

# PHONTECH

by ZENITEL GROUP

## INSTALLATION MANUAL

ICS 6200



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## Standards

The equipment is tested to the following product standards:

EMC: EN60945 (2002), EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5,  
EN61000-4-6, EN61000-4-11, IEC60092-101  
Environmental: EN60945 (2002), EN60068-2-1, EN60068-2-1, EN60068-2-2, EN60068-2-6,  
EN60068-2-30, EN60068-2-52  
Ingress protection: IEC60529  
Compass safe distance: EN ISO 694  
Health and Safety: EN60950, CSA-C22.2 60950

For an updated list of approvals and statements of conformity, these are available

from: [www.phontech.net](http://www.phontech.net)

## Amendment Record

NO	INIT	DATE	CHAPTERS	VERSION	REASON FOR CHANGE
0	H.S.	24.05.13	All	A	Initial release
1	K.A.T.	01.09.14	2	B	Updated manual for 1.2 firmware release.
2	K.A.T	10.10.14	N/A	C	Added warranty and utilization section.
3	K.A.T	11.05.15	2.3	D	Updated for trunk parking functionality.
4	K.A.T	26.04.16	2,6	E	Added information about Snom 710.
5	ASK	26.09.2016	All	F	General Update, new enclosures, new teleph.
6	B.Ø.B	03.07.2017	Multiple	G	Added variants, updated conf. app. section.
7	T.H.	30.10.2018	2.6, 2.7, 4.2, 8	H	PAGA, 62xx72xx
8	T.H.	30.11.2018	4.2	I	6223, 7223 Unmounting instructions
9	HKL	6.8.2019	N/A	j	Doc no. A100K11946 / 4000087299 update
10	CV/AGK	20.12.2023	4.2	K	Corrected connection drawings 62XX telephones
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The information in this book has been carefully checked and is believed to be accurate. However, no responsibility is assumed for inaccuracies.

Zenitel AS reserves the right to make changes without further notice to any products or modules described herein to improve reliability, function or design. Zenitel AS does not assume any liability arising out of the application or use of the described product.

## SAFETY INSTRUCTIONS



This equipment contains CMOS integrated circuits. Observe handling precautions to avoid static discharges which may damage these devices.



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## SERVICE AND WARRANTY

Zenitel warrants that the product sold by Zenitel substantially conform 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](http://www.zenitel.com/customer-service/claims) or on RMA form provided by Zenitel through [claims@zenitel.com](mailto: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](http://www.zenitel.com/customer-service/claims) or on RMA form provided by Zenitel through [claims@zenitel.com](mailto: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.

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## 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.

## 1 SYSTEM DESCRIPTION

The Integrated Communication System Phontech 6200 is designed to meet the requirements for internal communications and shore connections on board ships.

The system is based on the Phontech 6200 and the Phontech 6200R units. These units are 1U in size, and may be combined into a complete scalable system effortlessly.

The Phontech 6200 units have a built in 2 port fast Ethernet switch for cascading. It supports ring network for redundancy. One 1U unit supports up to 24 lines. FXS and FXO, 8 wire E&M and UpN (61xx terminals) lines are supported. The units will support a mix of up to 6 line modules with 4 lines each. Each line is terminated in a RJ45 jack. A typical PABX configuration could be 5 x 4FXS + 1x4 FXO for a total of 20 telephones and 4 trunks. Typical intercom configuration could be 4x4UpN + 4FXO + 4E&M.

A 2x16 LCD character display with switches is provided to view status messages and configure basic functions.

VoIP trunks and terminals are terminated using the Ethernet connection. Up to 50 VoIP (SIP) registrations per unit are supported. A number of SIP trunk lines are supported on each of the Phontech 6200 units.

The exchange cabinet is normally located on the ships bridge, or the electronic equipment room. The intercom stations may be located in locations requiring two way communications, like the engine room, engine control room, mooring stations, generator rooms etc.

The Phontech 6200 units have been tested and approved according to IEC 60945.

The Phontech 6200 units are backward compatible with Phontech 61xx terminal hardware. Termination can be directly on the front panel using CAT5e type cable and RJ-45 connectors, or using 19" patch panels and patch cables.

If using 6200R, a terminal board (4000019813) is required for easy termination. Less overall rack space is used due to not requiring a 19" patch panel.

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## 1.1 MAJOR FUNCTIONS

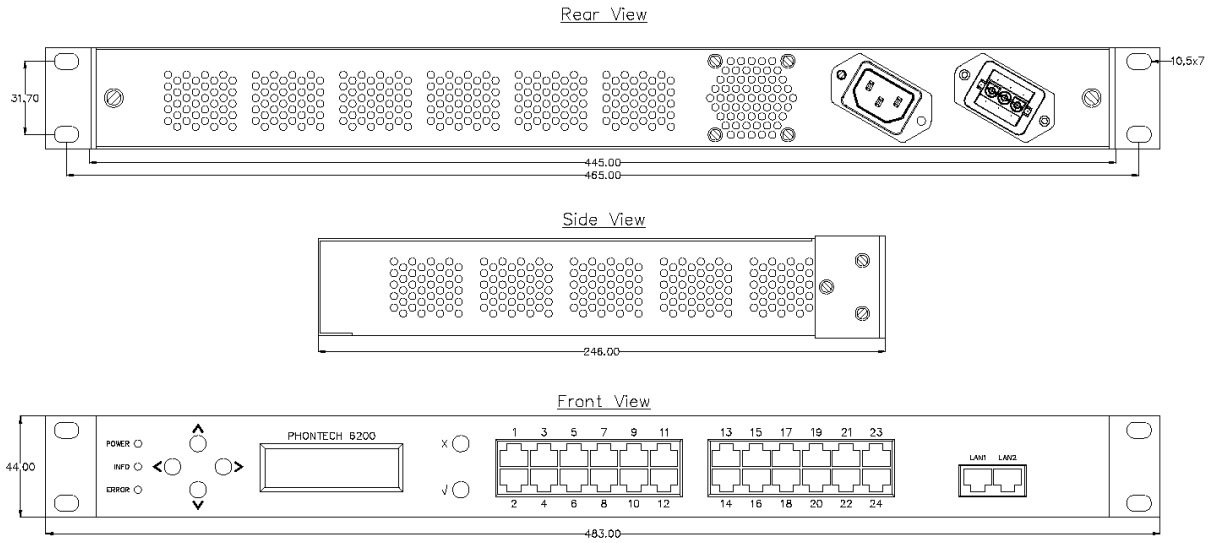
The major functions of the Phontech 6200 system includes:

- PABX operation.
- Intercom operation.
- Public address.
- Access to external systems and nets.
- Cost effective modular design.
- Flexible dual power supply configuration.
- Flexible Numbering plan
- Call groups
- Call hunting groups
- Paging groups
- Individual paging
- Intrusion
- Call transfer
- Call forwarding
- Wake up calls
- Who am I / Identification
- Automated switchboard
- Direct Inward Dialing
- Conference bridge
- Configurable access control
- Redundant power supplies
- Self-diagnostic functions
- Field upgradeable hardware and software
- Programmable priority structure.

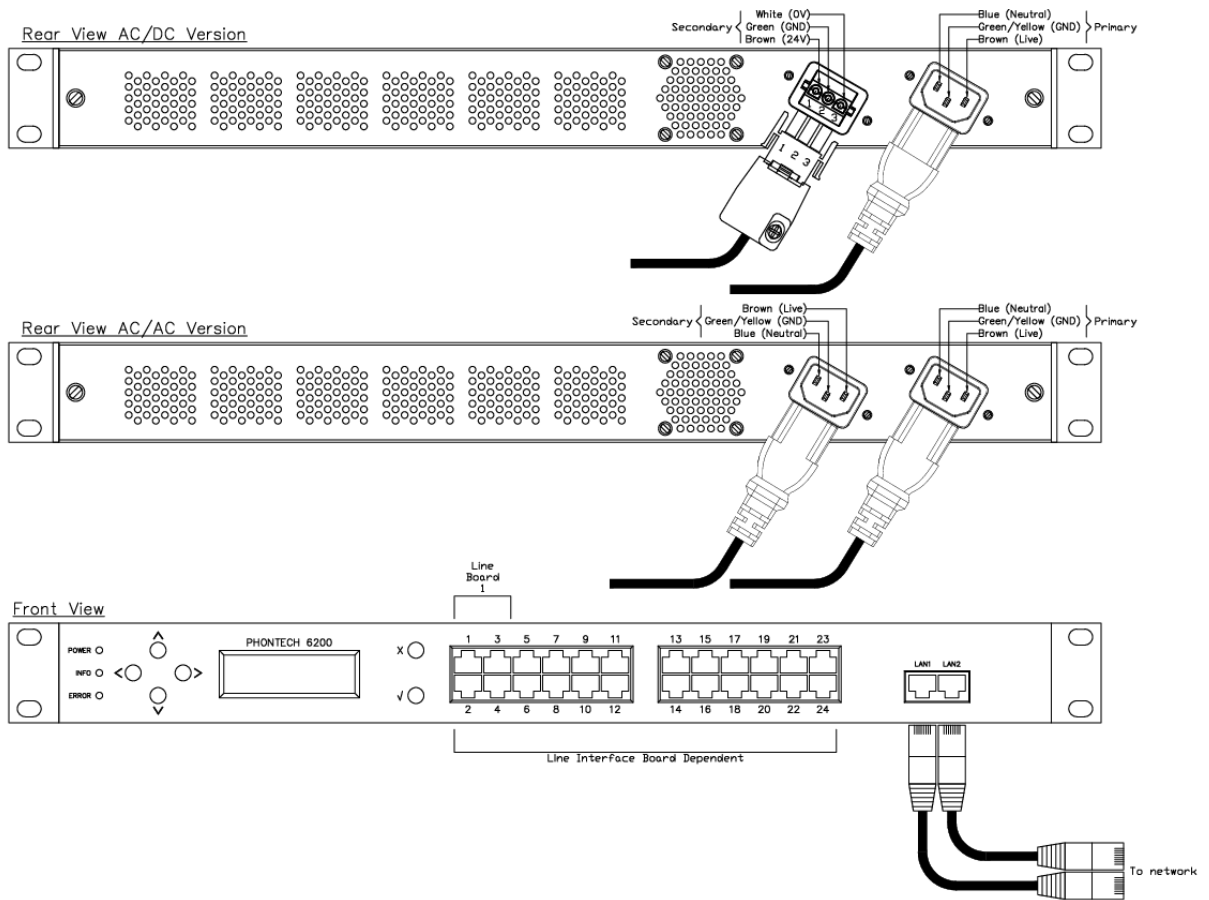
Various intercom units for all purposes:

- Office types.
- Flush mounted.
- Weather/ water protected types.
- Noisy area compliant types with extra signal device activation and connection for headset and loudspeaker.

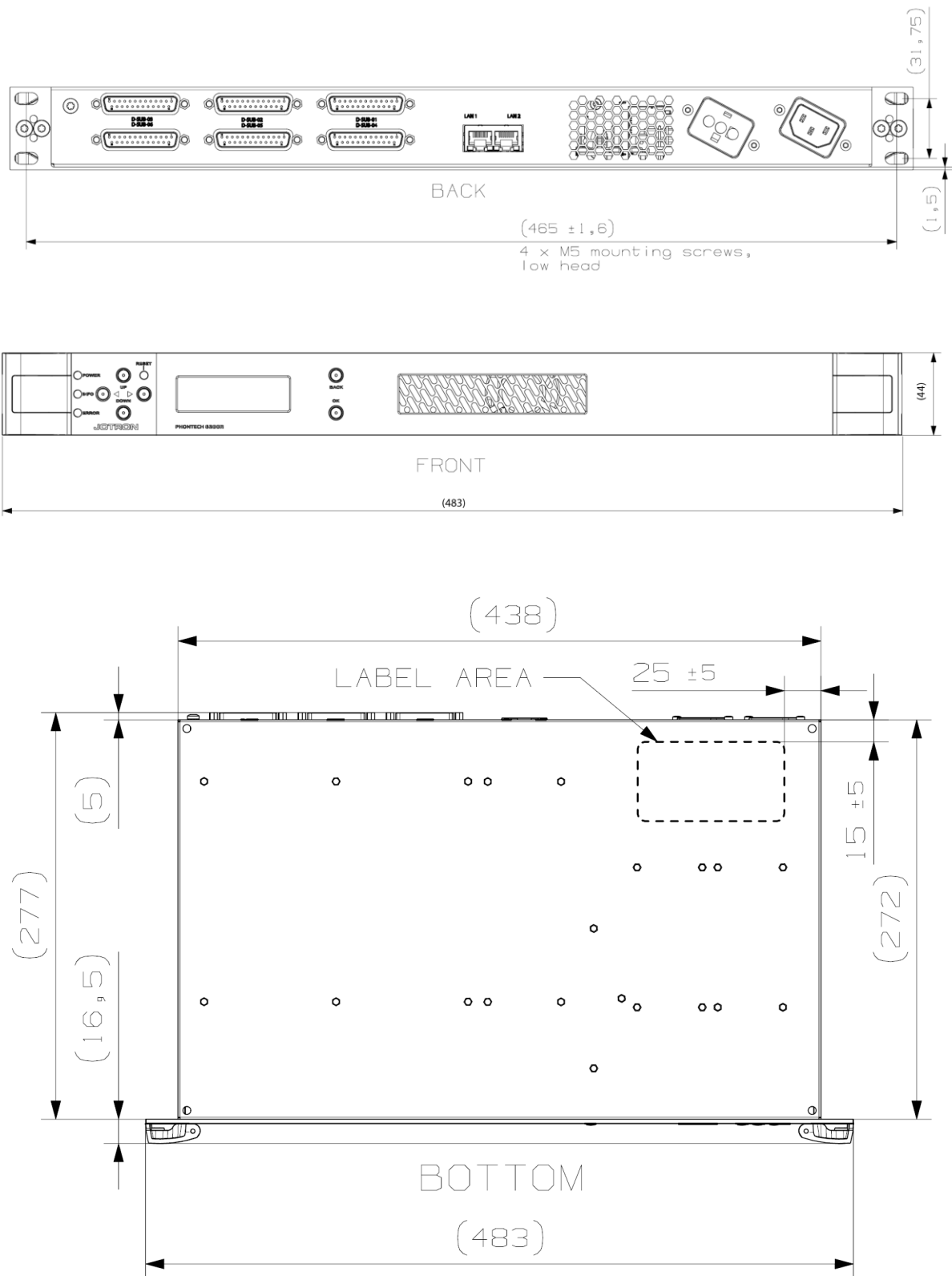
## 1.2 MECHANICAL LAYOUT 6200



## 1.3 ELECTRICAL CONNECTIONS 6200



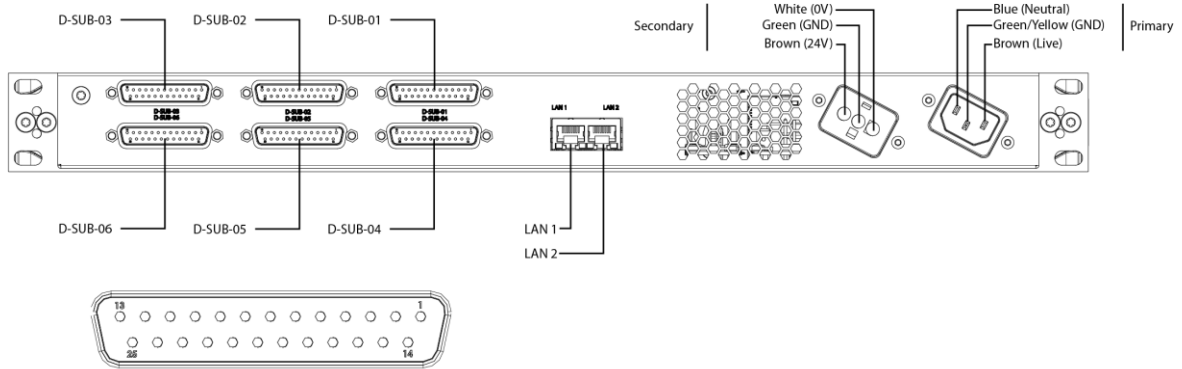
## 1.4 MECHANICAL LAYOUT 6200R



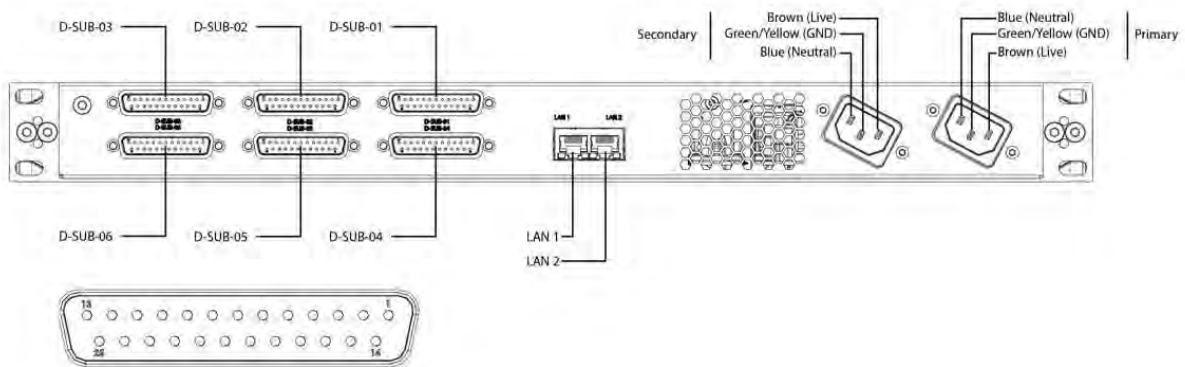


## 1.5 ELECTRICAL CONNECTIONS 6200R

### 1.5.1 AC-DC VERSION



### 1.5.2 AC-AC VERSION

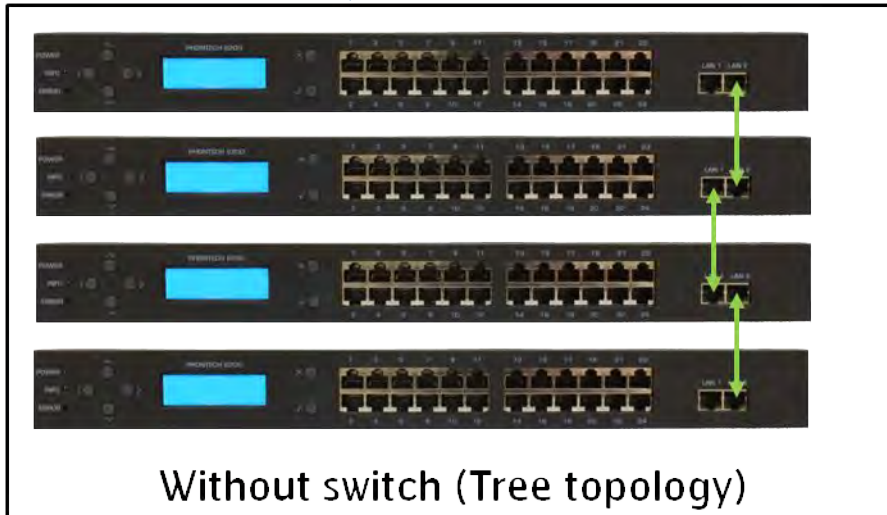


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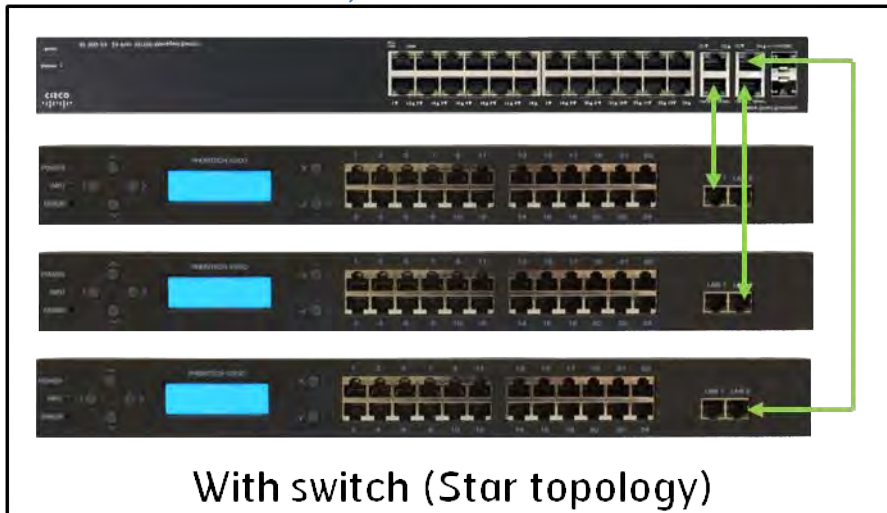
## 1.6 STACKING

Multiple Phontech 6200 units communicate using the Ethernet ports LAN1 (25) and LAN2 (26). The LAN1 and LAN2 ports are connected internally by a built-in Ethernet switch. Interconnecting 6200 units is done by connecting Ethernet patch cables between the LAN ports. Three topologies are possible. If you have the 6200R, the LAN ports are located at the rear of the unit.

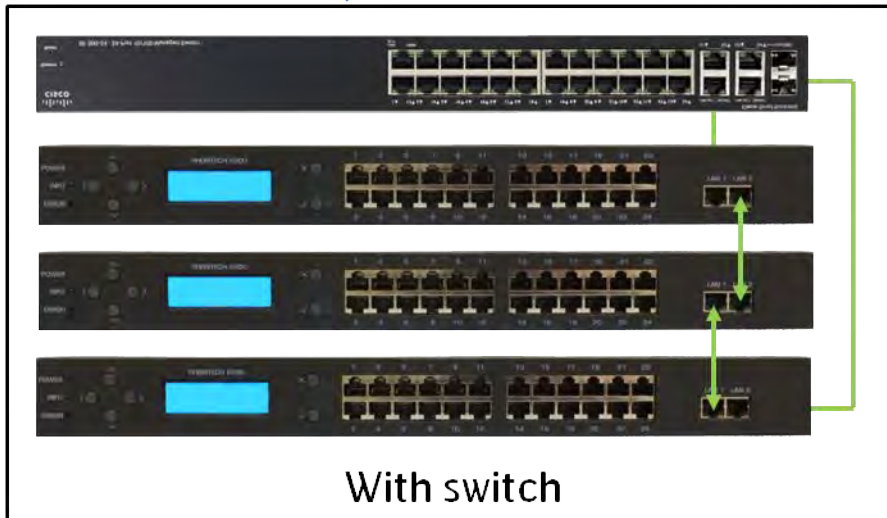
### 1.6.1 TREE TOPOLOGY, WHICH IS THE SIMPLEST



### 1.6.2 STAR TOPOLOGY, WHICH INCLUDES THE USE OF AN EXTERNAL SWITCH



### 1.6.3 RING TOPOLOGY, WHICH HAS THE ADDED BENEFIT OF REDUNDANCY

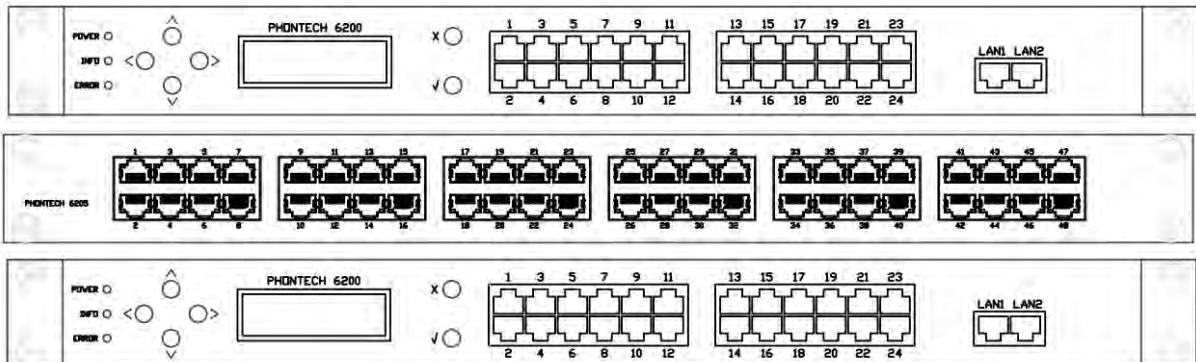


The Ethernet connections have a maximum segment length of 100m. If longer segments are required, repeaters or media converters can be used. This allows for physical separation of multiple Phontech 6200 units within a single system.

### 1.7 RACK MOUNTING

#### 6200 variant:

It is recommended to arrange the Phontech 6200 units in pairs with a patch panel in between for easy patch cable arrangement. Ports 1-24 on upper 6200 unit will connect to the upper connector row on the patch panel, and the lower 6200 to the lower row.






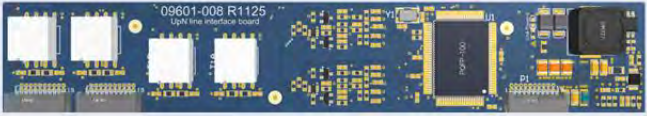
Allow space for arranging the cables both inside and on the front of the cabinet.

#### 6200R variant:

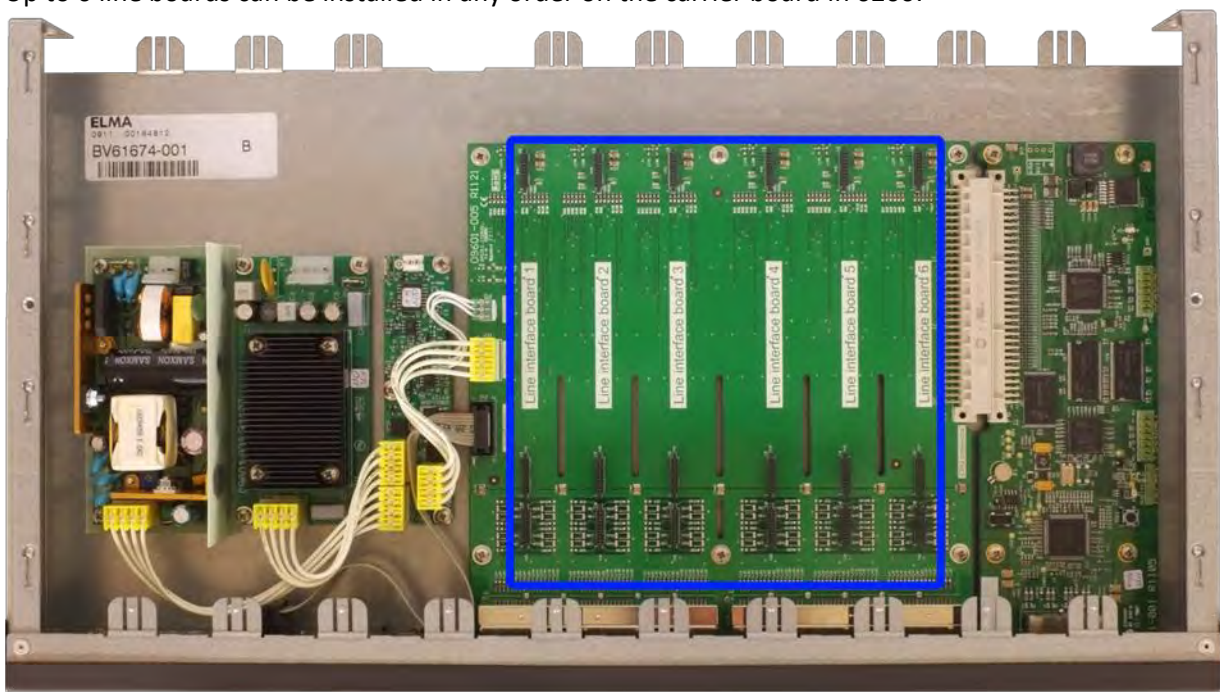
If you are using Phontech 6200R you do not need the patch panel between the units. For easy connection, we recommend to use our interface board 4000019813 together with the 6200R. See chapter 3.2.1.3.1 for more information.

## 1.8 INSTALLING LINE BOARDS IN THE PHONTECH 6200/6200R

The line boards are installed on the carrier board inside a Phontech 6200/6200R unit. The line boards are color coded.

Interface	Board color	
FXS	Green	
FXO	Red	
E&M	Black	
UpN	Blue	

Up to 6 line boards can be installed in any order on the carrier board in 6200.

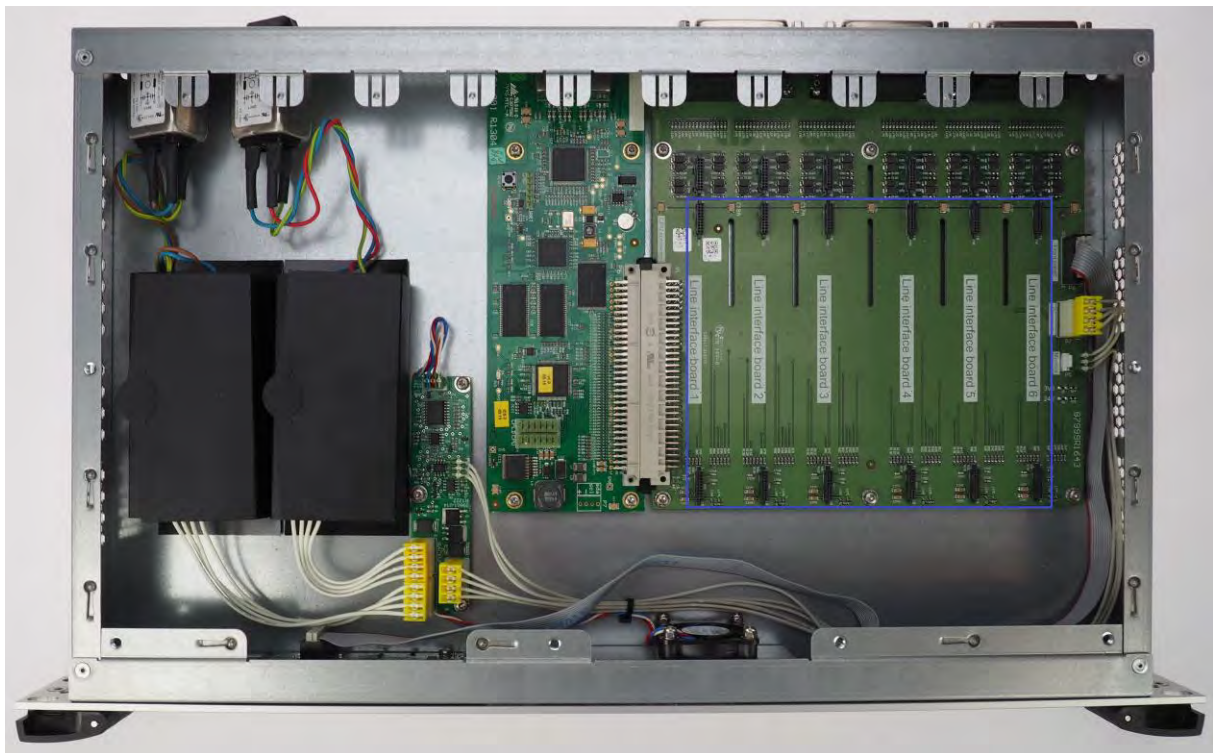




Line interface board connectors relates to front panel ports in the following way:

Line interface board	Ports
1	1 - 4
2	5 - 8
3	9 - 12
4	13 - 16
5	17 - 20
6	21 - 24

Also in 6200R 6 line boards can be installed in any order on the carrier board.



Line interface board connectors relates to line interface board in the following way:

Line interface board	Ports on interface board
1	1 - 4
2	5 - 8
3	9 - 12
4	13 - 16
5	17 - 20
6	21 - 24

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## 1.9 FXS BOARD

The FXS line board supplies 4 lines of traditional analog telephone lines, aka POTS, Plain Old Telephone Service. The FXS line is connected to terminals 4 and 5 on the RJ-45 jack. Parallel connection of terminals is possible.

Line voltage    -48VDC  
Ring voltage    50VRms  
Maximum REN   3  
Loop current    25mADC  
Signal levels according to ES 203-021  
Line impedance according to ES 203-021

Supported terminals

Zenitel 5111, 5111-H, 5113, 5123, Gigaset DA710, ResistTel Ex, FEP-2010

## 1.10 FXO BOARD

The FXO line board supplies 4 trunk lines of the POTS type, Plain Old Telephone Service. This interface is the opposite side of the FXS interface, and is typically used to connect to shore lines, mobile networks and satellite trunks.

On-Hook Leakage Current    5uA  
Minimum line DC current    10mA  
Maximum line DC current    60mA  
Ringer equivalence number   0.2  
Ring voltage frequency range 13Hz-68Hz  
Signal levels according to ES 203-021  
Line impedance according to ES 203-021

The FXO line is connected to terminal 4 and 5 on the RJ-45 jack

## 1.11 UPN BOARD

The UPN line board supports 4 lines of Zenitel Digital Intercom (61xx) lines.

Line voltage    +37VDC  
Line impedance    110 ohms

The UPN line is connected to terminal 4 and 5 on the RJ-45 jack  
The maximum recommended line length is 500m using 0.75 twisted pair ships cable.  
Parallel connection of terminals is not possible.

Supported Terminals

Phontech 6110 MkII, 6111, 6112, 6113, 6114, 6123 and 6124

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## 1.12 E&M BOARD

The E&M board is typically used to connect systems like PA/GA and VHF/UHF radio paging.

It has two audio/key inputs and two audio/key output.

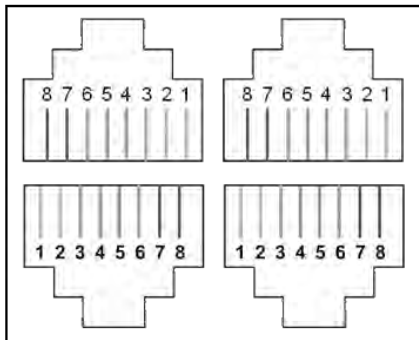
The audio inputs can be either line level or microphone level with AGC. The keying input accepts dry closing contacts. The audio output is line level with transformer isolation, the key output is a dry closing contact.

Output impedance	150ohms
Input impedance	4.7kohms
Nominal line level	0dBu
Maximum line level	+3.15dBu
Nominal mic level	-34dBu
Maximum mic level	-17dBu
AGC range	44dB

### 6200 variant:

The inputs are connected to the upper row of RJ-45 jacks, the outputs to the lower. The keying input/output is connected to 3 and 6 on the RJ-45 jack. The audio line is connected to terminal 4 and 5.

- 3 – Key in (E)**
- 4 – Audio in (T1)**
- 5 – Audio in (R1)**
- 6 – Ground (SG)**



- 3 – Key out (M)**
- 4 – Audio out (T)**
- 5 – Audio out (R)**
- 6 – Ground (SB)**

---

6200R variant:

The inputs are connected to odd-numbered ports, while outputs are connected the next even numbered port. The audio is connected to lines A/B, while key is connected to lines C/D on the 4000019813. See chapter 3.2.1.3.1 for more information.

### **1.13 6200/6200R POWER TERMINAL MODULE**

When the Phontech 6200 or Phontech 6200R is installed in a cabinet, a common power terminal module is fitted, for easy termination of the required power supplies, as well as the power failure outputs. Power failure outputs are dry closing contacts, and are activated when the corresponding power supply fails.

See chapter 3 for further details.

### **1.14 TECHNICAL DATA**

Supply voltages	Universal AC input (110-230VAC) DC input 24V nominal, 18VDC-72VDC
Maximum power consumption	65W
Size	445mm x 246mm x 44mm (w, d, h)
Weight	2.5kg
Capacity	24 physical lines, 50 registered SIP clients



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## 2 INSTALLATION

### 2.1 INSTALLATION GUIDE

The installation should be planned in detail before commencing. The cables should be listed in a cable plan, with number of pairs etc. The location of each unit in the communication system should be planned to obtain maximum performance and user availability. The locations of the intercom stations and telephones with regards to the operators must be taken especially into consideration. Zenitel strongly recommend the use of junction boxes for the external cable distribution.

