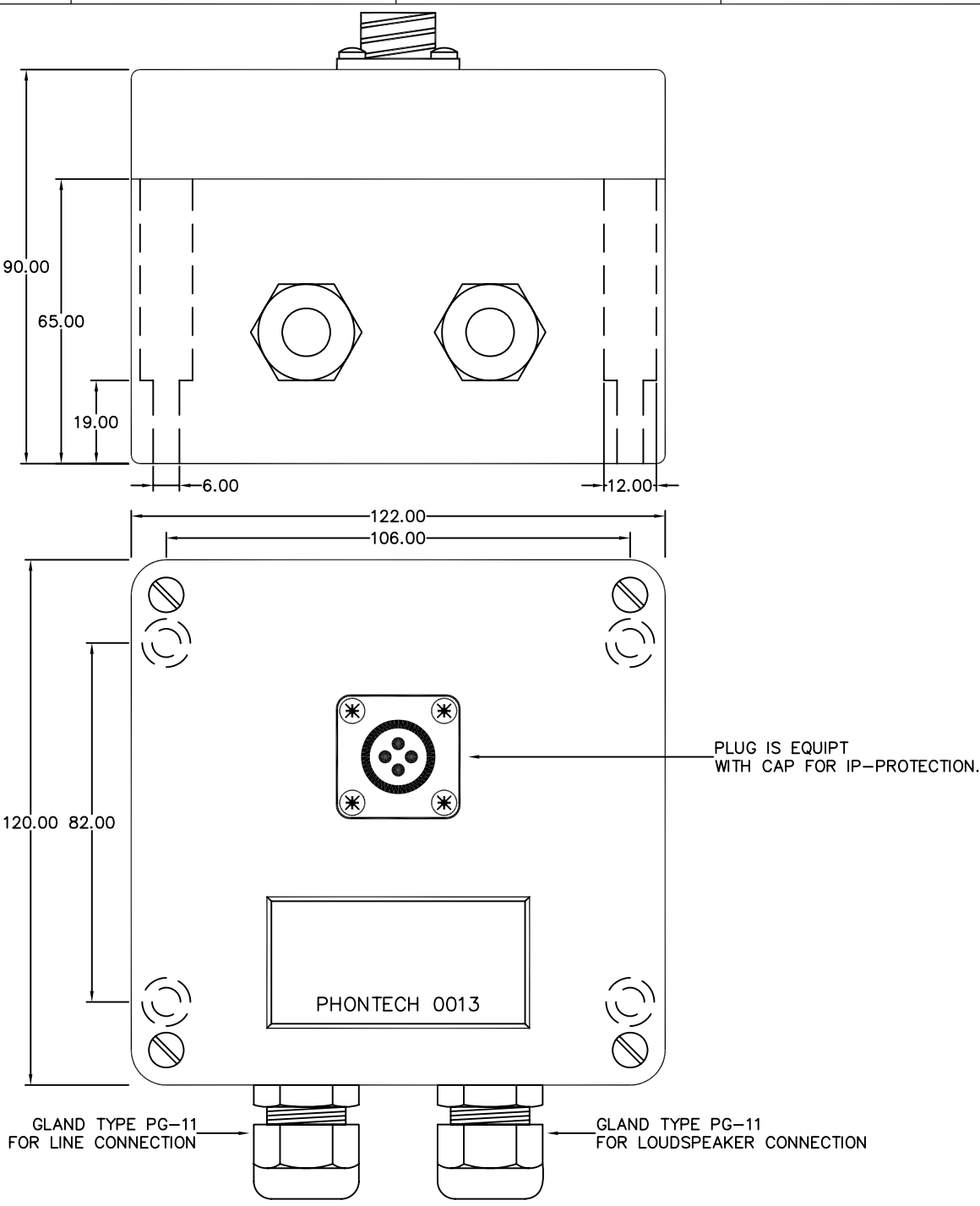
3000: 10,11
3001: 18,19
3002: 26,27
3100: STARBOARD: 14,15
3100: PORT: 18,19
3101: STARBOARD: 14,15
3101: PORT: 18,19
3102: STARBOARD: 14,15
3102: PORT: 18,19

NOTE 2
PTT LINE TERMINALS
ON DIFFERENT MASTER UNITS

3000: 12,13
3001: 16,17
3002: 28,29
3100: STARBOARD: 16,17
3100: PORT: 20,21
3101: STARBOARD: 16,17
3101: PORT: 20,21
3102: STARBOARD: 16,17
3102: PORT: 20,21

NOTE 3
PLUGBOX LAYOUT
TOP VIEW





EQUIPMENT DATA:			
MANUFACTURER	: ZENITEL AS	FIXING DETAILS	: 4pcs. M4 BOLT.
MODEL/TYPE	: PLUGBOX, 0013.	ACCESS	: FRONT.
RACK/BOX SUPPL.	: ROSE.	CABLE ENTRY	: BOTTOM.
RACK/BOX TYPE	: 12.12.09.	GLAND TYPE	: 2p
MATERIAL	: GRP.	PROTECTION IP	:
COLOUR	: RAL 7001.	POWER SUPPLY	:
WEIGHT OF UNIT	: APP. 3,00Kg.	POWER CONSUMP.	:
MOUNTING	: TO WALL.	HEAT DISSIPATION	:

A

A

B

B

C

C

D

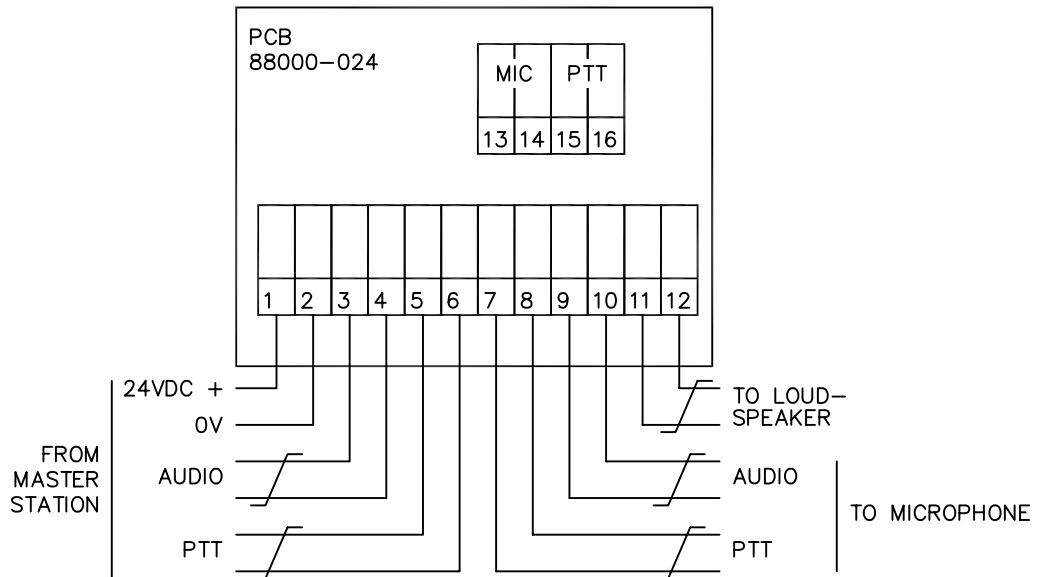
D

E

E

F

F



CIS Master Station to Substation connections:

		Terminals									
		CIS P-3100:	CIS P-3101	CIS P-3102		P-0019	P-9001/P-9004/ P-9009 P-9024/ P-9041/ P-9052	P-9003/P-9016/ P-9135		STB-2	STB-3
Substation No.1	Audio (live)	1	1	1		7	1	1		1	1
	Audio (neutral)	6 (via JB)	6 (via JB)	6 (via JB)		8	2	2		2	2
	Signal device ctrl ((+ 24V) - ref)	11 (via JB)	11 (via JB)	11 (via JB)				3			3
	Signal device ctrl ((neg) - live))	7	7	7				4			4
Substation No.2	Audio (live)	2	2	2		7	1	1		1	1
	Audio (neutral)	6 (via JB)	6 (via JB)	6 (via JB)		8	2	2		2	2
	Signal device ctrl ((+ 24V) - ref)	11 (via JB)	11 (via JB)	11 (via JB)				3			3
	Signal device ctrl ((neg) - live))	8	8	8				4			4
Substation No.3	Audio (live)	3	3	3		7	1	1		1	1
	Audio (neutral)	6 (via JB)	6 (via JB)	6 (via JB)		8	2	2		2	2
	Signal device ctrl ((+ 24V) - ref)	11 (via JB)	11 (via JB)	11 (via JB)				3			3
	Signal device ctrl ((neg) - live))	9	9	9				4			4
Substation No.4	Audio (live)	4	4	4		7	1	1		1	1
	Audio (neutral)	6 (via JB)	6 (via JB)	6 (via JB)		8	2	2		2	2
	Signal device ctrl ((+ 24V) - ref)	11 (via JB)	11 (via JB)	11 (via JB)				3			3
	Signal device ctrl ((neg) - live))	10	10	10				4			4
Substation No.5	Audio (live)	5	5	5		7	1	1		1	1
	Audio (neutral)	6 (via JB)	6 (via JB)	6 (via JB)		8	2	2		2	2
	Signal device ctrl ((+ 24V) - ref)	11 (via JB)	11 (via JB)	11 (via JB)				3			3
	Signal device ctrl ((neg) - live))	41 *	41 *	41 *				4			4
Substation No.6	Audio (live)		26	26		7	1	1		1	1
	Audio (neutral)		6 (via JB)	6 (via JB)		8	2	2		2	2
	Signal device ctrl ((+ 24V) - ref)		11 (via JB)	11 (via JB)				3			3
	Signal device ctrl ((neg) - live))		42 *	42 *				4			4
Substation No.7	Audio (live)		27	27		7	1	1		1	1
	Audio (neutral)		6 (via JB)	6 (via JB)		8	2	2		2	2
	Signal device ctrl ((+ 24V) - ref)		11 (via JB)	11 (via JB)				3			3
	Signal device ctrl ((neg) - live))		43 *	43 *				4			4
Substation No.8	Audio (live)		28	28		7	1	1		1	1
	Audio (neutral)		6 (via JB)	6 (via JB)		8	2	2		2	2
	Signal device ctrl ((+ 24V) - ref)		11 (via JB)	11 (via JB)				3			3
	Signal device ctrl ((neg) - live))		44 *	44 *				4			4
Substation No.9	Audio (live)		29	29		7	1			1	
	Audio (neutral)		6 (via JB)	6 (via JB)		8	2			2	
Substation No.10	Audio (live)		30	30		7	1			1	
	Audio (neutral)		6 (via JB)	6 (via JB)		8	2			2	
Substation No.11	Audio (live)			31		7	1			1	
	Audio (neutral)			6 (via JB)		8	2			2	
Substation No.12	Audio (live)			32		7	1			1	
	Audio (neutral)			6 (via JB)		8	2			2	
Substation No.13	Audio (live)			33		7	1			1	
	Audio (neutral)			6 (via JB)		8	2			2	
Substation No.14	Audio (live)			34		7	1			1	
	Audio (neutral)			6 (via JB)		8	2			2	
Substation No.15	Audio (live)			35		7	1			1	
	Audio (neutral)			6 (via JB)		8	2			2	
Substation No.16	Audio (live)			36		7	1			1	
	Audio (neutral)			6 (via JB)		8	2			2	
Substation No.17	Audio (live)			37		7	1			1	
	Audio (neutral)			6 (via JB)		8	2			2	
Substation No.18	Audio (live)			38		7	1			1	
	Audio (neutral)			6 (via JB)		8	2			2	
Substation No.19	Audio (live)			39		7	1			1	
	Audio (neutral)			6 (via JB)		8	2			2	
Substation No.20	Audio (live)			40		7	1			1	
	Audio (neutral)			6 (via JB)		8	2			2	

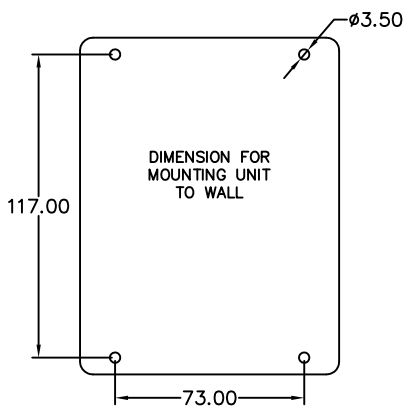
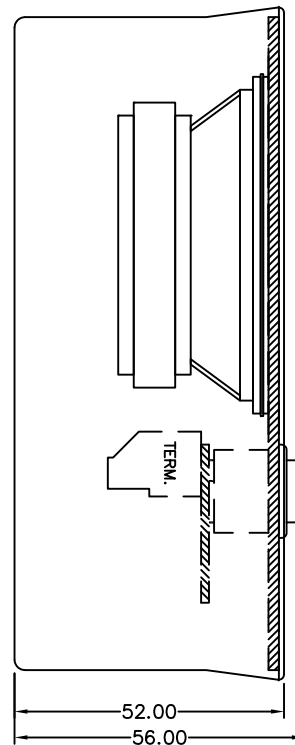
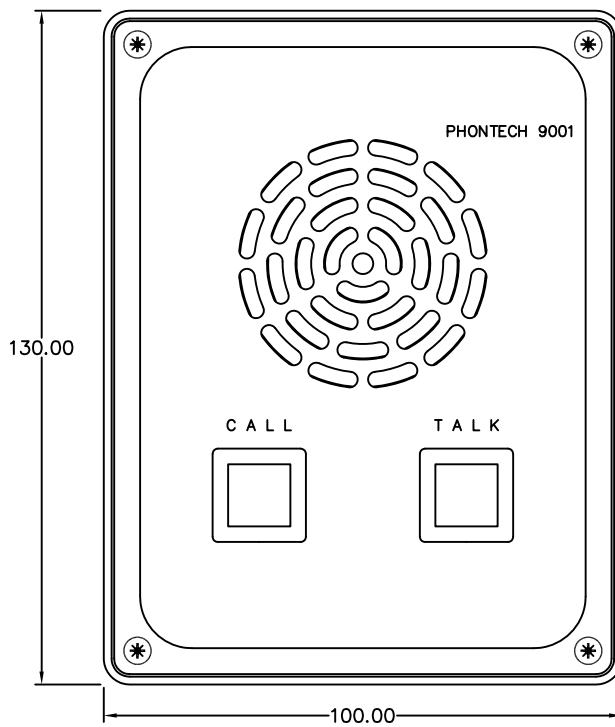
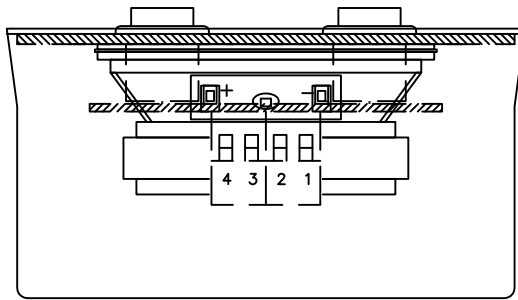
* = requies additional board: Built-in PCB for 3100, 3101, 3102, additional 4 x sub stations - pn 4000017654

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EQUIPMENT DATA:

MANUFACTURER : ZENITEL AS
MODEL/TYPE : SUBSTATION.
RACK/BOX SUPPL. : ZENITEL AS
RACK/BOX TYPE : NA.
MATERIAL : PC/ABS BLEND, ABS.
COLOUR : RAL 9005/9006.
WEIGHT OF UNIT : 0,3Kg.
MOUNTING : TO WALL.

FIXING DETAILS : SEE INSIDE BOX.
ACCESS : FRONT.
CABLE ENTRY : BOTTOM/REAR.
GLAND TYPE : YARD SUPPLY.
PROTECTION IP : IP-31
POWER SUPPLY : NA.
POWER CONSUMP. : NA.
HEAT DISSIPATION : NA.

A

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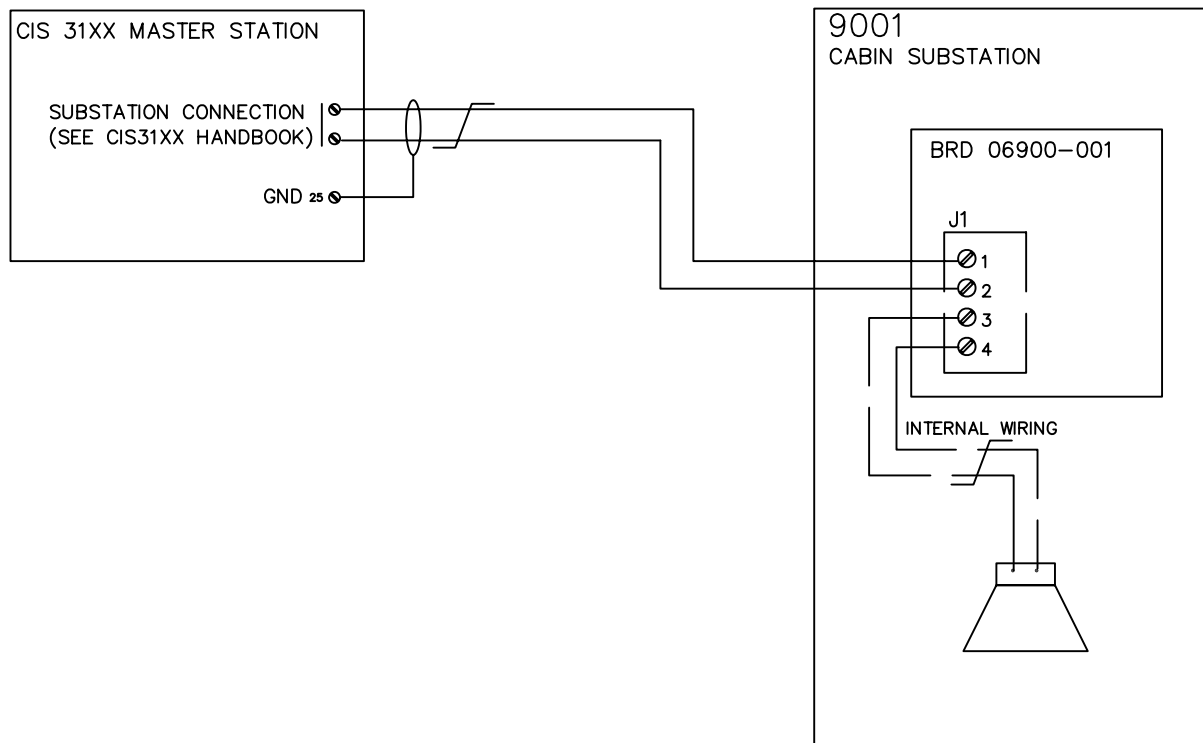
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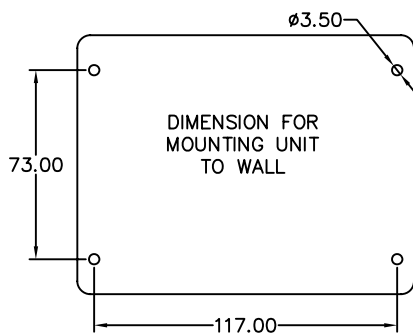
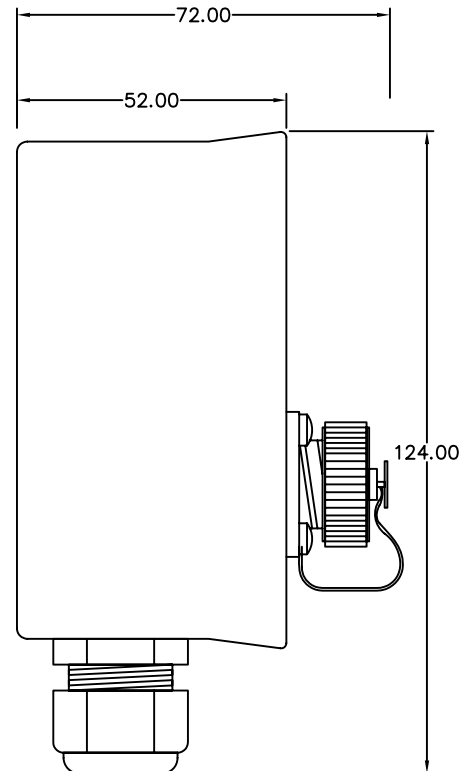
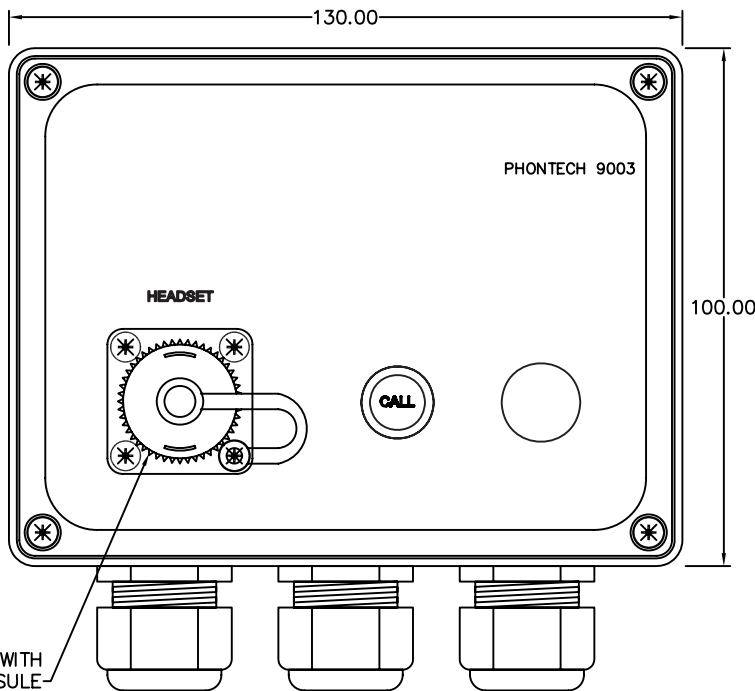
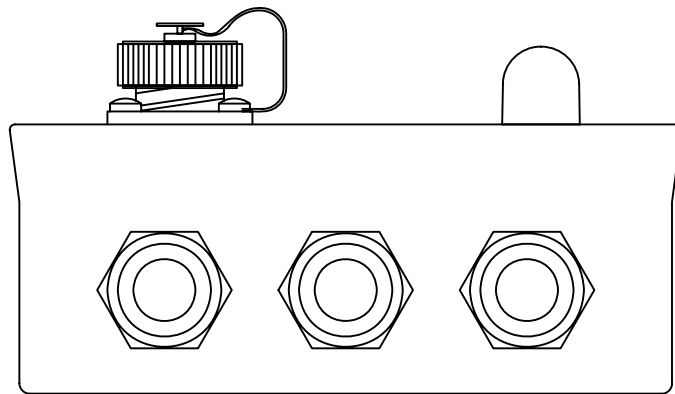
B

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EQUIPMENT DATA:

MANUFACTURER : ZENITEL AS
MODEL/TYPE : CALL/PLUGBOX.
RACK/BOX SUPPL. : ZENITEL AS
RACK/BOX TYPE : NA.
MATERIAL : PC/ABS BLEND, ABS.
COLOUR : RAL 9005/9006.
WEIGHT OF UNIT : 0,3Kg.
MOUNTING : TO WALL.