#### 2.1.1 CABLE TERMINATION

First, ensure that the cable to be used is according to the Zenitel specifications. See 2.1.8 and 2.1.9 for more details.

#### 2.1.2 GLANDS

The cables enter weather-proof units by means of cable glands. Where cable glands are not supplied from the factory, the installer must adapt the glands to the actual cable outer diameter. This is to obtain the specified ingress protection.

#### 2.1.3 FERRULING

The conductors should be ferruled prior to termination when using cage clamp terminals.

#### 2.1.4 MARKING

Each cable is to be marked with cable numbers.

Each conductor is to be marked with the specific termination numbers.

Please note that Zenitel uses plug-able screw terminals in almost all units. This is to make the installation and service work as easy and durable as possible.

#### 2.1.5 FASTENING

Where applicable, the cables and the conductors shall be clamped to the structure with cable ties.

#### 2.1.6 PRESERVATION

Prior to, during, and after completion of the installation the equipment surfaces are to be protected against acid holding fluids, pollution, moist, impacts etc. This is in order to avoid damaged equipment for which Zenitel will claim void warranty.

#### 2.1.7 SCREEN CONNECTION

In order to obtain maximum performance after installation, it is necessary to terminate the cables and ground the screens in a satisfactory manner. The cables are to be de-isolated by removing approximately 500mm of the outer insulation. Then the screen braid is cut off approximately 30 mm longer than the outer isolation. The conductors are to be de-isolated and ferruled before they are inserted into the terminals. The outer screen is clamped to the cable fixing rails inside of the cabinet. Cable ties of a conductive type (metal) are recommended for best result.

#### 2.1.8 CABLE REQUIREMENTS

All cables used with the Phontech 6200 system must be of approved ship cable type.

The cables must be:

- Individually twisted pairs
- Recommended conductor size is 0.75 mm<sup>2</sup>
- All cabling in the Phontech 6200 system must be a separate network.

- 
- DO NOT COMBINE DIFFERENT SYSTEMS IN THE SAME CABLE. THIS IS TO PREVENT DISTURBANCE AND NOISE CAUSED BY INTERFERENCE.

Between the exchange and intercom / telephones: 1 pair.

If extra signal device / loudspeaker: 1 extra pair for 24 VDC (total 2 pairs)

Power cables: 1 pair + Ground

### **2.1.9 CABLE REQUIREMENTS FOR ETHERNET**

The Ethernet cables must be of specification category 5e UTP or better. Zenitel recommends using the TIA/EIA-568-B.1-2001 termination scheme. The maximum length of each segment must be less than 100m.

### **2.1.10 COMPLYING WITH IMO REQUIREMENTS**

The Phontech 6200 system will comply with IMO requirements for two-way voice communication systems only if the following is adhered to:

- Extensions located on the navigation bridge and ECR must have the "Priority access" checkbox checked. An alternative is for these extensions to be a member of a class where the "Priority access" checkbox is checked. This will give these extensions the highest priority in the system.
- When telephones are mounted in close proximity on the above mentioned locations, the ring tones on adjacent telephones should be selected so that incoming calls are distinguishable. See the user manual for the respective telephones for information on how to achieve this.
- The Phontech 6200 system must be connected to both mains and emergency power. At least one of the power inputs must be connected to a power source capable of supplying the Phontech 6200 system during blackout.

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### 2.1.11 COMMISSIONING TEST

The Phontech 6200 shall be configured according to the customer requirement.

Tests to be performed:

- Handbook is delivered and available for commissioning
- Check the installation according to installation instructions

Using the configuration as reference, for each extension check:

- The installed terminal type
- The local extension name and number
- Class membership and priority service
- Group memberships
- If applicable, the hotline extensions
- If applicable, access control
- If applicable PA group memberships
- If applicable Auto answer

For trunk lines:

- Check trunk type
- Check prefix and DID
- Check access control and billing

## 2.2 NETWORK RECOMMENDATIONS

### 2.2.1 OVERVIEW

This section describes how the Phontech 6200 system is designed to use an Ethernet network to communicate with other Phontech 6200 units, VoIP telephones and VoIP trunks, how to set up the Phontech 6200 system in a separate network - either physically or via *IEEE 802.1q* VLANs as supported by many modern switches - and some of the precautions that have to be taken into account when using *IEEE 802.3af-2003* Power over Ethernet for VoIP telephones.

### 2.2.2 PHONTECH 6200 NETWORK CONFIGURATION

When setting up the Phontech 6200 units, one must first run through the "First Run Wizard" as described in Section 2.4.3. The number chosen for the individual 6200/6200R/6202/6202R unit here will determine a few things, among these the IP-address the unit will use. By default, all Phontech 6200 units will use the *172.16.0.0/16* network block, and the unit that has been set up as number 1 will always run a DHCP server which will serve addresses in the *172.16.1.0 - 172.16.255.254* block to clients. The number and IP address of a unit that has already been set up can be viewed via the front panel display as described in Section 2.4.4.5.1.

ICS #1 - 172.16.0.1



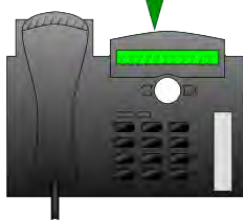
ICS #2 - 172.16.0.2



ICS #3 - 172.16.0.3



Switch



172.16.1.1  
(DHCP)



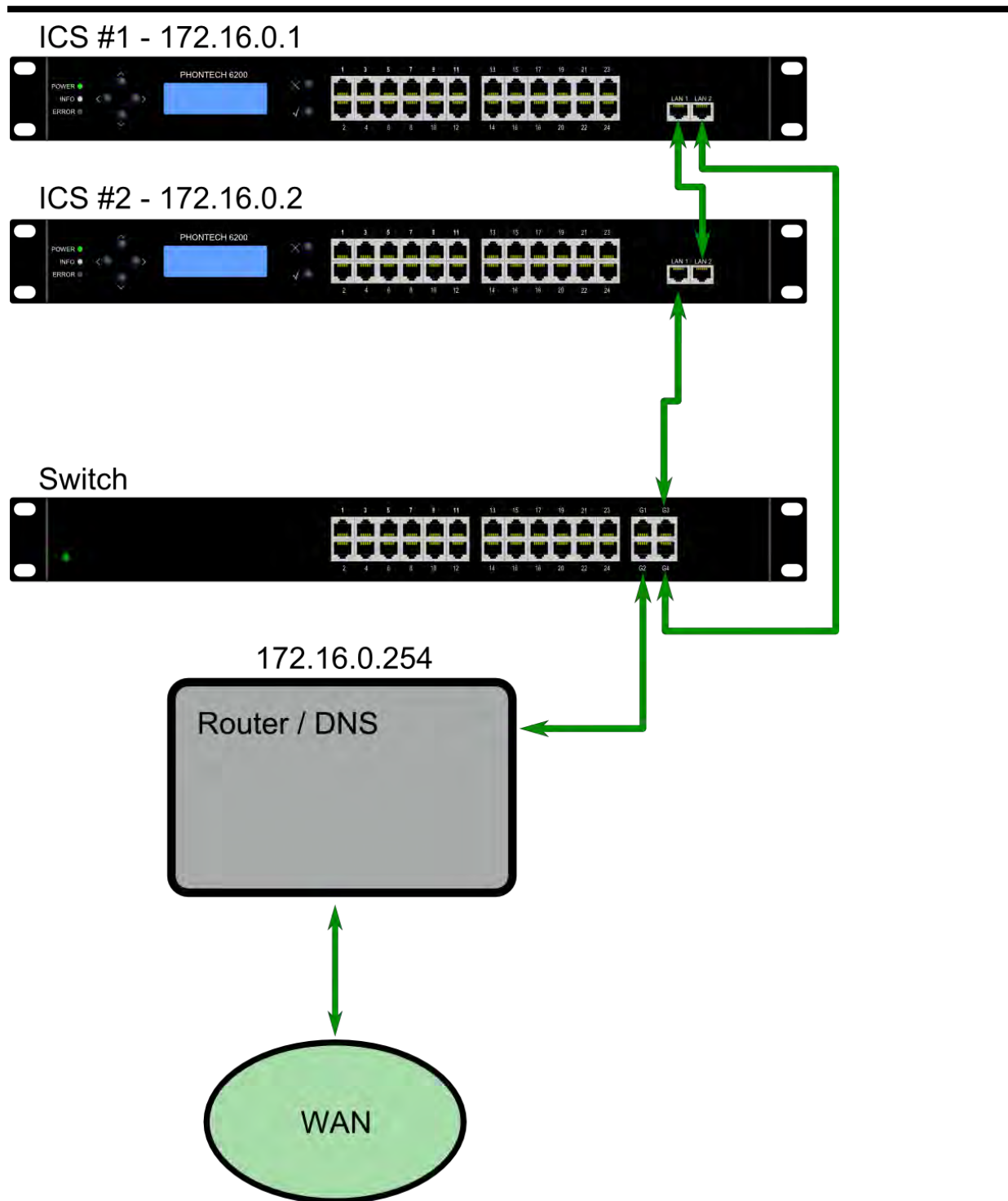
172.16.1.2  
(DHCP)



172.16.1.3  
(DHCP)

In the above example diagram, there are three 6200 units arranged in order, as well as several VoIP telephones which receive an IP address from 6200-unit number 1 via DHCP.

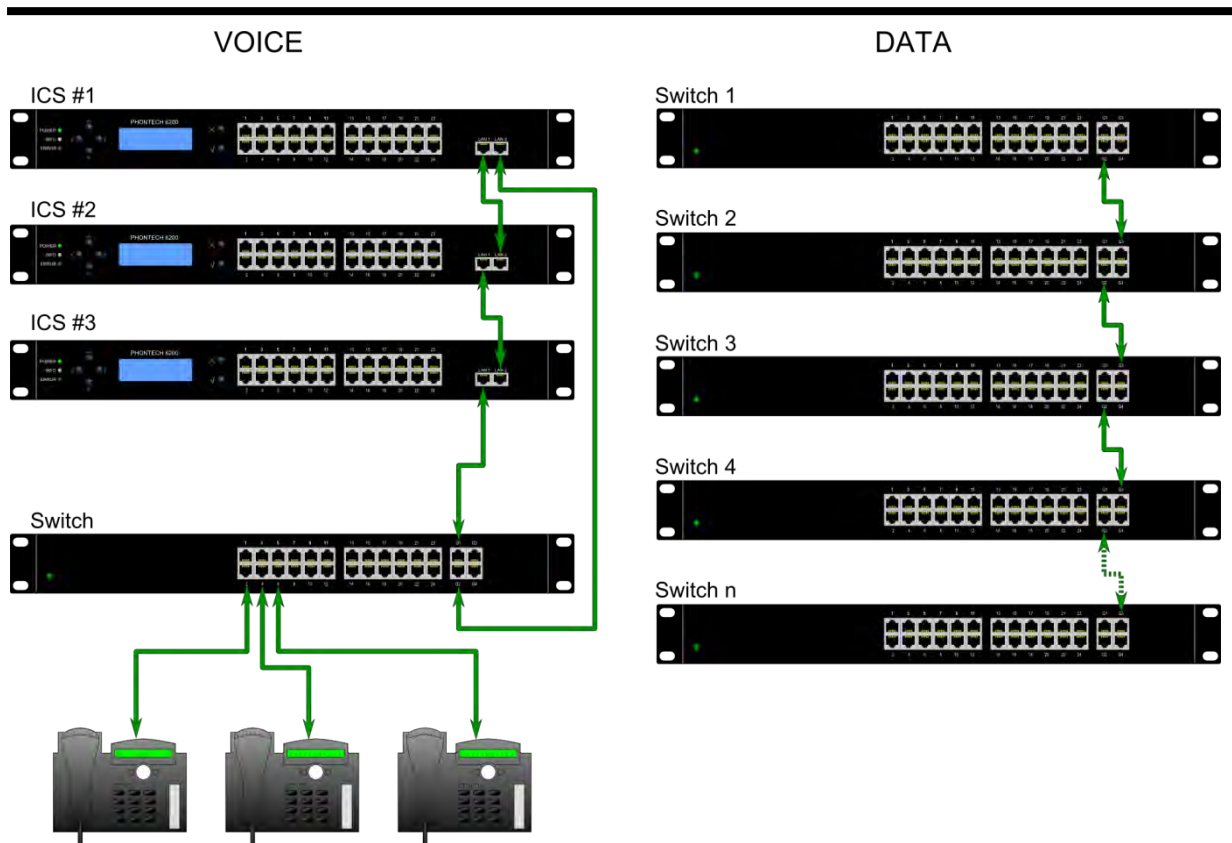
By default, each 6200-unit will route external traffic via *172.16.0.254*. Also by default, DNS requests will be sent to *172.16.0.254*. If an external VoIP trunk is required, please make sure that the router is correctly configured to route IP-traffic and to answer DNS requests.



We recommend installing the Phontech 6200 system in a physically separate network or in a separate *802.1q* VLAN.

### 2.2.3 INSTALLING THE PHONTECH 6200 IN A SEPARATE NETWORK

Using a physically separate network is the simplest method of installing a Phontech 6200 system. It allows you to isolate the PBX from the rest of your network at the cost of separate infrastructure. This is typically the approach taken if there are few to none VoIP telephones or trunks in a Phontech 6200 system, as there is little need to share infrastructure in these cases.

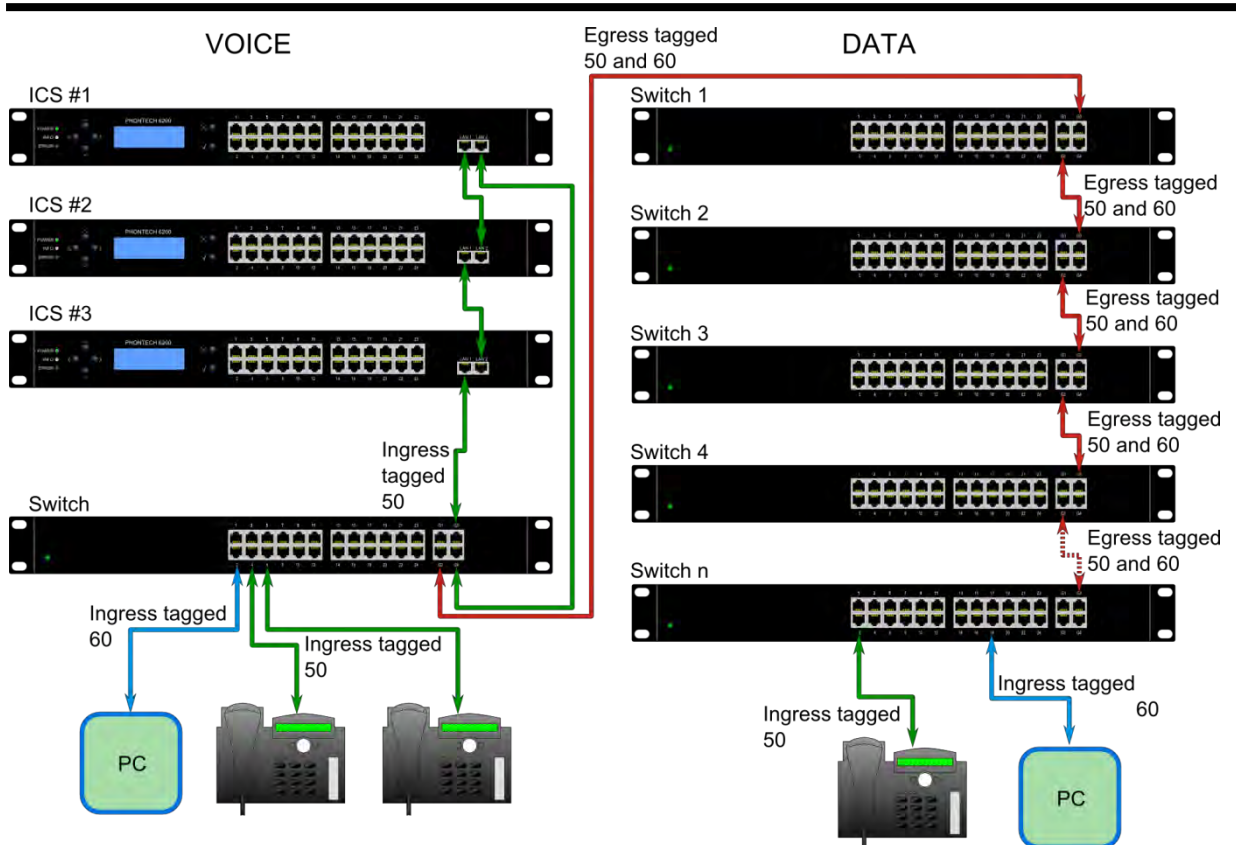


In the above example, three Phontech 6200 units are connected in a redundant ring while being separate from the main network. Please note that this also implies separate cabling for the VoIP telephones present.

#### 2.2.4 INSTALLING THE PHONTECH 6200 IN A SEPARATE 802.1Q VLAN

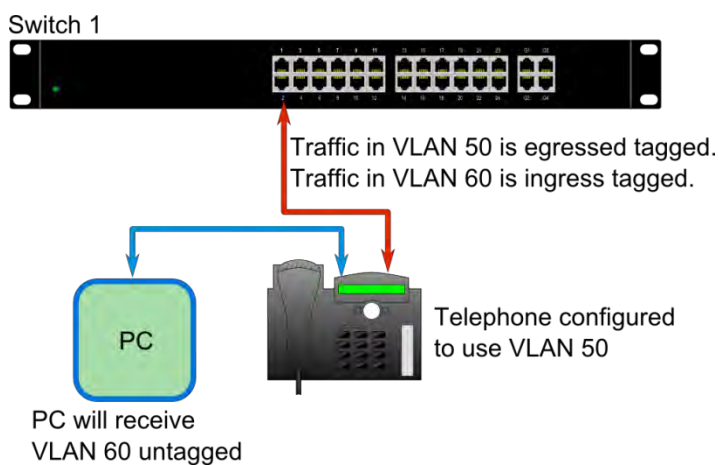
It is also possible to install the Phontech 6200 system in a network separated by using *802.1q* VLANs. This method allows you to share infrastructure and cabling that would otherwise have had to be duplicated. A VLAN is a virtual LAN that will in effect act as a completely separate network despite passing through the same infrastructure and possibly the same cabling; using a VLAN tag to define which network the traffic belongs to. It is possible to have up to 4096 different VLANs. Please note that in order to use VLANs, you need VLAN-capable infrastructure.

A common way to organize traffic into VLANs is to separate different independent services into separate VLANs.



In the example above, traffic is separated into a “Voice VLAN” (with an ID of 50) and a “Data VLAN” (with an ID of 60). The “Voice VLAN” is able to use the same infrastructure as the regular “Data VLAN” by configuring the switches to tag the traffic appropriately depending on the port it is plugged into. This may be configured by making sure that the port the VoIP telephone is placed on has ingress tag of 50 and the egress traffic is untagged. Similarly, a computer would have an ingress tag of 60 and the egress traffic is untagged.

It is also possible to allow several VLANs to share one port, by making sure that at least all but one of them is tagging egress traffic. In this approach, the end-point must be VLAN-aware in order to receive any of the tagged traffic. This could be used to share a port between a computer and a VoIP telephone.

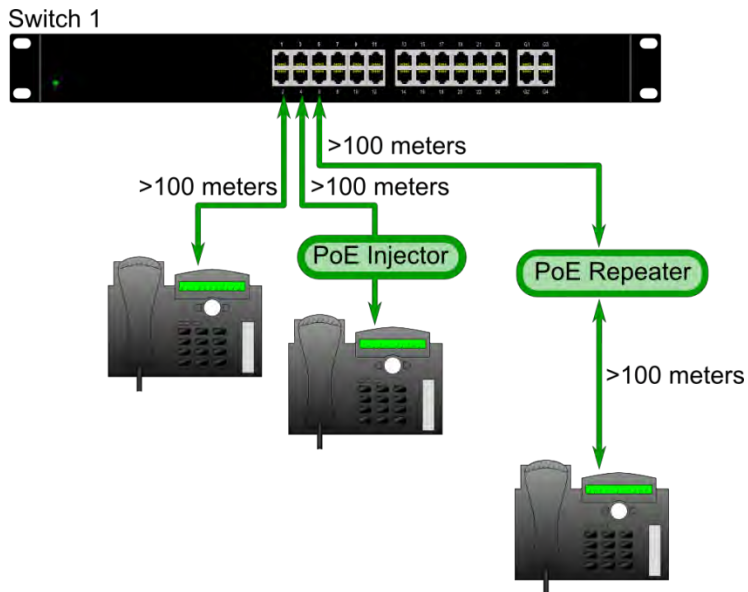


For more complex scenarios, please contact Zenitel for a feasibility study.

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## 2.2.5 USING 802.3AF-2003 POE FOR VOIP TELEPHONES

Power over Ethernet (“PoE”) allows units which supports it to replace the usual “wall wart” power supplies that are commonly used for most electrical products. To take advantage of this, a PoE-capable switch must be used, the end-point must support PoE and the length of the cabling between the two may not exceed 100 meters, as per *802.3af-2003*. If cable lengths greater than this is desired, please consider distributing one or more switches closer to the end-point, make use of a PoE-capable repeater or use a PoE-injector closer to the end-point.



For PoE, we recommend category 5 cabling or better.



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## 2.3 CONFIGURATION APPLICATION

### 2.3.1 PREREQUISITES

#### 2.3.1.1 Requirements

The Phontech 6200 Configuration Application requires as a minimum the following:

- Windows Vista SP1, Windows 7, Windows 10 or later.
- At least 1 GHz CPU speed.
- At least 512MiB of RAM.
- At least 500MiB of free disk space.
- 100 Mbit/s Wired Network Connection.

The recommended setup is:

- Windows 7 or later.
- 2Ghz dual-core CPU or better.
- 4GiB of RAM or better.
- 2GiB of free disk space or better.
- 100 Mbit/s Wired Network Connection.

### 2.3.2 INSTALLATION

To install the application, run the supplied installer and follow the instructions given.

### 2.3.3 STARTING THE APPLICATION

After installation, the application may be found in the "Start"-menu, as "ICS 6200 Configuration Application".

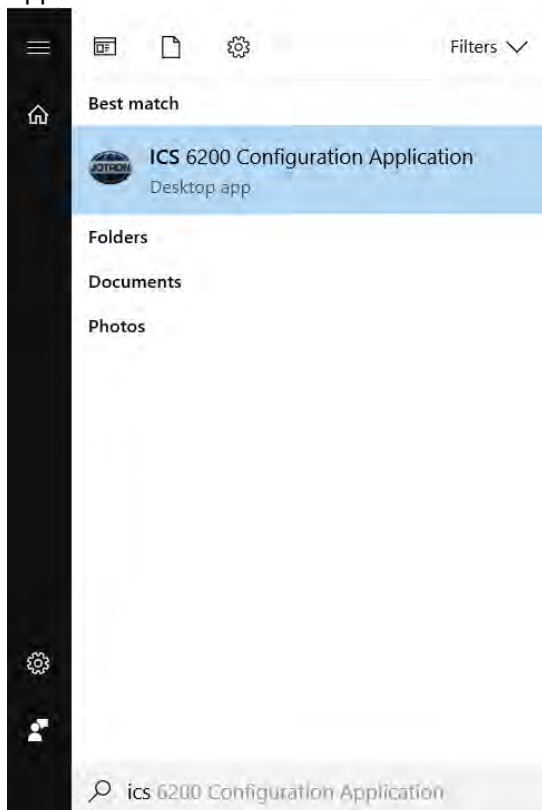


Figure 2-1 - Start Menu Entry

## 2.3.4 COMMON TASKS

### 2.3.4.1 Connecting to a Phontech 6200 Network

In order to connect to and configure a Phontech 6200 system, you must connect your computer to the Phontech 6200 network. Make sure that your computer is set up to automatically acquire network addresses, and connect your computer to one of the LAN ports on the front of the 6200. Alternatively, you may connect your computer to the switch used for VoIP telephony if applicable.

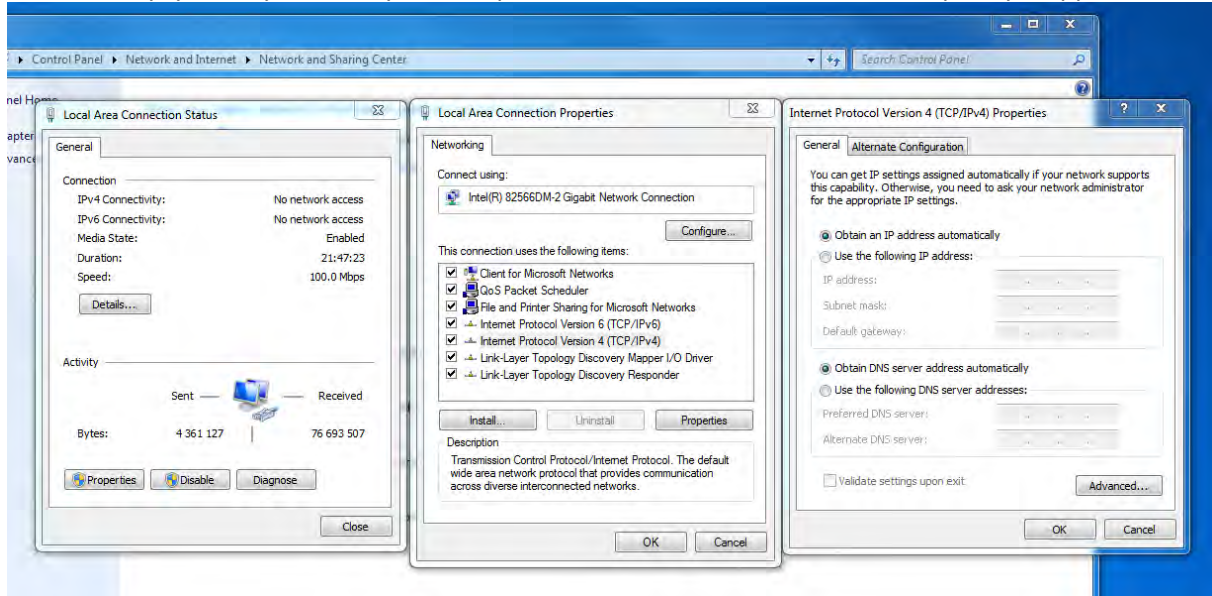


Figure 2-2 - DHCP Settings

Verify that your computer is connected to the Phontech 6200 network by checking that it has set an IP-address. Note that the IP-address shown here is in the *172.16.1.0 – 172.16.255.254* range.

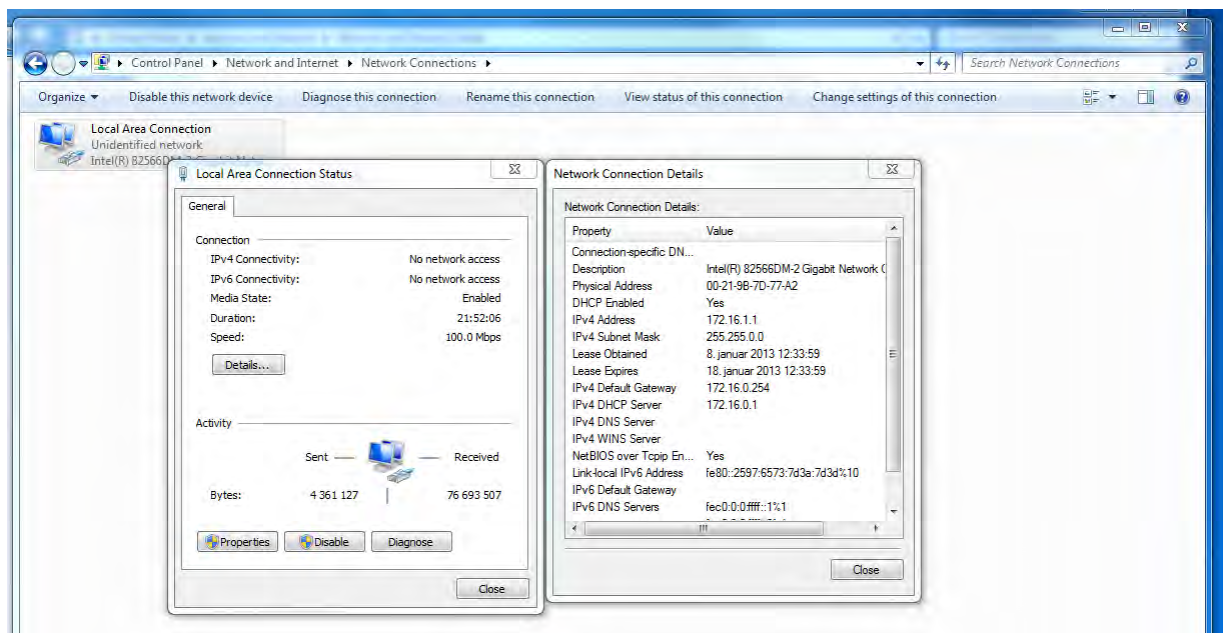


Figure 2-3 - IP Address

If you are running Windows Vista, Windows 7 or Window 10, you may receive a dialog asking you what kind of network you have connected to. All choices are valid.

### 2.3.4.2 Making Changes and Saving Them

When making changes to the configuration in the configuration application, it is important to note that the changes are not applied to the Phontech 6200 system until you choose to send them. Sending your changes can be done via the toolbar, or via "File -> Send".

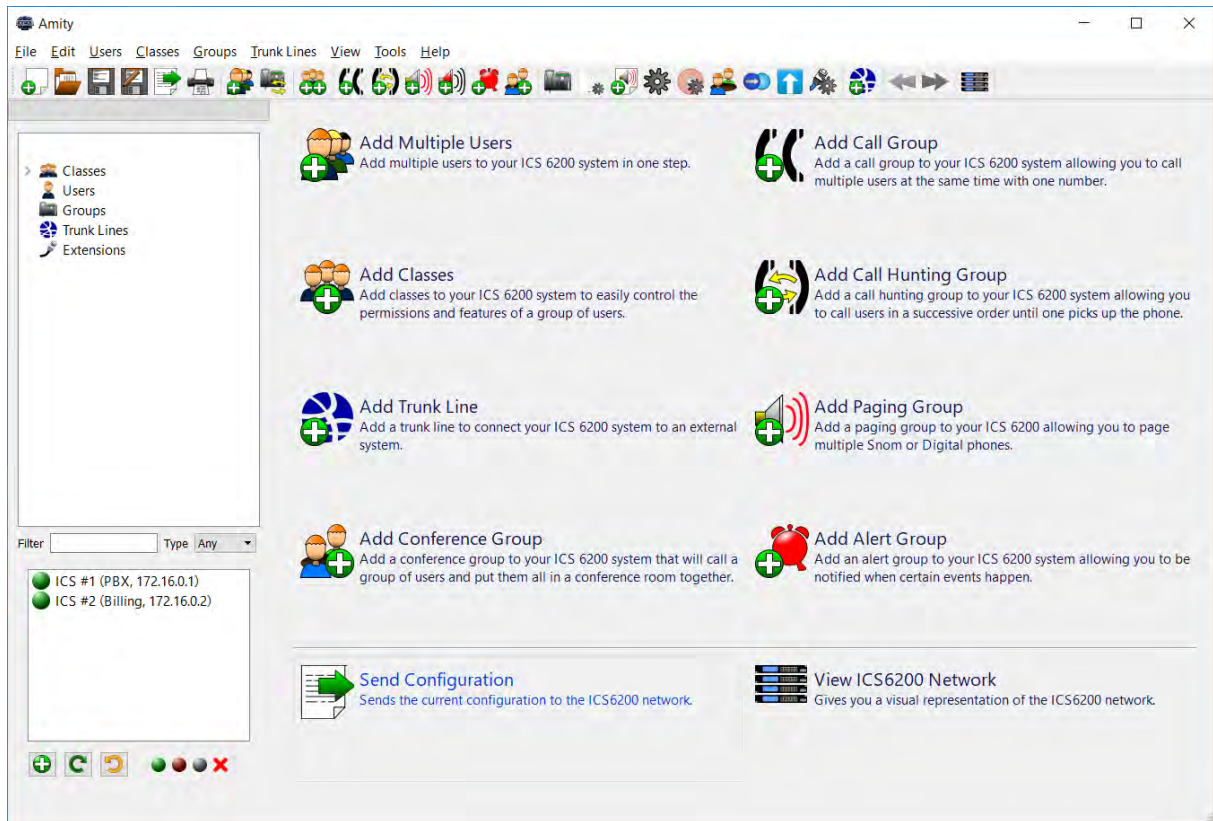


Figure 2-4 - Send Configuration

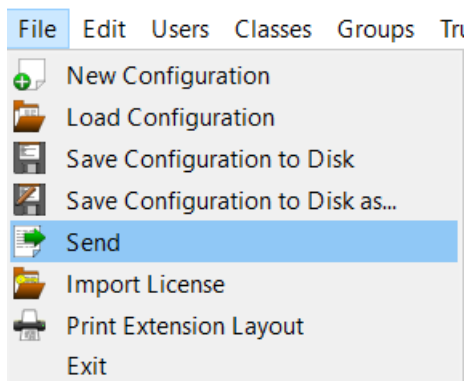


Figure 2-5 - Send Configuration in File-menu

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The configuration can also be saved to disk using the regular "Save" or "Save as..." commands. Note that this does not imply the "Send" operation - this must be performed separately.

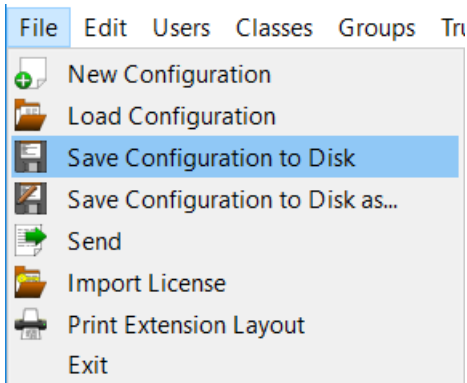


Figure 2-6 - Save Configuration

Please note that if you have just set up users on a new Phontech 6200 Unit or a unit that you have just installed new line interface boards on, the configuration application will have to perform some more intrusive set up procedures, which will cause any ongoing calls on the unit to be terminated. A pop-up dialog box will warn you of this before performing this action.

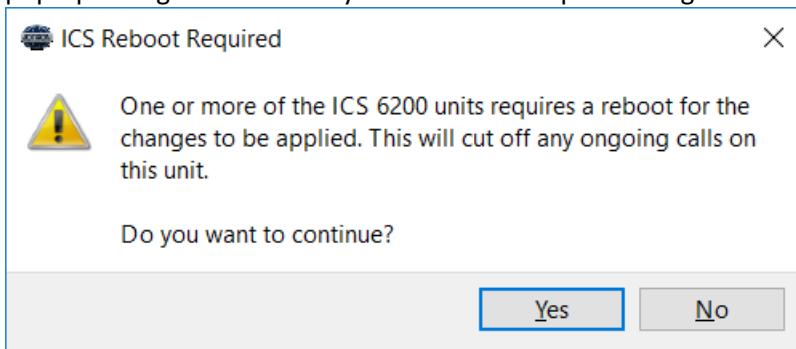


Figure 2-7 - Required Restart of ICS units

Once the send operation has succeeded, the configuration application will notify.

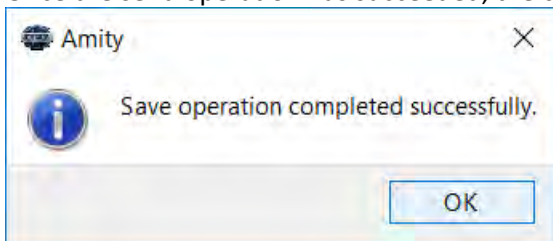


Figure 2-8 - Send OK

### 2.3.4.3 First Steps

Upon successfully connecting to a Phontech 6200 and starting the configuration application, it will automatically discover all 6200 units in the network and download the current configuration. If the system is newly installed (that is, having just completed the "First Run"-wizard as described in the installation guide), an empty configuration is in effect.

### 2.3.4.4 Adding Users

To add users to the system, please use the Add Multiple Users Wizard. It can be started from the start view or from the menu bar under "Users".

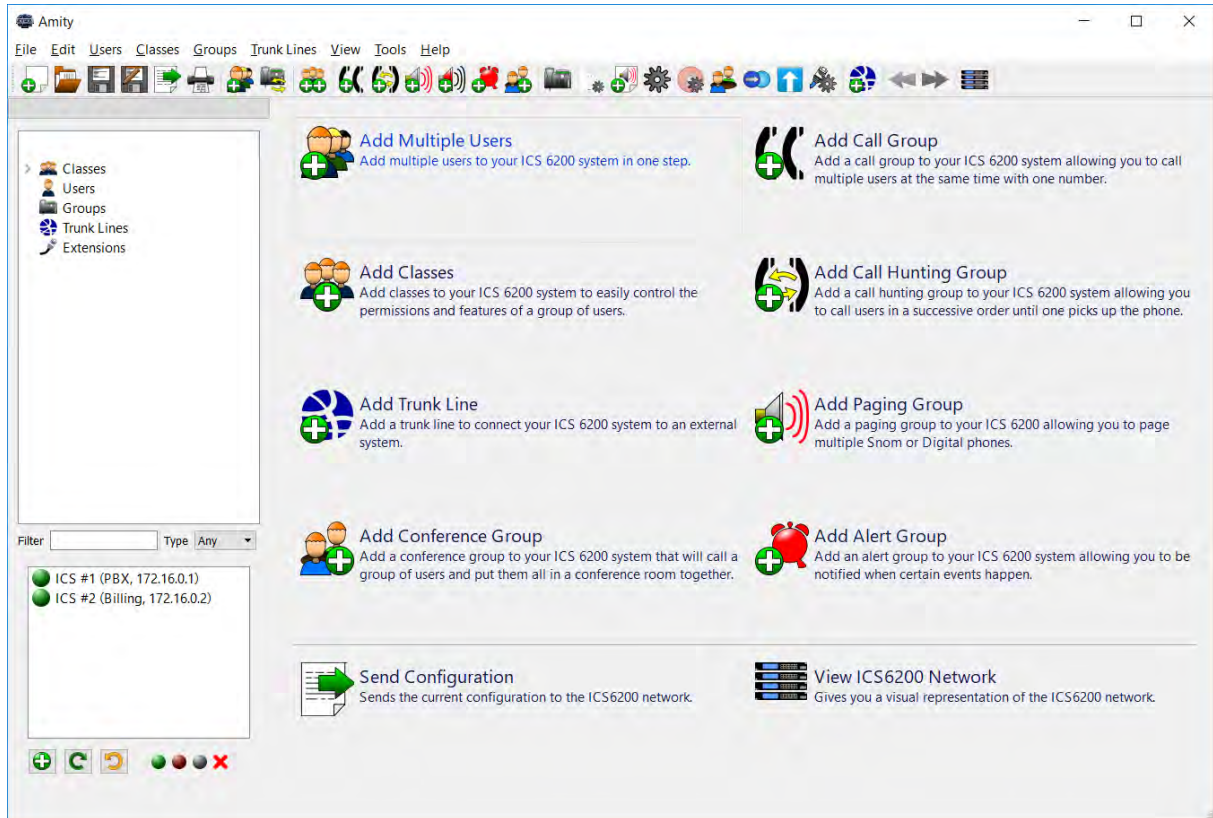


Figure 2-9 - Add Users

Once you have started the wizard, you will be greeted by an introduction describing the wizard you have just started. Continue the wizard by clicking the 'Next'-button. This will lead you to the page where you enter the details for the new users.



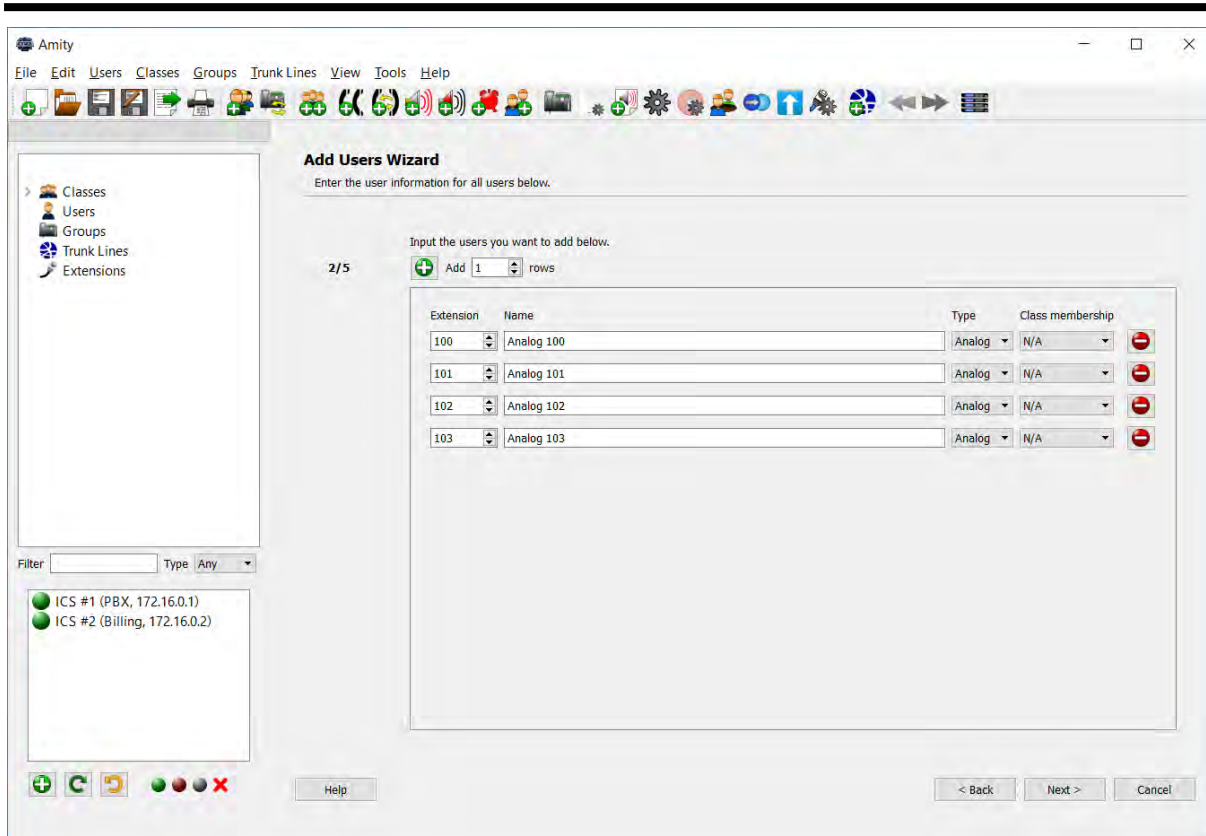


Figure 2-10 - Add Users: Extension, Name, Types and Class membership

When you create new users you have to enter the extension number, user name and the interface in use by this user. The extension number is the number to call if anyone wants to reach this user. The user name is used as a description in the configuration application and will be displayed as the caller ID if the dialed phone supports a character display. The interface decides how the phone is connected physically and which features the user supports. The different interface alternatives are:

- **Analog (FXS):** The "regular" station interface. Requires an unused port on a FXS line interface. Please note that Analog telephones do not support paging or alert groups.
- **Digital (UpN):** The Zenitel proprietary digital interface. Requires an unused port on an UpN line interface.
- **Snom 300:** The Snom 300 brand VoIP telephone. Allows you to enter a provisioning MAC address which will be used to automatically configure the telephone. Requires an unused VoIP license.
- **SIP:** A generic SIP account which may be used for other VoIP phones. Requires an unused SIP license.

It is possible, but optional to assign the new user to one or more classes. These can be useful in segmenting access to different kinds of features to different sets of users. Classes will be discussed in "Managing Users with Classes".

One or more rows may be added by clicking the green plus icon. The number of rows added is determined by the number entered in the input next to the icon. Each new row is automatically assigned a new extension number based on the previous row and will inherit the user type and class membership of the previous row by default.

Given that one or more of the new users are of the FXS or UpN type, you must now choose which ports to use. You will be presented with a visual representation of the Phontech 6200 system, where you can pick the desired port on the desired unit. The ports to select are determined by the type of users you have created. You will be presented with a view of the system once for each technology that uses the physical ports. The current interface is described in the upper left corner of the page. The right side of the page lists the users that are to be placed in the system. A blue text means that this is the user that will be placed with the next click. A gray name means that this user has already been placed and a black name signals that this user has not been placed yet. Numbers will be displayed on the visual representation to indicate which user has been selected for any placed port.

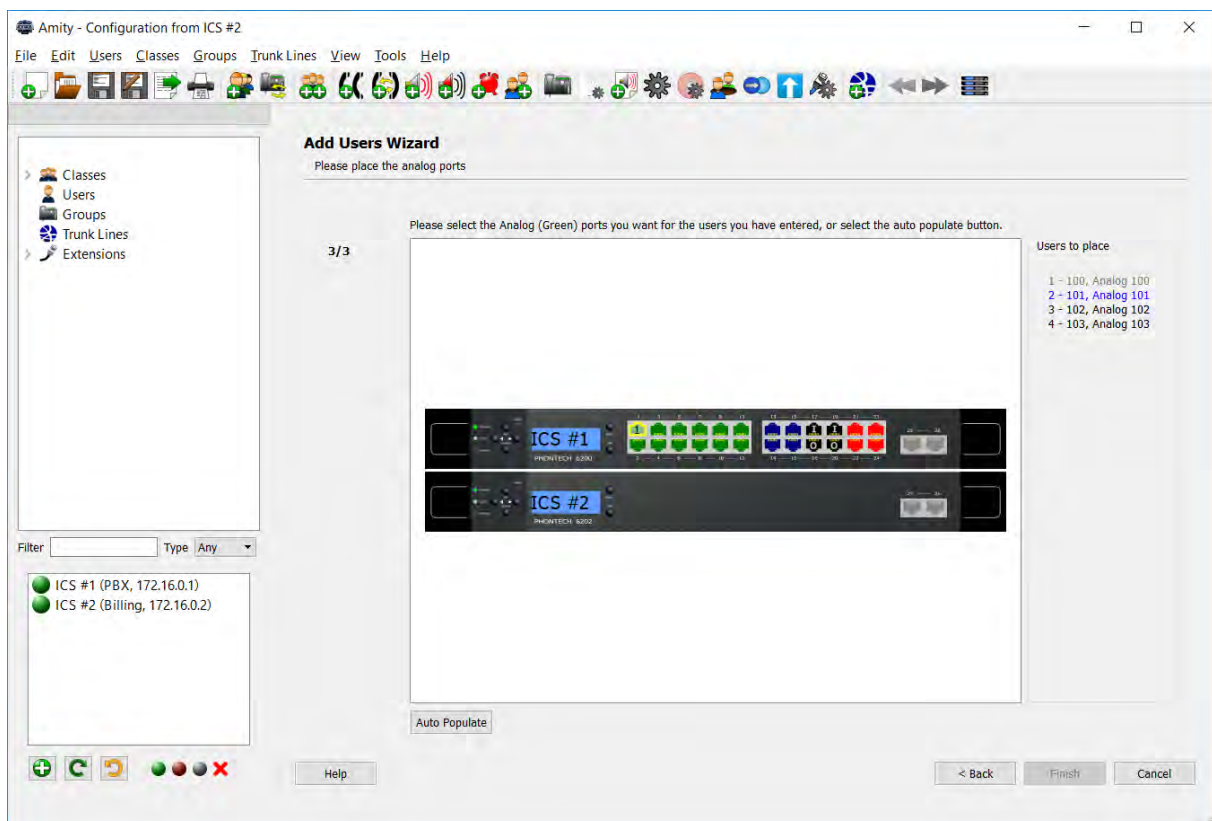


Figure 2-11 - Add Users: Port Placement Page

When placing multiple users, the "Auto Populate" function can be a timesaver. This will automatically pick unused ports for you in a sequential fashion.

If one or more of the new users are of a Snom 300 variant, you must enter the provisioning MAC address of the handset. This allows the Phontech 6200 system to automatically provision the configuration to the handset once it is connected.

If you have exceeded all the available licenses for SIP and Snom 300 users you will be notified in the bottom of the wizard page and you will not be able to add the users. To add more users of this type, please see the licenses section of this manual.

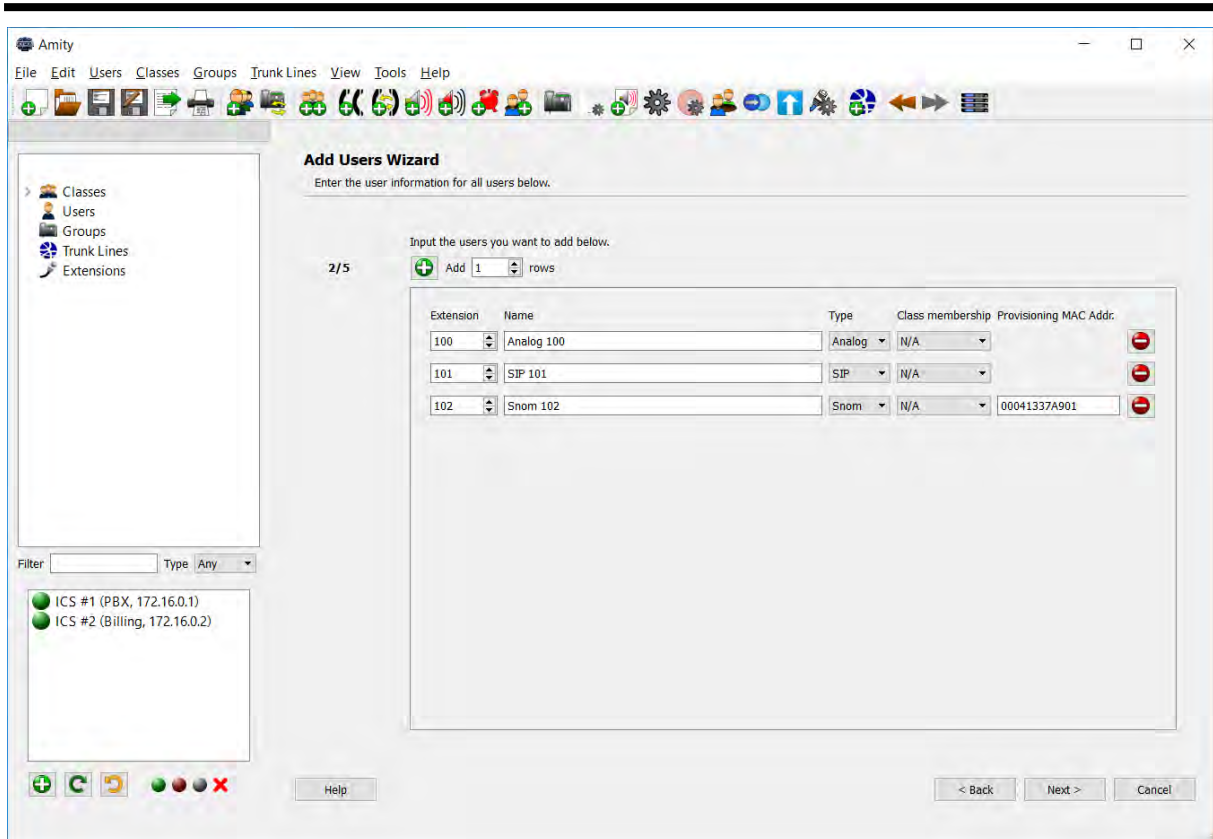


Figure 2-12 - Add Users: Adding SIP and Snom 300 Users

Additionally, if one or more of the new users are of a Snom 300 or SIP type, one may select which 6200 unit they shall be registered on. The configuration application will automatically select this, based on how many VoIP phones are registered on each unit already, but this can be changed here.



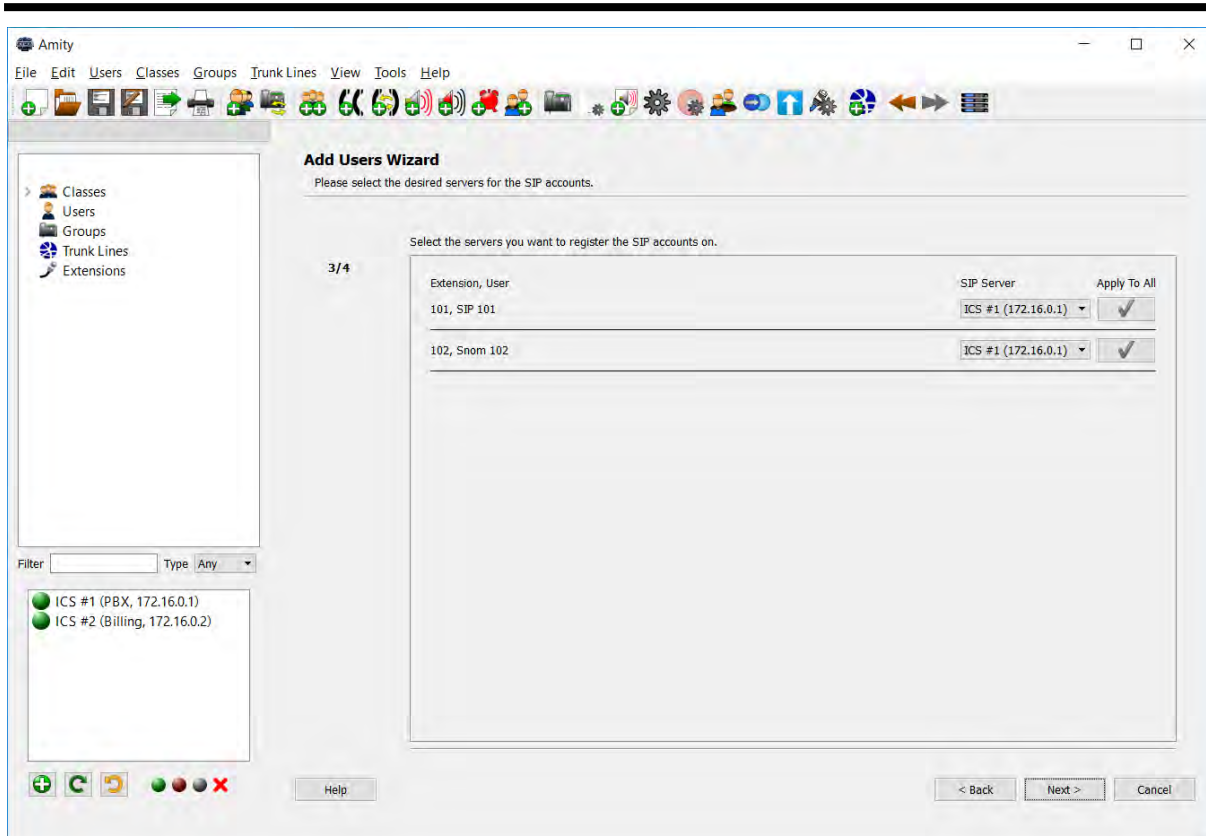


Figure 2-13 - Add Users: Registration Info for SIP and Snom 300

### 2.3.4.5 Managing Users with Classes

A class is a collection or set of users that may share some properties. It is an optional feature that may be used to simplify certain parts of the configuration of large systems.

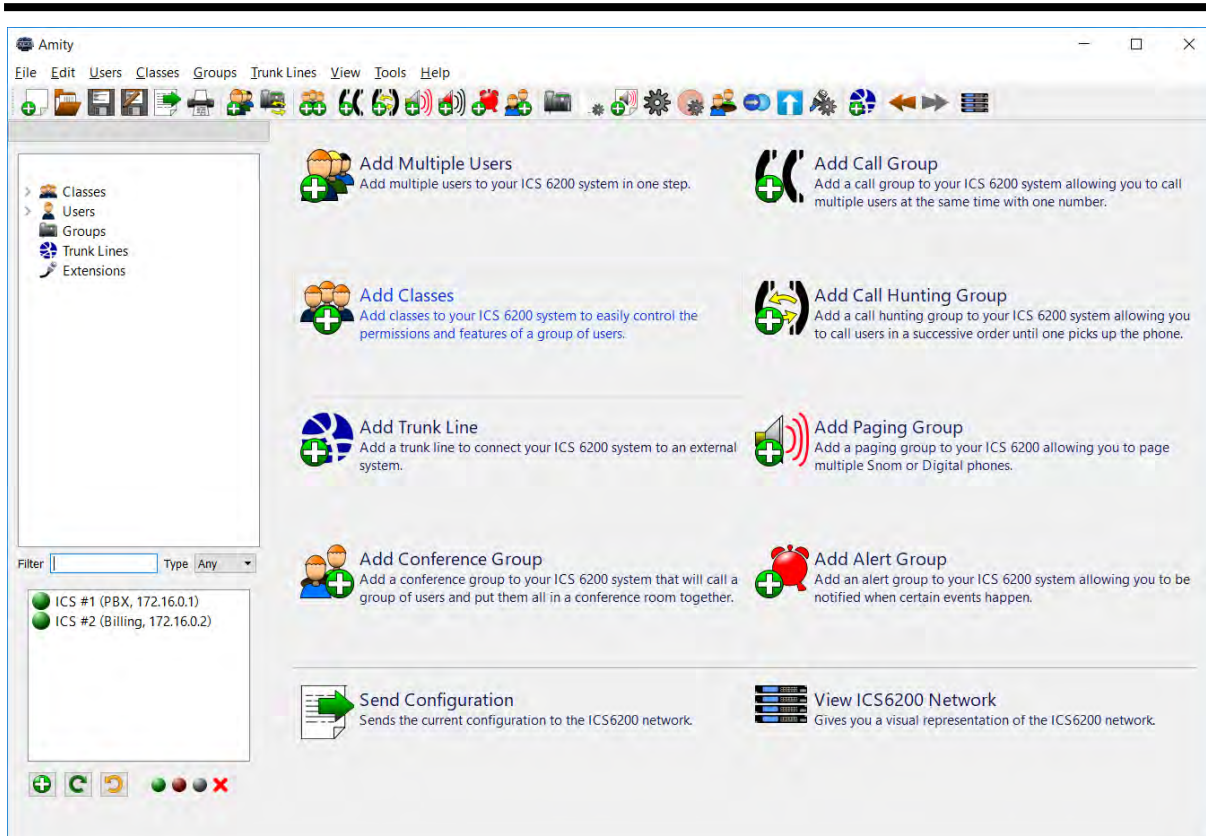


Figure 2-14 - Adding Classes

Consider a system where a subset of users - let us call them "Officers" – have access to a number of features - such as paging groups, dialing out over a trunk interface or high priority access to certain users. If we were to add or remove users from this set of Officers, we would have to manually change or update the permissions of each of these features - a process which may be error prone or easy to forget. This may be simplified by creating an "Officer"-class, which holds all of the relevant users. This class would be the only member which had access to the features in question, and the issue of adding or removing users from having access to these features is now simply a case of adding or removing users from this class.

By default, the system contains one predefined class, which holds all users.

To add classes, please use the "Add Classes Wizard".

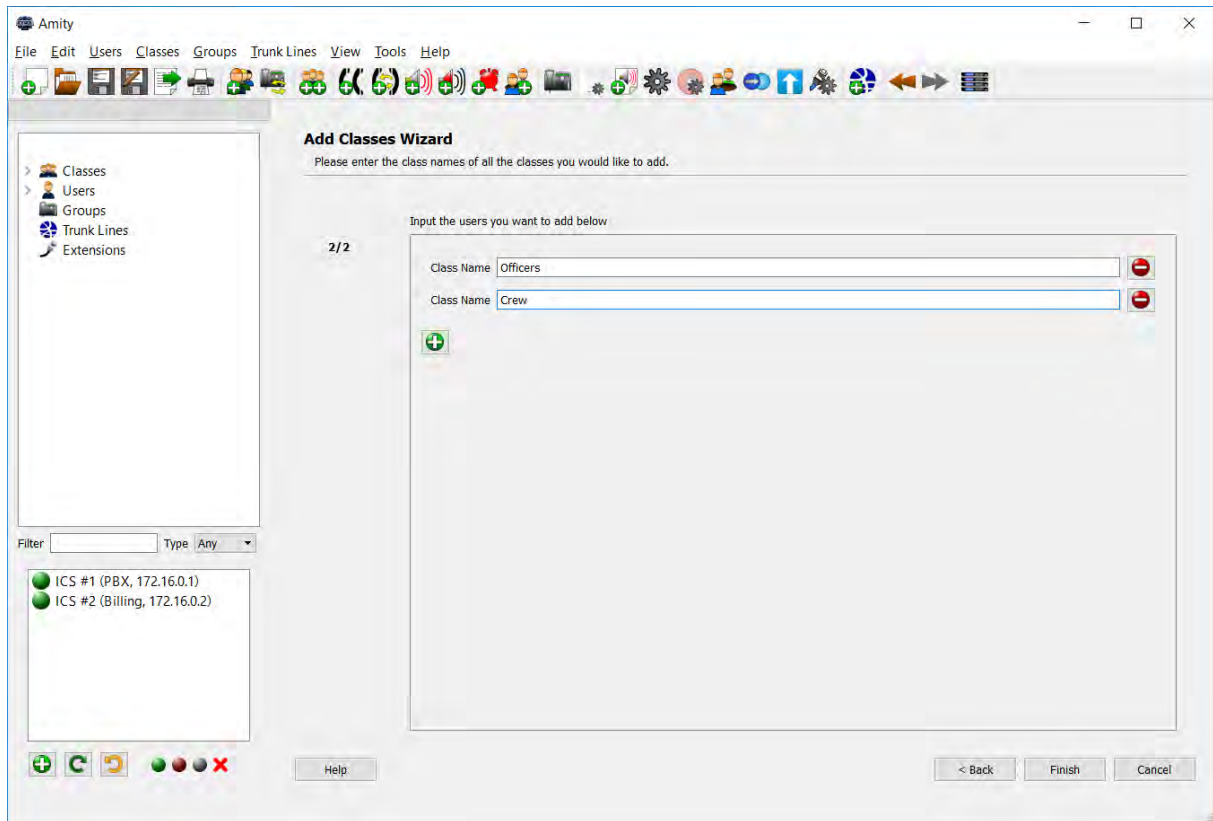


Figure 2-15 - Adding Classes

To assign class membership to users, you may use the "User Properties" or "Class Properties" dialogs for existing users, or select the desired class when adding new users.

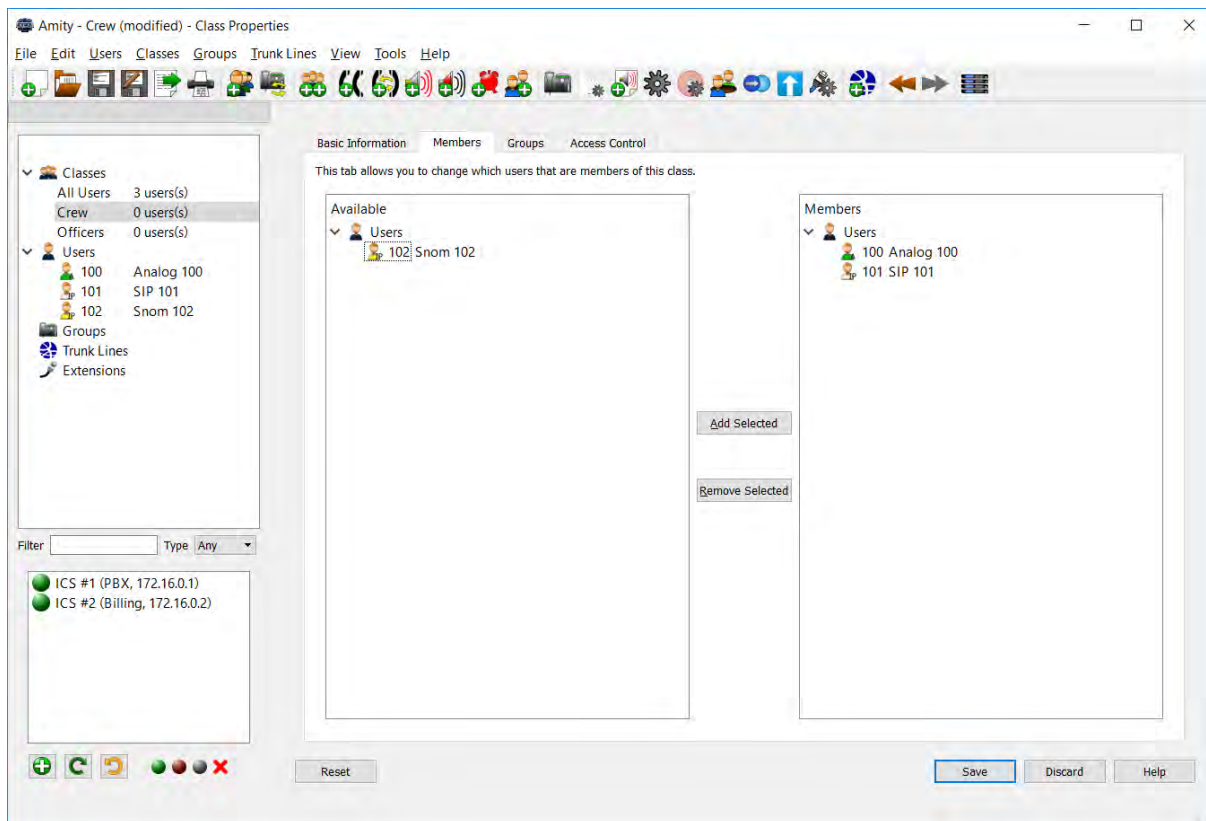


Figure 2-16 - Adding Members to a Class Using "Class Properties"

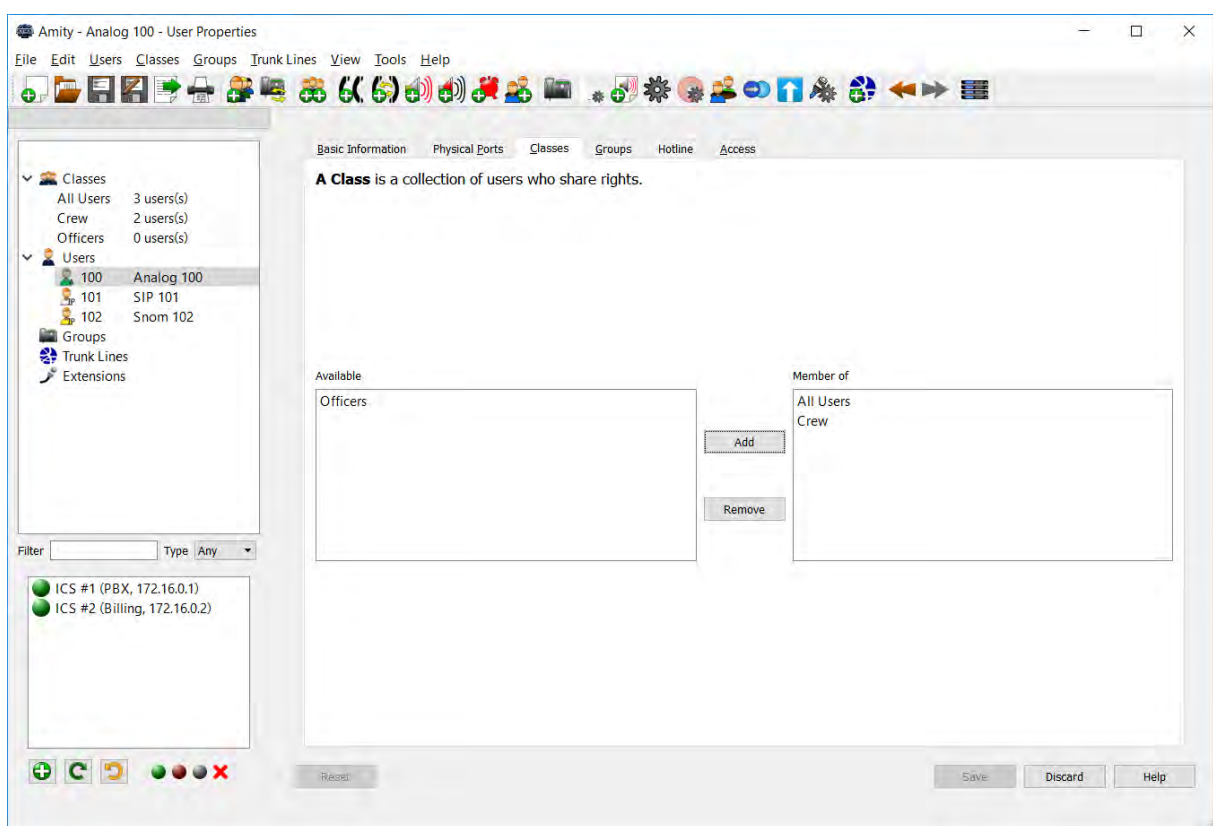


Figure 2-17 - Assigning Class Membership in the “User Properties” Window

#### 2.3.4.6 Adding a Group

Groups provide different functionality on a set of users that are members of the group. The functionality differs on the type of group:

- **Call Group:** When the group extension is dialed, the group will call all of its members simultaneously. The member to first pick up the phone will receive the call.
- **Call Hunting Group:** When the group extension is dialed, the group will dial all of its members sequentially in a pre-defined order. The first member who picks up the phone will receive the call.
- **Paging Group:** When the group extension is dialed, the call will be automatically paged out on the speakers of the members of the group. This requires paging support on the phones that are members of the group.
- **Alert Group:** The alert group allows a sound to be played on the speaker of the members of the group, based on an external input. This requires an unused E&M input port, as well as paging support on the phones that are members of the group.

To add a group, start the relevant group type wizard.