FIXING DETAILS : SEE INSIDE BOX.
ACCESS : FRONT.
CABLE ENTRY : BOTTOM.
GLAND TYPE : 3pcs. M20.
PROTECTION IP : IP-56
POWER SUPPLY : FROM CENTRAL.
POWER CONSUMP. : NA.
HEAT DISSIPATION : NA.

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A

A

CIS 31XX MASTER STATION

SUBSTATION CONNECTION

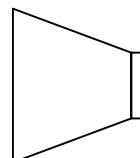
EXT SIGNAL DEVICE CONN.
(SEE CIS31XX HANDBOOK)

GND 25

B

B

EXTERNAL LOUDSPEAKER

RATED POWER FOR THE
SIGNALLING DEVICE:
90-240 VAC / 5-48VDC
8 A

C

C

SIGNALLING DEVICE



PWR

INP.

D

D

9003

SUBSTATION FOR HEADSET

BRD 09900-001

J1

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HEADSET

E

E

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F

1

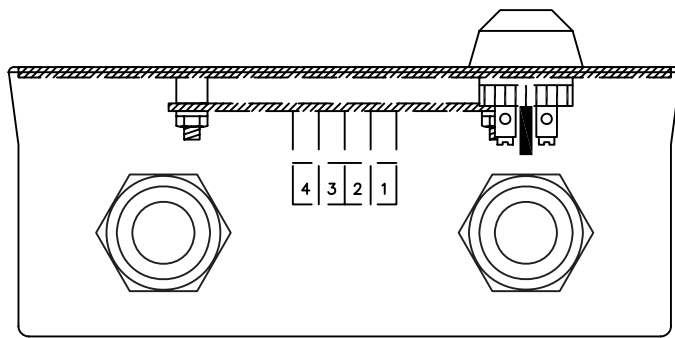
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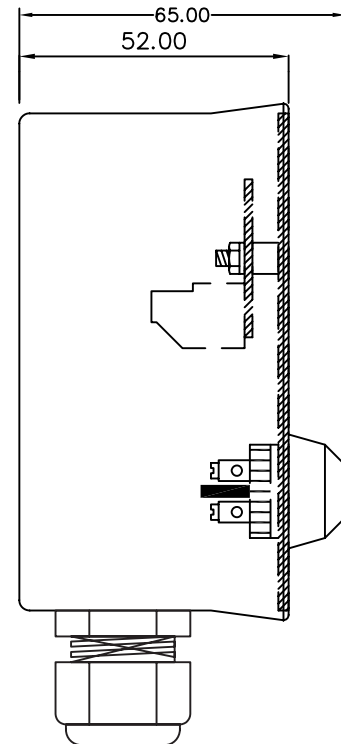
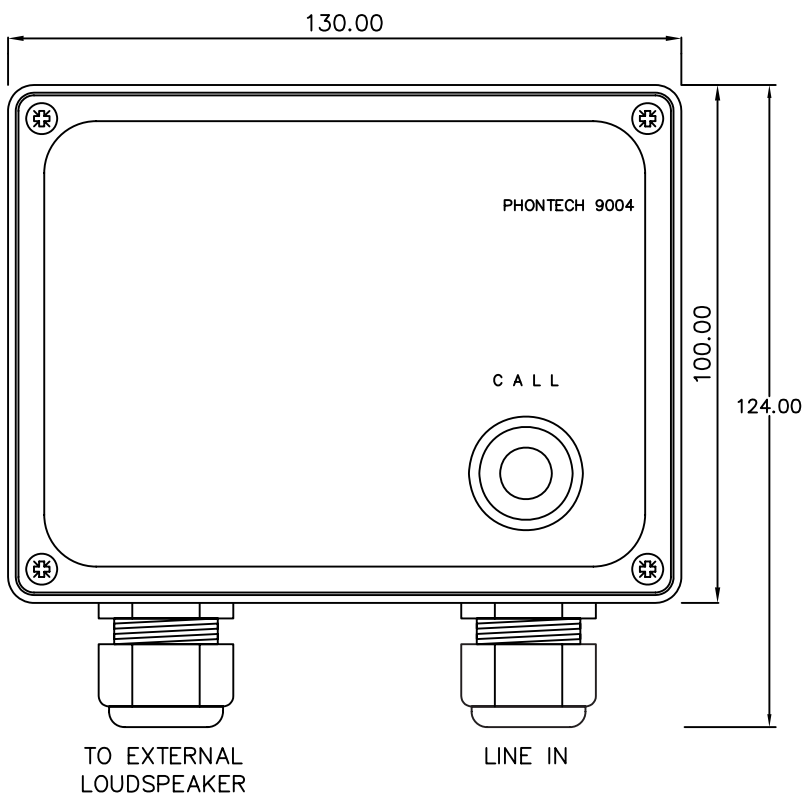
A

A



B

B

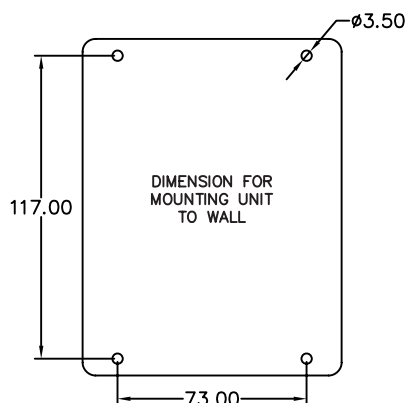


D

D

E

E



EQUIPMENT DATA:

MANUFACTURER : ZENITEL AS
MODEL/TYPE : CALL UNIT
RACK/BOX SUPPL. : ZENITEL AS
RACK/BOX TYPE : NA.
MATERIAL : PC/ABS BLEND
COLOUR : RAL 9005/9006
WEIGHT OF UNIT : 0,3Kg.
MOUNTING : TO WALL

FIXING DETAILS : SEE INSIDE BOX
ACCESS : FRONT
CABLE ENTRY : BOTTOM
GLAND TYPE : 2pcs. M20
PROTECTION IP : IP-56
POWER SUPPLY : NA.
POWER CONSUMP. : NA.
HEAT DISSIPATION : NA.

F

F

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A

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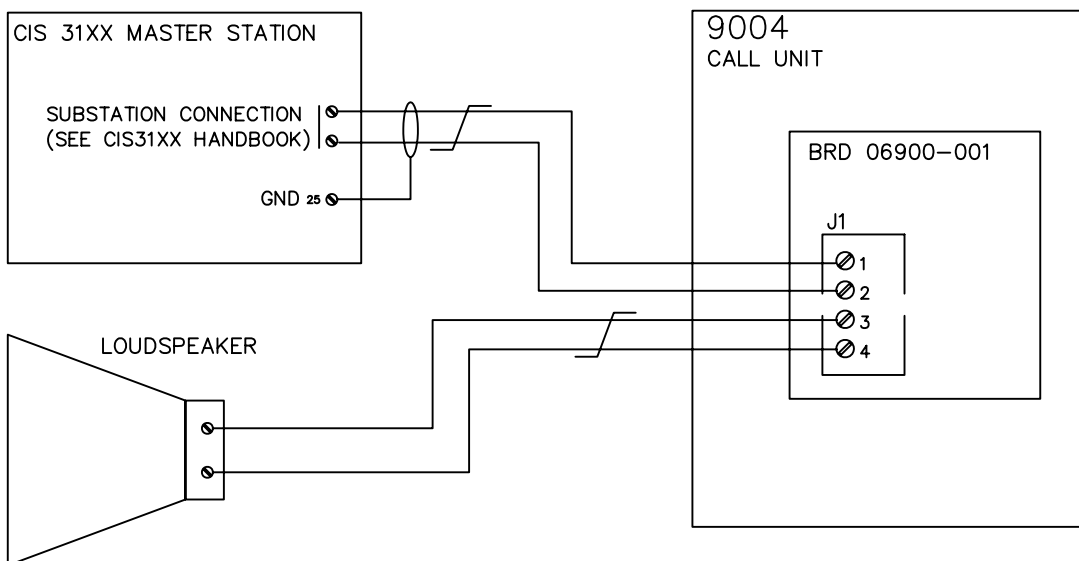
D

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1

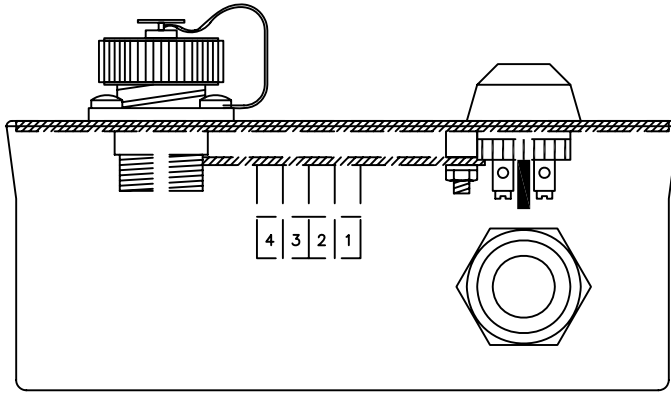
2

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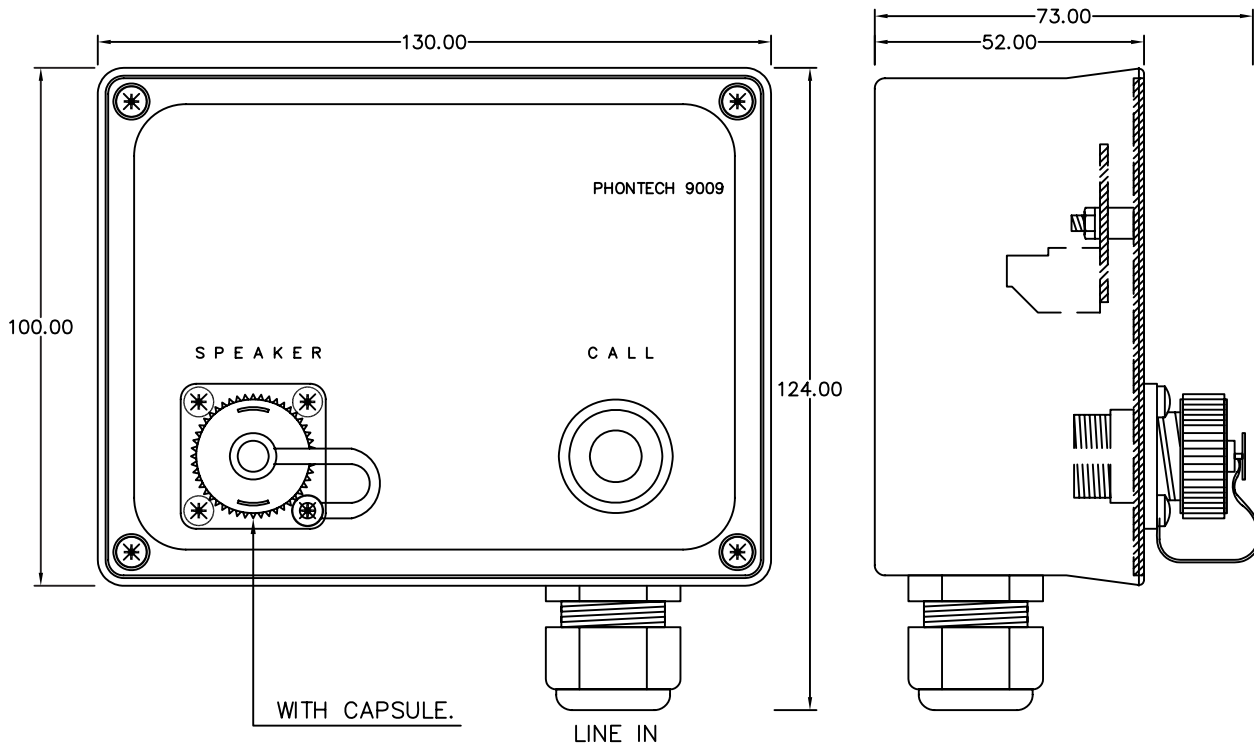
A

A



B

B



C

C

D

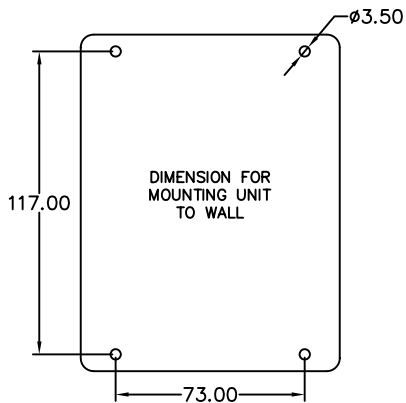
D

E

E

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F



EQUIPMENT DATA:

MANUFACTURER : ZENITEL AS
MODEL/TYPE : CALL/PLUGBOX.
RACK/BOX SUPPL. : ZENITEL AS
RACK/BOX TYPE : NA.
MATERIAL : PC/ABS BLEND, ABS.
COLOUR : RAL 9005/NATUR.
WEIGHT OF UNIT : 0,3Kg.
MOUNTING : TO WALL.

FIXING DETAILS : SEE INSIDE BOX.
ACCESS : FRONT.
CABLE ENTRY : BOTTOM.
GLAND TYPE : 1pcs. M20.
PROTECTION IP : IP-56.
POWER SUPPLY : FROM CENTRAL.
POWER CONSUMP. : NA.
HEAT DISSIPATION : NA.

A

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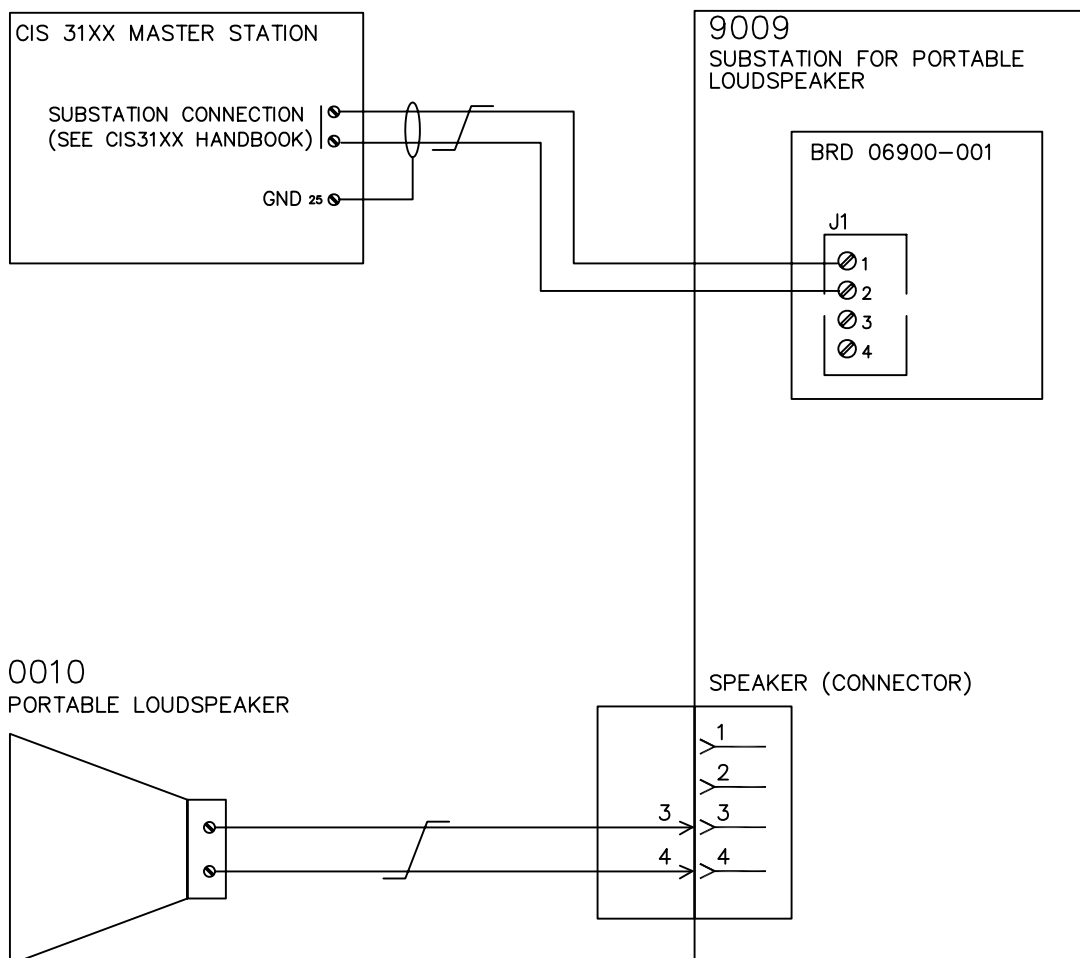
D