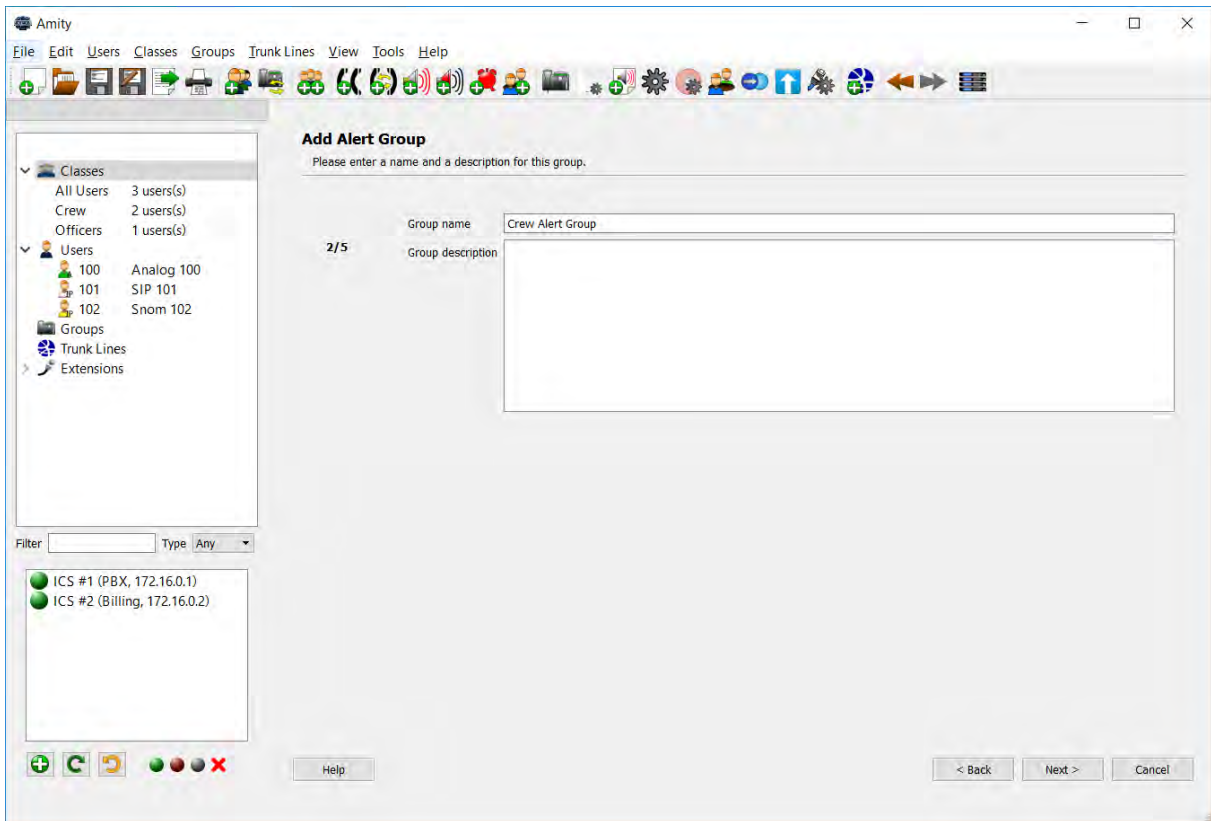


Figure 2-18 - Adding an Alert Group

The first step is to enter a name and optionally a description for the group. Unless the group is an Alert group, you will also have to enter an extension for the group. If the group is an Alert group, we will have to select an unused E&M pair to be used as the source of the alert.

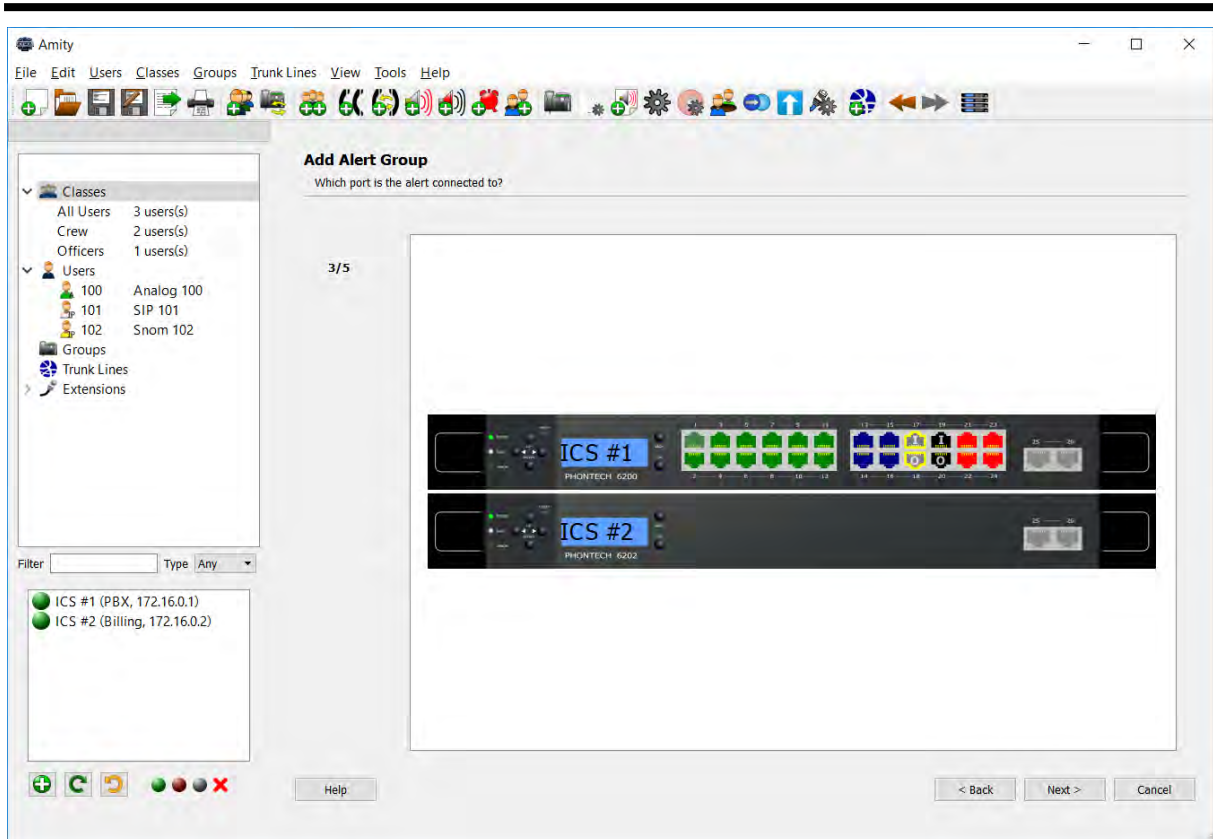


Figure 2-19 - Selecting the Input for the Alert Group

We will then select the members of the group. You may select classes, individual users and, in some cases, even other groups. If the group you are adding requires paging functionality, only users which support this is listed.



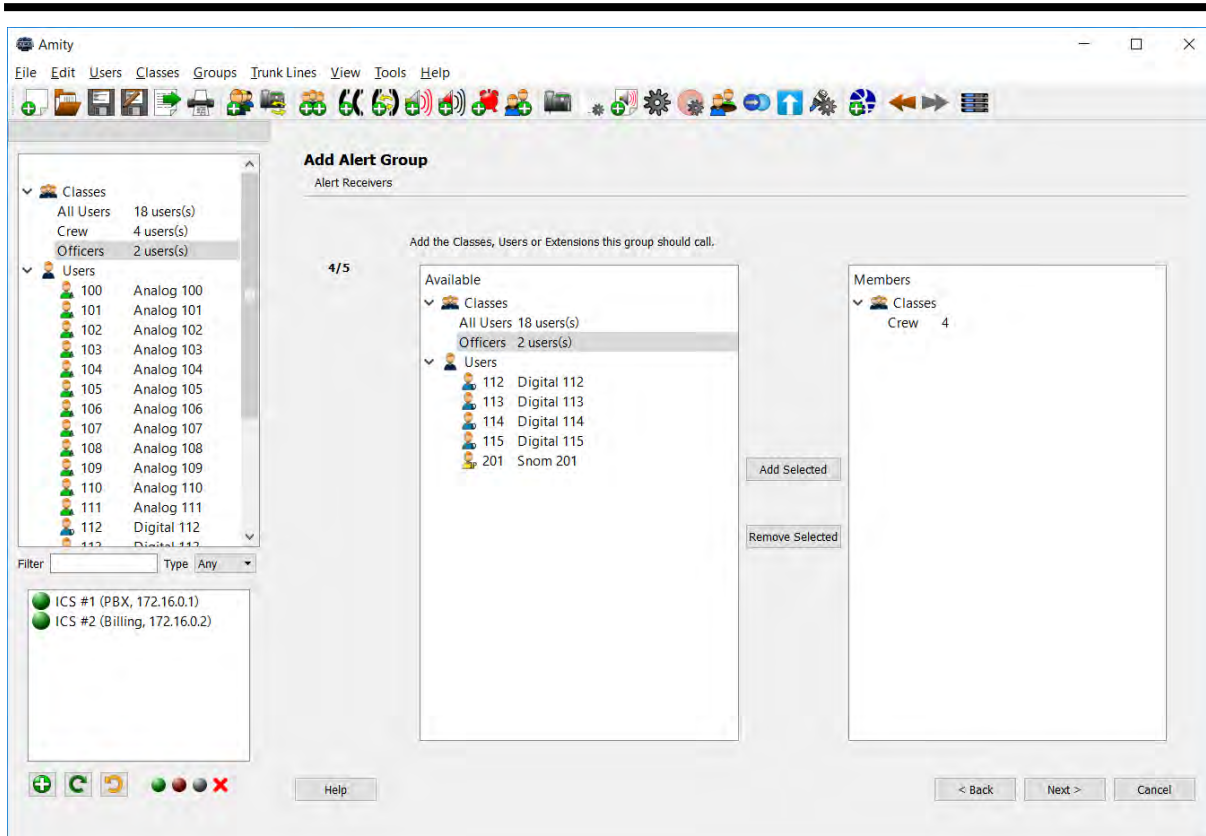


Figure 2-20 - Adding members to the Alert Group. Note that only users which support paging are listed

Please note that the order of the members is significant in the Call Hunting group, and may be adjusted using the arrow buttons. For all other groups, the order of the members is insignificant.



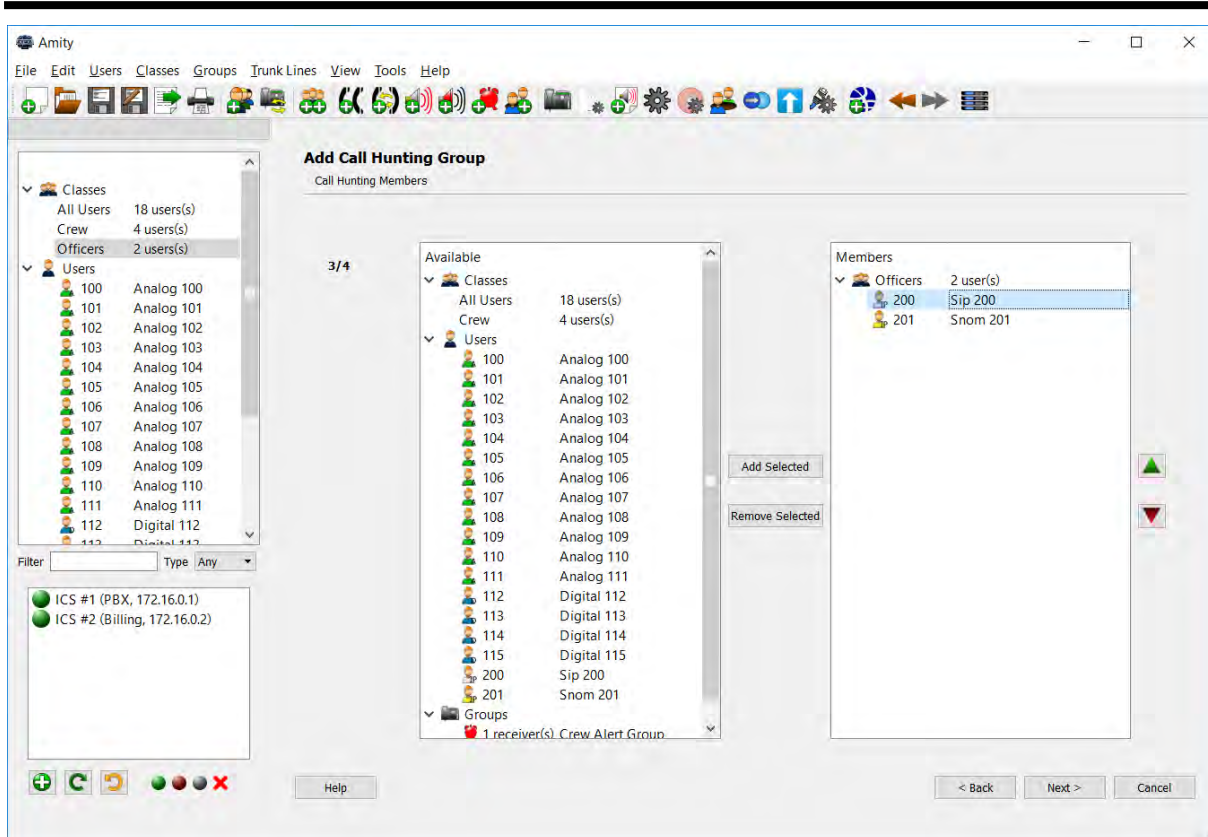


Figure 2-21 - Arranging members in a Hunting Group

Once the members have been added, all we need to do is verify that the information we entered is correct.

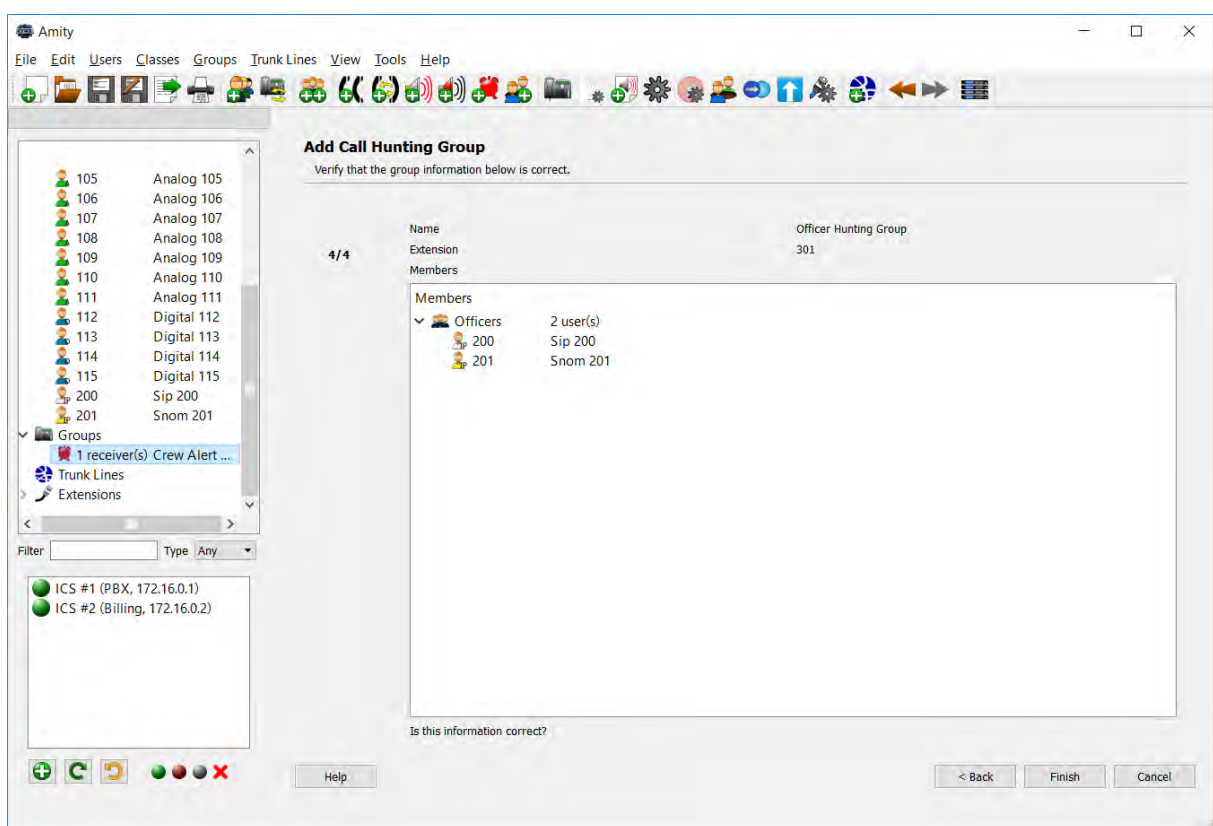


Figure 2-22 - Verifying a new Call Group

#### 2.3.4.7 Adding a Trunk Line

A Trunk Line allows you to connect your Phontech 6200 system to another PBX or the public telephone system. Different methods may be used to dial out over the trunk or receive calls from the trunk.

The different types of trunks provided are:

- SIP client: A 6200 unit will register with a remote SIP server and route calls to and from this server. Requires an unused SIP license.
- SIP server: A 6200 unit will act as a SIP server for a remote client, and route calls to and from this client. Requires an unused SIP license.
- FXO: Allows you to connect the Phontech 6200 system to an FXS interface of a remote PBX or what is commonly called PSTN. Requires one or more unused FXO ports.
- E&M Allows you to connect the Phontech 6200 system to an external system providing key and audio signals. For example, a PAGA system. Requires an unused input/output pair on an E&M module.

To add a Trunk Line, start the "Add Trunk Line Wizard". The first step is to enter a name and optionally a description for the new Trunk Line. Once this has been completed, we will have to select the type of trunk as described above.

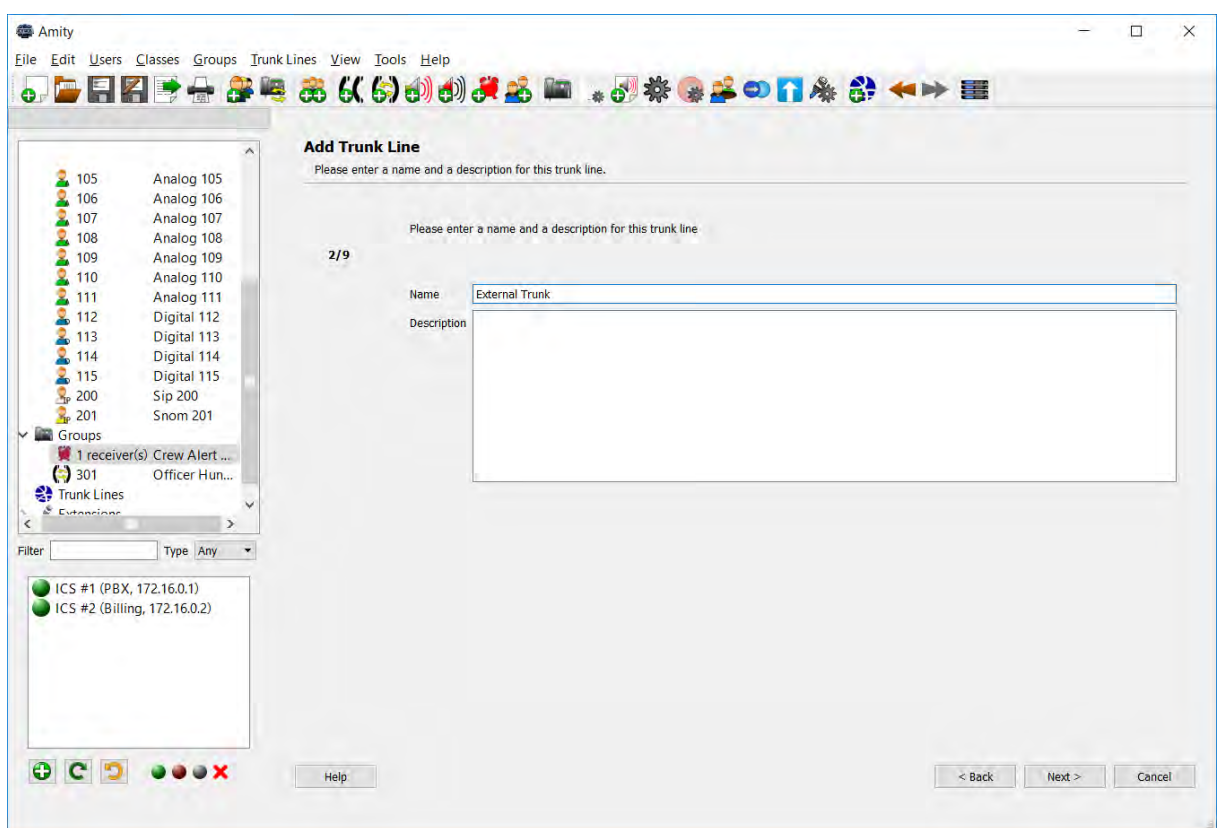


Figure 2-23 - Adding a Trunk Line

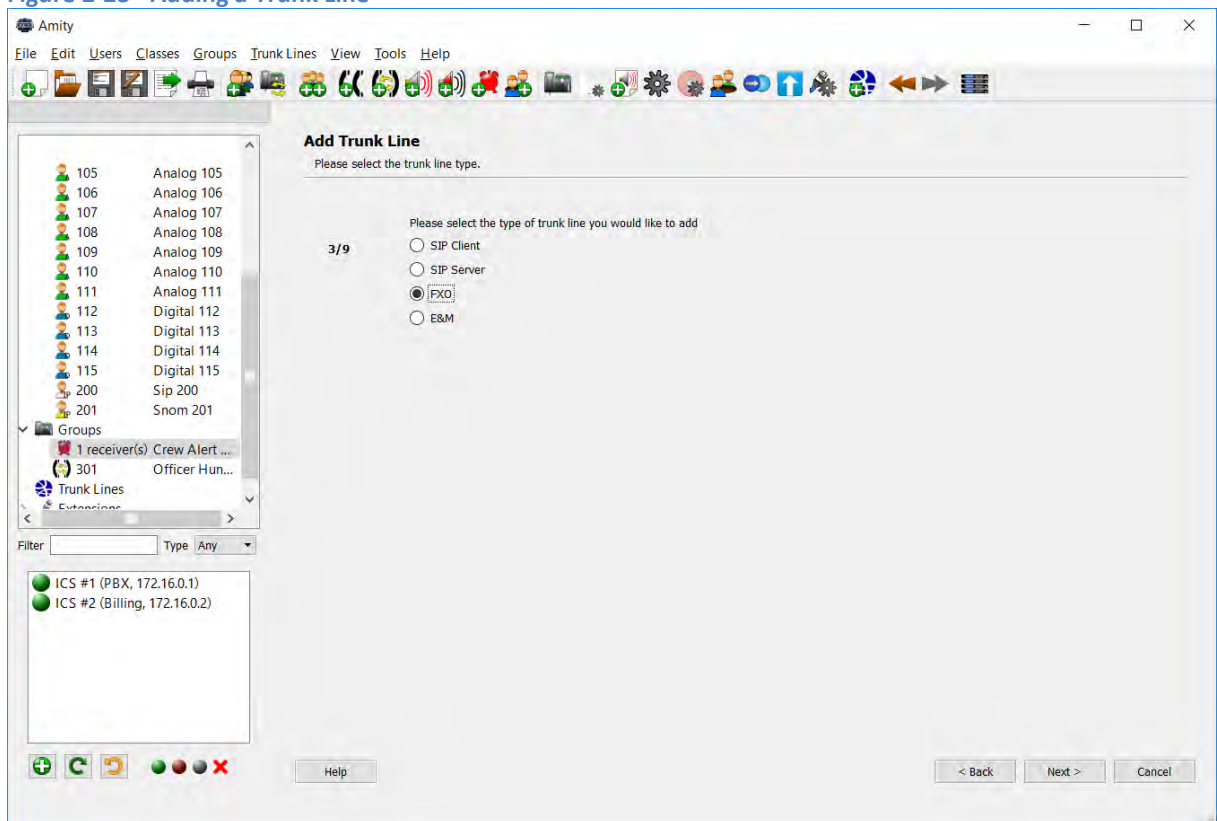


Figure 2-24 - Selecting the Type of the new Trunk Line

If the trunk type is SIP client, you will have to enter the IP-address or hostname of the provider, as well as the username, password and realm as supplied by your provider. The 6200 drop down defines which 6200 unit in the network the Trunk Line shall be added to.

The "Behind NAT" checkbox should be checked if the 6200 unit the trunk is added to is behind a network address translation layer and must traverse this in order to reach the server. If in doubt, leave this checked. If the remote server uses multiple IP-addresses to initiate calls to the 6200 due to load balancing, it is possible to resolve all the hostname addresses using the next checkbox. Please note that if your provider changes their IP-addresses, you must re-send your configuration to the 6200 network in order to regenerate the trunk settings. If in doubt, leave this unchecked.

If the trunk type is a SIP server, you must define the user name, password and realm you have or will use on the remote SIP client. You must also select which 6200 unit the client will be registered on.

If the trunk type is FXO or E&M, you have to select which port(s) to use. You can optionally select multiple FXO ports for load balancing.

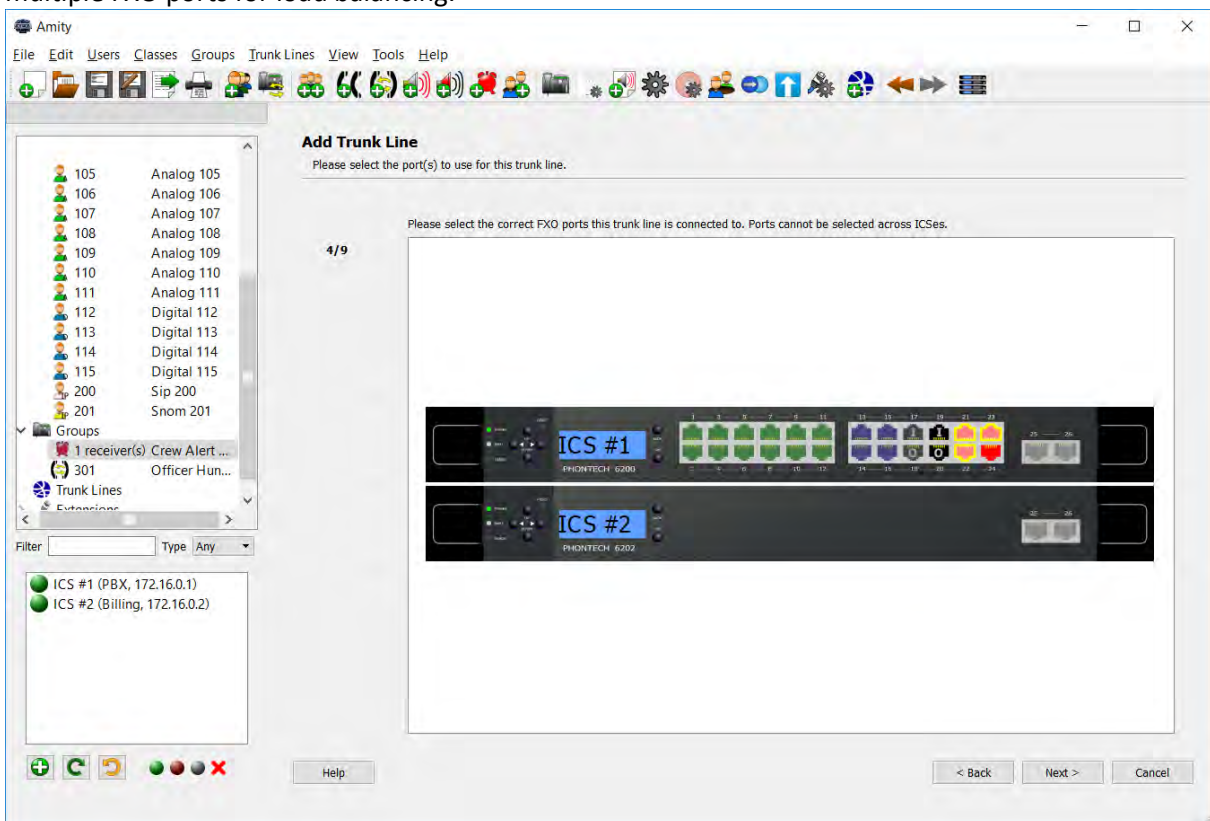


Figure 2-25 - Selecting an FXO Port

The next step is to select what action to take when an incoming call is detected. The Phontech 6200 can call one or more extensions directly by selecting "Call an extension", give a switchboard-like greeting by selecting "Switchboard" or use the supplied number to directly call the intended recipient using "Direct Inward Dialing". Alternatively, incoming calls may be disabled.

Selecting the "Park incoming calls" option when "Call an extension" is selected will change the behavior of how the incoming call is dealt with. First a preconfigured phone will ring and answer the incoming call. As the call is answered, the system will notify the one who answered the call that a parking number has been allocated for the caller. Once the one who answered the call hangs up, the caller will be placed in the parking slot announced and another user can dial the configured retrieval

extension and enter the parking room number to retrieve the call. This extension number is configured in the Phontech 6200 System Settings and if it is already configured it will be displayed below the checkbox for the parking option. This option can also be changed from the “Incoming Call Actions” tab in the Trunk Line properties screen.

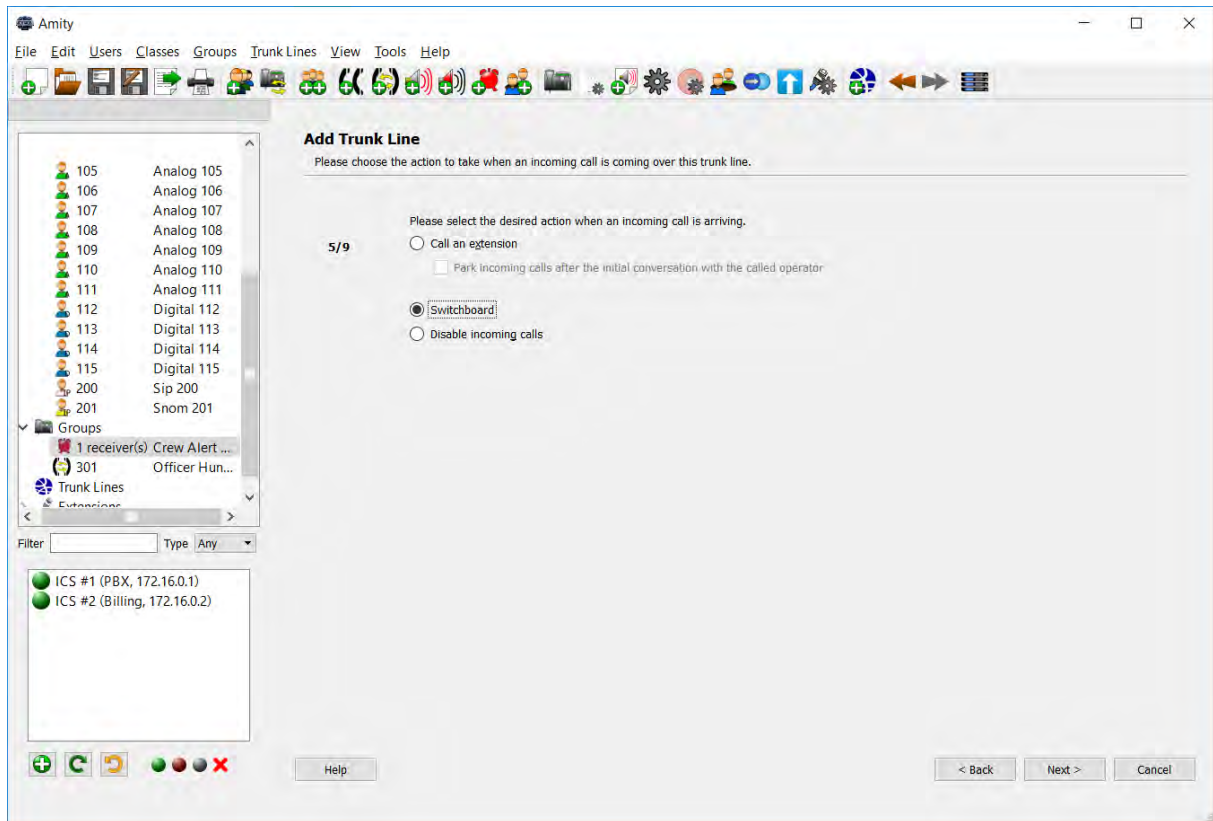


Figure 2-26 - Selecting which action to take upon incoming calls

Note that the Direct Inward Dialing option is only available for SIP trunk lines.

Unless incoming calls are disabled, you must select which users and/or groups should be reachable through this trunk. Users or groups who are not selected in this step may not be called from the trunk, regardless of the selected incoming call action.



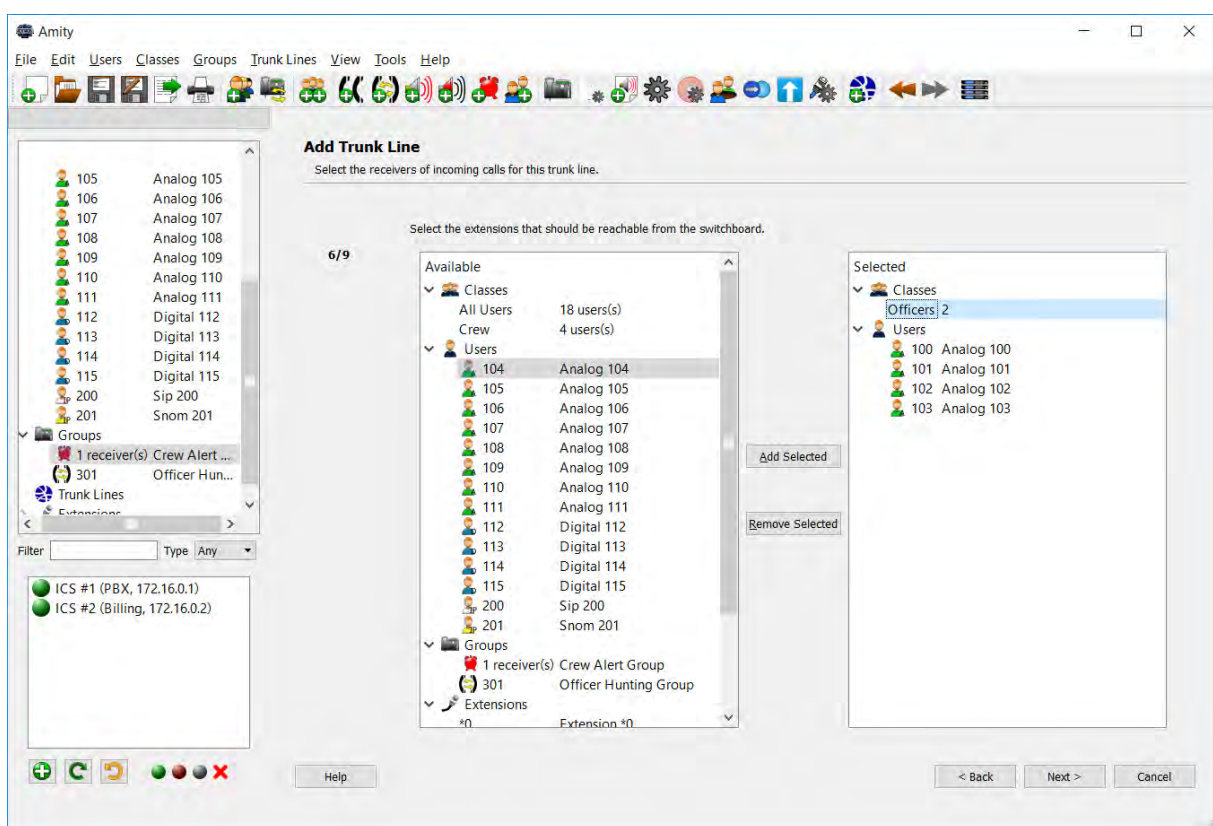


Figure 2-27 - Select which users who should be reachable from incoming calls

We must also define the outgoing behavior. This can either be "Prefix and dial out extension" - which allows your users to dial out using the trunk with both a prefix and a dial out extension, "Decided by extension length" - which sends a call over the trunk line if the dialed number is longer than the configured number of digits. "Dial out extension only" - which only provides a dial out extension for your users or disabled entirely. Dial out can also be set to "Disabled" if it should not be possible under any circumstances to call out with this trunk line.

It is also possible to enable call logging on a trunk line. For this option to be active you must have a 6202 Billing Unit connected to your Phontech 6200 network. See more information about this under the "Configuring storage" and "Call logging" sections.