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A

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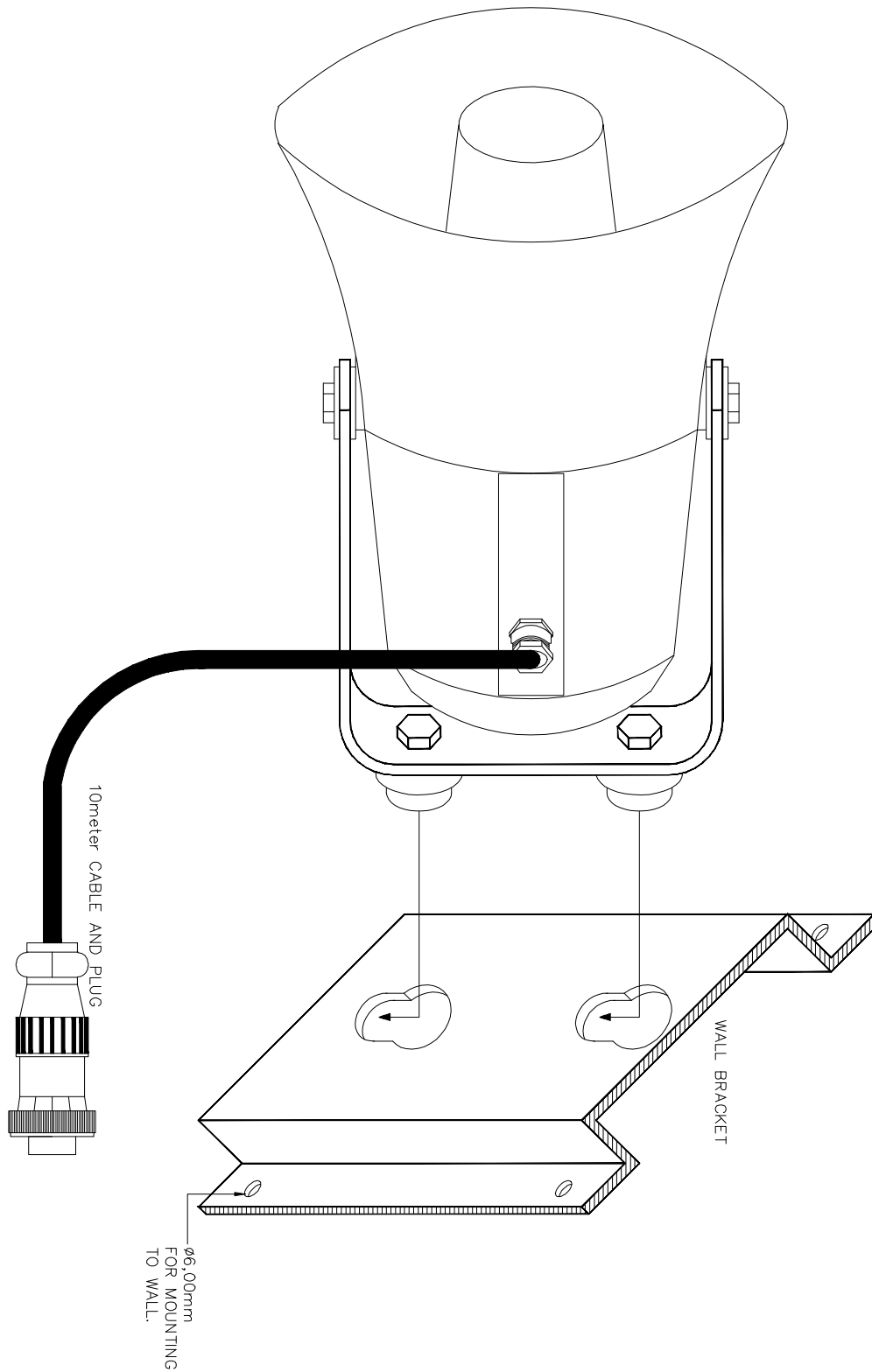
D

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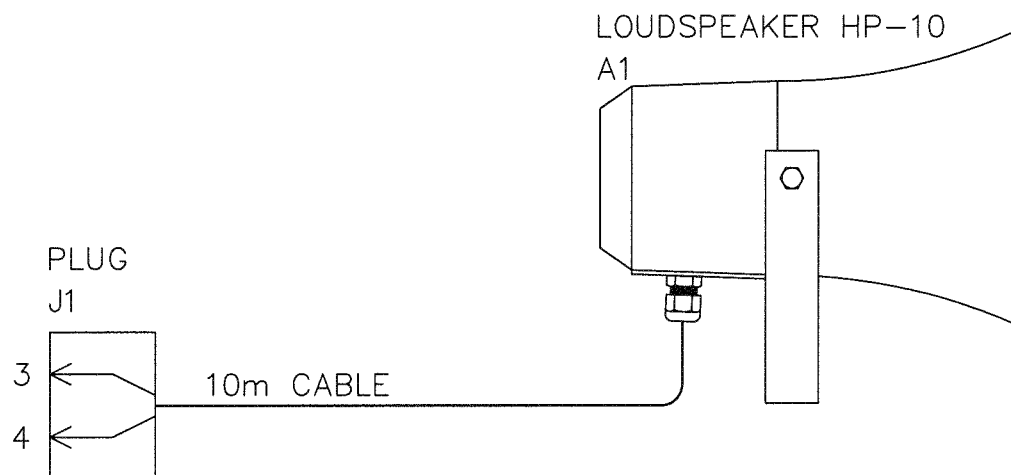
D

E

E

F

F



NOTE:
KRYMPESTRØMPE MED LIM MÅ BENYTTES PÅ PLUGGEN.
2stk. ø8,00x30mm.
1stk. ø15,00x30mm.
1stk. ø23,00x55mm.

1

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4

1

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A

A

B

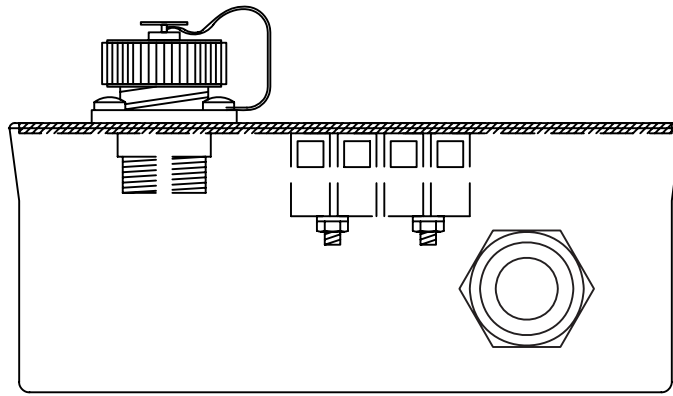
B

C

C

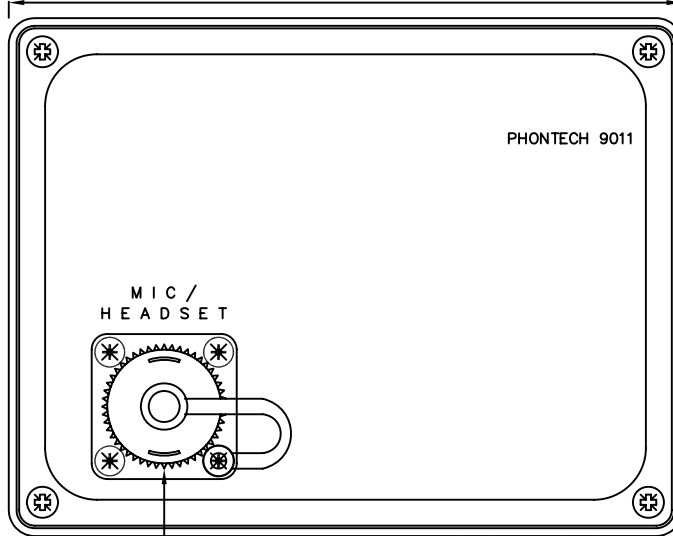
D

D



130.00

74.00
52.00



PHONTECH 9011

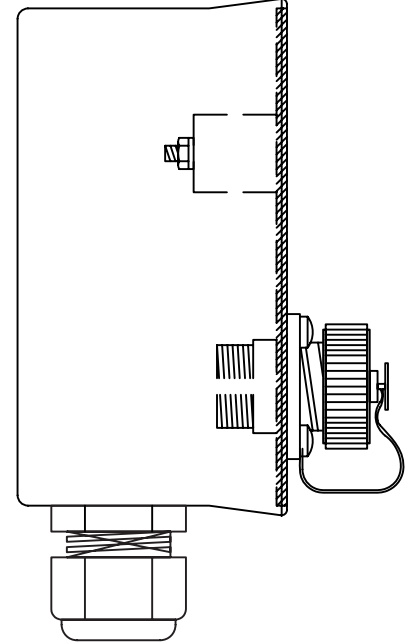
MIC /
HEADSET

100.00

124.00

WITH CAPSULE.

LINE IN

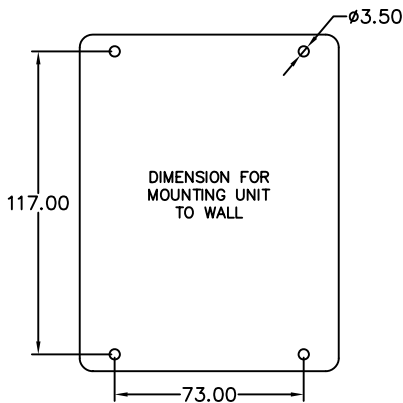


E

E

F

F



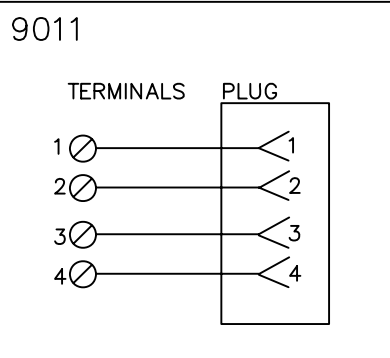
DIMENSION FOR
MOUNTING UNIT
TO WALL

EQUIPMENT DATA:

MANUFACTURER : ZENITELAS
MODEL/TYPE : PLUGBOX.
RACK/BOX SUPPL. : ZENITELAS
RACK/BOX TYPE : NA.
MATERIAL : PC/ABS BLEND, ABS.
COLOUR : RAL 9005/NATUR.
WEIGHT OF UNIT : 0,3Kg.
MOUNTING : TO WALL.

FIXING DETAILS : SEE INSIDE BOX.
ACCESS : FRONT.
CABLE ENTRY : BOTTOM.
GLAND TYPE : 1pcs. M20.
PROTECTION IP : IP-56.
POWER SUPPLY : FROM CENTRAL.
POWER CONSUMP. : NA.
HEAT DISSIPATION : NA.

A



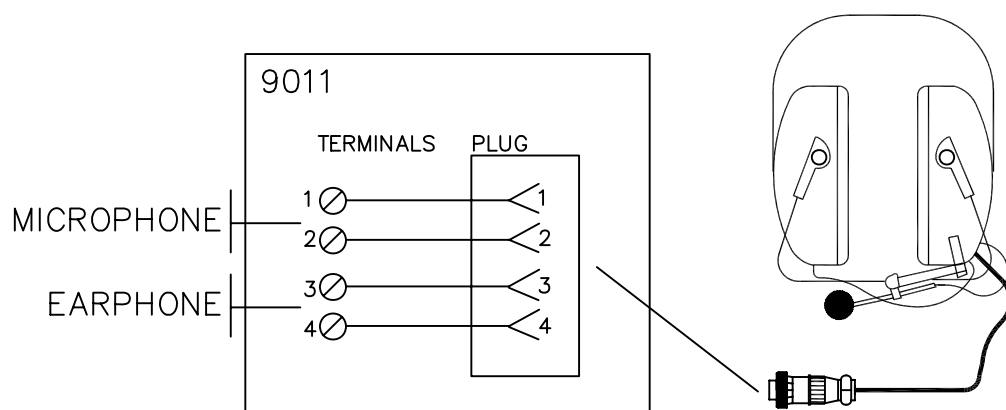
A

B

GENERAL PURPOSE

B

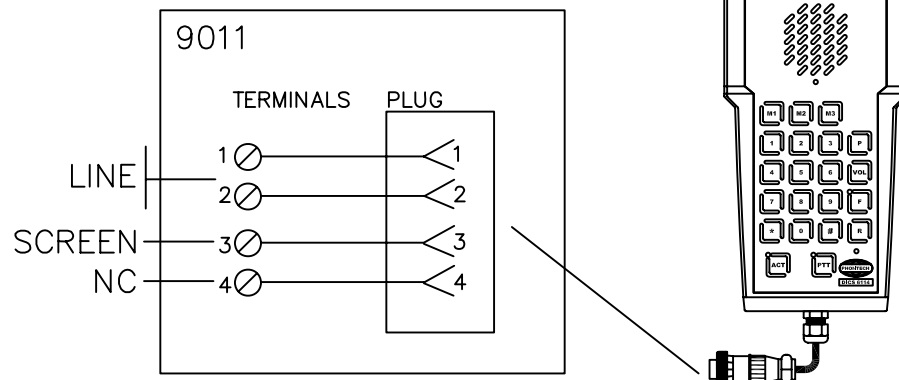
C



C

HEADSET / MICROPHONE

D



D

DICS 6114

E

E

F

F

1

2

3

4

A

B

C

D

E

F

A

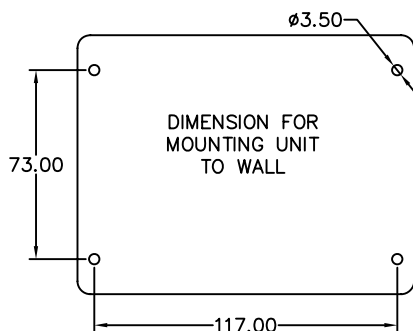
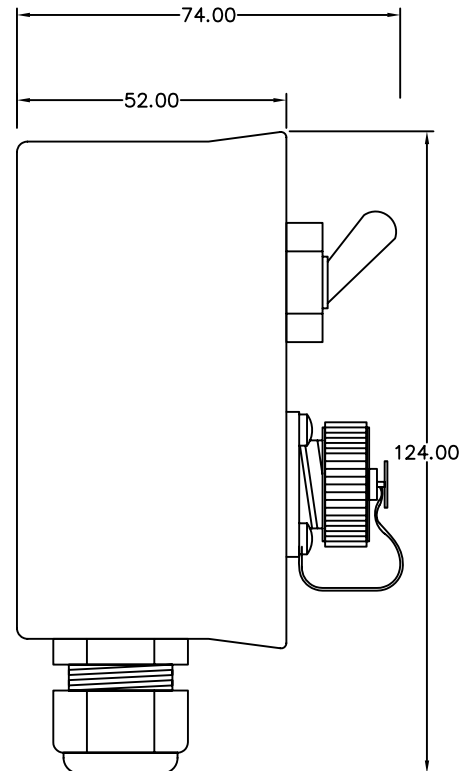
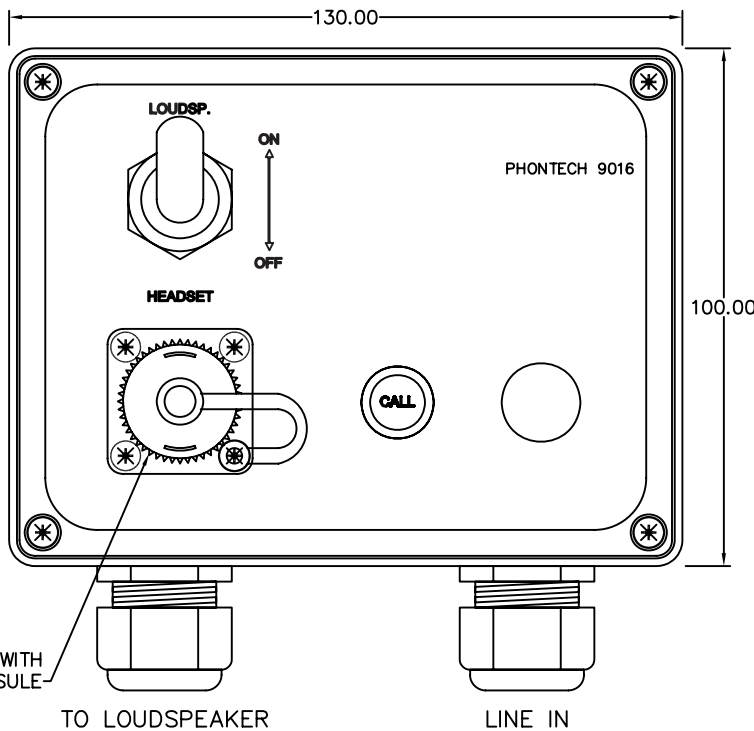
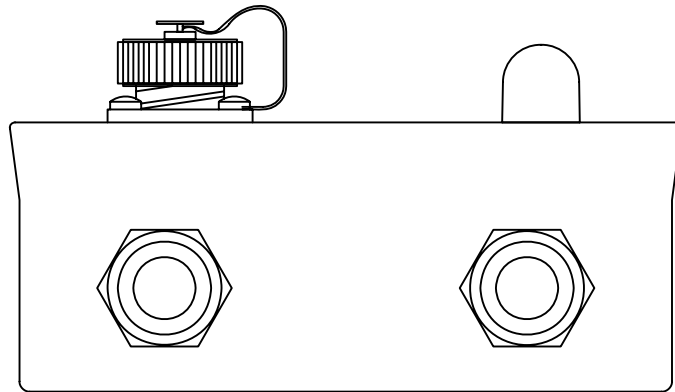
B

C

D

E

F



EQUIPMENT DATA:

MANUFACTURER : ZENITEL AS
MODEL/TYPE : CALL/PLUG BOX.
RACK/BOX SUPPL. : ZENITEL AS
RACK/BOX TYPE : NA.
MATERIAL : PC/ABS BLEND, ABS.
COLOUR : RAL 9005/9006.
WEIGHT OF UNIT : 0,3Kg.
MOUNTING : TO WALL.

FIXING DETAILS : SEE INSIDE BOX.
ACCESS : FRONT.
CABLE ENTRY : BOTTOM.
GLAND TYPE : 2pcs. M20
PROTECTION IP : IP-56.
POWER SUPPLY : FROM CENTRAL.
POWER CONSUMP. : NA.
HEAT DISSIPATION : NA.

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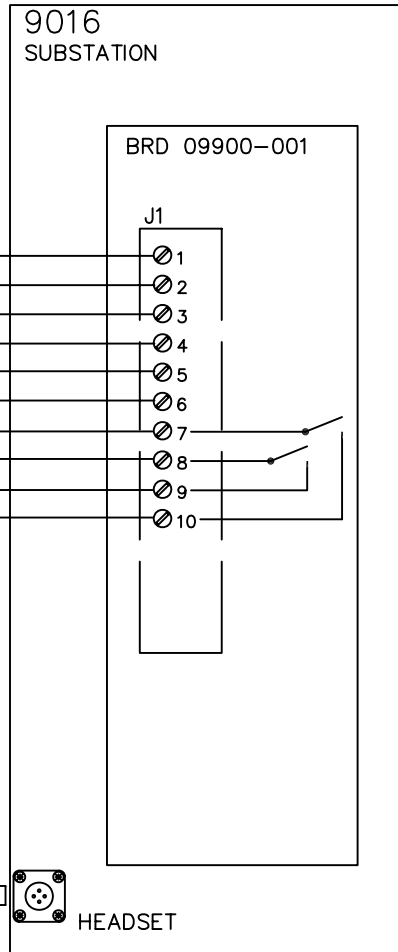
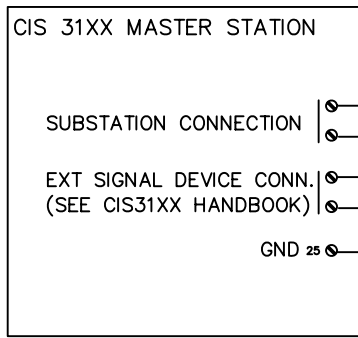
F

1

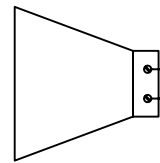
2

3

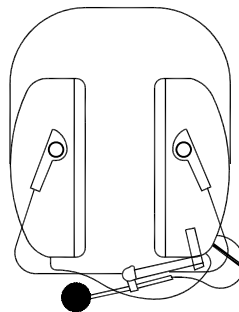
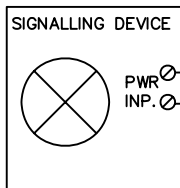
4



EXTERNAL LOUDSPEAKER



RATED POWER FOR THE
SIGNALLING DEVICE:
90-240 VAC / 5-48VDC
8 A



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A

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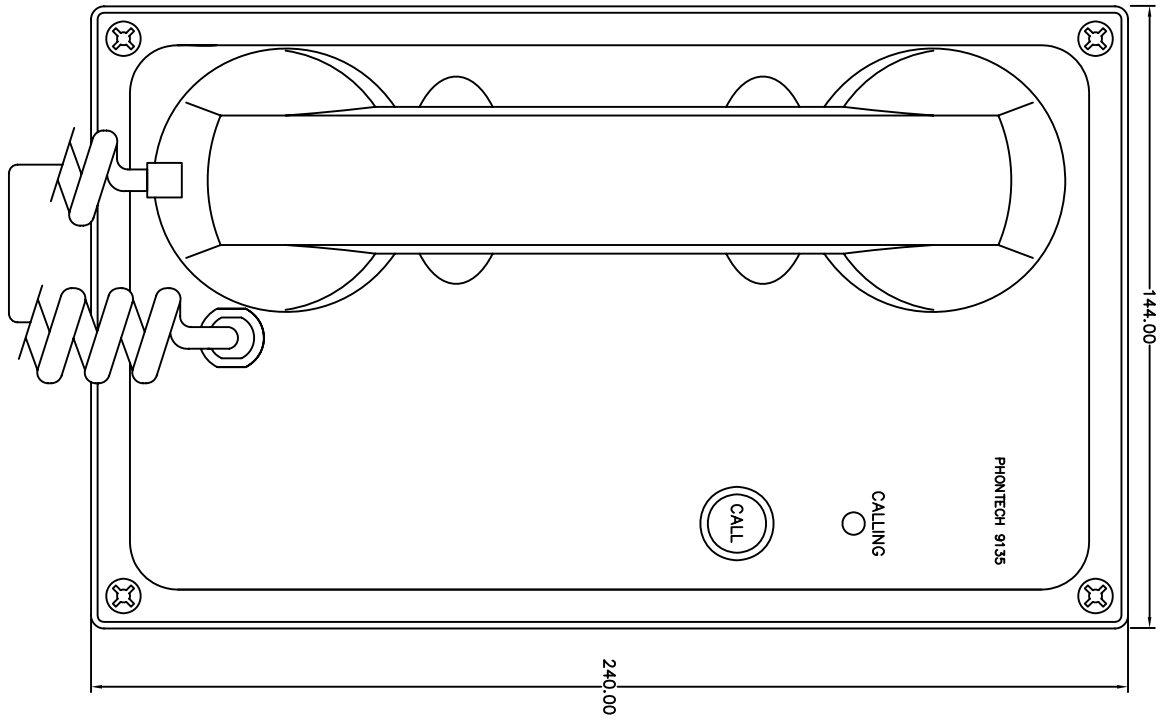
C

D

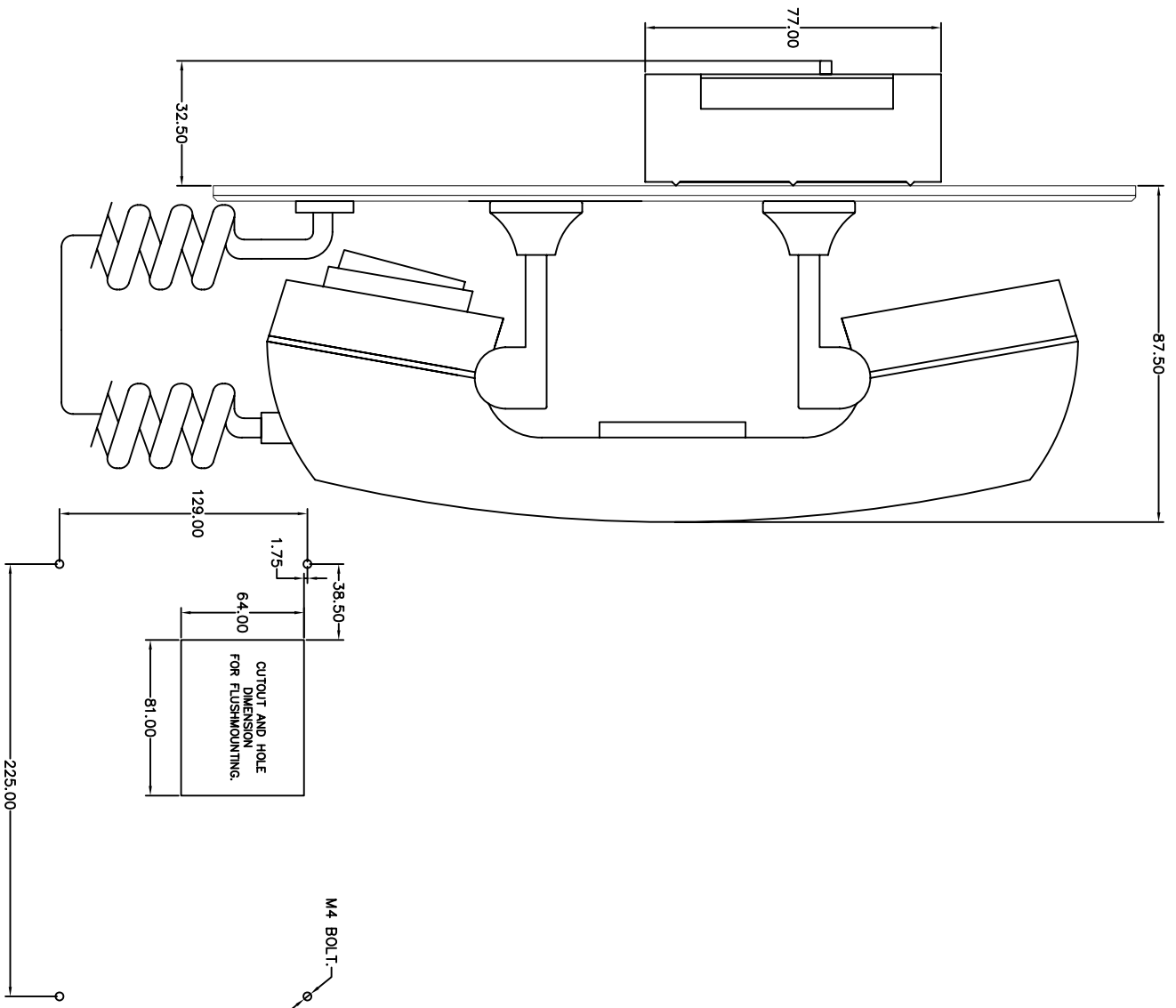
E

F

FRONT VIEW



SIDE VIEW



A

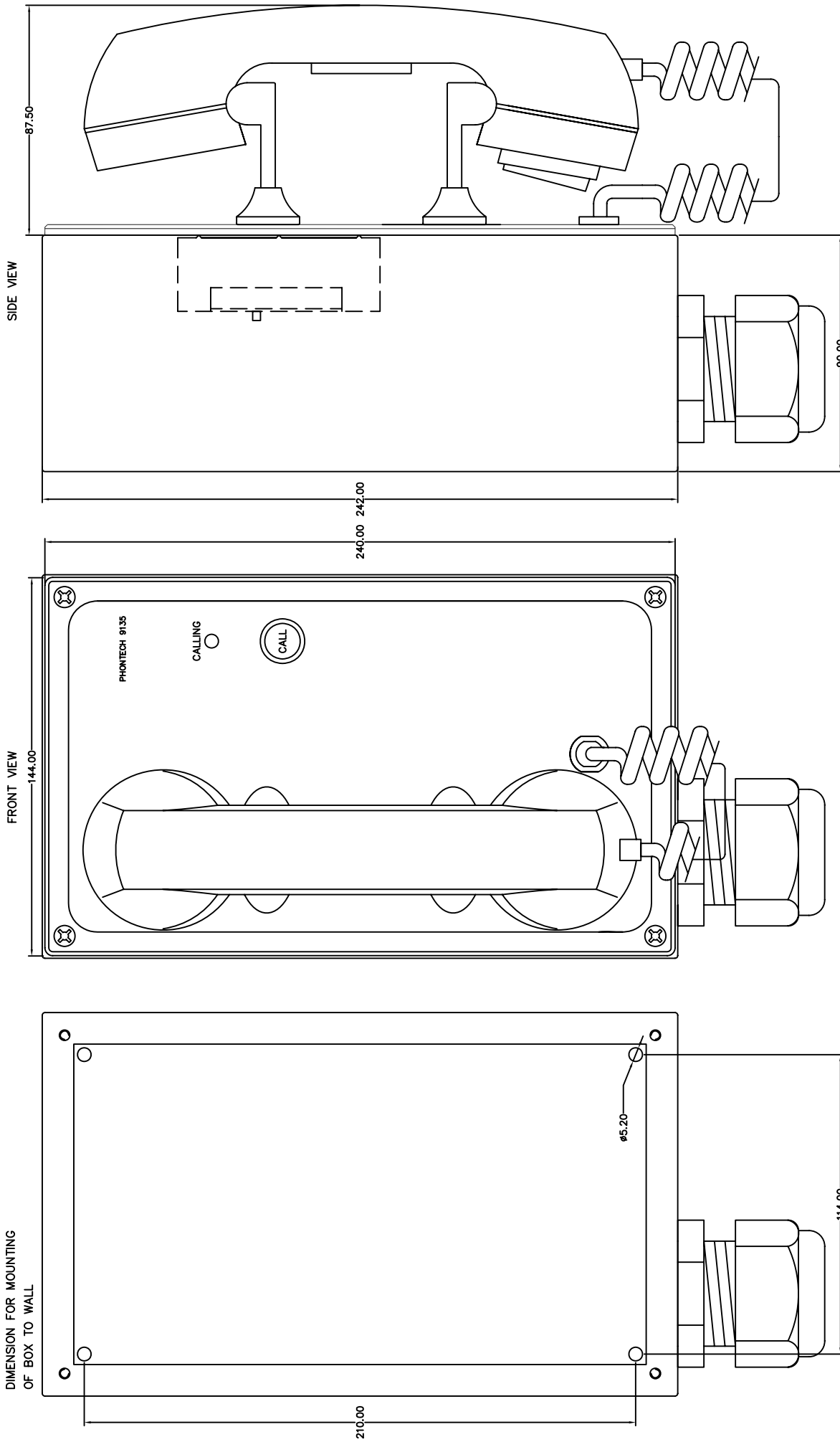
B

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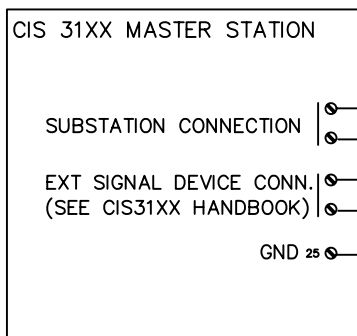
3

2

1

A

A



9135
HANDSET SUBSTATION
w/ RELAY

BRD 09900-001

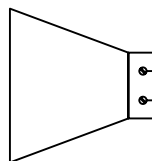
J1

1
2
3
4
5
6
7
8
9
10

B

B

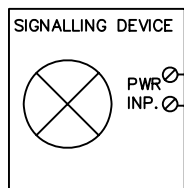
EXTERNAL LOUDSPEAKER



RATED POWER FOR THE
SIGNALLING DEVICE:
90-240 VAC / 5-48VDC
8 A

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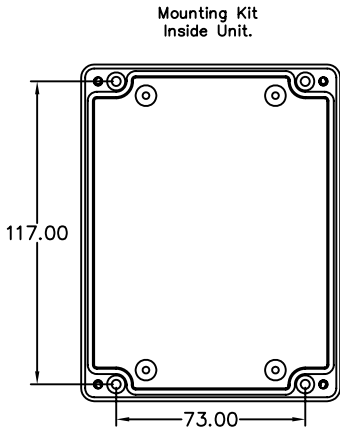
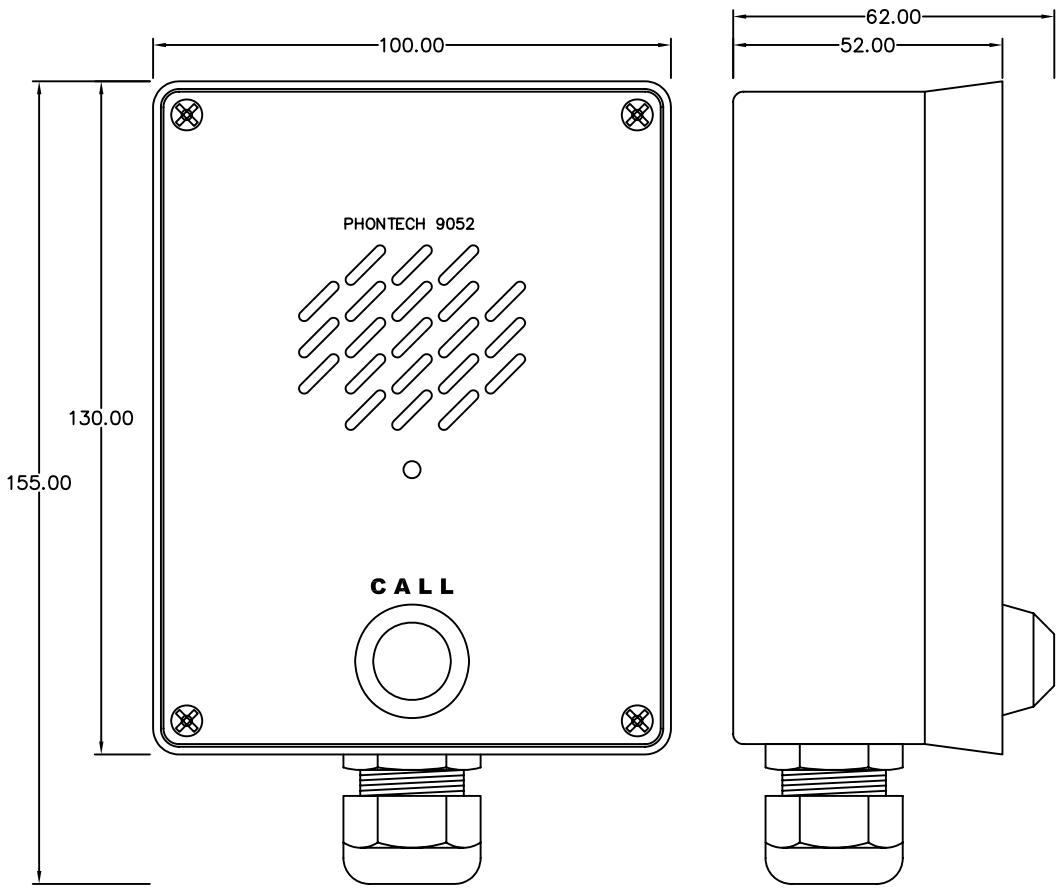
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EQUIPMENT DATA:

MANUFACTURER : PHONTECH AS.
MODEL/TYPE : SUBSTATION.
RACK/BOX SUPPL. : PHONTECH AS.
RACK/BOX TYPE : UNIVERSAL.
MATERIAL : BYBLEND/AISI 316.
COLOUR : RAL 9005/NATUR.
WEIGHT OF UNIT : APP: 0.6 Kg.
MOUNTING : TO WALL.

FIXING DETAILS : SEE MOUNTING KIT.
ACCESS : FRONT.
CABLE ENTRY : BOTTOM.
GLAND TYPE : PG-13,5.
PROTECTION IP : IP-55.
POWER SUPPLY : NA.
POWER CONSUMP. : NA.
HEAT DISSIPATION : NA.

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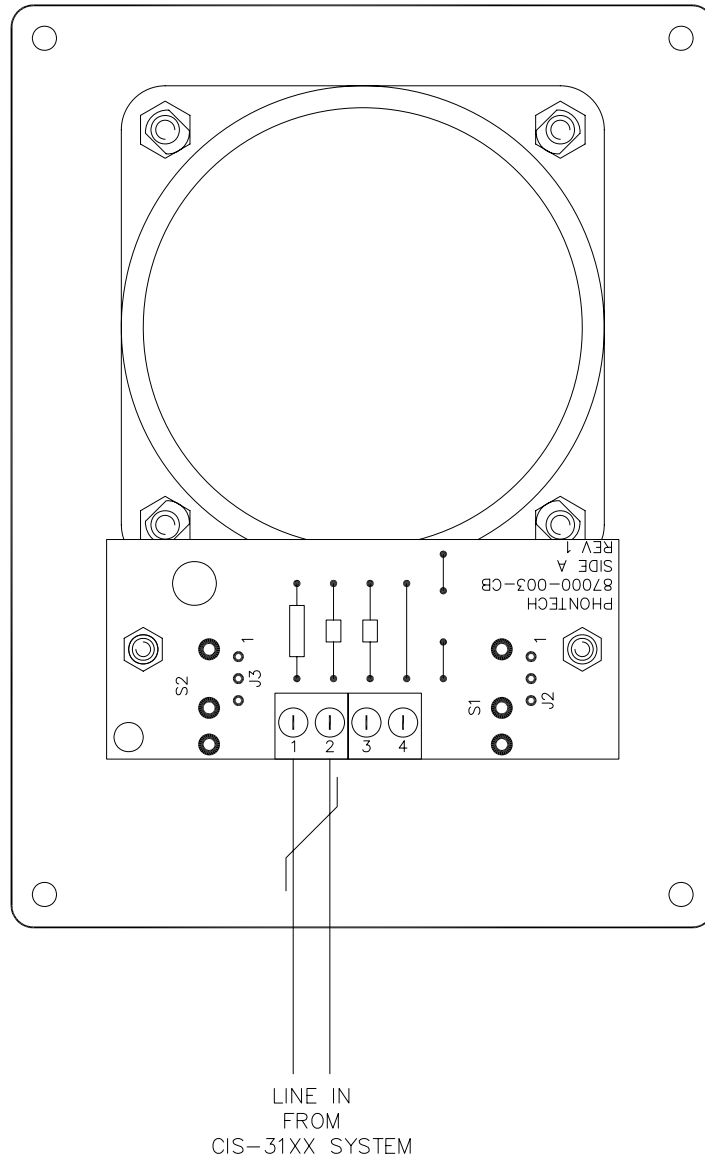
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3005020058

STB-2

Callbox WT Wall Mounted



This product belongs to the ETB/CTB talkback system range, but is tested and approved to be compatible with Phontech CIS Talkback systems.