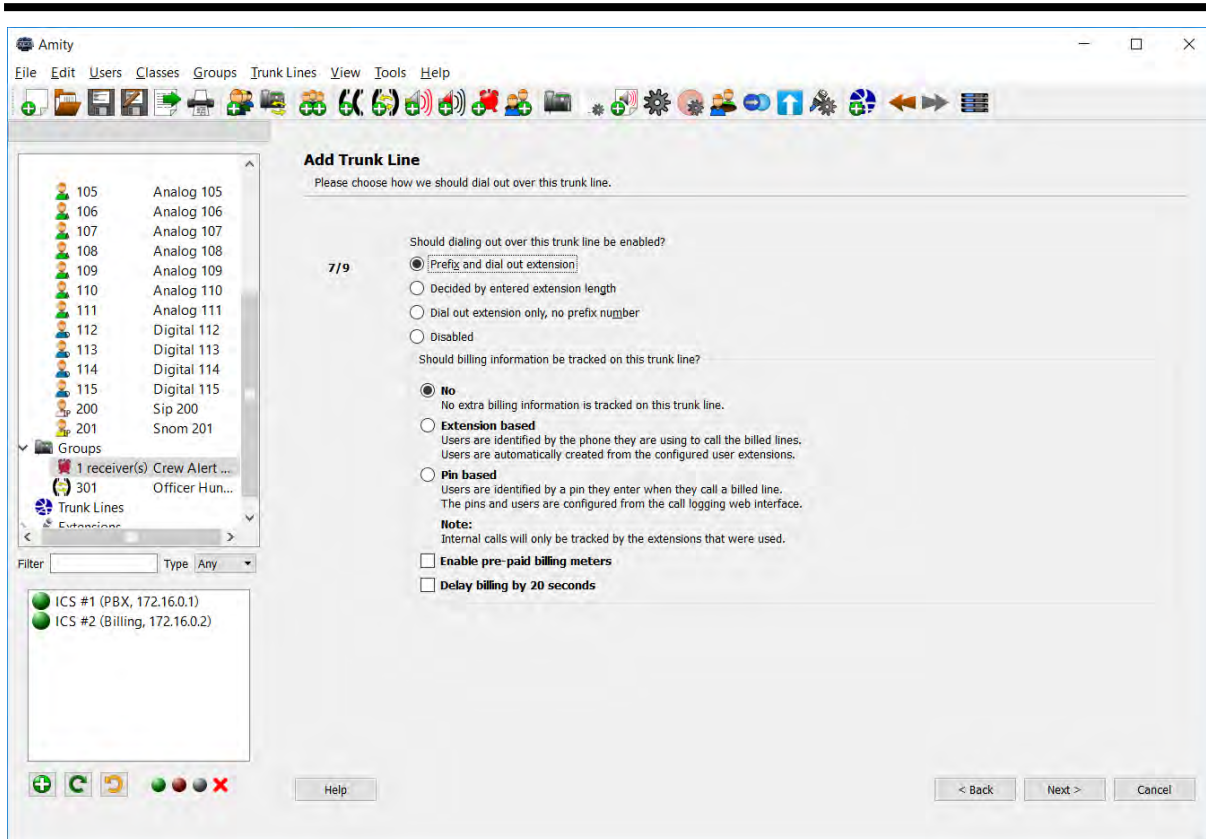


Figure 2-28 - Outgoing calls behaviour

Unless dialing out over the trunk is disabled, you must now select the dial out extension, and optionally prefix. If "Direct Inward Dialing" was selected during choosing the incoming actions, you must now supply your DID-prefix and fallback number in case we do not have a correct prefix to send.



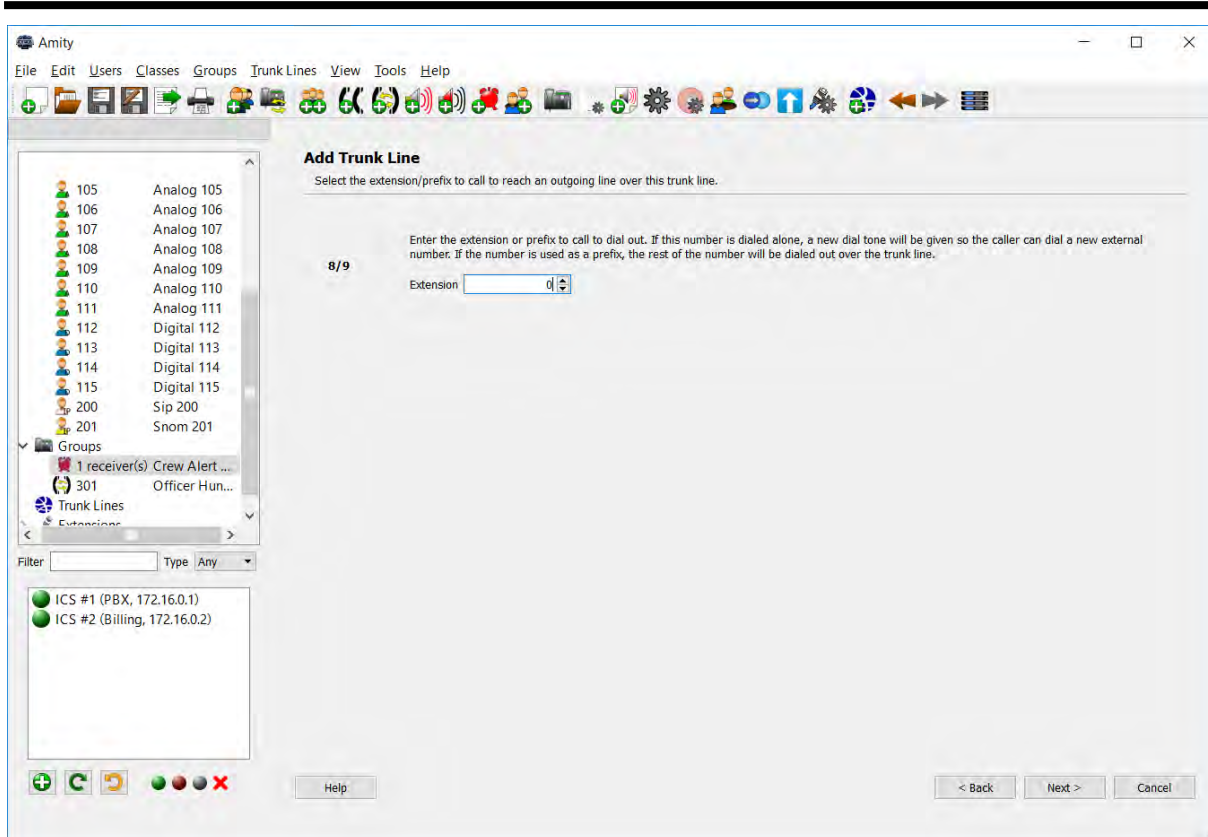


Figure 2-29 - Supply the extension or prefix number to use

Finally, please verify that the information is correct.

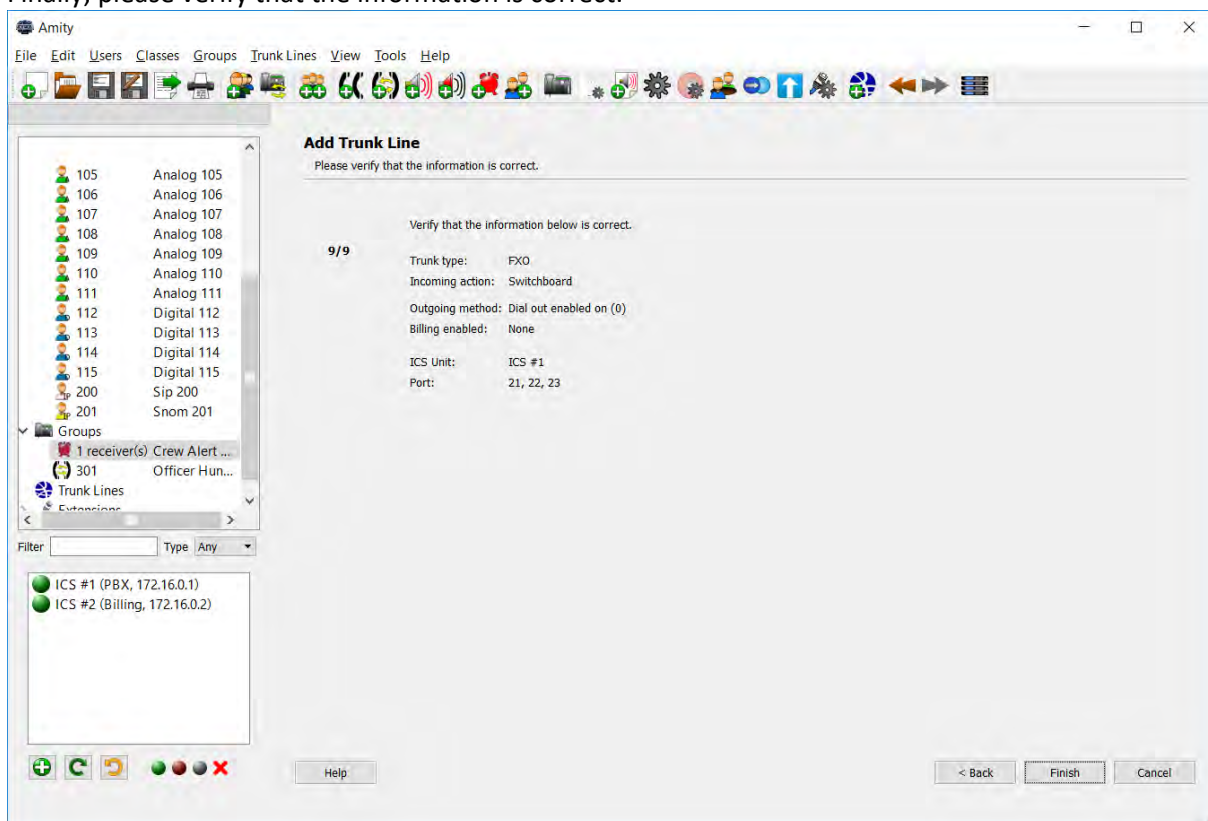


Figure 2-30 – Verify trunk settings

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Many additional settings such as restricting access to dialling out over the trunk, different sounds and other tweaks are changeable from the properties page for a trunk line. This is described in chapters such as "Access Control", "Call Logging" and "Custom System Sounds".

#### 2.3.4.8 Printing the Configuration

In order to get a hard copy of the configuration, you may use the "Print Extension Layout" function. This will give you a printout describing the current layout of the configuration, including extension, type and port number or MAC address / SIP password. All of this is listed per 6200-unit and grouped into physical extensions and VoIP extensions.

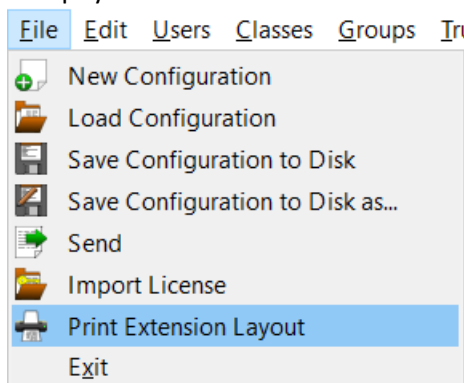


Figure 2-31 - Printing the Configuration

#### 2.3.4.9 Mark as Good

If you are happy with the configuration at this point, it is useful to run the "Mark as Good" function on the 6200 unit. Please consult the Phontech 6200 Firmware documentation for instructions on how to run this function, or how to restore a known good image.

### 2.3.5 LESS COMMON TASKS

#### 2.3.5.1 SIP licenses

To be able to use SIP telephone or Snom 300 telephones in your Phontech 6200 system, you have to have a SIP license installed. This license will be provided to you by Zenitel AS. To check the current status of your SIP license you can go to the "Help -> Info" item from the menu bar. If you click the "Licenses" tab you should see the status of your license. If this tab is grayed out, you do not have any license installed.

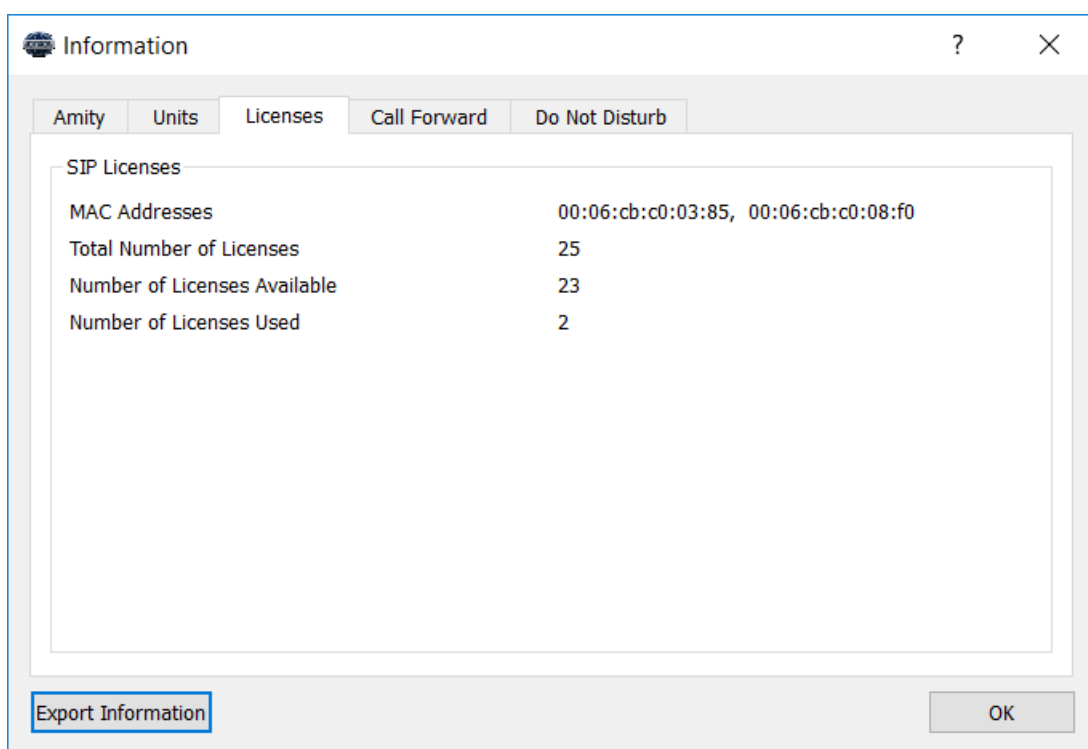


Figure 2-32 - License Information

To acquire a new license from Zenitel AS or upgrade an old one you can use the "Request License Quote" dialog. This can be found under the "Help -> Request License Quote" menu.

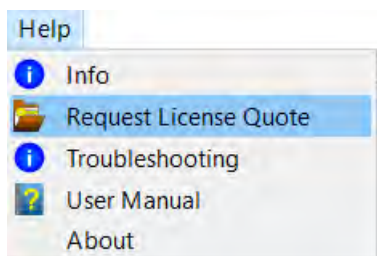


Figure 2-33 - Request License Quote Menu Item

Fill out the dialog to request the number of SIP licenses you want and click the "Save" button to get a file that contains all this information. Then send this file to [cs@zenitel.com](mailto:cs@zenitel.com) and you will be instructed on how to proceed with the order.

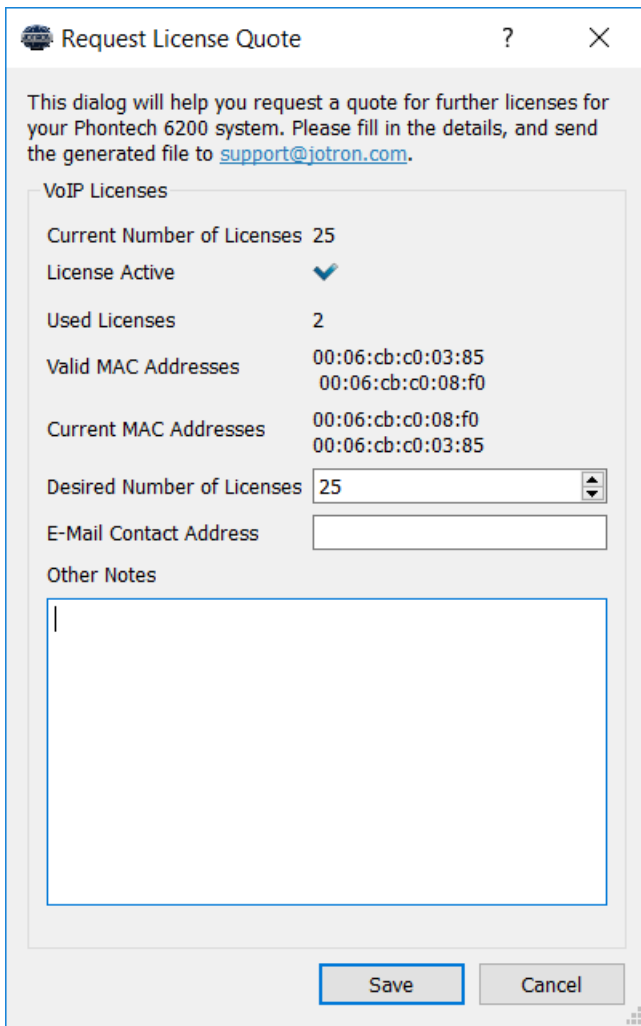


Figure 2-34 - Request License Quote Dialog

To make sure the license will be correct make sure all Phontech 6200 Units have been connected to the system

When you receive a license file you must import it to the configuration. Be sure to keep this license file safe as you will need it again if you want to create a new configuration from scratch for this system. Go to the "File -> Import License" menu item and select the license file you were provided.

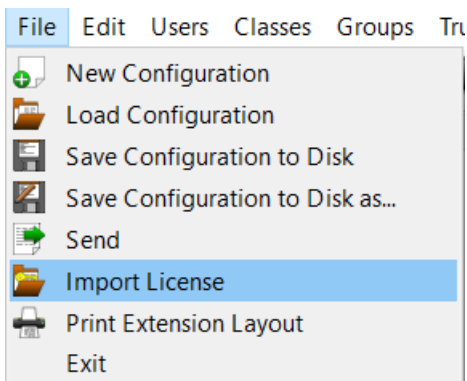


Figure 2-35 - Import License

If the license file you selected was valid you will be notified about this and you can check the status of your license under "Help -> Info" as explained earlier.

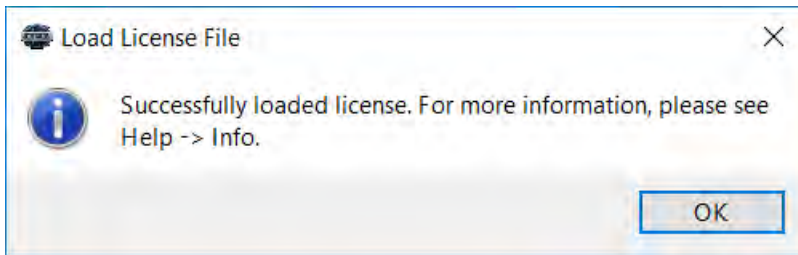


Figure 2-36 - License Import Successful

### 2.3.5.2 Access Control

In order to restrict access to certain resources, it is possible to set up Access Control via the configuration application. Access Control means that only a specific predefined set of users may use the resource. It is set up using the properties dialog of the resource in question.

In the dialog, simply set up who should have access to the resource.

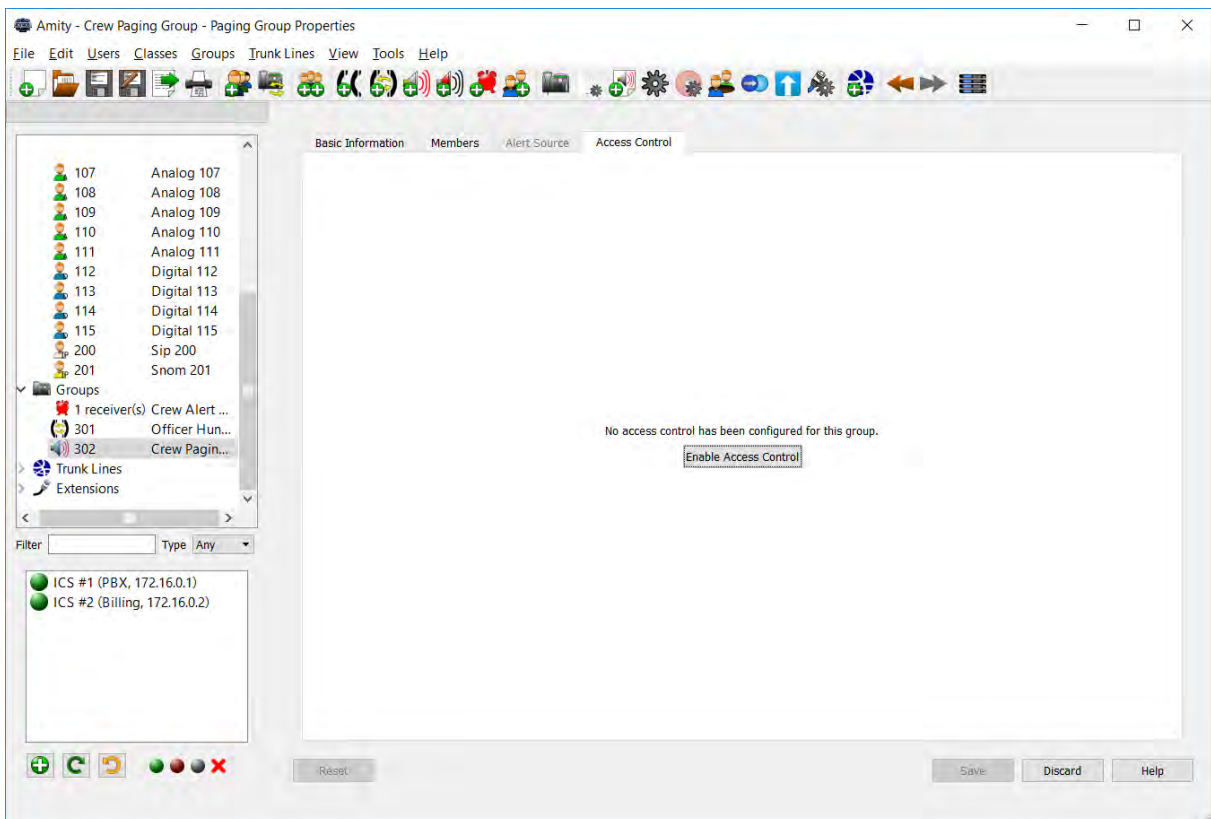


Figure 2-37 - Access Control for a Group

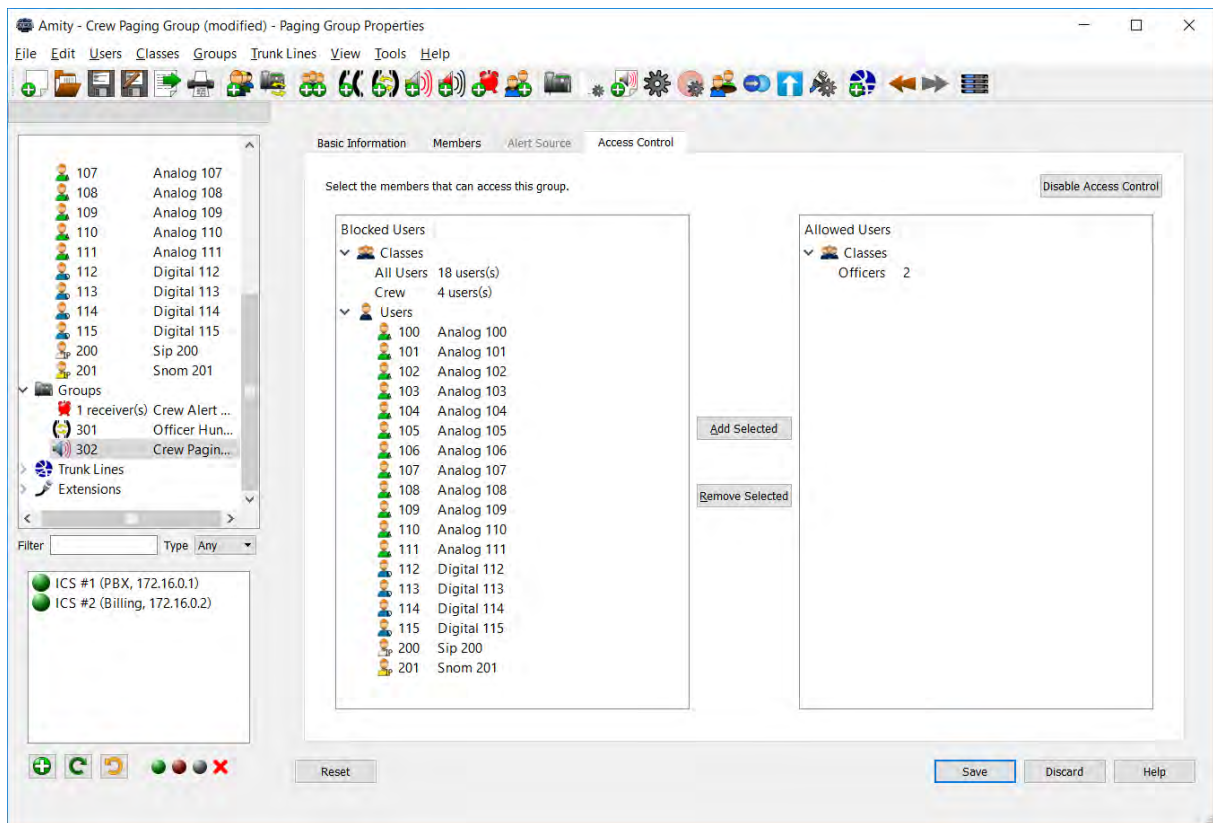


Figure 2-38 - Restricting access to a Group



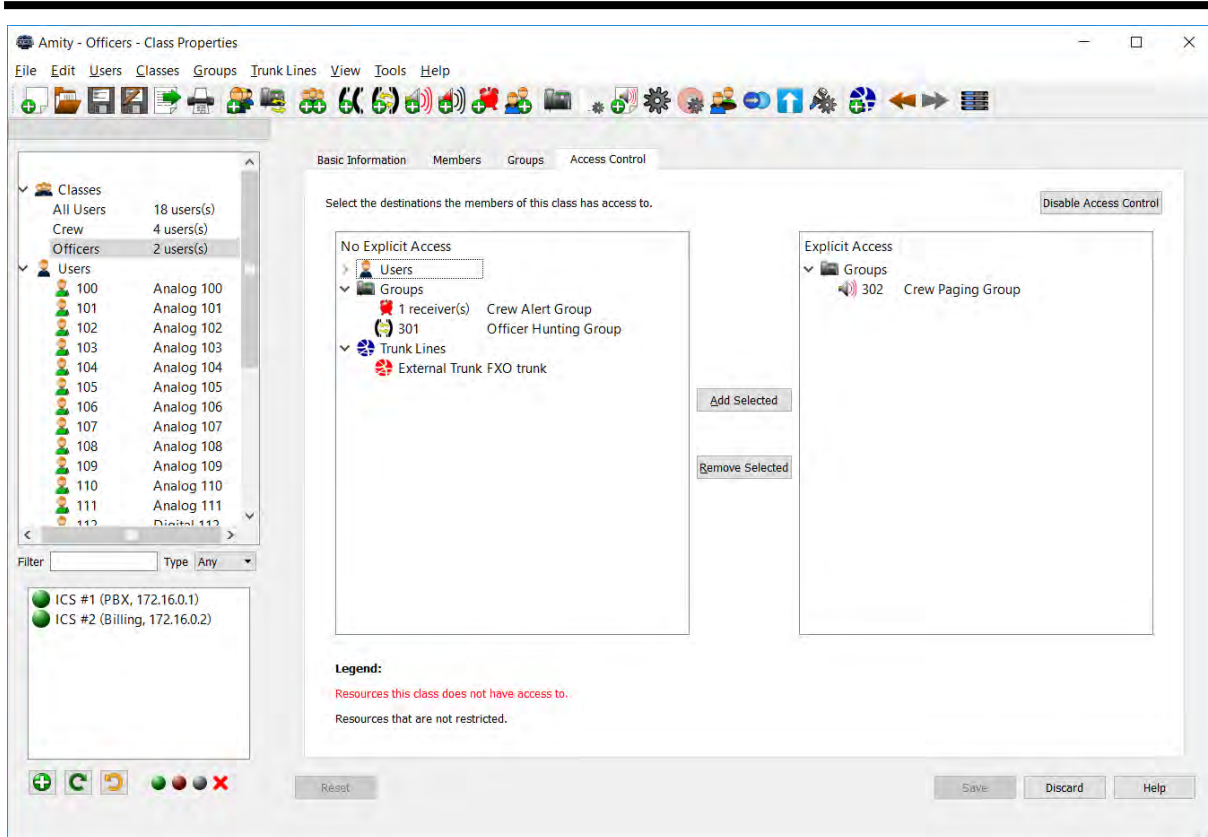


Figure 2-39 - Viewing the Access Control settings of a Class

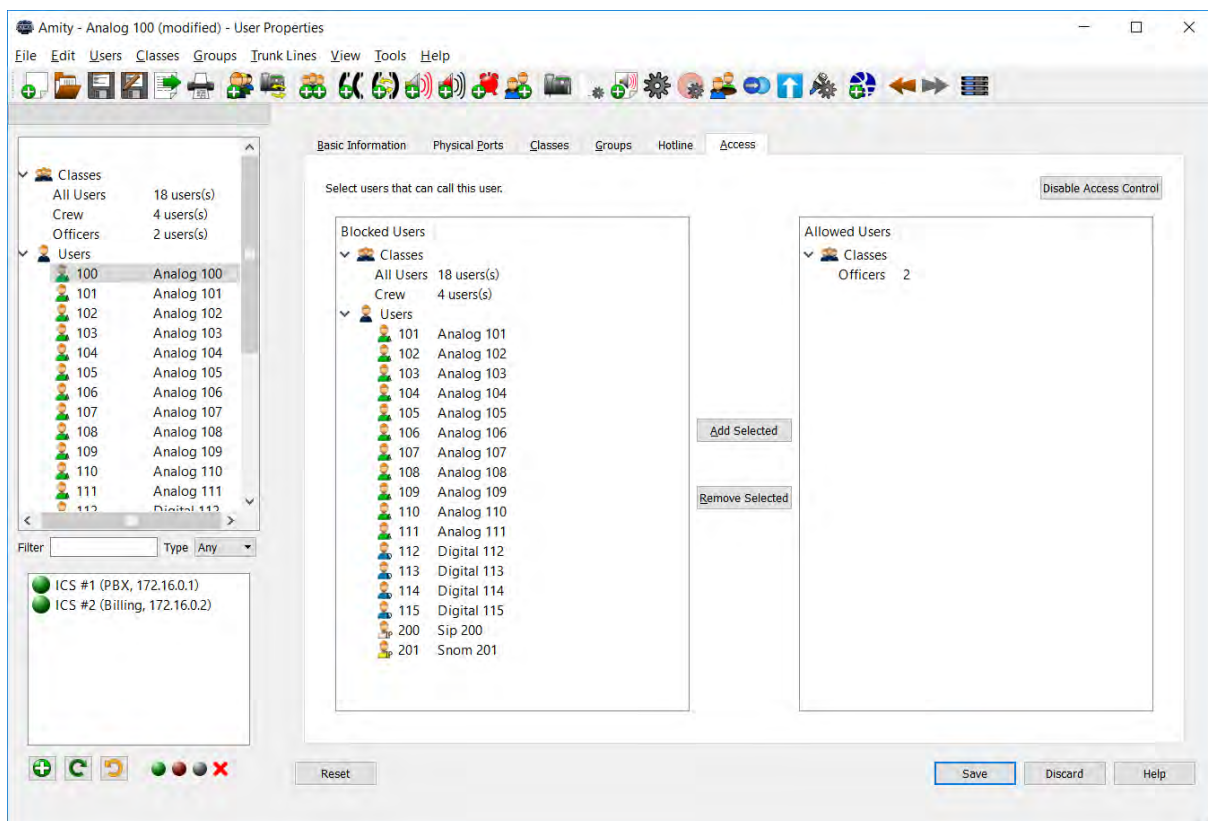


Figure 2-40 - Restricting Access to a User



### 2.3.5.3 Hotline

Hotline mode is the ability of having a telephone automatically dial an extension upon going off hook. It is possible to set up on analog or digital users by using the properties dialog of the user in question and opening the hotline tab.

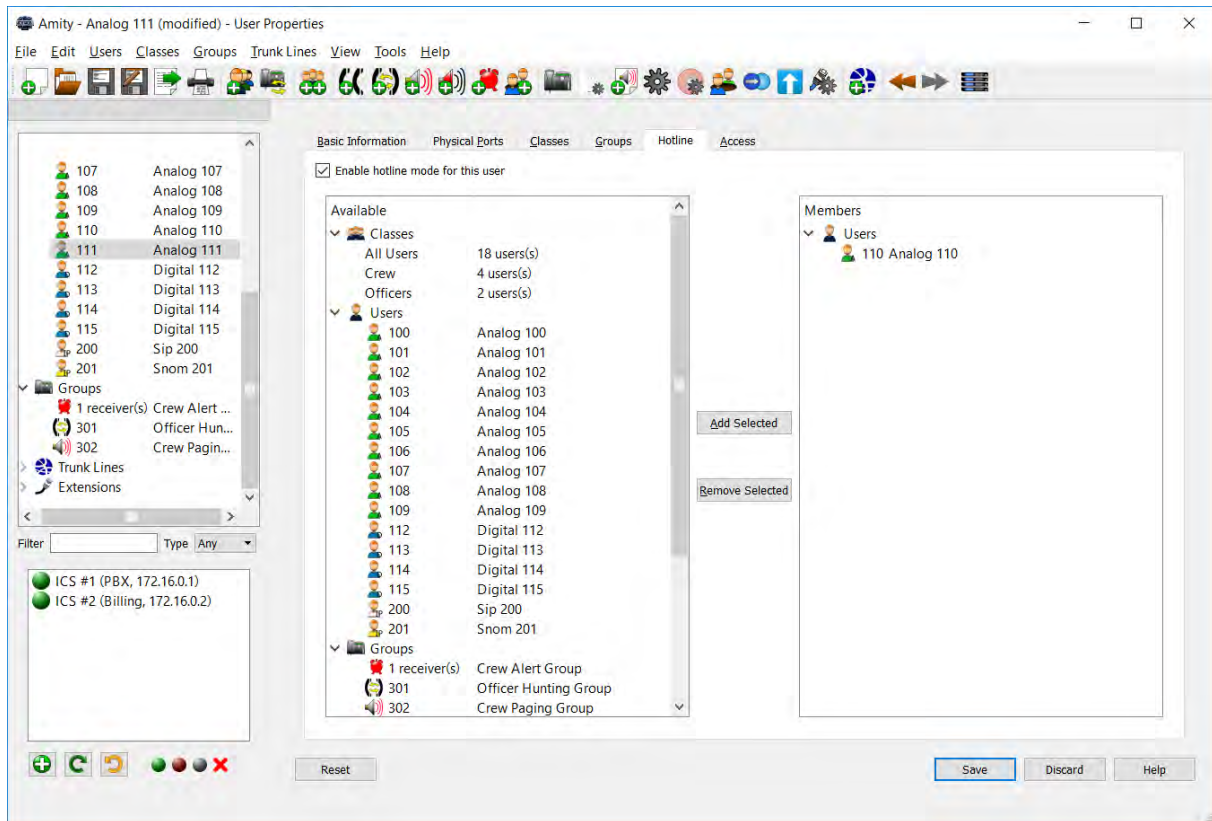


Figure 2-41 - Enabling Hotline for a User

Please note that this means that this user may only reach the recipient(s) specified in the hotline tab as he or she may no longer dial extensions.

### 2.3.5.4 High Priority Calls

High Priority Calls is the ability to always be able to reach users regardless if they are already in a conversation. This functionality is enabled on a specific user or class. It can be turned on by checking the checkbox titled "This user/class can intrude into other users' calls". Any user with this enabled will be able to intrude into other users calls by pressing '1' when queried. Please note that the other party will be disconnected.