DESCRIPTION

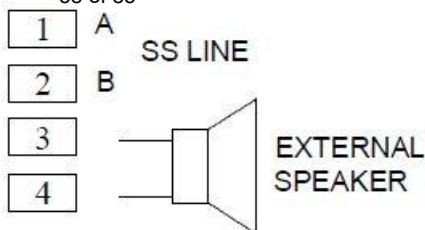
- Call box
- Waterproof
- Call button
- Forming a loud speaking Talk Back Substation together with a horn loudspeaker (VML-1520)

SPECIFICATIONS

GENERAL

Material / Colour	ABS / Grey
Connections	Screw Terminals
IP-rating	IP-66
Dimensions (mm)	110W x 80H x 63D
Weight	0.3 kg
Temperature operating	-25 to +55 °C

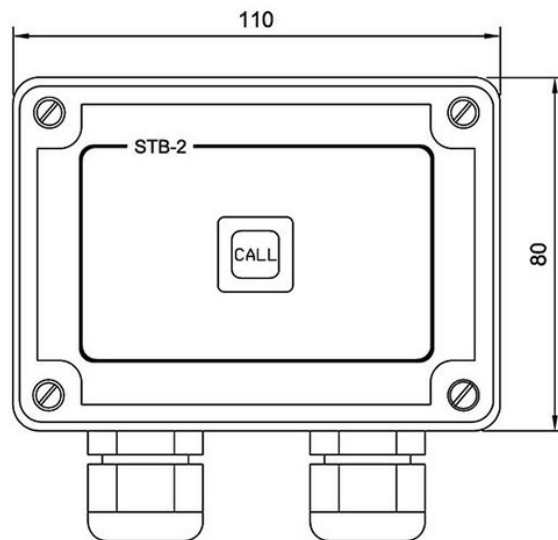
[Export Table Data](#)



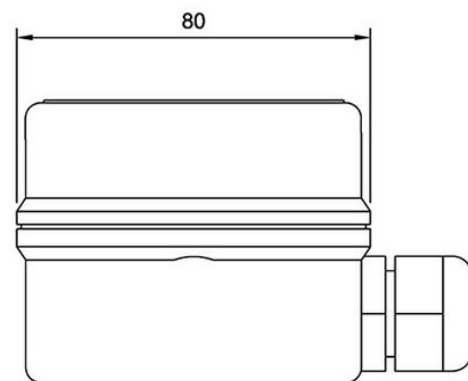
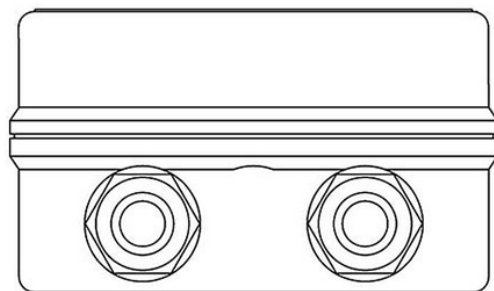
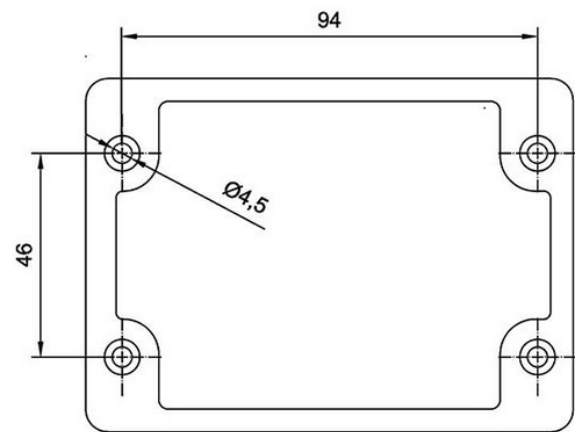
CIS Master Station to Substation connections:

		Terminals				
		CIS P-3100:	CIS P-3101	CIS P-3102	CIS P-3130	STB-2
Substation No.1	Audio (live)	1	1	1	1	1
	Audio (neutral)	6 (via JB)	6 (via JB)	6 (via JB)	6 (via JB)	2
	Signal device ctrl ((+ 24V) - ref)	11 (via JB)	11 (via JB)	11 (via JB)	11 (via JB)	
	Signal device ctrl ((neg) - live))	7	7	7	7	
Substation No.2	Audio (live)	2	2	2	2	1
	Audio (neutral)	6 (via JB)	6 (via JB)	6 (via JB)	6 (via JB)	2
	Signal device ctrl ((+ 24V) - ref)	11 (via JB)	11 (via JB)	11 (via JB)	11 (via JB)	
	Signal device ctrl ((neg) - live))	8	8	8	8	
Substation No.3	Audio (live)	3	3	3	3	1
	Audio (neutral)	6 (via JB)	6 (via JB)	6 (via JB)	6 (via JB)	2
	Signal device ctrl ((+ 24V) - ref)	11 (via JB)	11 (via JB)	11 (via JB)	11 (via JB)	
	Signal device ctrl ((neg) - live))	9	9	9	9	
Substation No.4	Audio (live)	4	4	4	4	1
	Audio (neutral)	6 (via JB)	6 (via JB)	6 (via JB)	6 (via JB)	2
	Signal device ctrl ((+ 24V) - ref)	11 (via JB)	11 (via JB)	11 (via JB)	11 (via JB)	
	Signal device ctrl ((neg) - live))	10	10	10	10	
Substation No.5	Audio (live)	5	5	5	5	1
	Audio (neutral)	6 (via JB)	6 (via JB)	6 (via JB)	6 (via JB)	2
	Signal device ctrl ((+ 24V) - ref)	11 (via JB)	11 (via JB)	11 (via JB)	11 (via JB)	
	Signal device ctrl ((neg) - live))	41 *	41 *	41 *	41	
Substation No.6	Audio (live)		26	26	26	1
	Audio (neutral)		6 (via JB)	6 (via JB)	6 (via JB)	2
	Signal device ctrl ((+ 24V) - ref)		11 (via JB)	11 (via JB)	11 (via JB)	
	Signal device ctrl ((neg) - live))		42 *	42 *	42	
Substation No.7	Audio (live)		27	27	27	1
	Audio (neutral)		6 (via JB)	6 (via JB)	6 (via JB)	2
	Signal device ctrl ((+ 24V) - ref)		11 (via JB)	11 (via JB)	11 (via JB)	
	Signal device ctrl ((neg) - live))		43 *	43 *	43	
Substation No.8	Audio (live)		28	28	28	1
	Audio (neutral)		6 (via JB)	6 (via JB)	6 (via JB)	2
	Signal device ctrl ((+ 24V) - ref)		11 (via JB)	11 (via JB)	11 (via JB)	
	Signal device ctrl ((neg) - live))		44 *	44 *	44	
Substation No.9	Audio (live)		29	29	29	1
	Audio (neutral)		6 (via JB)	6 (via JB)	6 (via JB)	2
Substation No.10	Audio (live)		30	30	30	1
	Audio (neutral)		6 (via JB)	6 (via JB)	6 (via JB)	2
Substation No.11	Audio (live)		31	31		1
	Audio (neutral)			6 (via JB)	6 (via JB)	2
Substation No.12	Audio (live)			32	32	1
	Audio (neutral)			6 (via JB)	6 (via JB)	2
Substation No.13	Audio (live)			33	33	1
	Audio (neutral)			6 (via JB)	6 (via JB)	2
Substation No.14	Audio (live)			34	34	1
	Audio (neutral)			6 (via JB)	6 (via JB)	2
Substation No.15	Audio (live)			35	35	1
	Audio (neutral)			6 (via JB)	6 (via JB)	2
Substation No.16	Audio (live)			36		1
	Audio (neutral)			6 (via JB)		2
Substation No.17	Audio (live)			37		1
	Audio (neutral)			6 (via JB)		2
Substation No.18	Audio (live)			38		1
	Audio (neutral)			6 (via JB)		2
Substation No.19	Audio (live)			39		1
	Audio (neutral)			6 (via JB)		2
Substation No.20	Audio (live)			40		1
	Audio (neutral)			6 (via JB)		2

* = requires additional board: Built-in PCB for 3100, 3101, 3102, additional 4 x sub stations - pn 4000017654



PG-13,5



3005020059

STB-3

Comb. Call-Plugbox-Signalrelay



This product belongs to the ETB/CTB talkback system range, but is tested and approved to be compatible with Phontech CIS Talkback systems.

DESCRIPTION

- Calling unit
- Wall mounting
- Waterproof
- Call-button for calling Master unit
- Socket with dust-cap for connection of headset or microphone
- Built-in relay circuit for operation of external signalling devices
- Forming a loudspeaking Talk-Back substation together with a horn loudspeaker (VML-1520)

SPECIFICATIONS

GENERAL

Connections	Screw terminals
Colour	Grey
IP rating	IP-66
Dimensions	224W x 80H x 63D
Weight	0.5 kg
Temperature operating	-25 to +55 °C

[Export Table Data](#)

Created: 22.07.2014, updated: 06.05.2022

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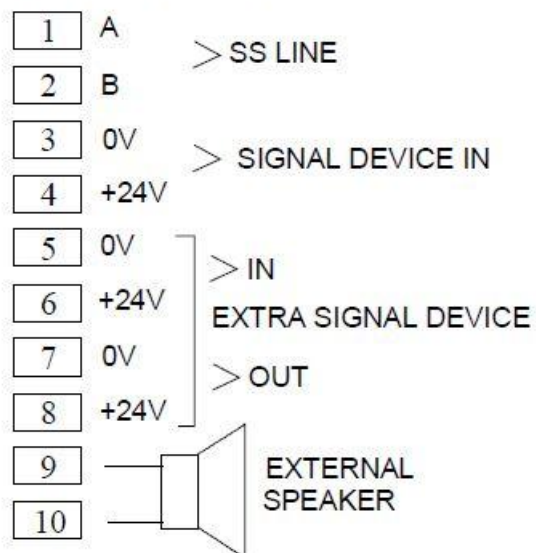
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SCREW TERMINAL

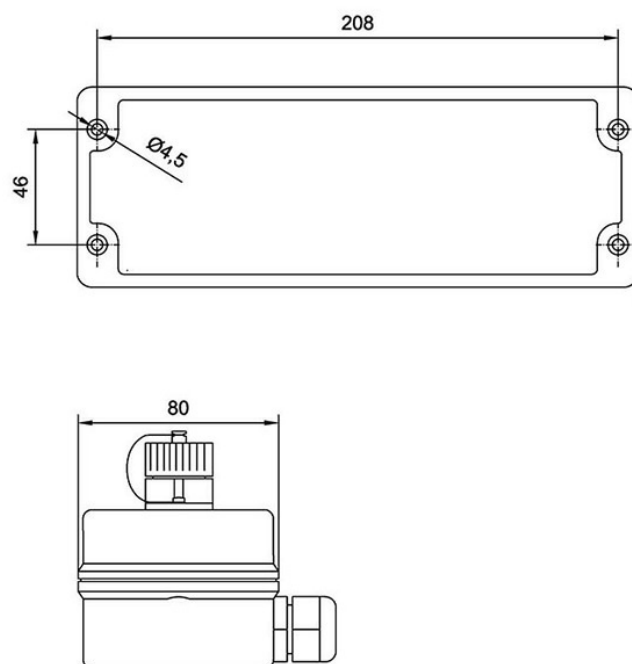
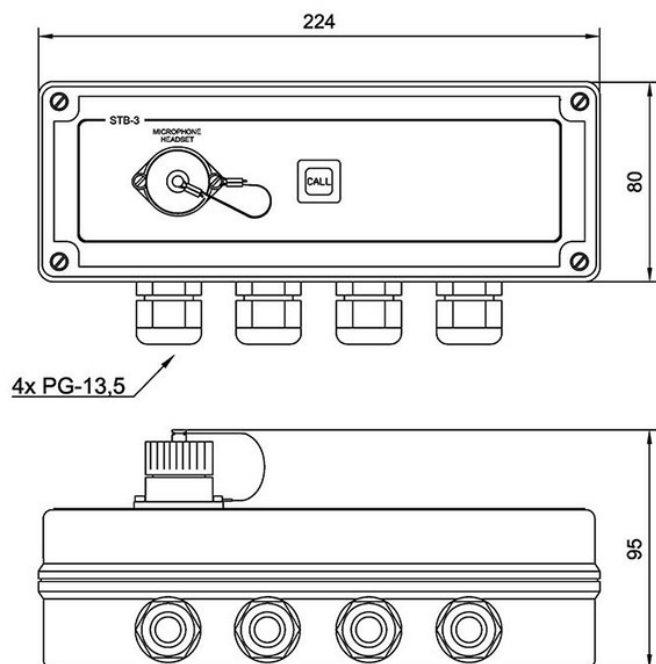


CIS Master Station to Substation connections:

Handbook page
62 of 83

		Terminals				STB-3
		CIS P-3100:	CIS P-3101	CIS P-3102	CIS P-3130	
Substation No.1	Audio (live)	1	1	1	1	1
	Audio (neutral)	6 (via JB)	6 (via JB)	6 (via JB)	6 (via JB)	2
	Signal device ctrl ((+ 24V) - ref)	11 (via JB)	11 (via JB)	11 (via JB)	11 (via JB)	3
	Signal device ctrl ((neg) - live))	7	7	7	7	4
Substation No.2	Audio (live)	2	2	2	2	1
	Audio (neutral)	6 (via JB)	6 (via JB)	6 (via JB)	6 (via JB)	2
	Signal device ctrl ((+ 24V) - ref)	11 (via JB)	11 (via JB)	11 (via JB)	11 (via JB)	3
	Signal device ctrl ((neg) - live))	8	8	8	8	4
Substation No.3	Audio (live)	3	3	3	3	1
	Audio (neutral)	6 (via JB)	6 (via JB)	6 (via JB)	6 (via JB)	2
	Signal device ctrl ((+ 24V) - ref)	11 (via JB)	11 (via JB)	11 (via JB)	11 (via JB)	3
	Signal device ctrl ((neg) - live))	9	9	9	9	4
Substation No.4	Audio (live)	4	4	4	4	1
	Audio (neutral)	6 (via JB)	6 (via JB)	6 (via JB)	6 (via JB)	2
	Signal device ctrl ((+ 24V) - ref)	11 (via JB)	11 (via JB)	11 (via JB)	11 (via JB)	3
	Signal device ctrl ((neg) - live))	10	10	10	10	4
Substation No.5	Audio (live)	5	5	5	5	1
	Audio (neutral)	6 (via JB)	6 (via JB)	6 (via JB)	6 (via JB)	2
	Signal device ctrl ((+ 24V) - ref)	11 (via JB)	11 (via JB)	11 (via JB)	11 (via JB)	3
	Signal device ctrl ((neg) - live))	41 *	41 *	41 *	41	4
Substation No.6	Audio (live)		26	26	26	1
	Audio (neutral)		6 (via JB)	6 (via JB)	6 (via JB)	2
	Signal device ctrl ((+ 24V) - ref)		11 (via JB)	11 (via JB)	11 (via JB)	3
	Signal device ctrl ((neg) - live))		42 *	42 *	42	4
Substation No.7	Audio (live)		27	27	27	1
	Audio (neutral)		6 (via JB)	6 (via JB)	6 (via JB)	2
	Signal device ctrl ((+ 24V) - ref)		11 (via JB)	11 (via JB)	11 (via JB)	3
	Signal device ctrl ((neg) - live))		43 *	43 *	43	4
Substation No.8	Audio (live)		28	28	28	1
	Audio (neutral)		6 (via JB)	6 (via JB)	6 (via JB)	2
	Signal device ctrl ((+ 24V) - ref)		11 (via JB)	11 (via JB)	11 (via JB)	3
	Signal device ctrl ((neg) - live))		44 *	44 *	44	4
Substation No.9	Audio (live)		29	29	29	
	Audio (neutral)		6 (via JB)	6 (via JB)	6 (via JB)	
Substation No.10	Audio (live)		30	30	30	
	Audio (neutral)		6 (via JB)	6 (via JB)	6 (via JB)	
Substation No.11	Audio (live)			31	31	
	Audio (neutral)			6 (via JB)	6 (via JB)	
Substation No.12	Audio (live)			32	32	
	Audio (neutral)			6 (via JB)	6 (via JB)	
Substation No.13	Audio (live)			33	33	
	Audio (neutral)			6 (via JB)	6 (via JB)	
Substation No.14	Audio (live)			34	34	
	Audio (neutral)			6 (via JB)	6 (via JB)	
Substation No.15	Audio (live)			35	35	
	Audio (neutral)			6 (via JB)	6 (via JB)	
Substation No.16	Audio (live)			36		
	Audio (neutral)			6 (via JB)		
Substation No.17	Audio (live)			37		
	Audio (neutral)			6 (via JB)		
Substation No.18	Audio (live)			38		
	Audio (neutral)			6 (via JB)		
Substation No.19	Audio (live)			39		
	Audio (neutral)			6 (via JB)		
Substation No.20	Audio (live)			40		
	Audio (neutral)			6 (via JB)		

* = requires additional board: Built-in PCB for 3100, 3101, 3102, additional 4 x sub stations - pn 4000017654



ACCESSORIES



P-MT7-A

Item number: 1020600776



VML-1520

Item number: 3006100088



P-66

Item number: 3005020039

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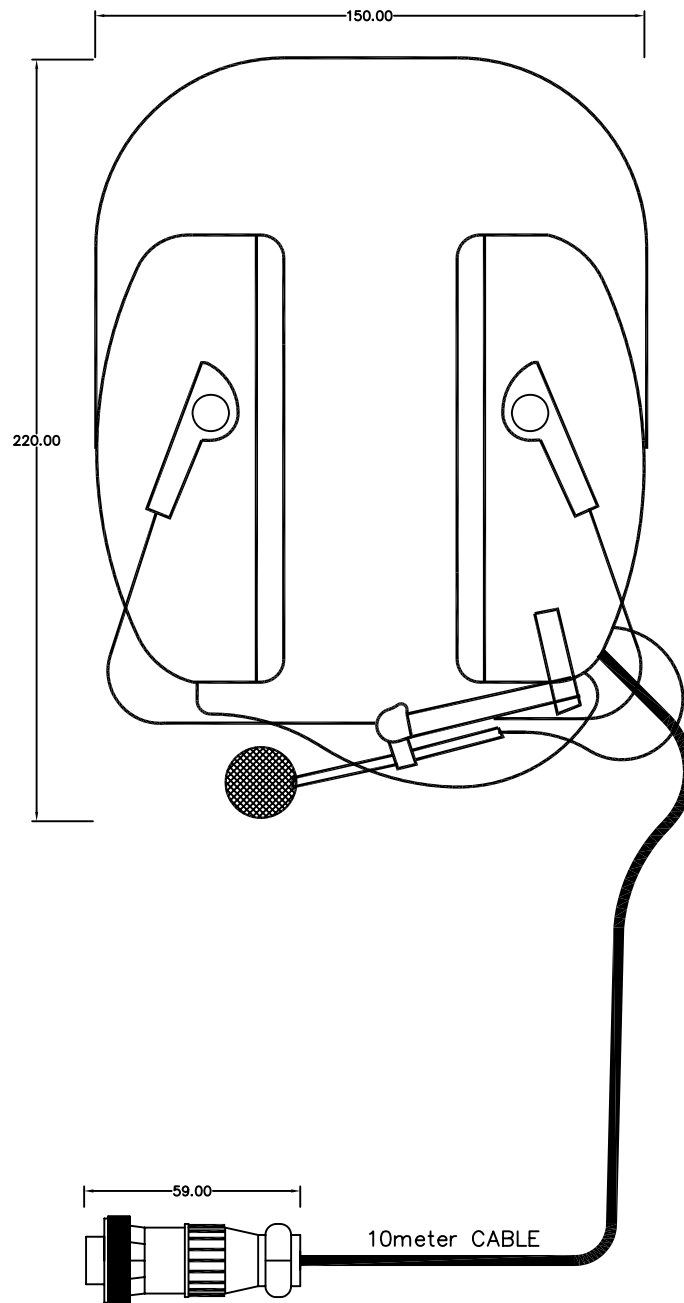
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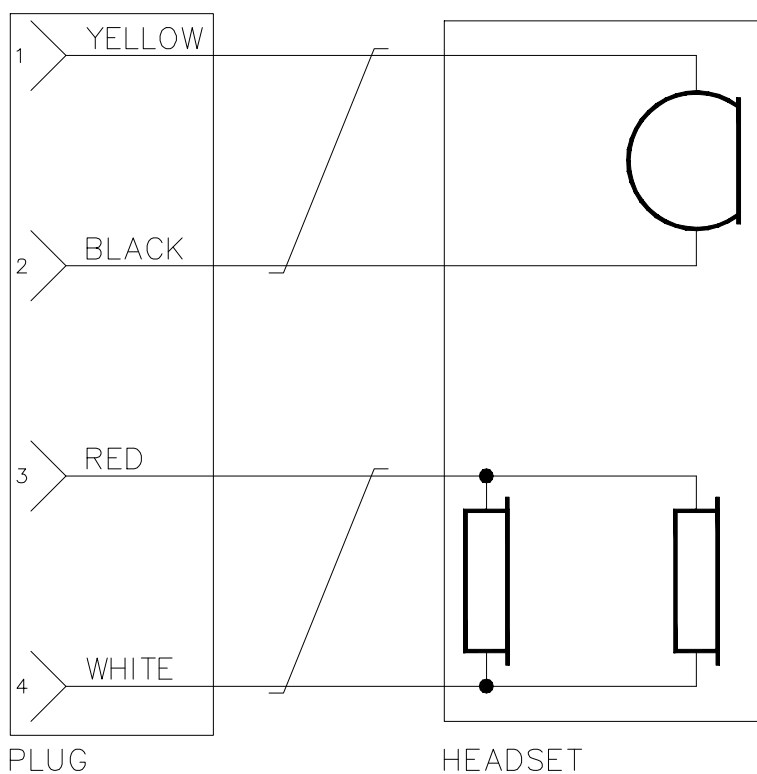
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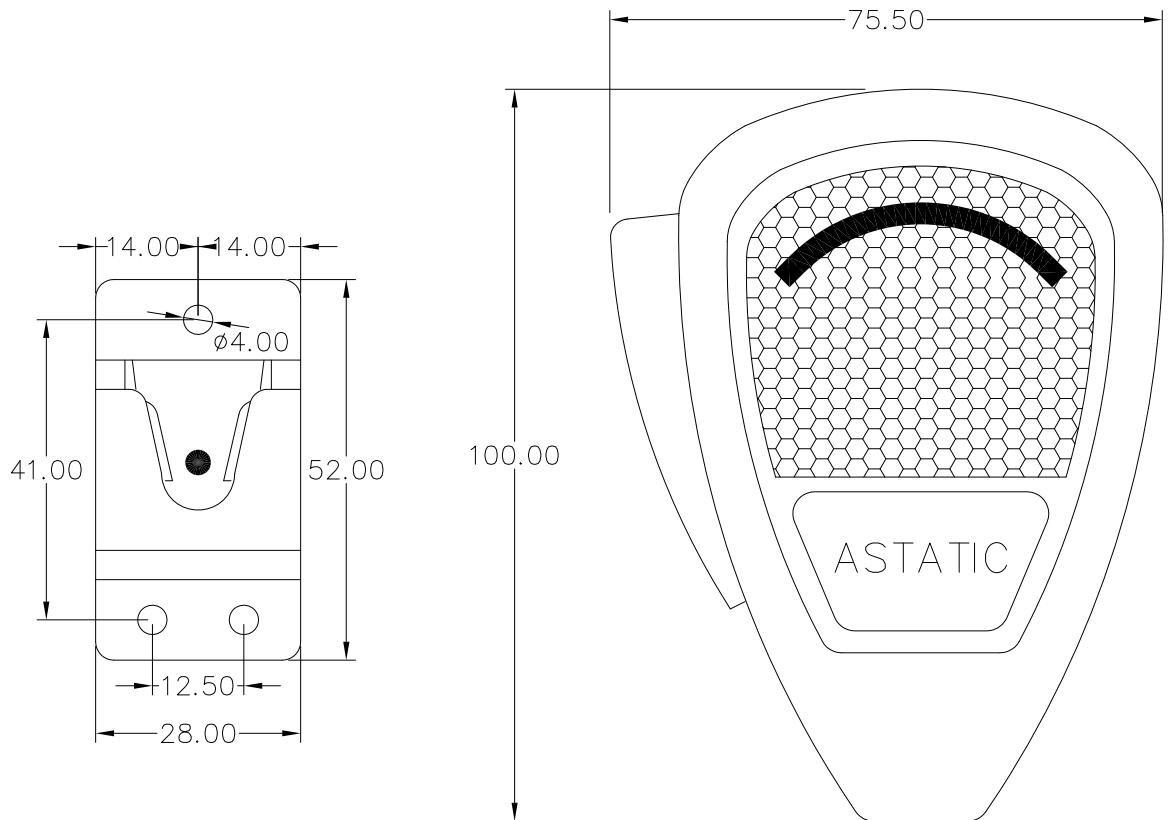
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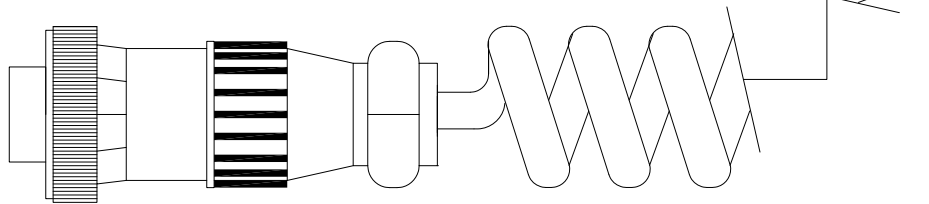
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NOTES:

- CURLED CABLE APP. 0,55m INCLUDED PLUG.
- COLOUR: BLACK.
- SUPPLIED WITH MOUNTING BRACKET.





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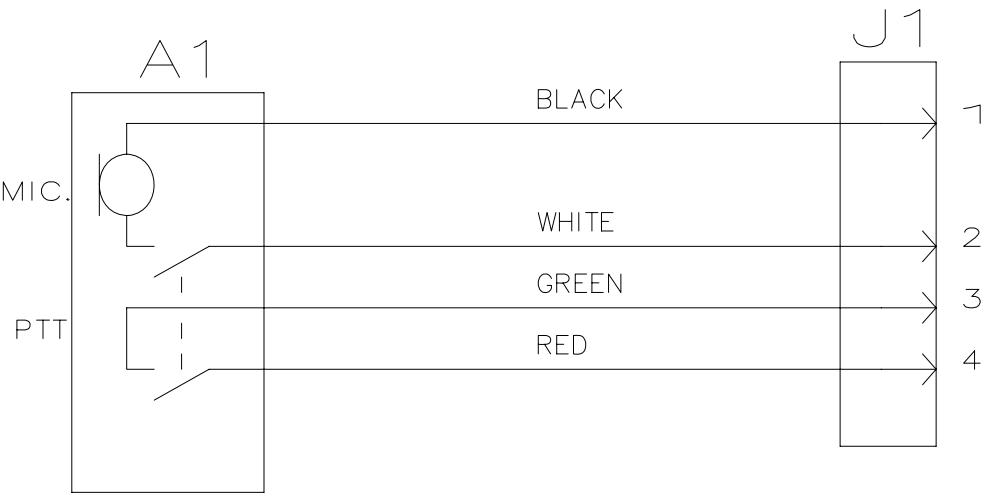
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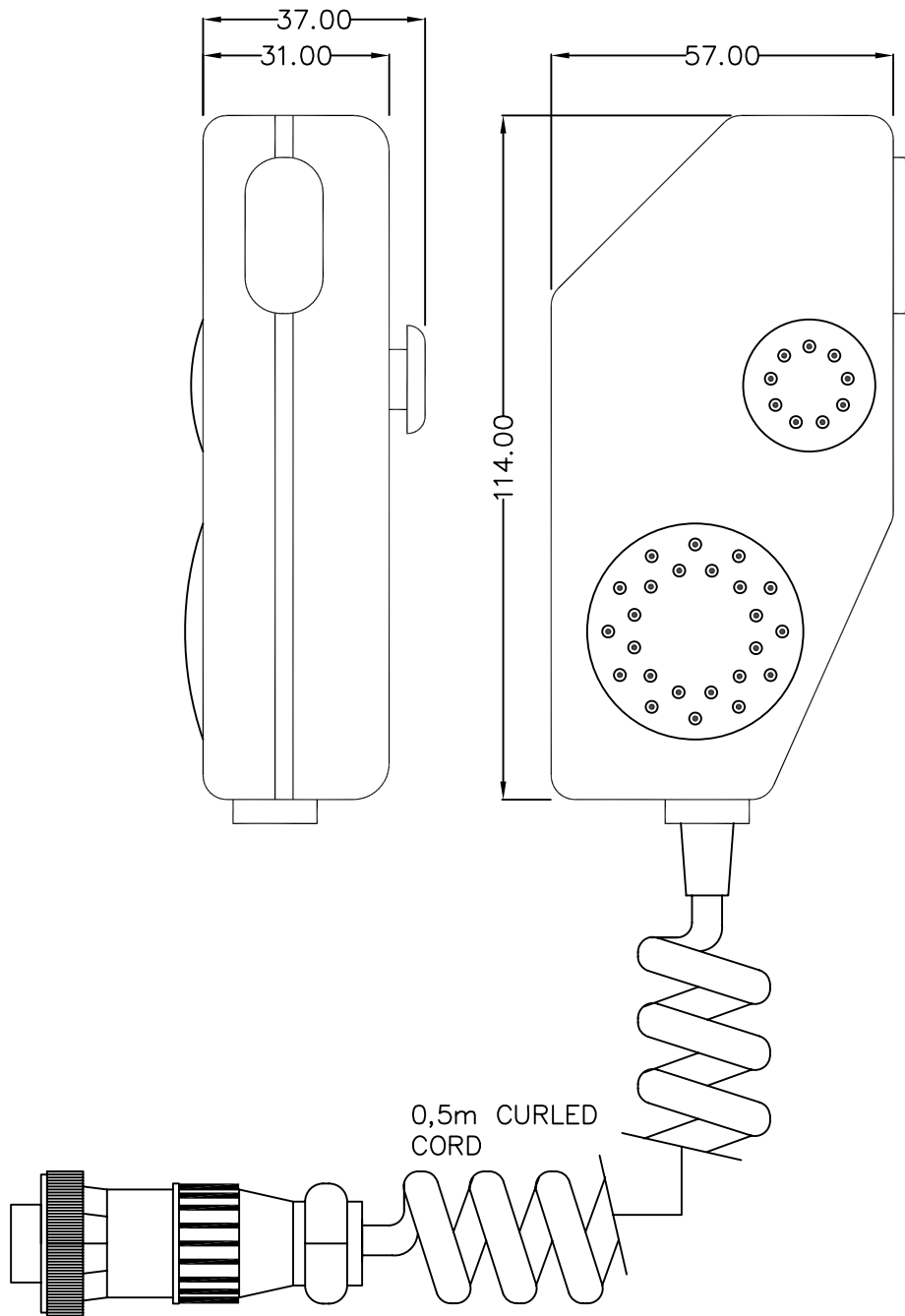
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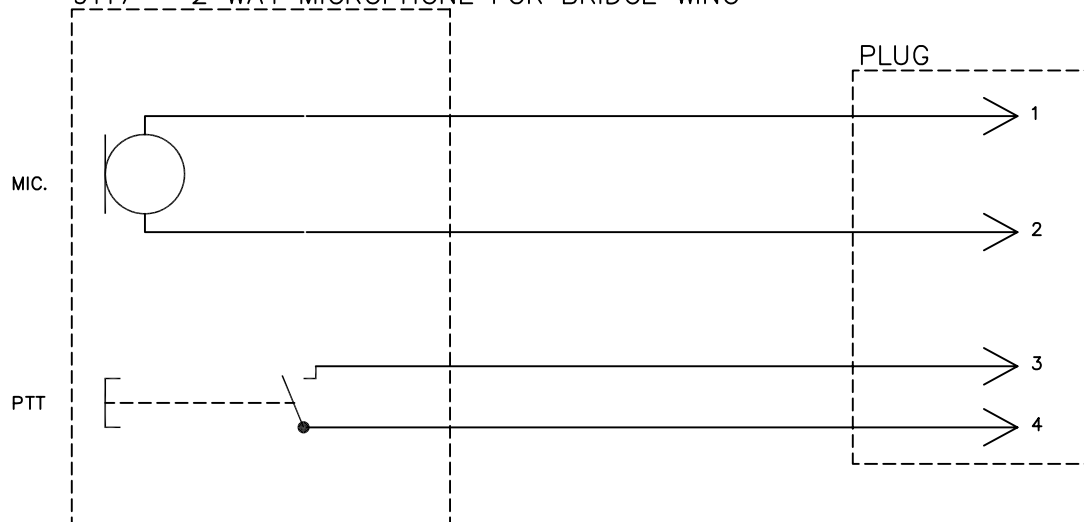
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9117 - 2 WAY MICROPHONE FOR BRIDGE WING



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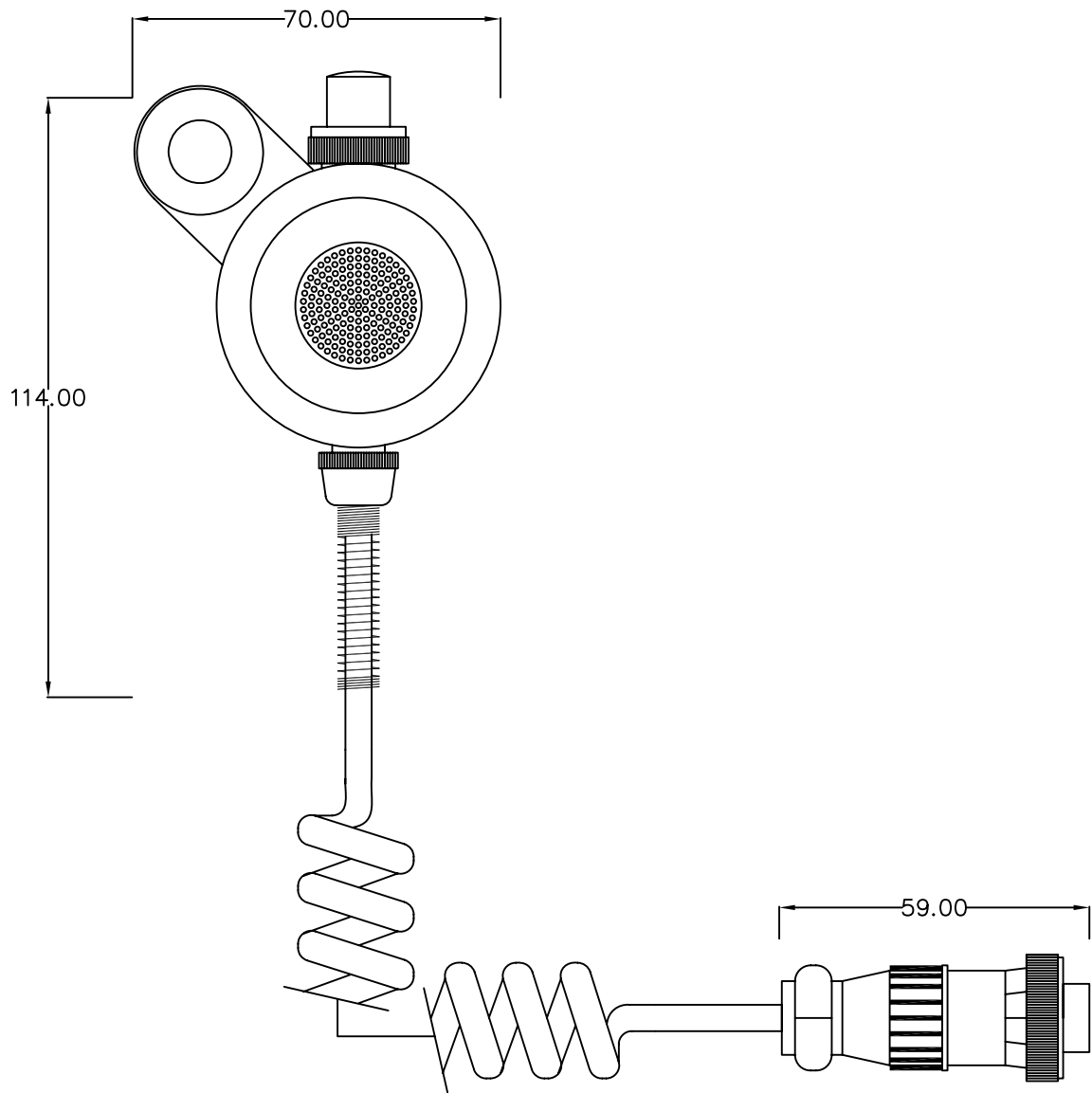
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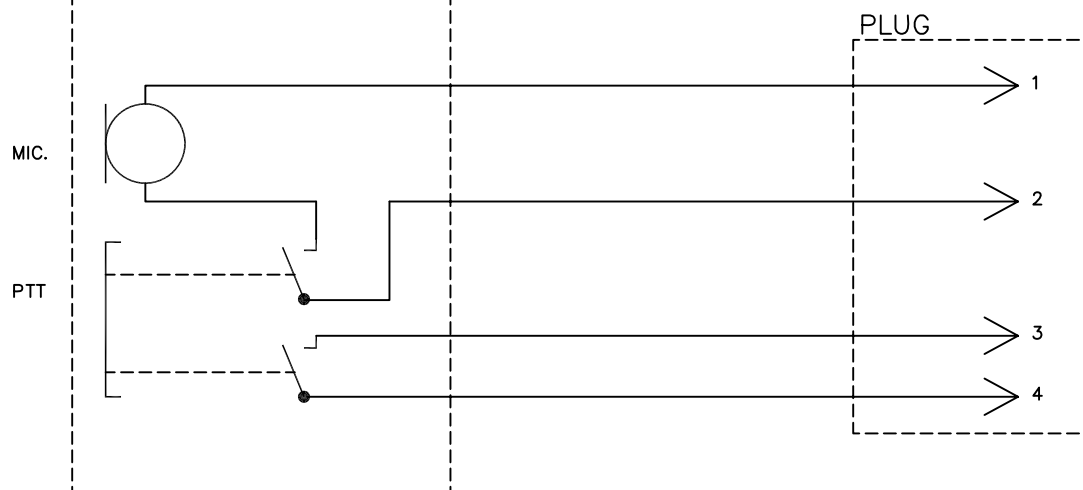
E

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9217 — WATERPROOF HAND-HELD MICROPHONE



3006100088

VML-1520

Horn Loudspeaker 15W, 20 OHM Waterproof



IP67



DESCRIPTION

- General purpose 15 Watt 20 ohm horn loudspeaker
- For use on deck areas, engine room etc.
- To be used together with ACM or talk-back stations

SPECIFICATIONS

GENERAL

Dimension (mm)	250W x 145H x 270D
Temperature	-40 °C - +55 °C
Relative humidity	0% - 95%
Material, finish	ABS, grey
Mounting	Bracket, stainless steel grade 304
Termination	Cable 2.5m
Weight	1,35 kg
Rated power	15W rms
SPL at 1kHz	106dB/1W/1m - 118Db/15W/1m
Effective frequency range	275 - 7000 Hz
IP rating	IP-67
Identification/markings	2732

Created: 29.07.2014, updated: 19.04.2022

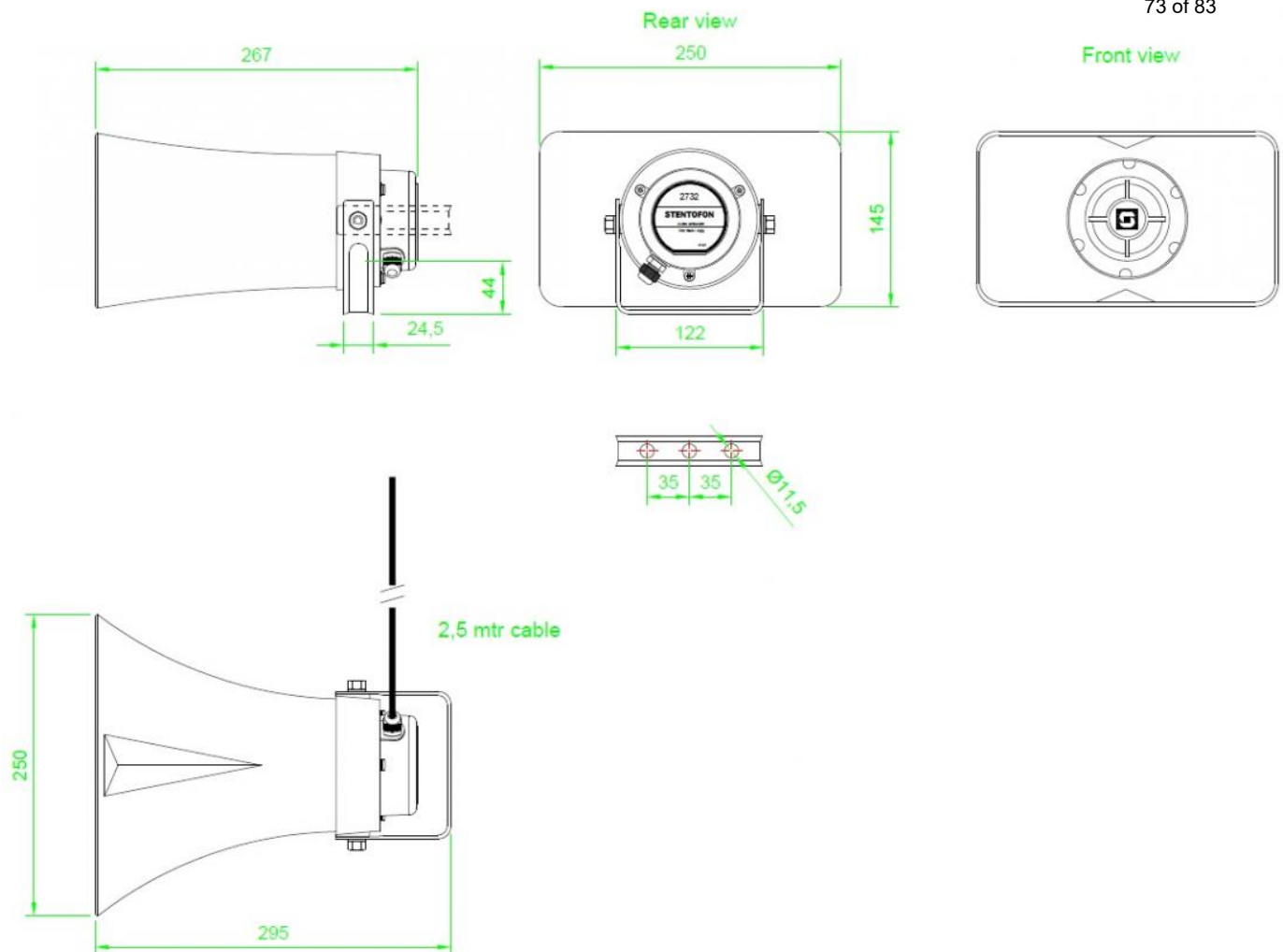
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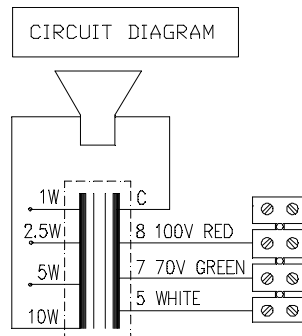
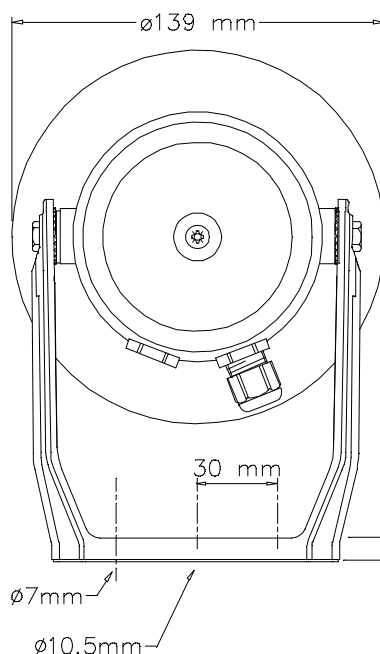
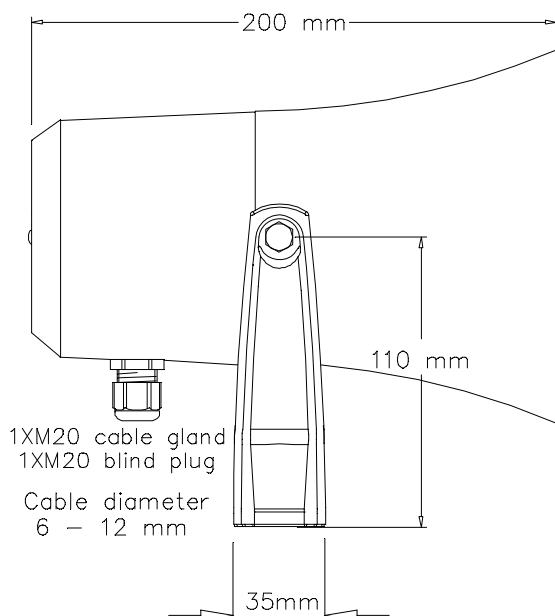
USA