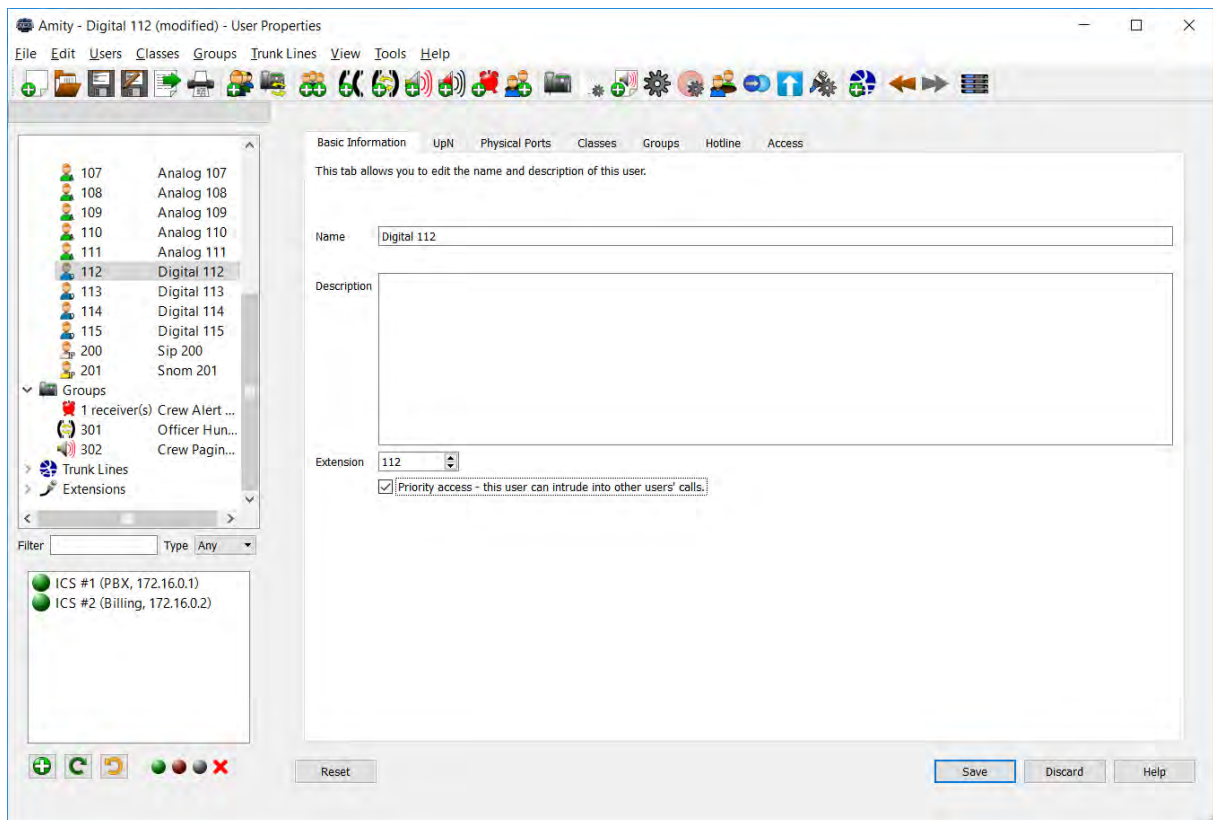


Figure 2-42 - Enabling High Priority for a User

### 2.3.5.5 Additional Tools

The “Tools”-menu of the configuration application contains several additional tools for configuration and management of the Phontech ICS 6200/6202 and associated phones. These tools are described in the following sections.

**Tools** **Help**

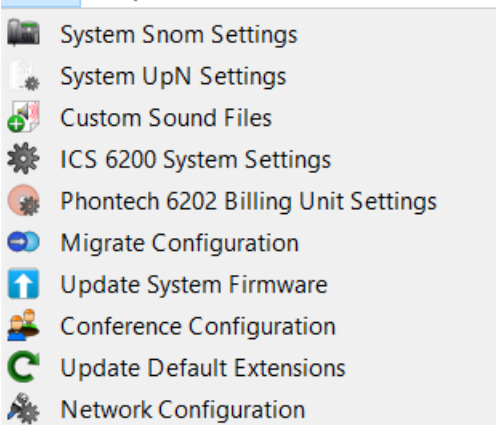


Figure 2-43 – Tools-menu

#### 2.3.5.1 Modifying Global Snom Settings

The global Snom settings dialog allows you to change the default settings for all the Snom 300 telephones in your system. Under "General Options" it is possible to change the default tone scheme, clock format and ring tone. In the "Volumes" section you can change the volume on the ringer as well

as the volumes of calls in speaker and handset mode. Under the "Other" section you can force the settings for all phones. This will disallow any user to change any of these settings on the phone itself.

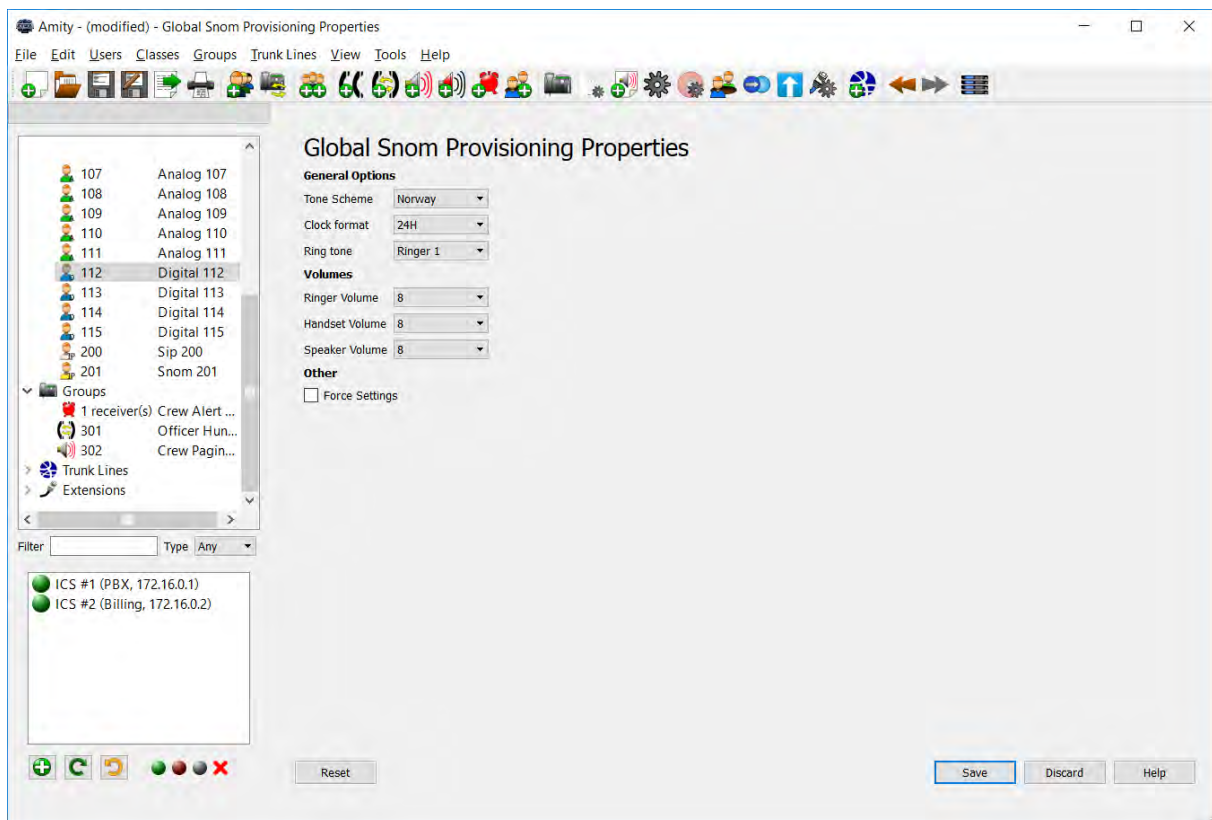


Figure 2-44 - Changing Global Snom Settings

### 2.3.5.2 Modifying Global UpN Settings

The global UpN settings dialog allows you to change the default settings for the UpN telephones in your system.

It is possible to change the default ring tone, handset volume, speaker volume, paging volume and alert volume, as well as setting the default backlight level and the extensions reached by pressing M1 through M3.

The speed dial buttons M1 through M3 can operate in different modes, but only when the destination extension of a speed dial button is another digital UpN phone. The three modes of operations are:

- **Normal** - The button works as a normal speed dial. The number is dialed as if it were entered manually on the key pad.
- **Intercom** - The number is dialed and the other end automatically goes off-hook in an intercom state. This means that the sound will go out on the speaker on the other end and the external microphone will be enabled. The conversation will therefore go both ways until the call has been terminated.
- **Paging** - The number is dialed and the other end will go off-hook in speaker mode but the microphone will not be enabled. This means that the call will only serve as a page that cannot be responded to without the performing another call.

All the speed dial buttons can either be pushed once or held down. If the buttons are pushed the calls must be terminated by either by putting the handset back on-hook or pressing the ACT key. If the buttons are held down the call will automatically terminate once the button is released.

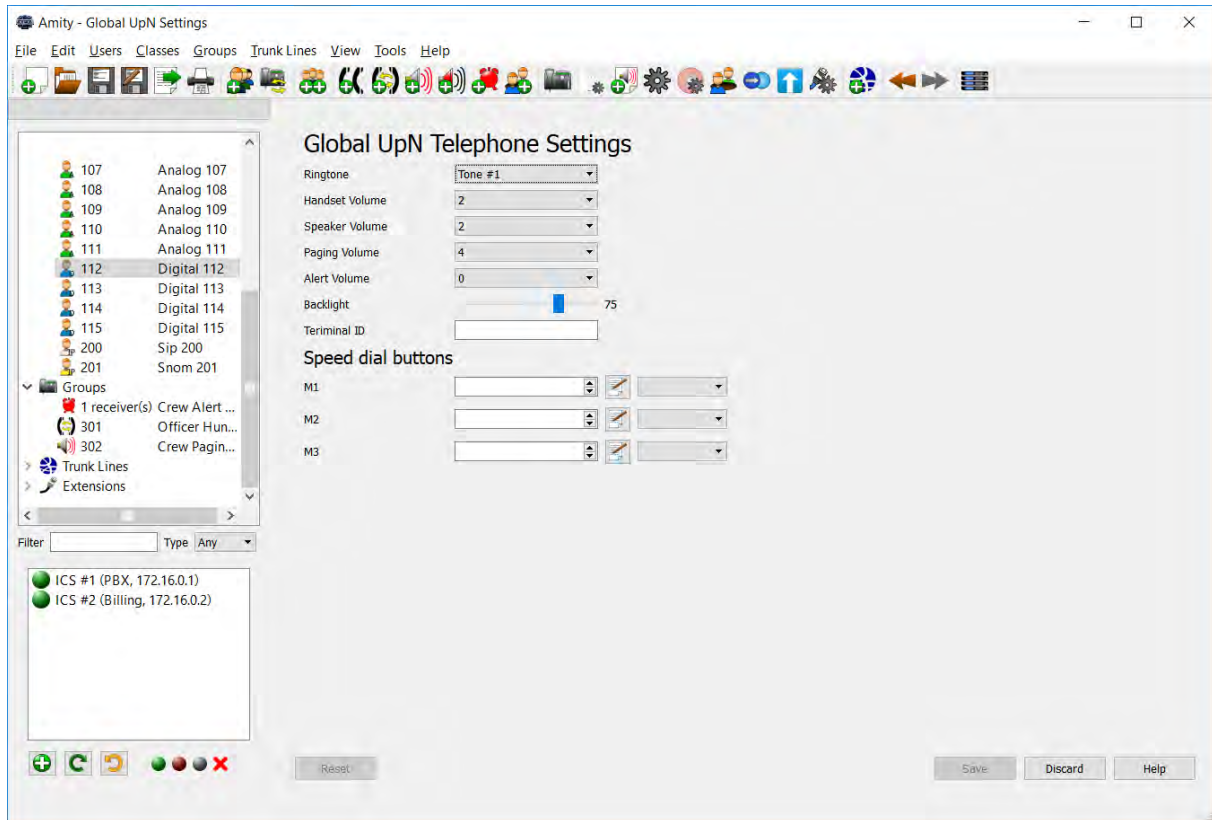


Figure 2-45 - Changing Global UpN Settings

### 2.3.5.1 Custom System Sounds

The Phontech 6200 system allows you to change some of the default sounds and notifications used in the system. To change these sounds you must go to the "Custom Sound Files" screen found under the "Tools" menu.

Before any of the default sounds can be changed you must first upload some new sounds. This is done by clicking the "Add" button on the right side of the "Uploaded sound files" list. This will open a file dialog where you can select a sound file to upload. The sound file can be either a .wav file or an .mp3 file. For the best quality they should be in 8000 Hz Mono. When the file is uploaded it is transcoded to the internal format used in the Phontech 6200 system. You can listen to the result of the transcode by clicking the newly uploaded file in the list and then click the "Play" button to the right of it.

After one or more files have been uploaded they can be selected in the drop down boxes to the right of the page. This will change the sounds in question to the one you have selected. Uploaded sounds are also used in other parts of the application such as in the Trunk Line properties screen where you can select the sound that will play when a "Switchboard" configuration is used.

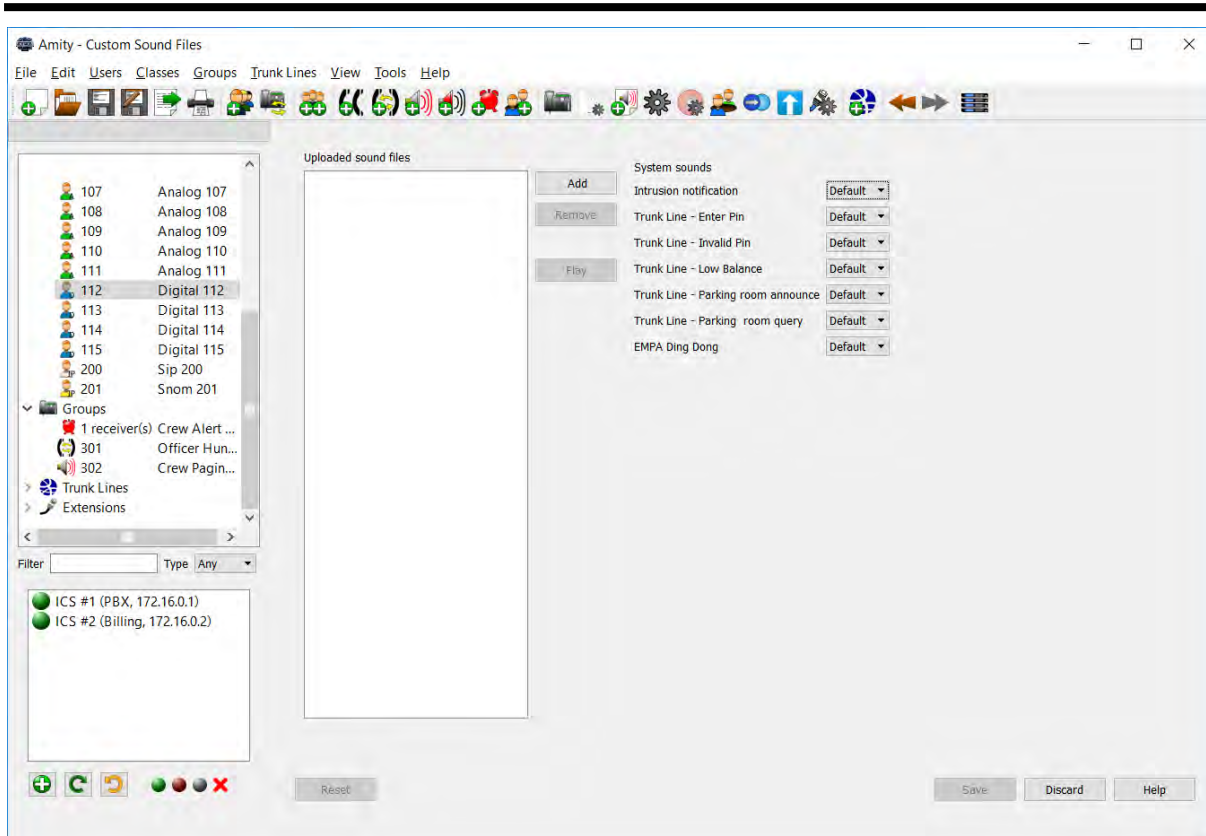


Figure 2-46 - Custom Sound Files Screen

### 2.3.5.2 Modifying Phontech 6200 System Settings

The Phontech 6200 System Settings dialog allows you to configure certain system-wide features. Among these are the “Time”-settings, “SNMP”-settings and the system wide “Analog Phone” settings.

Using this dialog, it is possible to set the time to a specific time zone and to synchronise the time to an external NTP-server. This can be useful when you want to synchronise time across multiple different systems to avoid that their perception of time drifts between them. “Local time” is the default setting, meaning that the system will use its internal clock to keep track of time. The local time and date can be set on the Phontech 6200 units using the front panel display.

It is also possible to set the SNMP settings for the Phontech 6200 system in the tab labelled “SNMP Settings”. The system is capable of supporting both version 2 and 3 of the protocol. By default, version 2 is enabled. When using SNMP version 2, the community string must be set. By default, this is set to “public”.



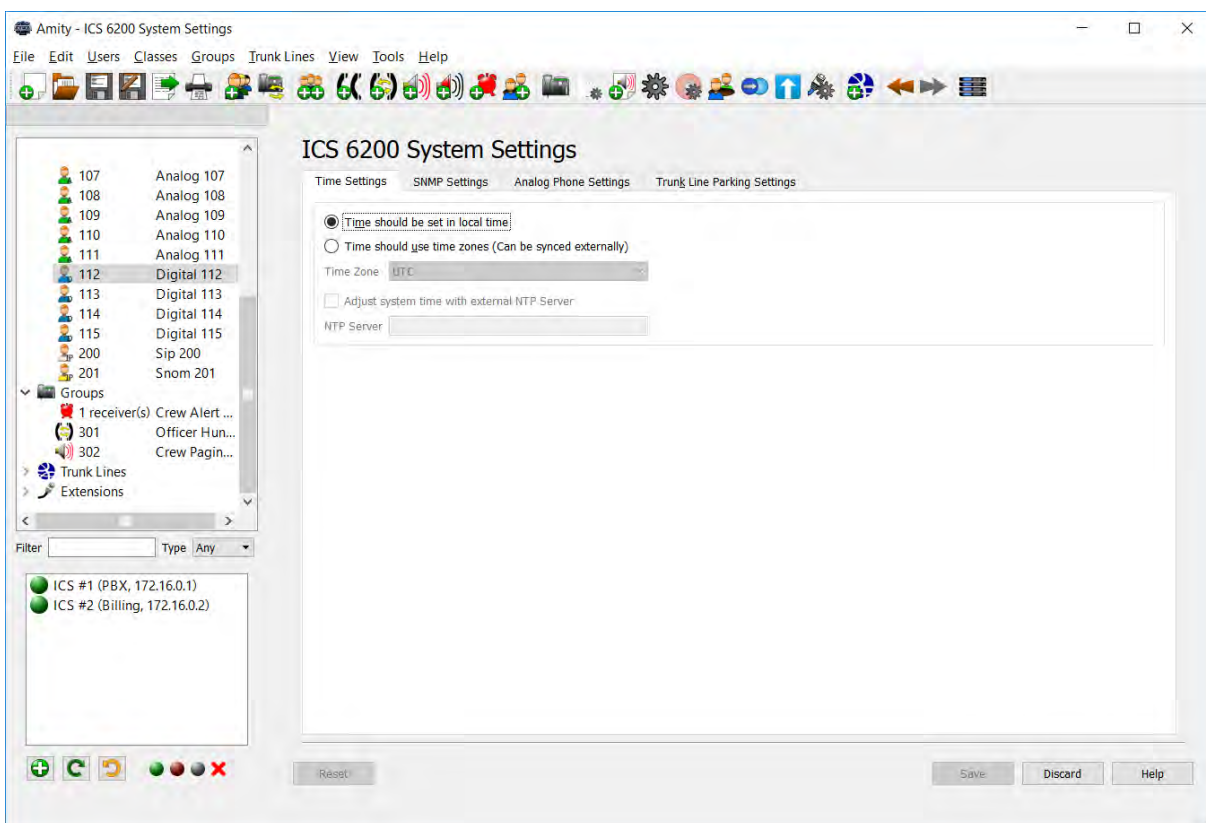


Figure 2-47 - Phontech 6200 System Settings – Time Settings

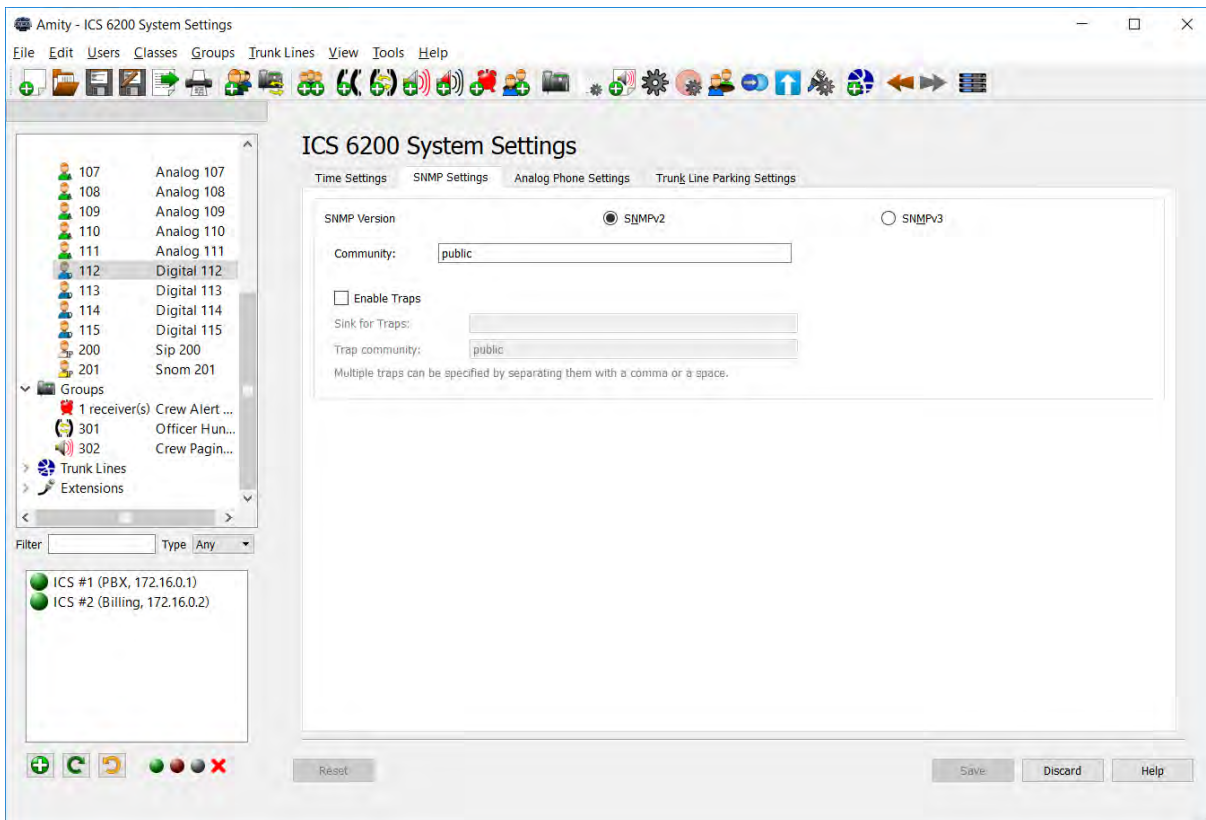


Figure 2-48 - Phontech 6200 System Settings - SNMP Settings

To enable version 3 of the protocol, simply select the correct version from the dialog and enter the desired login information.

The authentication method, encryption method and security level may be changed from this dialog, but the defaults should suffice for most cases. When in doubt, leave this unchanged.

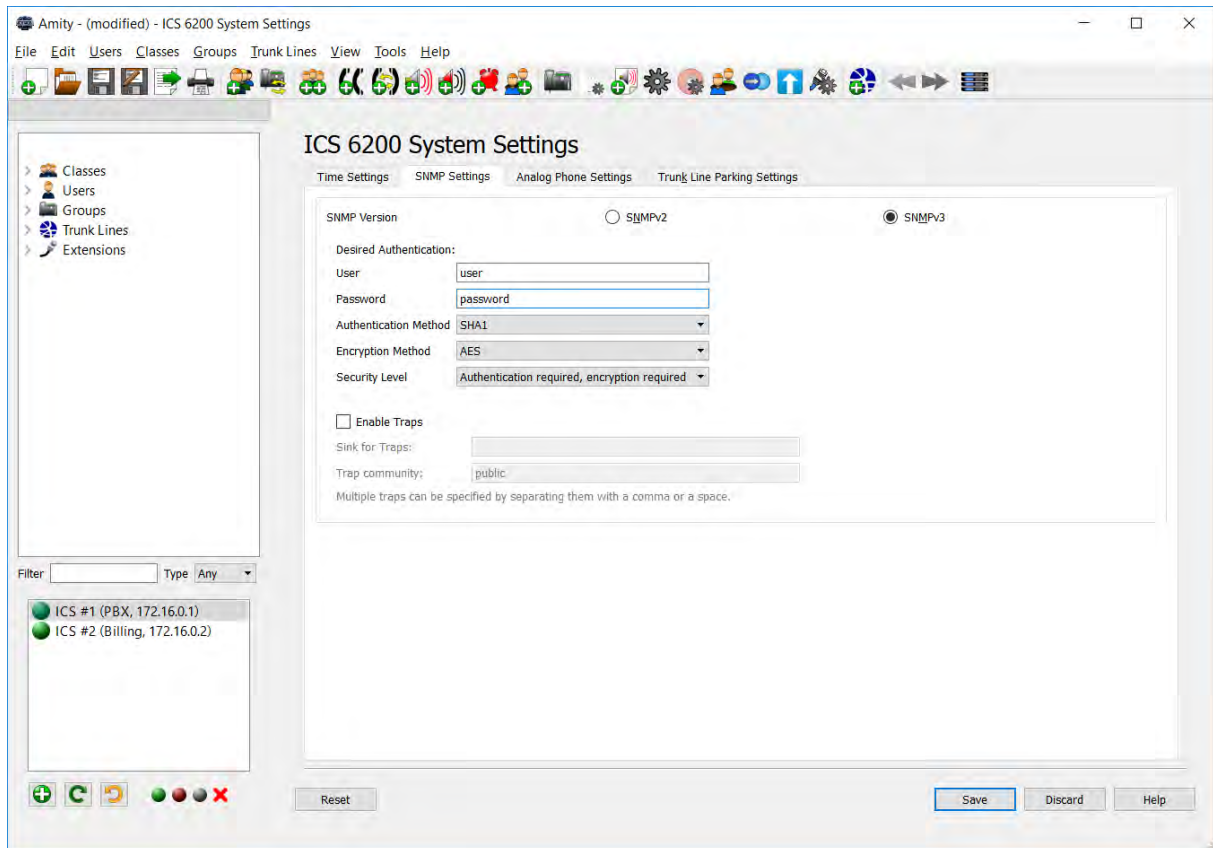


Figure 2-49 - Setting up SNMP Version 3

If you wish to receive traps from the Phontech 6200 system, please enable the checkbox and enter a valid IP-address, optionally followed by a port. The host entered here will receive traps concerning common hardware failures such as power supply failures, fan failures or earth faults.



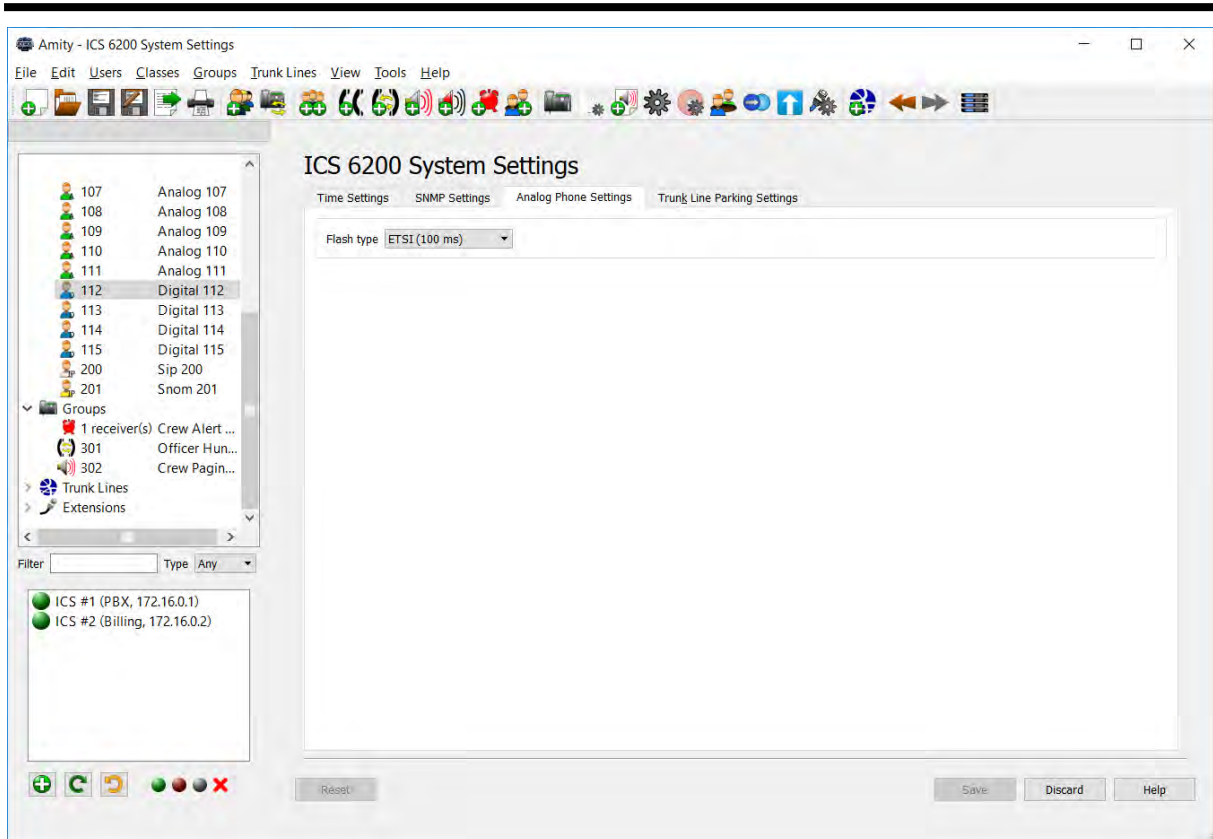


Figure 2-50 - Phontech 6200 System Settings - Analog Phone Settings

System wide settings for analog phones are configured in the “Analog Phone Settings” tab. Here the settings for the “Flash” function can be changed.

The extension to retrieve calls stored in the incoming trunk line parking lot can be configured from the “Trunk Line Parking Settings” tab. Here you can input the extension number that must be called to retrieve the stored calls. Once a user dials this number, he or she will be asked to enter the parking room number given to the operator who first answered the call. This page will warn if there are no trunk lines configured with the parking capabilities or if the selected extension is already in use.

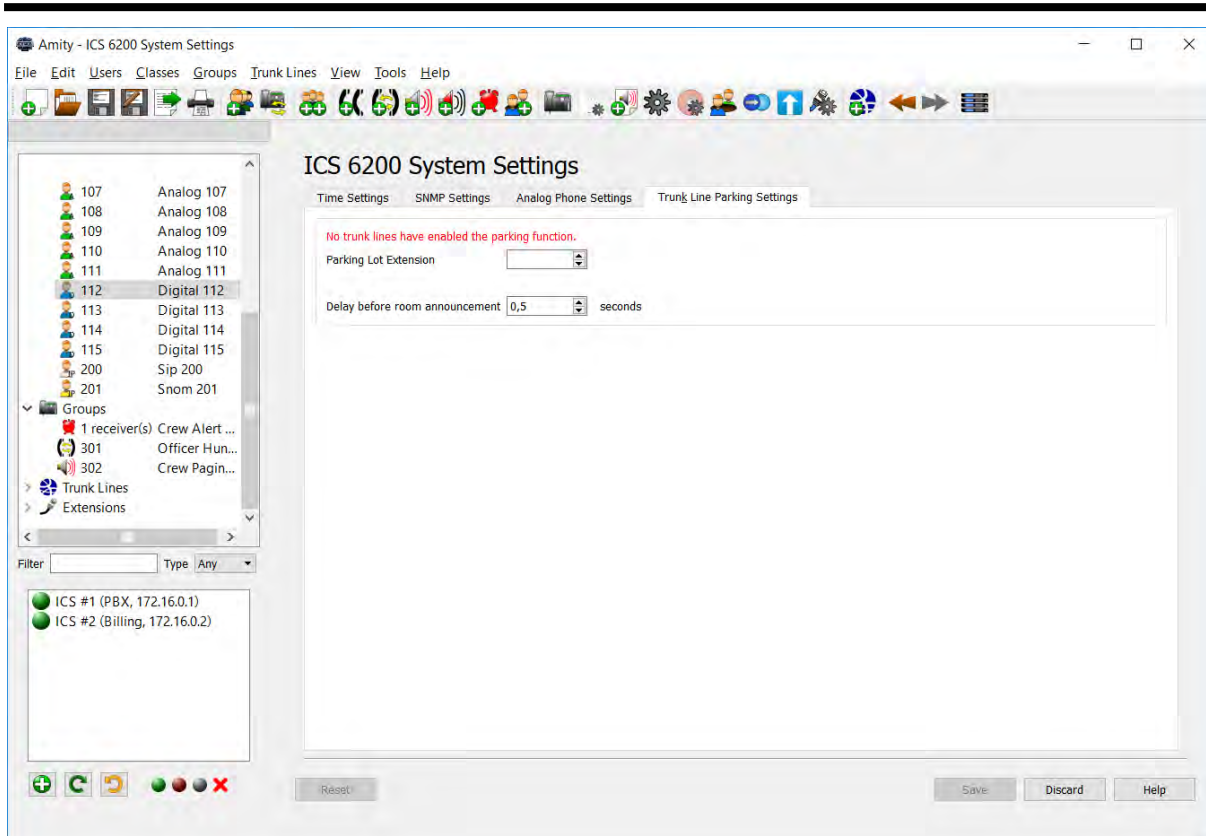


Figure 2-51 - Phontech 6200 System Settings - Trunk Line Parking Settings

### 2.3.5.3 Configuring Billing

The Phontech 6202 Billing Unit Settings dialog allows you to configure the storage devices in your network. This is required to make use of call logging functionality. The dialog can be found under the 'Tools' menu.