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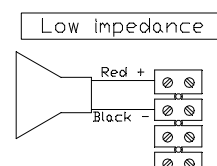
Phone..... + 1 484 494 5790
Fax..... + 1 484 494 5793
E-mail..... dnh@dnhspeakers.com

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HP-10(T)



Secondary nominal tapings	
C : 10W	10 W
C : 5W	5 W
C : 2,5W	2,5 W
C : 1W	1 W



Sound pressure levels at 1W/1m 28mm

SPL vs Freq



Specifications

Material / Color	ASA / RAL 7035
Mounting	Bracket
Termination	Screw connections
Weight w/transformer	1,1 kg
IP-rating	66/67
Max. / min. amb. temp	90°C / -50°C
Rated / max. power	10 W / 15 W
SPL 1W/1m	107 dB
SPL rated power	117 dB
Effective freq. range	450 – 10000 Hz
Dispersion (-6dB) 1kHz / 4kHz	150° / 45°
Directivity factor, Q(2kHz)	
Options	Impedance, colors, labels

Installation, Operation and Maintenance Procedures

- Unscrew lid, lead cable through cable gland, connect to terminal (70V or 100V) and select required tapping on transformer.
- Fasten lid with a torque of 1,2 – 1,5 Nm.
- Fasten bracket to wall or ceiling with 1 to 3 screws.
- To change the position of the loudspeaker, please adjust the bracket (by loosening / tightening the screws) as required.
- For optimum performance, always use the correct voltage / power and operate within the frequency limits as stated.
- Do not open loudspeaker when energized.
- This loudspeaker is supplied with a 2 year warranty against defective materials and workmanship.

DNH reserves the right to alter specifications without notice





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GERMANY

DNH GmbH

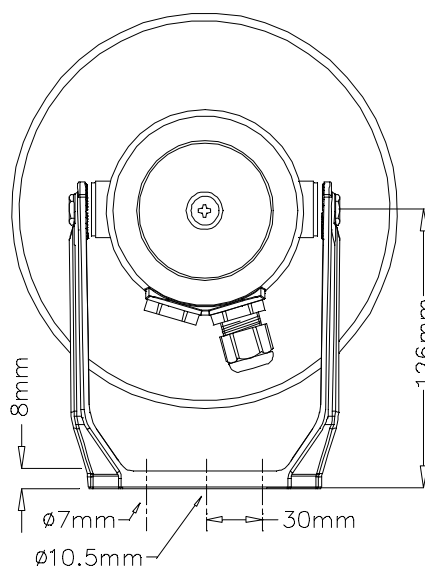
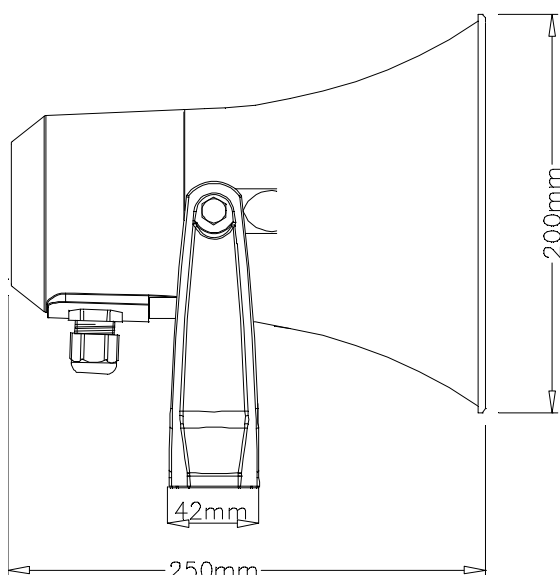
Phone... + 49 040 6569 30-0
Fax..... + 49 040 6569 30-30
E-mail..... dnh@dnh.de

USA

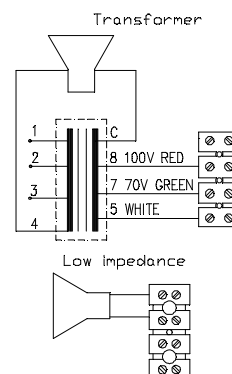
DNH Speakers Inc

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HP-15(T)



CIRCUIT DIAGRAM



70/100 Volt combined
transformer
Primary connections

White : Green 70 V
White : Red 100 V

Secondary
nominal tapings

C : 4	15,0 W
C : 3	7,5 W
C : 2	4,0 W
C : 1	2,0 W

Sound pressure levels at 1W/1m P5/15T

SPL vs Freq



Specifications

Material / Color	ASA / RAL 7035
Mounting	Bracket
Termination	Screw connections
Weight w/transformer	1,4 kg
IP-rating	66 / 67
Max. / min. amb. temp	90°C / -50°C
Rated / max. power	15 W / 20 W
SPL 1W/1m	108 dB
SPL rated power	118 dB
Effective freq. range	330 – 8000 Hz
Dispersion (-6dB) 1kHz / 4kHz	130° / 35°
Directivity factor, Q	8,3
Options	Impedances, colors, labels

Installation, Operation and Maintenance Procedures

- Fasten loudspeaker to wall/ceiling with two screws through foot bracket.
- Remove lid by 1 screw, lead cable trough cable gland, select required tapping and connect to terminal 70V or 100V.
- Fasten lid with a torque of 1,2 – 1,5 Nm.
- To change the position of the loudspeaker, please adjust the bracket (by loosening / tightening the screws) as required.
- For optimum performance, always use the correct voltage / power and operate within the frequency limits as stated.
- Do not open loudspeaker when energized.
- This loudspeaker is supplied with a 2 year warranty against defective workmanship.

DNH reserves the right to alter specifications without notice





ISO 9001 CERTIFIED

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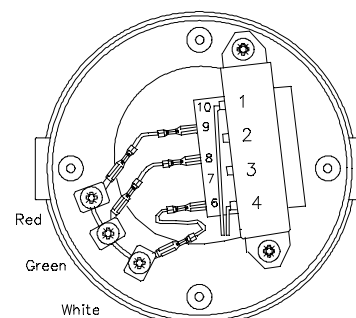
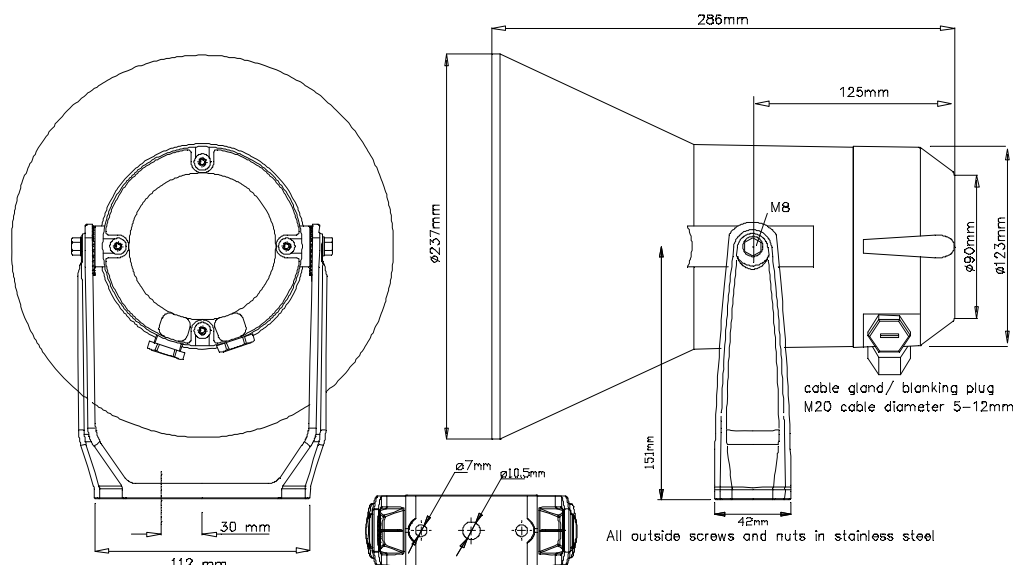
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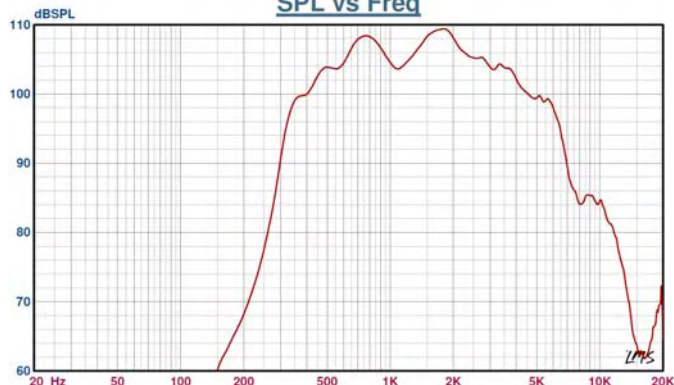
HP-20(T)



70/100 volt combined transformer Primary connections	
White : Green	70 V
White : Red	100 V
Secondary nominal tapings	
1 : 4	20 W
1 : 3	15 W
1 : 2	7,5 W
2 : 4	3,5 W
2 : 3	2 W

Sound pressure levels at 1W/1m sine wave

SPL vs Freq



Specifications

Material / Color	Polyamide / RAL 7035
Mounting	Bracket
Termination	Inside screw connections
Weight w/transformer	2,1 kg
IP-rating	67
Max. / min. amb. temp	150°C / -50°C
Rated / max. power	20 W / 25 W
SPL 1W/1m	110 dB
SPL rated power	122 dB
Effective freq. range	310 – 8000 Hz
Dispersion (-6dB) 1kHz / 4kHz	115° / 30°
Directivity factor, Q(2kHz)	9,3
Options	Impedance, colors, labels

Installation, Operation and Maintenance Procedures

- Unscrew lid (4 screws). Lead cable through cable gland and connect to screw terminal (100V or 70V).
- Tapp transformer to wanted power. Tighten cable gland to ensure IP-grade.
- Fasten lid with a torque of 2-3 Nm.
- Fasten bracket with 1-3 screws.
- To change the position of the loudspeaker, please adjust the bracket (by loosening / tightening the screws) as required.
- For optimum performance, always use the correct voltage / power and operate within the frequency limits as stated.
- Do not open loudspeaker when energized.
- This loudspeaker is supplied with a 2 year warranty against defective materials and workmanship.

DNH reserves the right to alter specifications without notice



1

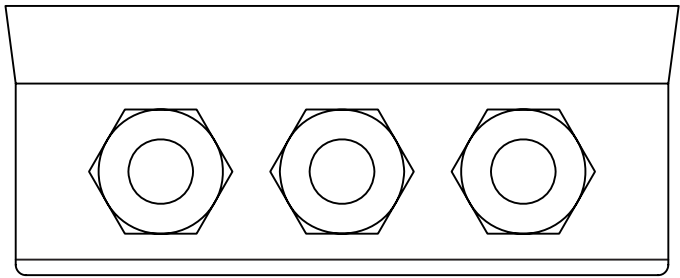
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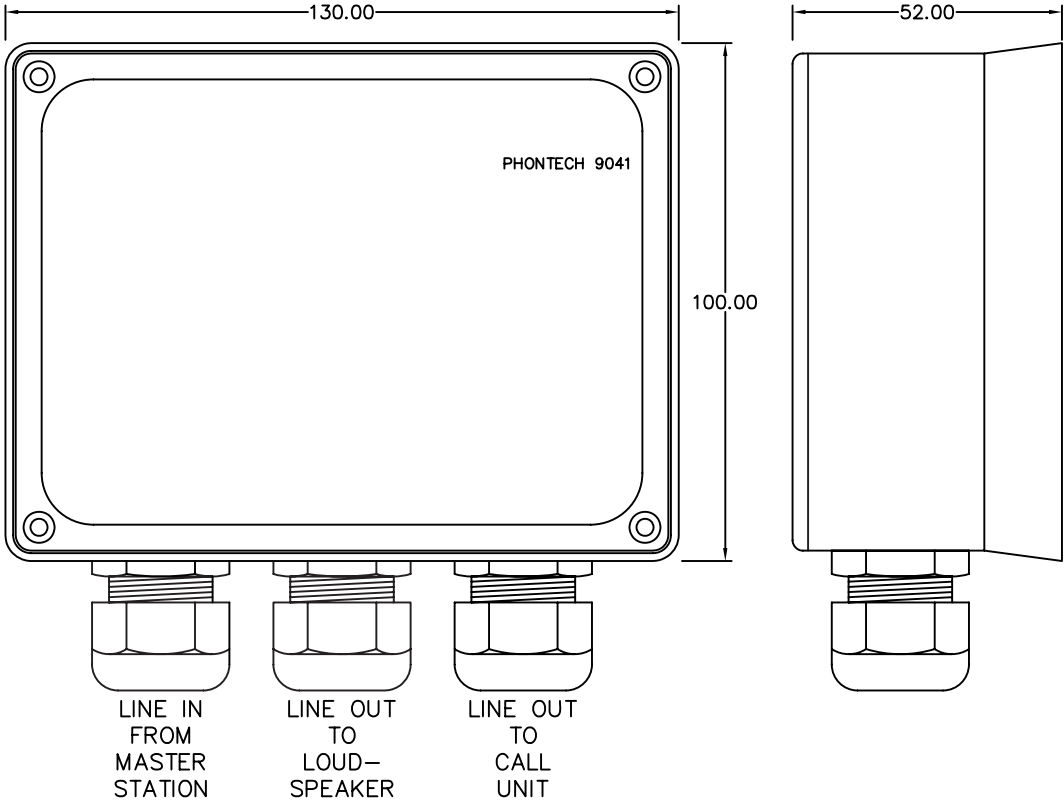
A

A



B

B



C

C

D

D

E

E

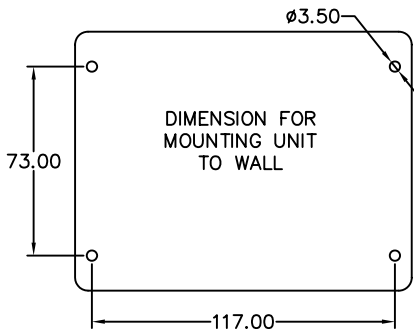
EQUIPMENT DATA:

MANUFACTURER : ZENITEL AS
MODEL/TYPE : EX INTERFACE UNIT
RACK/BOX SUPPL. : ZENITEL AS
RACK/BOX TYPE : NA.
MATERIAL : PC/ABS BLEND, ABS
COLOUR : RAL 9005/9006
WEIGHT OF UNIT : 0,30Kg.
MOUNTING : TO WALL

FIXING DETAILS : SEE INSIDE BOX
ACCESS : FRONT
CABLE ENTRY : BOTTOM
GLAND TYPE : 3pcs. M20
PROTECTION IP : IP-56
POWER SUPPLY : FROM CENTRAL
POWER CONSUMP. : NA.
HEAT DISSIPATION : NA.