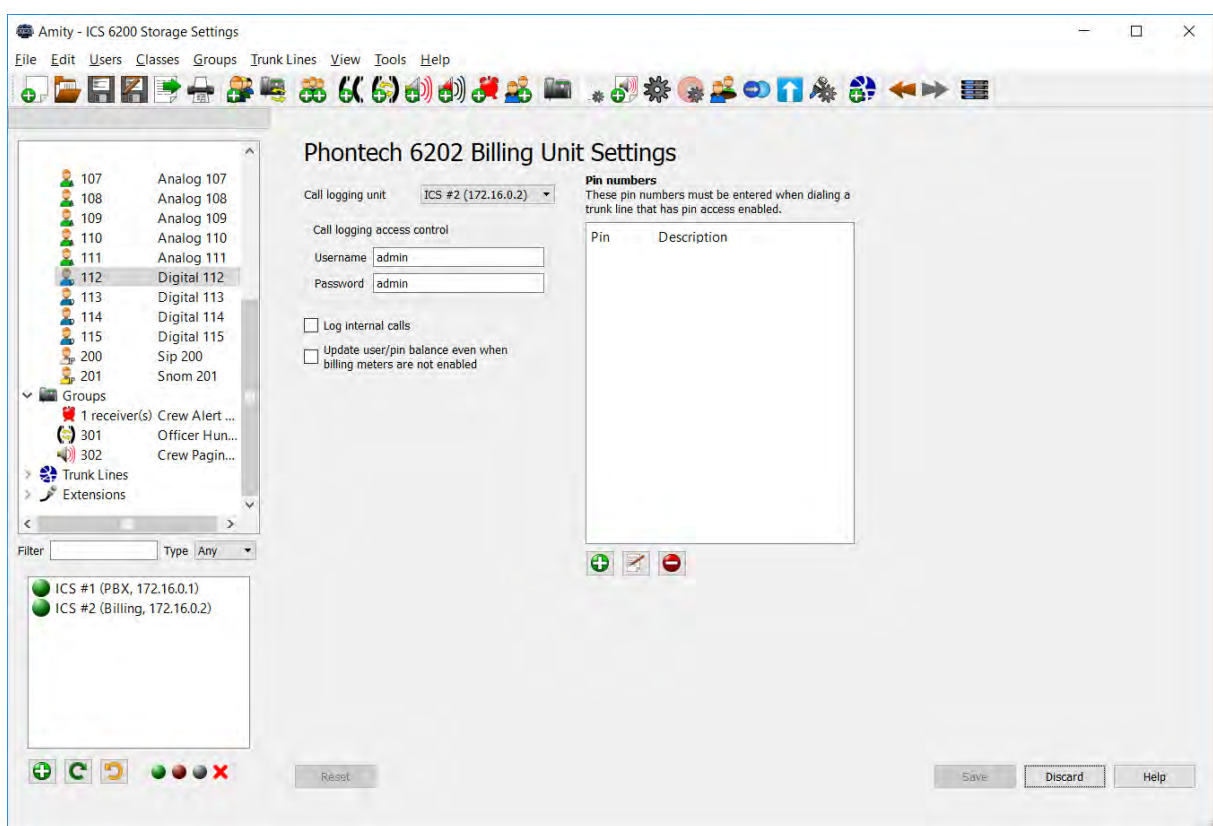


Figure 2-52 - Phontech 6202 Billing Unit Settings

Before any call logging setting can be changed, you must first select a storage unit to be used in the network. This is done in the drop down box in the upper left part of the page view. The other settings can only be changed after this has been done.

From this screen you can change the username and password used to access the call logging web interface. You can also enable or disable logging of internal calls as well as whether or not to update account balances even though balance is not enforced on accounts. This permits accounts to go into a negative balance. You can also manage the different PINs used by the system if any trunk lines have enabled call logging with PIN authentication.

To add a new pin, press the green plus icon and a dialog will appear. In this dialog you must enter the PIN and optionally a description of the PIN. The description can be changed by selecting the PIN in the list and clicking the notebook at next to the green plus icon. If you want to remove a PIN, click it and then click the red minus icon.

If you delete a pin number, the balance attached to this pin will be removed and cannot be restored unless you have an earlier backup from the web interface.

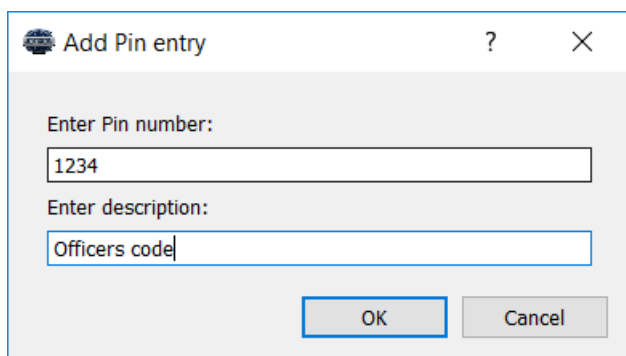


Figure 2-53 - New PIN Dialog

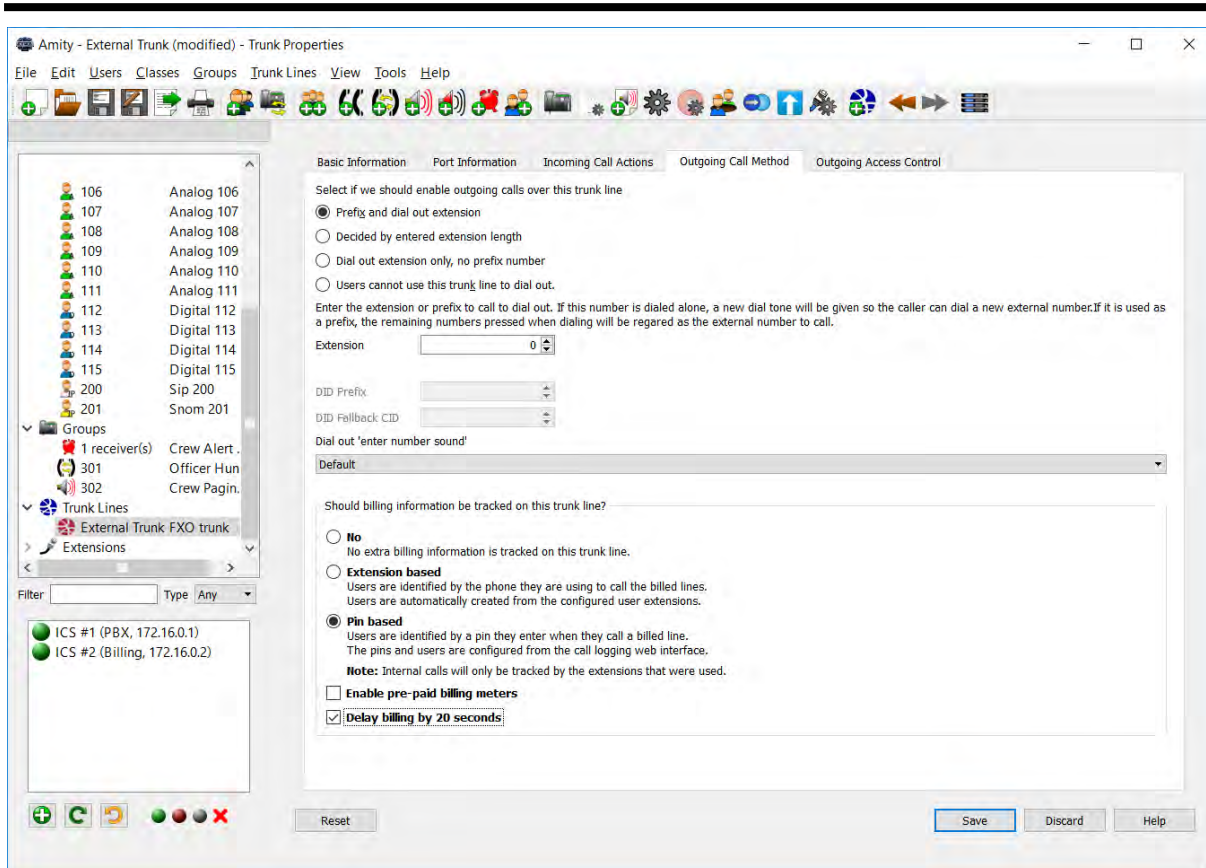
The web interface for the storage unit can be accessed by typing the IP address of the storage unit into the address bar of a web browser. The address is shown in the drop-down where you select the unit to use as your call logging storage device.

#### 2.3.5.4 Call Logging

If a storage unit has been configured, you can configure call logging on your trunk lines. See the "Configuring Billing" section above.

To configure call logging on a trunk line, right-click the trunk line in the left-hand tree view and click "Properties". This will open the trunk line properties page. Go to the "Outgoing Call Method" tab and find the call logging options at the bottom of the page. There are a few different modes of call logging that can be enabled and they are as follows:

- **No** - This will not enable call logging on this trunk line
- **Extension based** - This will base call logging and billing on the extension that calls the trunk line. When a user calls through the trunk line, the number he was calling from is logged and any account balance updates are performed against an automatically created account that matches the phone that was called from.
- **Pin based** - A PIN-based call logging system will ask the user to input a PIN before he can call out on a trunk line. When a user dials the trunk line either by a dial-out extension or a prefix or any other method, he will be asked for the PIN before the call goes out. If the user can enter a valid PIN, the call will be logged with this PIN number and any account updates will be to the PIN account that was entered. PIN numbers can be configured in the storage settings. See the "Configure Storage" section above for more information.



**Figure 2-54 - Trunk Line Properties Screen**

There are two other options that can be enabled in the call logging options page. If "Enable pre-paid billing meters" is checked, a user will only be able to make a call if the account he is associated with, either a PIN or the phone itself, must have a pre-paid balance. If the required balance is available, the call will proceed as normal however it will only be able to run for as long as the user has available balance.

The cost rates for different external extensions can be configured in the storage unit web interface.

If "Delay billing by 20 seconds" is checked, then the user gets the first 20 seconds of a call for free. Depending on the technology that is used to connect the trunk line to the Phontech 6200 system, it might be required to tick this to avoid unnecessary billed calls because the user in the other end did not pick up. Some systems indicate that they go off-hook before the other end actually has answered.

For more details, see **"User manual for Phontech 6200 Call Logging interface"**

### 2.3.5.1 Migrate Configuration to Another System

Sometimes it can be useful to use the same configuration on multiple systems. To achieve this, the configuration must be migrated from one system to another. We will call the previous system A and the new system B.

The first step is to save the configuration of system A to a file a computer. After the configuration is saved the computer must be connected to system B. While the computer is connected to system B,

load up the configuration from system A and enter the "Migrate Configuration" wizard from the Tools menu.

In the Migrate Configuration wizard you are presented with the view of the current system as well as the view of the system in the loaded configuration. The system in the configuration can be seen under "Configured ICSes" (Phontech 6200 units) and the connected system can be found under "Unassigned discovered ICSes". The lists in both views display the IP addresses of the units as well as the modules that are or have been inserted in them.

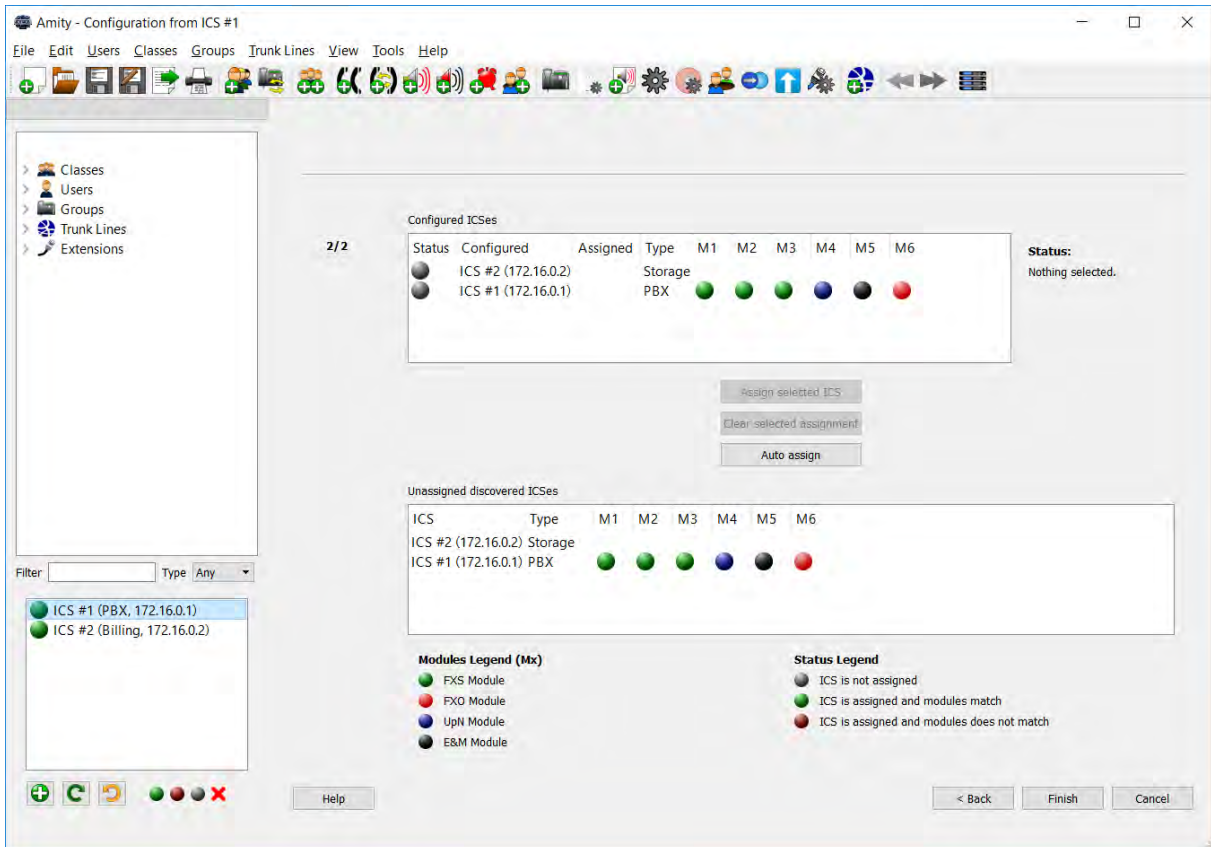


Figure 2-55 - Unassigned ICSes in Migrate Configuration

If the configured and discovered systems are identical in the module configuration you can press the "Auto assign" button found between the two views. This will try to automatically match the modules of the configured ICSes and the discovered ones so they map up perfectly.

If the modules do not match, but you still want to use the configuration anyways you must manually assign which discovered ICS in system B that should take over the role of a configured ICS in system A. To do this you first click the discovered ICS in the bottom view and then click the configured ICS you want it to take the role of in the top view and then click the "Assign selected ICS" button to assign it. The selected discovered ICS should then disappear from the bottom view. Do this for all configured Phontech 6200 Units.

Only Phontech 6200 units of the same type can be assigned to each other.



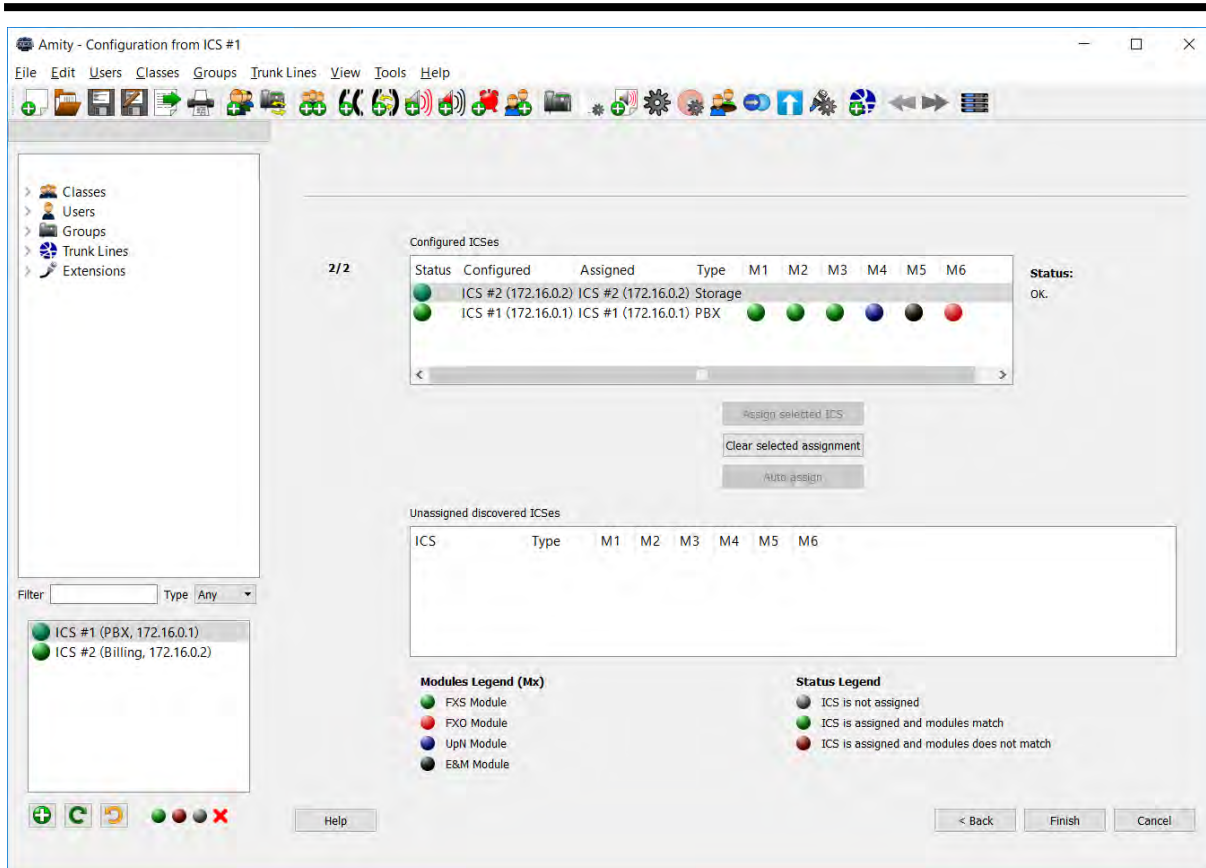


Figure 2-56 - Assigned ICSes in Migrate Configuration

Once all configured Phontech 6200 units have been assigned a discovered ICS you can click "Finish" to perform the migration. After the migration is done the configuration can be sent to the system as normal.

### 2.3.5.1 Upgrading Firmware

It is possible to upgrade the firmware of Phontech 6200 units by using the Phontech 6200 Configuration Application and a new firmware file as supplied by Zenitel. You can upgrade the firmware of specific Phontech 6200 units by right clicking on the unit in question in the lower left corner of the application and selecting "Upgrade Firmware". However, in cases where you have more extensive systems with several 6200 units, it is easier to use the "Update System Firmware" dialog, as found under the "Tools"-menu.

Upon opening either of these two options, you will be asked to find the new firmware file. Once this has been done, the application will check that the new firmware is valid and present you with the version and build date of both the current firmware and the newly selected firmware. If this information looks valid, press "Ok" to send the new firmware to your 6200 unit(s). The firmware will be checked for correctness on the Phontech 6200 unit upon receiving it, prior to extracting it. The process will take a few minutes and the Phontech 6200 unit(s) will reboot upon completing it.



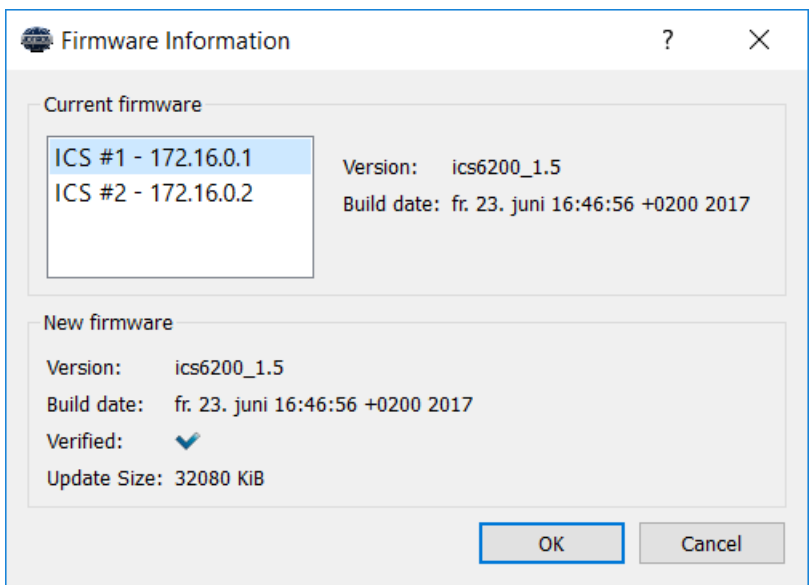


Figure 2-57 - Information about Current and New Firmware

**2.3.5.2 Configuring Conference Rooms**

Conference Rooms are special extensions where multiple users may engage in conversations together. The Conference Configuration dialog allows you to enable conference rooms and configure the extension used to dial to the conference rooms.

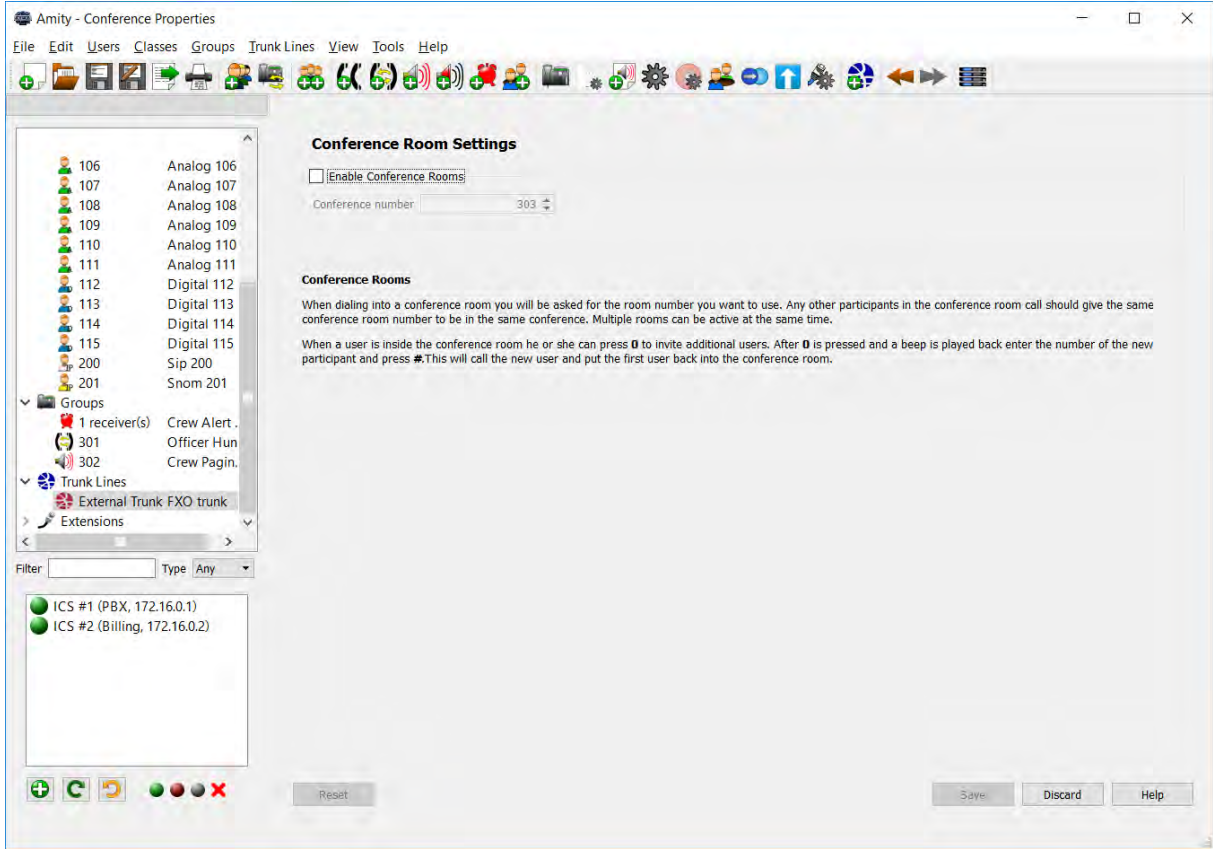


Figure 2-58 - Enabling Conference Rooms

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## 2.3.6 TROUBLESHOOTING

In the case that you run into some trouble, this section contains some pointers on how to get some help and how to troubleshoot basic issues.

### 2.3.6.1 Starting from Scratch with a New Configuration

If the configuration you have created does not fit as well as anticipated, it may be easier to restart from scratch. This may be done using the "New Configuration" function, which will present you with a pristine starting point so you can try again. Remember to send the configuration if you want to reset the configuration of the Phontech 6200 network too.

### 2.3.6.2 Unable to Send Configuration due to License Error

If you get the error message below when you try to send the configuration that means that the installed license either does not validate or does not provide enough licenses for the amount of SIP or Snom 300 phones configured in the system.

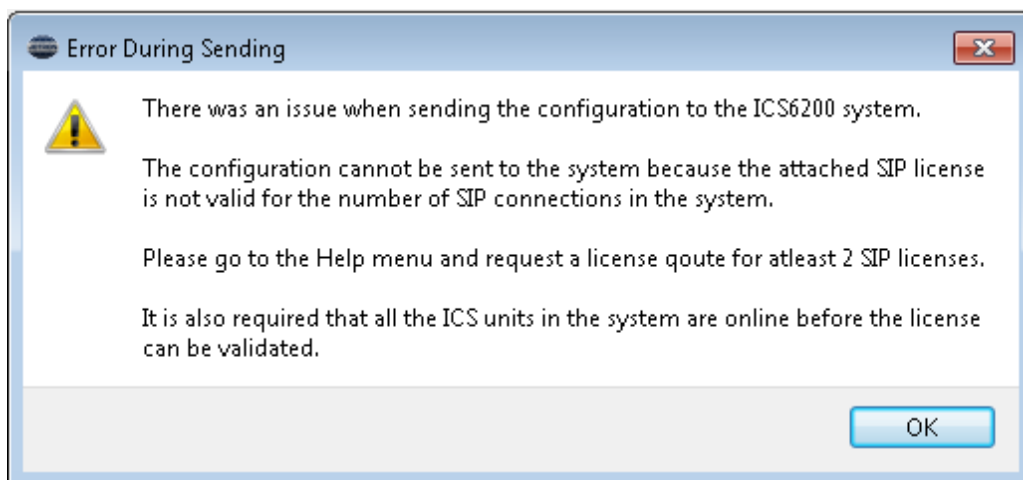


Figure 2-59 - License Error during Send Configuration

For the license to validate correctly, all of the Phontech 6200 units in the system must be powered on and connected to the network. This can be verified by inspecting the list of Phontech 6200 units in the lower left corner of the Configuration Application and see that all the status icons are green.

If the license is not valid for the given system or the number of SIP telephones in use, you can request a new license from "Help -> Request License Quote" as explained in the "SIP Licenses" chapter.

### 2.3.6.3 Revert to Known Good

If you created a known good fallback previously, it is possible to restore that state by using the front panel display of the Phontech 6200 unit. Please consult the Phontech 6200 Firmware documentation for instructions on how to perform this operation.

---

#### 2.3.6.4 Factory Reset

This function will revert the Phontech 6200 unit to its factory state, and remove all configuration, databases and settings contained on the Phontech 6200 unit. It is possible to perform this using the front panel display of the Phontech 6200 unit.

Once this has been performed, the Phontech 6200 unit reverts to its factory defaults. This means that you will have to run through the first run wizard again. Please consult the Phontech 6200 Firmware documentation for instructions on how to perform this operation.

#### 2.3.6.5 Choose Network Interface

This function can be useful if you have multiple network interfaces connected to different networks. This may cause the configuration application to not be able to discover your Phontech 6200 network. The dialog present under "Tools -> Network Configuration" allows you manually select the correct network interface. By doing this, you will instruct the Phontech 6200 Configuration Application to send discovery requests to the correct network instead of the more generic fallback.

This setting is stored across restarts of the application. The default value is the "Any"-setting.

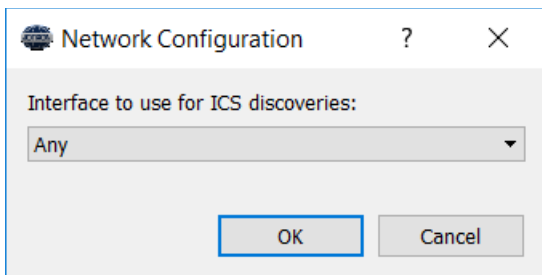


Figure 2-60 - Setting a Network Interface

#### 2.3.6.6 Creating an Information Package

If you require additional support for your Phontech 6200 System, please enclose an Information Package with your support request. The Information Package can be created using the "Help -> Info" dialog, simply press the "Export Information" button. This will create a single file containing logs from the application and any Phontech 6200 unit in the network, the configurations of each unit and information concerning the software versions used for the Configuration Application and each Phontech 6200 unit.

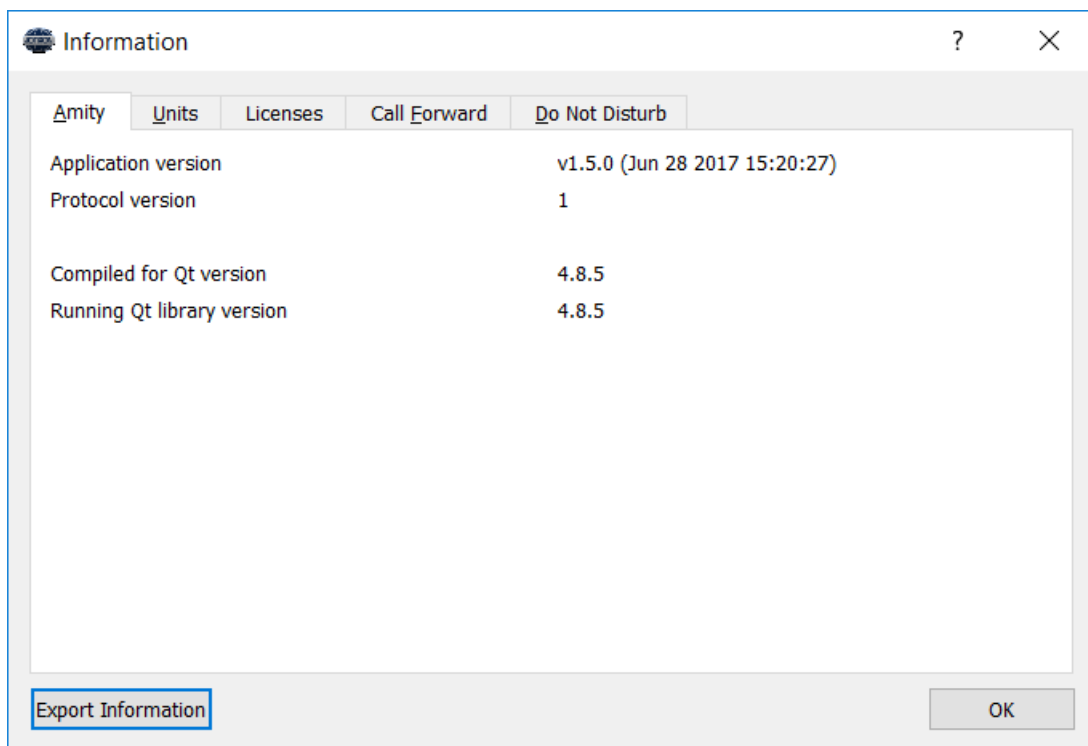


Figure 2-61 - Information Window

### 2.3.6.7 List of allowed separators in names

It is possible to use alphanumeric characters for names in the configuration application, in addition to the following separators:

- '-' (hyphen)
- ',' (comma)
- '.' (period)
- '+' (plus)
- '&' (ampersand)
- '#' (hash)

---

## 2.4 FRONT PANEL MANUAL

### 2.4.1 LED INDICATIONS

There are three LEDs found on the left side of the Phontech 6200 unit, providing different information. From top to bottom, they are the power LED, the info LED and the error LED.

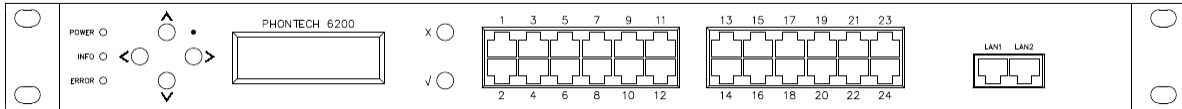


Figure 2-62 - Phontech 6200 Front View

The power LED will either be red or green, depending on the power supply status of the unit. If both power supplies are active, the LED will be green. If one of the supplies is down, the LED will be red. The info LED will show a heartbeat when the unit is running. The frequency of the heartbeat may give you an indication of the relative load of the unit. The error LED will light up if an error has been detected. More information regarding the type of error can be seen in the Information-menu.

### 2.4.2 FRONT PANEL DISPLAY

The front panel display provides navigation buttons on the left side, an LCD-screen for displaying information and a cancel and enter button on the right hand side. The front panel also includes a reset button which may be reached by using a safety pin or a similar instrument.

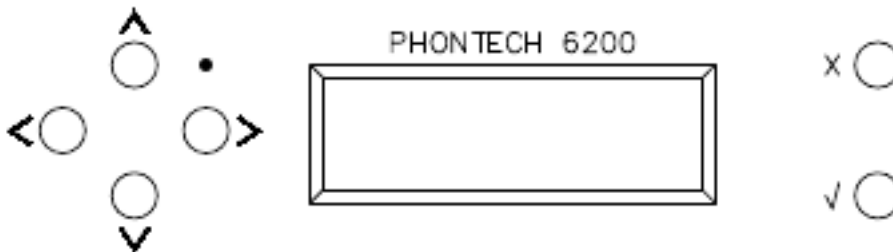


Figure 2-63 - Phontech 6200 Display and Buttons

### 2.4.3 FIRST RUN WIZARD

Unless the 6200 has been set up previously, it will run a first time setup wizard when powered on. This wizard will allow you to set the time and date, as well as choose if the 6200 shall be a new one or a replacement for another.

```
Press Enter
```

Figure 2-64 - First Step of the First Run Wizard

```
Adjust clock  
and date
```

Figure 2-65 - Adjusting Clock and Date in the First Run Wizard

---

```
Enter time :
  14 : 01
```

Figure 2-66 - Entering the Time in the First Run Wizard

```
Enter date :
  3 Jan 2013
```

Figure 2-67 - Entering the Date in the First Run Wizard

If the 6200 is a new 6200, you must select which number it is. The number shall be unique in a given 6200 network, and the first 6200 in a given network must be numbered 1.

```
New ICS?
Yes
```

Figure 2-68 - Is This a Replacement or a New Unit?

```
ICS Number :
1
```

Figure 2-69 - Select the Number for this Phontech 6200 Unit

If the 6200 is a replacement for a previous 6200, you may select which 6200 it is a replacement for among the ones currently missing. Please note that the replacement 6200 must have the same line modules installed. If this is not the case, the wizard will warn you, but you may still complete it and reconfigure the unit at your convenience. Once the wizard is completed, the unit will reboot, and can be configured and used.

#### 2.4.4 MENUS

When running, the display will show the Zenitel logo by default. When this is shown, pressing any of the buttons on the unit will show the menu system.

The Zenitel logo is displayed in a large, bold, lowercase, sans-serif font.

Figure 2-70 - The Zenitel Logo, the Default View

You may navigate through the menu system by using the up and down buttons. Enter will select or activate the currently chosen entry, while cancel will go back to the previously selected entry in the menu. Use the left and right buttons to select different options found on the same screen.

The PBX units have all the menus mentioned in these chapters while the Storage units only have the “Information” and “Setup” menus described in chapters 2.4.4.5 and 2.4.4.6 respectively.

---

### 2.4.4.1 Module Overview

```
^  □□□□□□ □□□□□□  
v  □□□□□□ □□□□□□
```

Figure 2-71 - Module Overview

This screen gives a quick overview of the current state of the line modules installed. If any UpN modules are installed, it is possible to see which ports on the front that have telephones connected.

### 2.4.4.2 Modules

```
^  
M o d u l e s  
v
```

Figure 2-72 - Modules Menu

```
^  1 : F X S  
v  P o r t s  1 - 4
```

Figure 2-73 - Viewing a Specific Module Position

This screen gives more in-depth information about each of the line modules installed, such as the type of module, the position it is installed in, and which ports on the front correspond to the module in question. It is also possible to select individual modules in order to see the extension (if any) that have been assigned to that particular port.

```
^  
C h 1 :  2 0 1  
v
```

Figure 2-74 - Extension for Port 1

### 2.4.4.3 Snom

```
^  
S n o m  
v
```

Figure 2-75 - Snom Menu

The Snom menu allows you to see the Snom telephones configured on this Phontech 6200 unit. It will show you the extension the Snom telephones are registered under, if the phone has registered and the MAC-address of the phone.