F

F



1

2

3

4

A

A

B

B

C

C

D

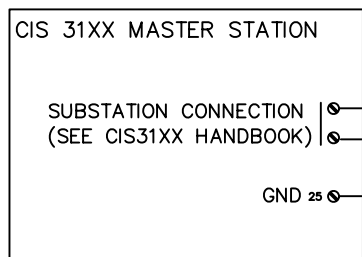
D

E

E

F

F



9041
EX INTERFACE UNIT FOR
SUBSTATIONS

BRD 06900-001

J1

1

2

3

4

1

2

3

4

CALL

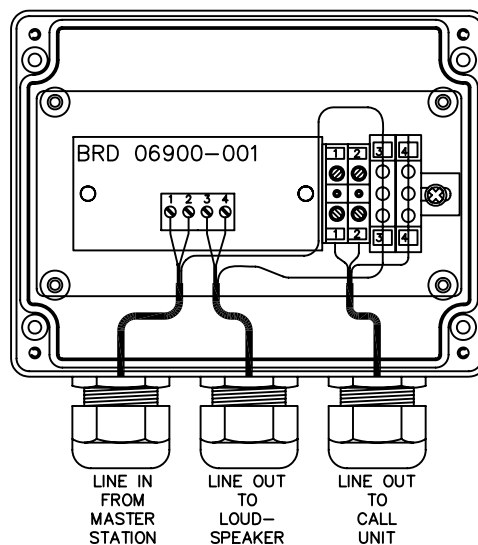
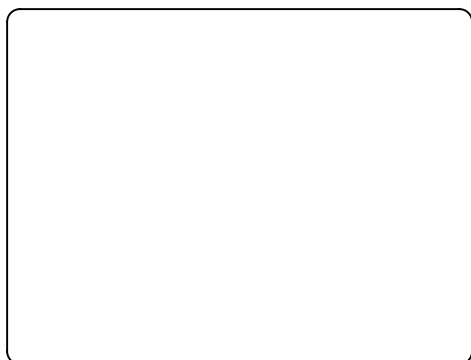
SCREEN

EX LOUDSPEAKER

EX CALL UNIT

HAZARDOUS AREA

SAFE AREA



1

2

3

4

A

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C

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A

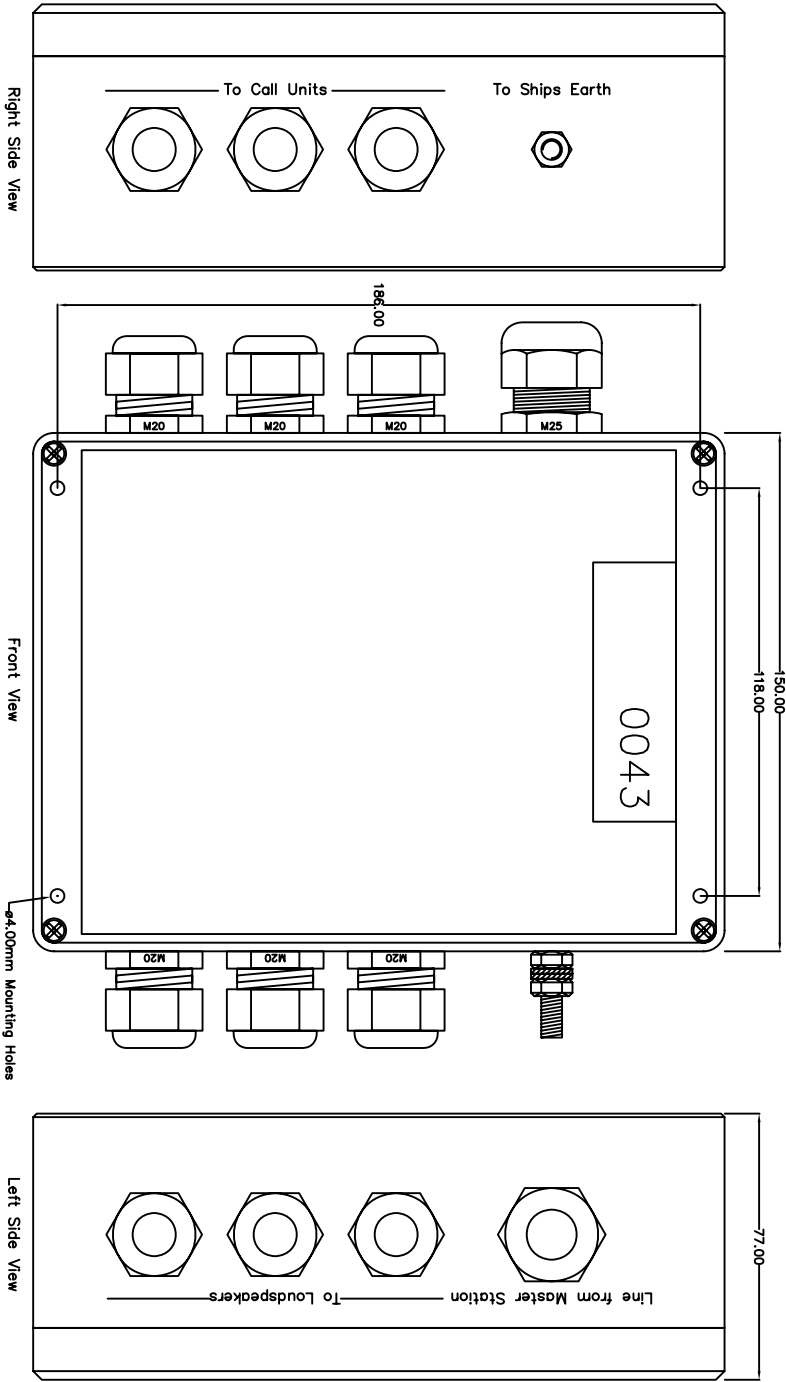
B

C

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F



EQUIPMENT DATA:

MANUFACTURER : Phontech as.
MODEL/TYPE : Interface Unit 0043.
RACK/BOX SUPPL. : Phontech as.
RACK/BOX TYPE : Wall Mounted.
MATERIAL : ABS.
COLOUR : White.
WEIGHT OF UNIT : 1,20Kg.
MOUNTING : To Wall.

FIXING DETAILS : 4pcs. M3 Bolt.
ACCESS : Front.
CABLE ENTRY : Both Sides.
GLAND TYPE : See Note 1.
PROTECTION IP : IP-56.
POWER SUPPLY : NA.
POWER CONSUMP. : NA.
HEAT DISSIPATION : NA.

1

2

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4

A

A

B

B

C

C

D

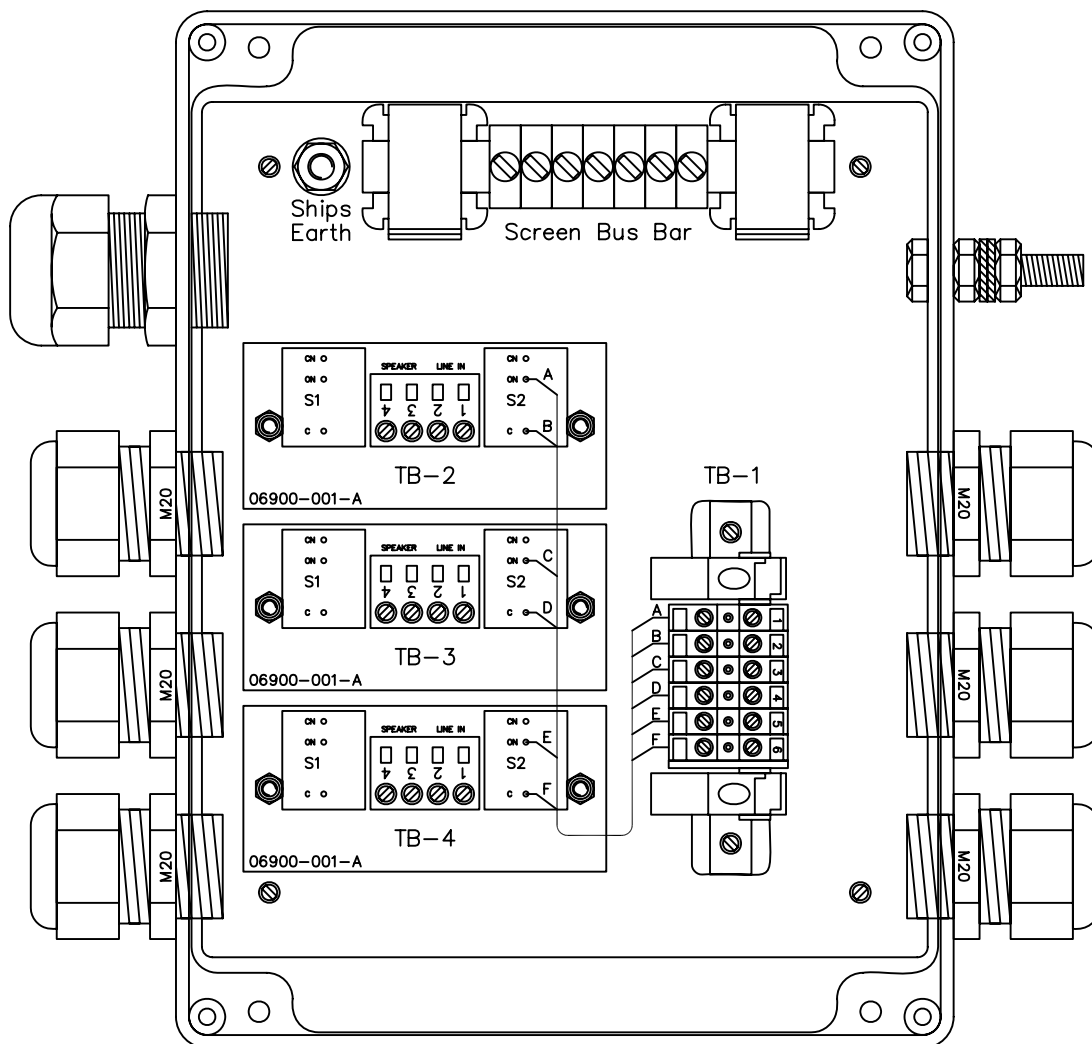
D

E

E

F

F



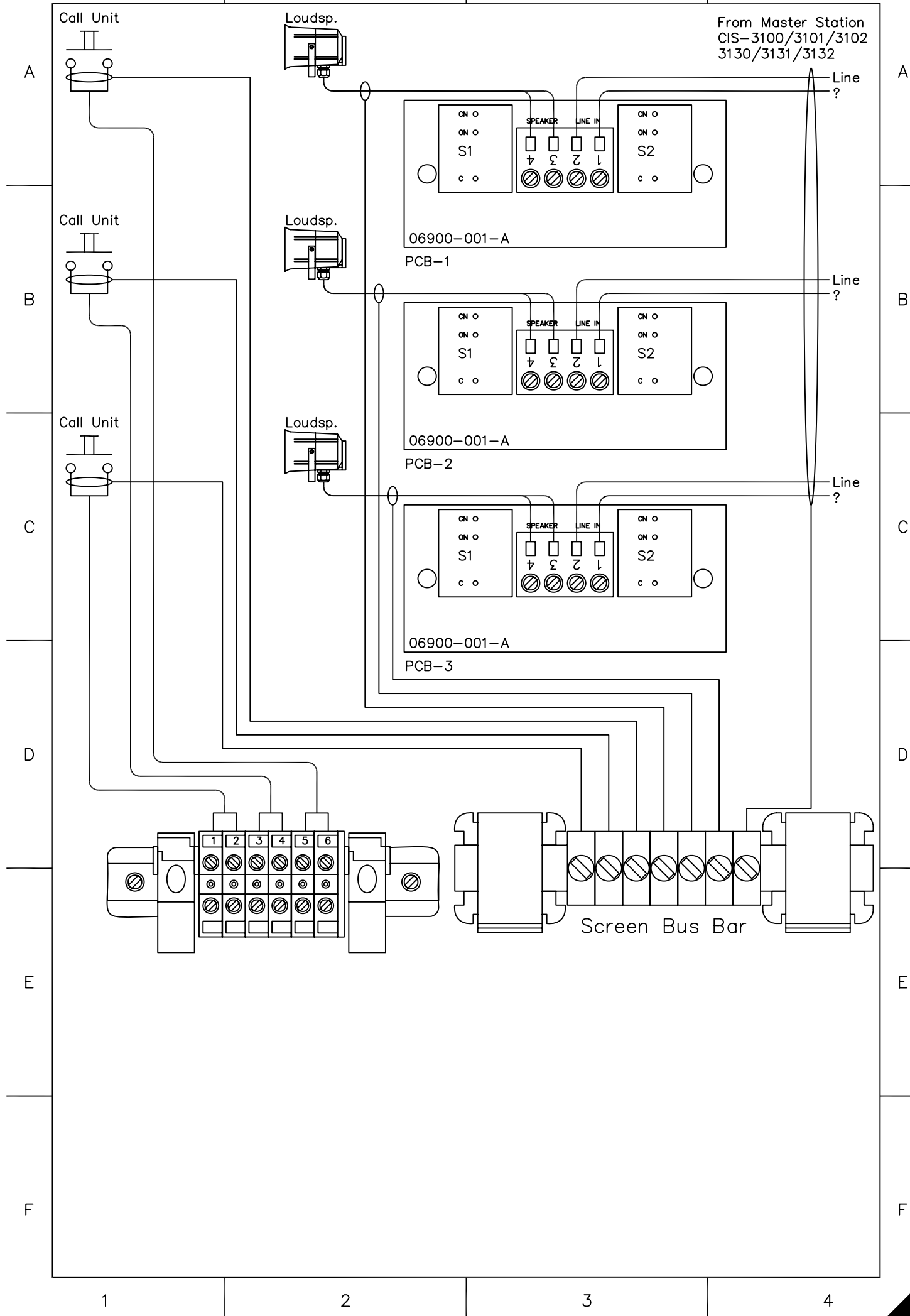
Front View (without lid)

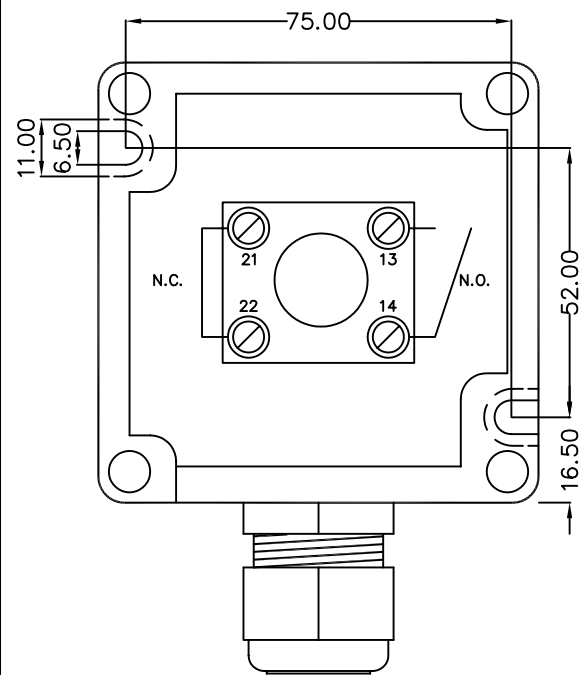
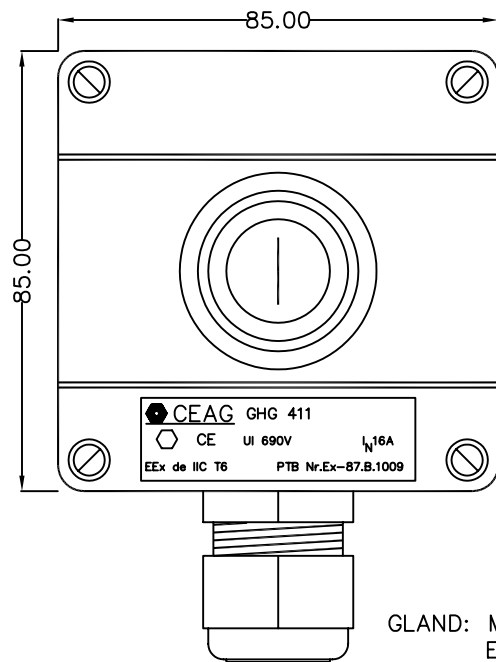
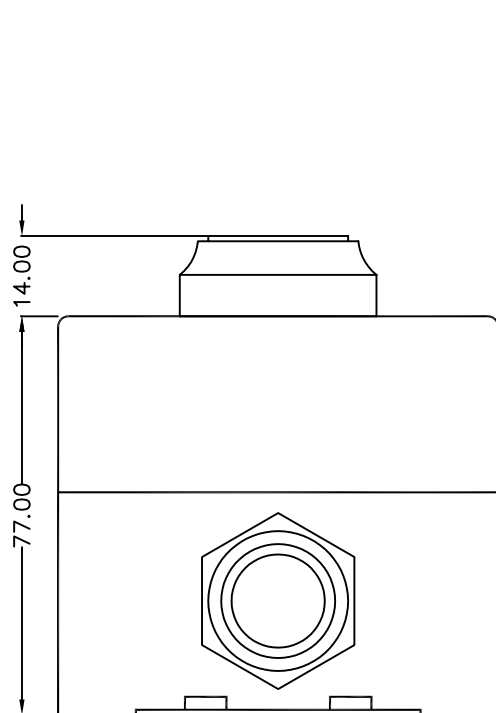
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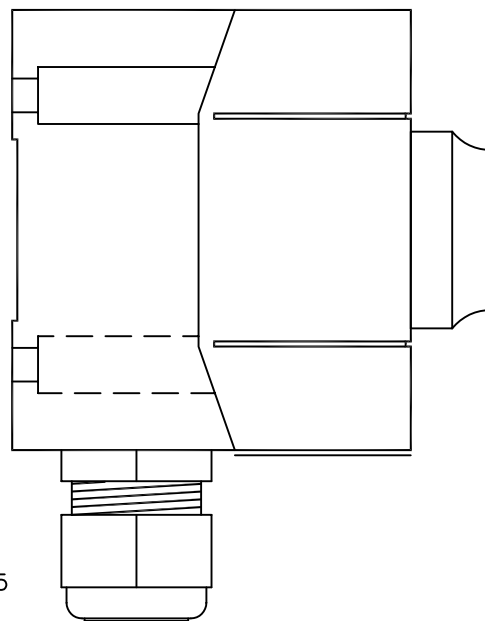
3

4





INTERNAL CONNECTION AND MOUNTING DIMENSION.





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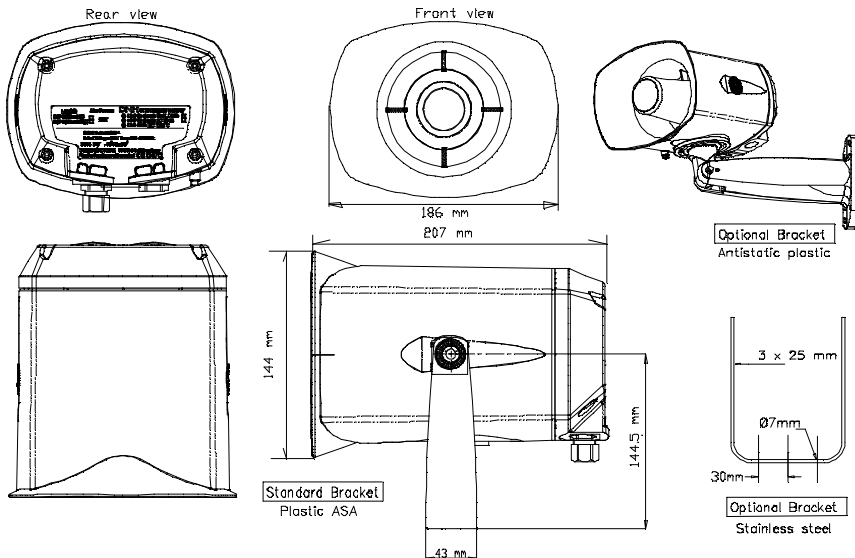
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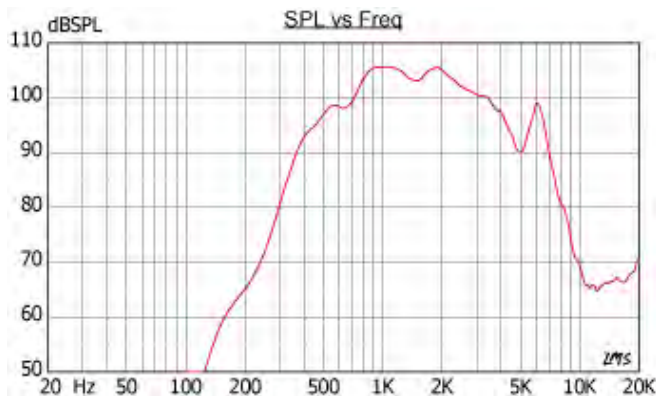
DSP-15EExmN



Model: **DNH 3770 Kragens Norway**
 DSP-15EExmN(T)
 DSP-15EExmNm(T)
 Max Power: **30W**
 Rated current: 0.25 A
 Rated Voltage: 100V Freq: 150-20000Hz
 IP66 & IP67 -50°C to +50°C
 Nemko 09ATEX1322 Ser.no.: Outside enclosure
 Warning: Do not open while energized **0470**

M20 EExe ATEX
approved cable gland
and M20 EExe ATEX
approved blinding
plug

SPL at 1W/1m Sine wave



IIB IIC

Material / Color..... Anti-static PA / Black
 Mounting Bracket
 Termination..... e-chamber, push terminals
 Weight 1,8 kg
 IP-rating 66 / 67
 Max / min amb. temp..... 50°C / -50°C
 Rated / max. power 15 W/30 W
 SPL 1W/1m 105 dB 102 dB
 SPL rated power 15 W 116 dB 113 dB
 Effective freq range..... 380 – 7000 Hz 450-6000
 Dispersion (-6dB) 1kHz / 4kHz 200° / 50° 105° / 35°
 Directivity factor, Q (1 kHz) 1,8

Installation, Operation and Maintenance Procedures

- When mounting the loudspeaker please ensure that it is re-assembled in the same manner in which it was received.
- To change the position of the loudspeaker, please adjust the bracket (by loosening / tightening the screws) as required.
- Use only certified/specified cable glands and blanking plugs, reflecting the same IP rating and temperature range as the loudspeaker.
- DSP-15 EExmN can be supplied with different bracket systems, according to customer requirements.
- For optimum performance, always use the correct voltage / power and operate within the frequency limits as stated.
- Options: Impedances and labels
- Use only certified/specified cable glands and blanking plugs.
- WARNING: Do not open loudspeaker when energized.
- Fasten lid with a torque of 2 - 3 Nm.
- This loudspeaker is supplied with a 2 year warranty against defective materials and workmanship.



DNH reserves the right to alter specifications without notice

Rev. 21.10.2011

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