### 2.4.4.4 SIP

```
^  
S I P  
v
```

Figure 2-76 - SIP Menu



---

```
^ Ext: 1001
v Reg: No
```

Figure 2-77 - Viewing a SIP Extension

The SIP menu allows you to see the SIP telephones configured on this Phontech 6200 unit. It will show you the extension the SIP telephones are registered under and if the phone is currently registered.

#### 2.4.4.5 Information

```
^
Information
v
```

Figure 2-78 - Information Menu

The information menu contains different options which allow you to view information concerning the current state of this Phontech 6200 unit.

##### 2.4.4.5.1 Number and IP

```
^
Number and IP
v
```

Figure 2-79 - Number and IP Menu

```
ICS #1
IP: 172.16.0.1
```

Figure 2-80 - Viewing the Number and IP of this Phontech 6200

The number and IP menu will display which 6200 this is and its IP address.

##### 2.4.4.5.2 Error Information

```
^
Error
Information
v
```

Figure 2-81 - Error Information Menu

```
Fan failure
2389 RPM
```

Figure 2-82 - Viewing an Error – the Fan Speed is Below the Threshold

The Error Information menu provides a human-readable explanation of errors found in the system, if any. Multiple errors may be displayed and navigated through by using the Up and Down buttons.

---

### 2.4.4.5.3 Version

```
^  
  Version  
v
```

Figure 2-83 - Version Menu

```
ics6200 1.0  
- - Thu 3 Jan  
15:21:57 CET
```

Figure 2-84 - Viewing the Firmware Version

The Version menu provides the version and build date of the currently running firmware on this Phontech 6200 unit.

### 2.4.4.6 Setup

#### 2.4.4.6.1 Adjust Clock and Date

```
^  
  Adjust clock  
  and date  
v
```

Figure 2-85 - Adjust Clock and Date Menu

```
Enter time:  
  ^  
  7:21  
  v
```

Figure 2-86 - Adjust Clock

```
Enter date:  
  ^  
  3 Dec 2012  
  v
```

Figure 2-87 - Adjust Date

The Adjust Clock and Date menu allows you to change the time and date on this Phontech 6200 unit.

#### 2.4.4.6.2 Mark as Good

```
^  
  Mark as good  
v
```

Figure 2-88 - Mark as Good Menu

```
^  
  Are you sure?  
v  >Yes  No
```

Figure 2-89 - Selecting the Mark as Good Menu

---

The Mark as Good menu allows you to take a copy of the currently running firmware and configuration and store it as a "Known Good" image in a separate part of the unit. This firmware and configuration can then be restored using the "Revert to Known Good"-menu at a later date. If you choose to create a new "Known Good" image using the "Mark as Good" menu, the 6200 will reboot, and make a copy of the firmware and configuration. After this has completed, the 6200 unit will reboot into the regular firmware.

#### 2.4.4.6.3 FXO Tuning

```
^
  FXO tuning
v
```

Figure 2-90 - FXO Tuning Menu

*Note:* This sub menu is not available on the Storage units as they do not have any line modules.

The FXO Tuning menu allows you to automatically tune several parameters related to the FXO modules installed in your system. The tuning procedure is designed to help you reduce or eliminate unwanted echo that may occur when connecting to other telephony systems. Please note that the tuning procedure will cut off ongoing calls on the unit.

To start the tuning procedure, select the "FXO tuning" option. In order for the tuning procedure to work, you must supply a digit which will clear the dial-tone on the unit at the other end.

```
^ Enter digit
v 0
```

Figure 2-91 - Entering a single digit to stop the dial tone

The tuning procedure will tune each port of every FXO module that is installed in the Phontech 6200 unit. This process will take a few minutes. After it has completed, the Phontech 6200 unit will reboot, and the freshly tuned parameters will be applied.

```
Tuning 14
20% complete
```

Figure 2-92 - Tuning in Progress

#### 2.4.4.6.4 Factory Reset

```
^
  Factory reset
v
```

Figure 2-93 - Factory Reset Menu

```
^ Are you sure?
v > Yes No
```

Figure 2-94 - Selecting the Factory Reset Menu

The Factory Reset function allows you to discard all configuration data and settings stored on the 6200 and restore it to a pristine factory state. Once this has been performed, the Phontech 6200 unit will reboot, and present you with the first run setup wizard.

---

#### 2.4.4.6.5 Revert to Known Good

```
^ Revert to
v known good
```

Figure 2-95 - Revert to Known Good Menu

```
^ Are you sure?
v >Yes No
```

Figure 2-96 - Selecting the Revert to Known Good Menu

The Revert to Known Good function allows you to return to a previously set Known Good checkpoint or, if no such point has been created, to the factory defaults. Upon running this function, the Phontech 6200 unit will reboot and perform the rollback operation. This will take a few minutes. Once this has been completed, the Phontech 6200 unit will reboot again into the Known Good checkpoint. A Known Good checkpoint may be restored multiple times.

#### 2.4.4.6.6 Reboot

```
^
v Reboot
```

Figure 2-97 - Reboot Menu

```
^ Are you sure?
v >Yes No
```

Figure 2-98 - Selecting the Reboot Menu

The Reboot function allows you to reboot the Phontech 6200 unit. After the Reboot operation, the Phontech 6200 unit will return to its regular state.

## 2.5 CALL LOGGING WEB INTERFACE

The Phontech 6200 can be expanded to perform call logging and billing services. For this purpose, the Phontech 6202, Billing Unit must be hooked up and configured together with the system.

This is described in the separate handbook: **Users Manual for Phontech 6200 Call logging Interface**

## 2.6 PUBLIC ADDRESS IN 6200

An emergency public address functionality can be set up in a Phontech 6200 configuration. This requires an additional power amplifier 1671 (ref. 3.2.1.3.3), a loudspeaker network and two Emergency PA units, 6216 (ref. 8.5).

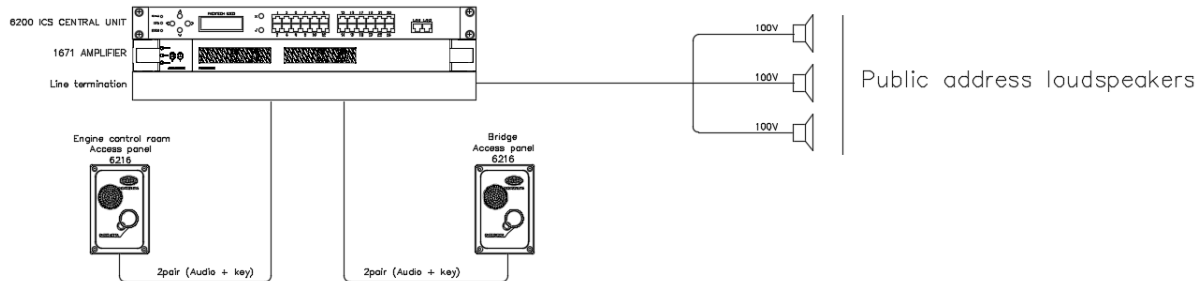


Figure 2-99

The two Emergency PA units 6216's must be connected and configured to a E&M board (ref. ch 1.12 / 2.3.4.7) and the termination module (ref ch.1.13). The amplifier also requires configuration of an E&M board and the connection set up to the termination module.

### 2.6.1 ADDING THE AMPLIFIER 1671 TO AN E&M BOARD TRUNK LINE

Add an E&M trunk line for the amplifier 1671

**Add Trunk Line**

Please enter a name and a description for this trunk line.

---

Please enter a name and a description for this trunk line

2/9

Name

Description

Figure 2-100

## Select E&M line type

**Add Trunk Line**  
Please select the trunk line type.

Please select the type of trunk line you would like to add

3/9

- SIP Client
- SIP Server
- FXO
- E&M

Figure 2-101

Select E&M port. This port will correspond with specific terminal on the terminal module (ref. ch 3.2.1.3.1)



Figure 2-102

Disable incoming calls. Line in level selection is indifferent in this case

**Add Trunk Line**  
Please choose the action to take when an incoming call is coming over this trunk line.

Please select the desired action when an incoming call is arriving.

5/9

- Call an extension
  - Park incoming calls after the initial conversation with the called operator
- Switchboard
- Direct Inward Dialing
- Disable incoming calls

EM Input Mode

- Line In Mode
- Microphone Mode

Figure 2-103

Select a dial out method. As this extension is only meant to open the interface and access the connected amplifier no prefix method is required.

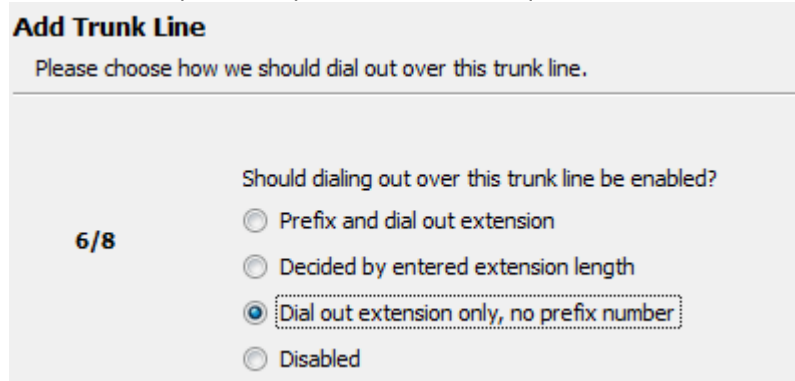


Figure 2-104

The system configuration requires a call out extension number. For the Emergency PA functionality, no extension is basically required. Select an “fictive” extension number out of the normal range.

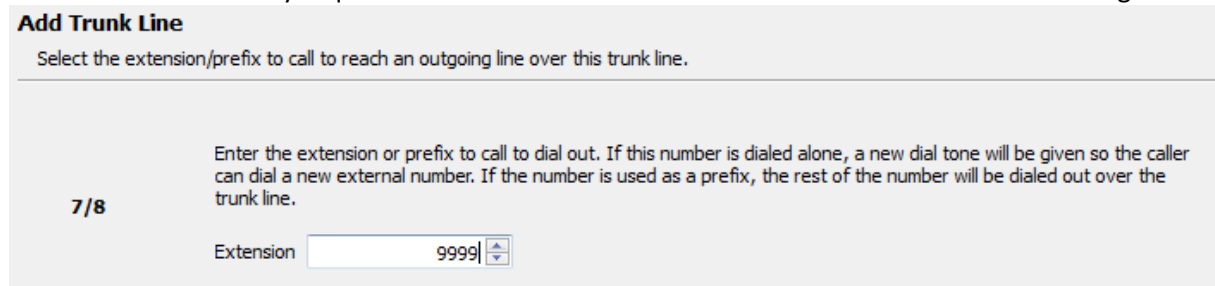


Figure 2-105

The amplifier 1671 shall be connected to the output port. (ref. ch 3.2.1.3.1)

## 2.6.2 PREPARING AN EMERGENCY PA GROUP

Add an EMPA Group. This function is only available in the toolbar menu.

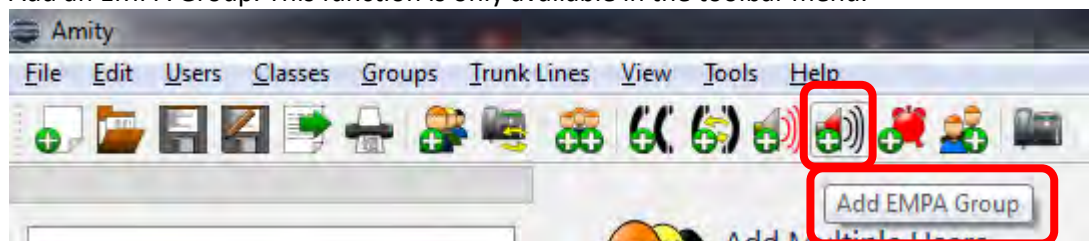


Figure 2-106



As this EMPA group is intended to be accessed by Emergency PA unit 6216 only, no extension is basically required. Select an “fictive” extension number out of the normal range.

The screenshot shows the 'Add EMPA Group Wizard' at the 'Basic Information' step, which is 2/4 of the process. The 'Group name' field contains 'Emergency Public Address announcement'. The 'Group description' field is empty. The 'Extension number' field is set to '10000'.

Add EMPA Group Wizard	
Basic Information	
2/4	Group name: Emergency Public Address announcement
	Group description: [Empty]
	Extension number: 10000

Figure 2-107

Add the previously prepared Trunk line; “Amplifier 1671 Connection” as a member of this EMPA group.

The screenshot shows the 'Add EMPA Group Wizard' at the 'EMPA Destinations' step, which is 3/4 of the process. The instruction is 'Add the Classes, Users or Extensions this group should call.' The 'Available' pane shows 'Classes' with 'All Users 12 users(s)'. The 'Members' pane shows 'Trunk Lines' with 'Amplifier 1671 Connection E&M trunk'. There are 'Add Selected' and 'Remove Selected' buttons between the panes.

Add EMPA Group Wizard	
EMPA Destinations	
3/4	Add the Classes, Users or Extensions this group should call.
Available	Members
Classes All Users 12 users(s)	Trunk Lines Amplifier 1671 Connection E&M trunk
Add Selected	
Remove Selected	

Figure 2-108

### 2.6.3 ADDING A 6216 TO AN E&M BOARD TRUNK LINE AND ACCESS TO THE EMPA GROUP

Add an E&M trunk line for the 6216

**Add Trunk Line**  
Please enter a name and a description for this trunk line.

Please enter a name and a description for this trunk line

**2/9**

Name 6216 Emergency PA Unit #1

Description

Figure 2-109

Select E&M line type

**Add Trunk Line**  
Please select the trunk line type.

Please select the type of trunk line you would like to add

**3/9**

SIP Client

SIP Server

FXO

E&M

Figure 2-110

Select E&M port. This port will correspond with specific terminal on the terminal module (ref. ch 3.2.1.3.1)

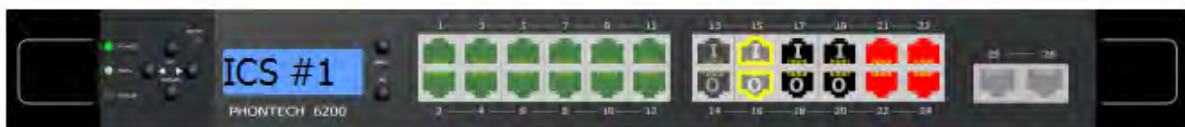


Figure 2-111

Select “Call an extension” and “Microphone Mode”

**Add Trunk Line**  
Please choose the action to take when an incoming call is coming over this trunk line.

5/9

Please select the desired action when an incoming call is arriving.

- Call an extension
  - Park incoming calls after the initial conversation with the called operator
- Switchboard
- Direct Inward Dialing
- Disable incoming calls

EM Input Mode

- Line In Mode
- Microphone Mode

Figure 2-112

Add the previously prepared EMPA group “Emergency Public Address announcement” as the incoming call action for this trunk line.

**Add Trunk Line**  
Select the receivers of incoming calls for this trunk line.

6/9

Select the extensions to be called when an incoming call is arriving through this trunk line.

Available

- Classes
  - All Users 12 users(s)
- Users
  - 100 Analog 100
  - 101 Analog 101
  - 102 Analog 102
  - 103 Analog 103
  - 104 Analog 104
  - 105 Analog 105
  - 106 Analog 106
  - 107 Analog 107
  - 108 Analog 108
  - 109 Analog 109
  - 110 Analog 110
  - 111 Analog 111
- Trunk Lines
  - Amplifier 1671 Connection E&M trunk

Selected

- Groups
  - 10000 Emergency Public Address announcement

Add Selected

Remove Selected

Figure 2-113

---

Then at last disable incoming call as this is not an option for the Emergency PA Unit.

**Add Trunk Line**

Please choose how we should dial out over this trunk line.

---

**7/9**

Should dialing out over this trunk line be enabled?

- Prefix and dial out extension
- Decided by entered extension length
- Dial out extension only, no prefix number
- Disabled

Figure 2-114

Any more 6216, Emergency PA units is added to access this “Emergency Public Address announcement” group.

**AN EMPA GROUP HAS AN OVERALL PRIORITY IN THE SYSTEM AND WILL OVERRIDE ANY OTHER ACTIONS.**

---

## 2.7 PHONTECH 6200 AS PA/GA SPEAKER LOOP

The Phontech 6200 system can be configured as a speaker loop for an existing PA/GA system such as MPA 1600. The alarm and PA messages will be administered from the PA/GA system and the phones in the Phontech 6200 system will be used as a speaker loop where the alarm or message will be played. This requires an E&M connection between the Phontech 6200 and the PA/GA system as well as telephones in the Phontech 61xx, 62xx or 72xx ranges. The messages from the PA/GA system will always take priority if configured as outlined in this chapter.

**Note:** Telephone stations in priority areas cannot be used as a speaker loop because they must remain available for two way communication in the event of a PA or GA event.

The PAGA systems audio output should be connected to the Phontech 6200 E&M input and a closing contact for PA and GA events on the PAGA side should be connected to the same E&M input port (ref. ch 1.12) and (ref. ch 3.2.1.3.1).

### 2.7.1 CREATE EMPA GROUP FOR TELEPHONE STATIONS

Create the EMPA group that will be used when distributing the PA/GA alarms and messages. This can be done by clicking the 'Groups' menu and selecting 'Add EMPA Group'.

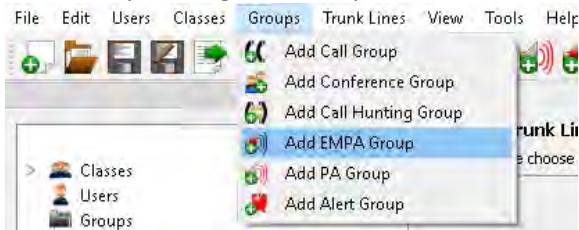


Figure 2-115: Create EMPA group

Enter a name and select an unused extension number for it.

**Add EMPA Group Wizard**

Basic Information

2/4

Group name	<input type="text" value="PAGA Group"/>
Group description	<input type="text"/>
Extension number	<input type="text" value="50"/>

Figure 2-116: Enter group information

Select the recipients of PA/GA messages and alarms. Note that only Phontech 61xx, 62xx and 72xx stations are supported and high priority stations are not listed in the available list.

**NOTE:** An EMPA group has an overall priority in the system and will override any other actions, so don't select stations that should be usable during a PA/GA event.

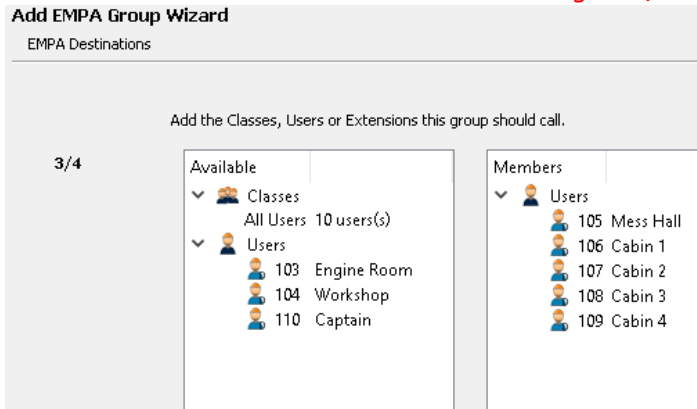


Figure 2-117: Select group members

Complete the wizard and locate the newly created group in the left hand extension list. Double click on it or right click and select 'Properties'.

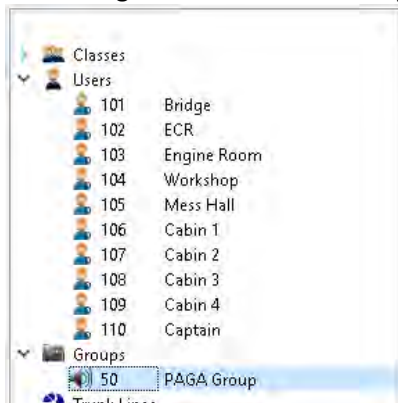


Figure 2-118: Locate the new EMPA group

From the opened properties screen, select the 'Skip Ding Dong before message' checkbox to avoid a duplicate ding dong when the PA/GA system already generates one. Click the Save button in the bottom right to apply the changes and proceed to configure the PA/GA trunk line.

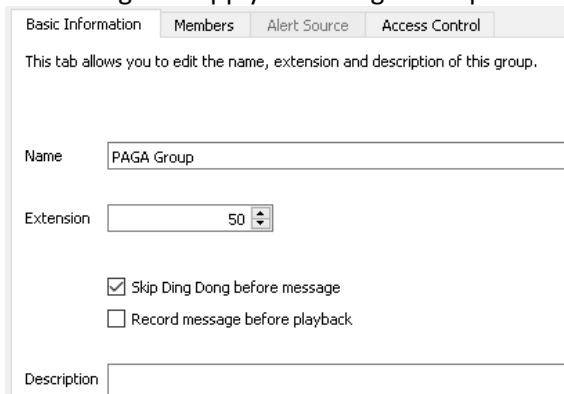


Figure 2-119: Disable Phontech 6200 generated Ding Dong

## 2.7.2 ADDING THE TRUNK LINE CONNECTED TO THE PA/GA SYSTEM

Add an E&M trunk line for the PA/GA system, detailed information can be found in (ref ch 2.3.4.7).

**Add Trunk Line**  
Please enter a name and a description for this trunk line.

2/9

Please enter a name and a description for this trunk line

Name

Description

Figure 2-120: Adding a trunk line to the PA/GA system

Select E&M line type.

**Add Trunk Line**  
Please select the trunk line type.

3/9

Please select the type of trunk line you would like to add

SIP Client

SIP Server

FXO

E&M

Figure 2-121: Select line type

Select E&M port. This port will correspond with specific terminal on the terminal module (ref. ch 3.2.1.3.1)

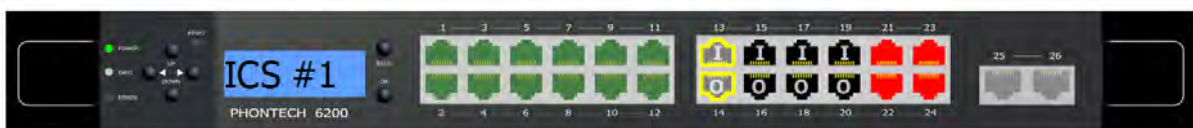
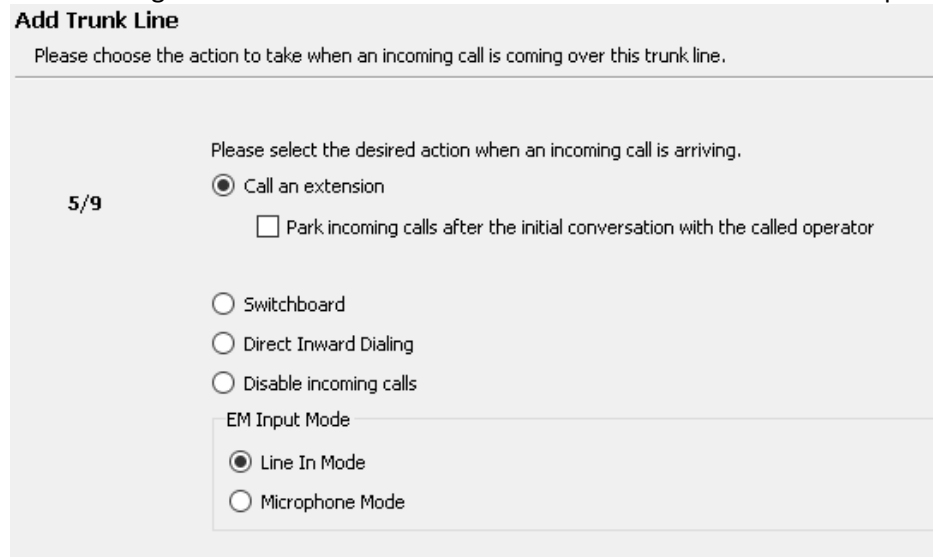


Figure 2-122: Select E&M port



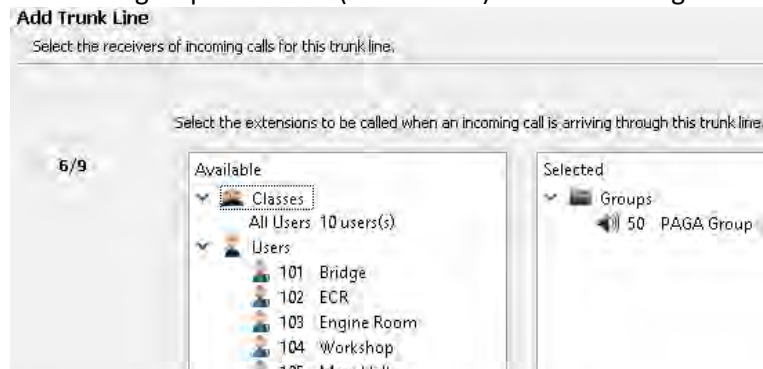
---

Set Incoming action to Call an extension and select Line In Mode as EM Input Mode.



**Figure 2-123: Select incoming call action**

Select the group created in (ref ch 2.7.1) as the incoming call handler for the trunk line.



**Figure 2-124: Select incoming destination**

Disable the outgoing actions for this trunk line. Alternatively, a Dial Out Extension can be selected if telephone stations should be allowed to send PA messages through the E&M interface and to the PAGA system. This requires additional wiring of the E&M output as described in (ref ch 1.12) and (ref ch 3.2.1.3.1).

### Add Trunk Line

Please choose how we should dial out over this trunk line.

7/9

Should dialing out over this trunk line be enabled?

- Prefix and dial out extension
- Decided by entered extension length
- Dial out extension only, no prefix number
- Disabled

Should billing information be tracked on this trunk line?

**Note:** Billing not available as no call logging unit has been configured. Do this under 'ICS 6200 Storage Settings'.

- No**  
No extra billing information is tracked on this trunk line.
- Extension based**  
Users are identified by the phone they are using to call the billed lines.  
Users are automatically created from the configured user extensions.
- Pin based**  
Users are identified by a pin they enter when they call a billed line.  
The pins and users are configured from the call logging web interface.

**Note:**

Internal calls will only be tracked by the extensions that were used.

- Enable pre-paid billing meters
- Delay billing by 20 seconds

**Figure 2-125: Disable outgoing actions**

The setup should now be complete and the configuration should be sent to the Phontech 6200 units by pressing the 'Send Configuration' button in the main screen.

### 3 SYSTEM CABINETS/RACKS AND TYPICAL CONFIGURATIONS

#### 3.1 CONFIGURATIONS FOR 6200

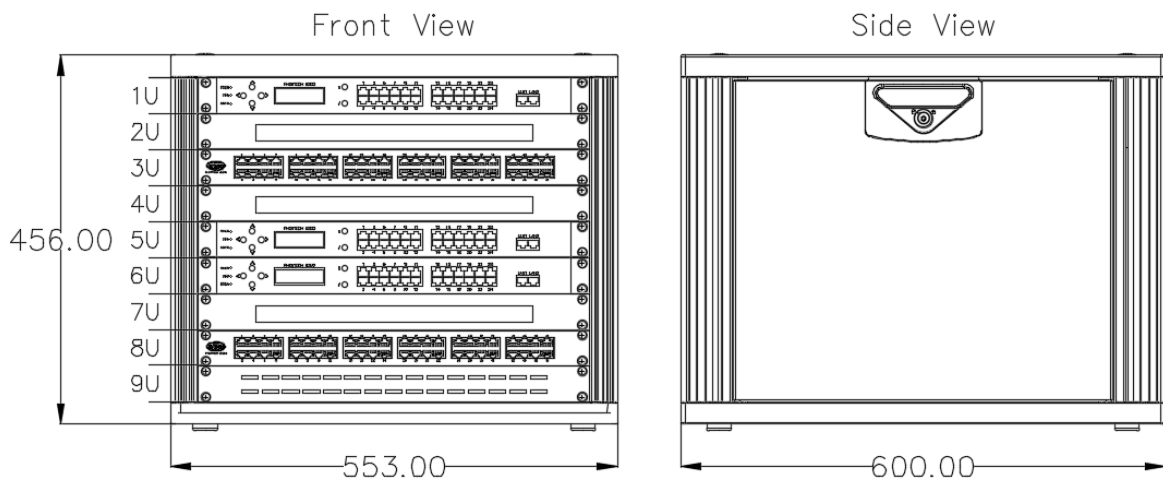
The basic cabinets for the Phontech 6200, ICS system configurations are a range of 4 different mini rack sizes; **9U** (4000018934ICS), **16U** (4000019835ICS), **25U** (4000018936ICS) and **34U** (4000018937ICS). A 34U combination rack for ICS and PAGA is also available (4000018937COM). All cabinets/racks are based on the Schroff Novastar series, colour RAL7021 BlackGrey. All racks are floor/desk mounted with cable entry from the bottom. Each cabinet comes in either a AC primary / DC backup (AC/DC) or AC primary / AC backup (AC/AC) power selection.

##### 3.1.1 18934ICS, 9U PHONTECH SYSTEM CABINET

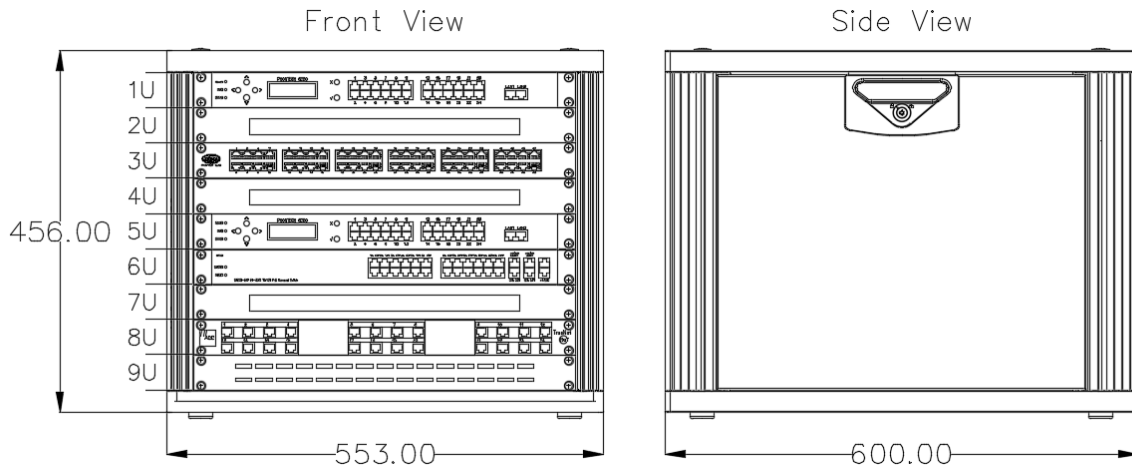
This 9U cabinet has a flexible configuration. Specific Layout drawings are available upon request within the standard configurations. Each layout is further configurable within each Phontech 6200 module (24L (FXS/FXO/UpN/E&M) and 48IP (VoIP registrations):

Drawing No.:	Sequence No:	Max configuration
14848-001-ML	-01	72L / -IP
-"-	-02	48L / -IP
-"-	-03	24L / -IP
-"-	-04	48L / 24IP
-"-	-05	24L / 48IP
-"-	-06	24L / 24IP
-"-	-07	-L / 48IP
-"-	-08	-L / 24IP

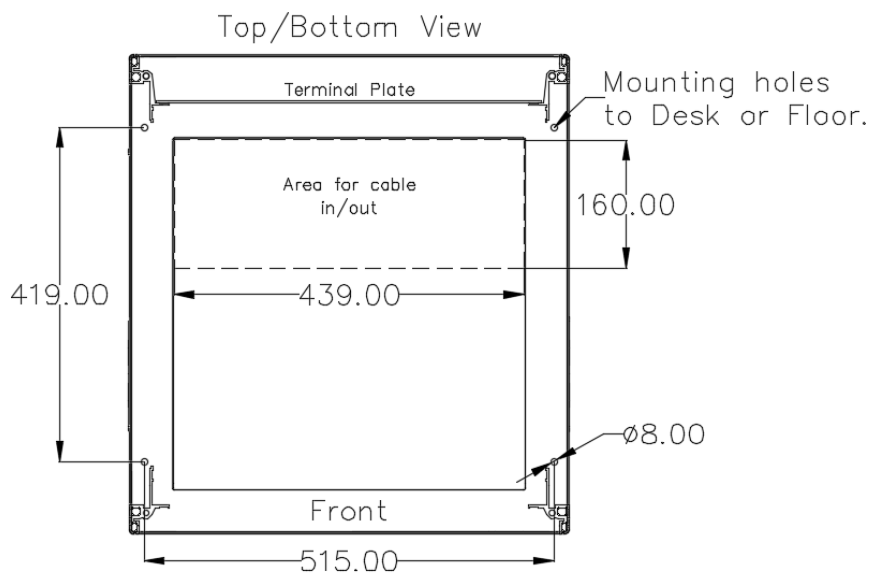
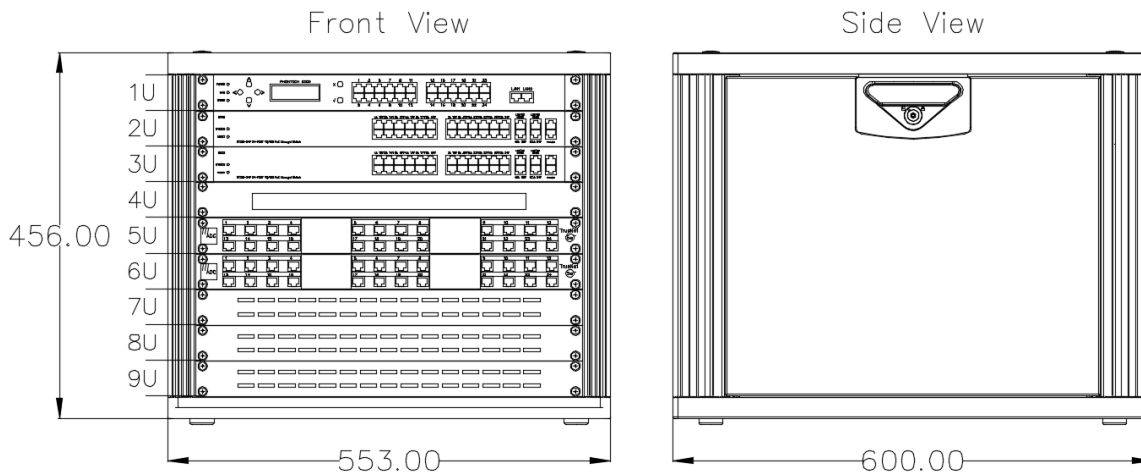
Layout example (14848-001-ML-01), 3 pcs 6200; 72 Lines, 0 VoIP.



**Layout example (14848-001-ML-04), 2 pcs 6200, 1 LAN Sw; 48 Lines, 24 VoIP.**

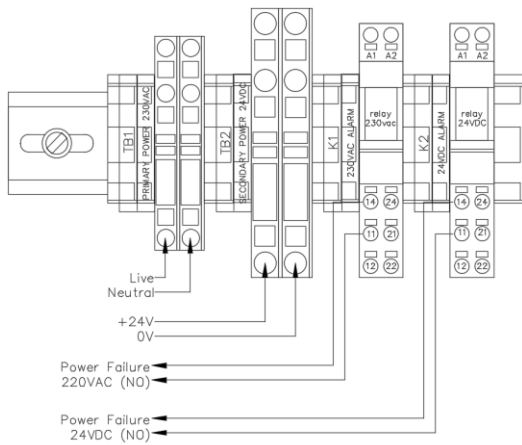
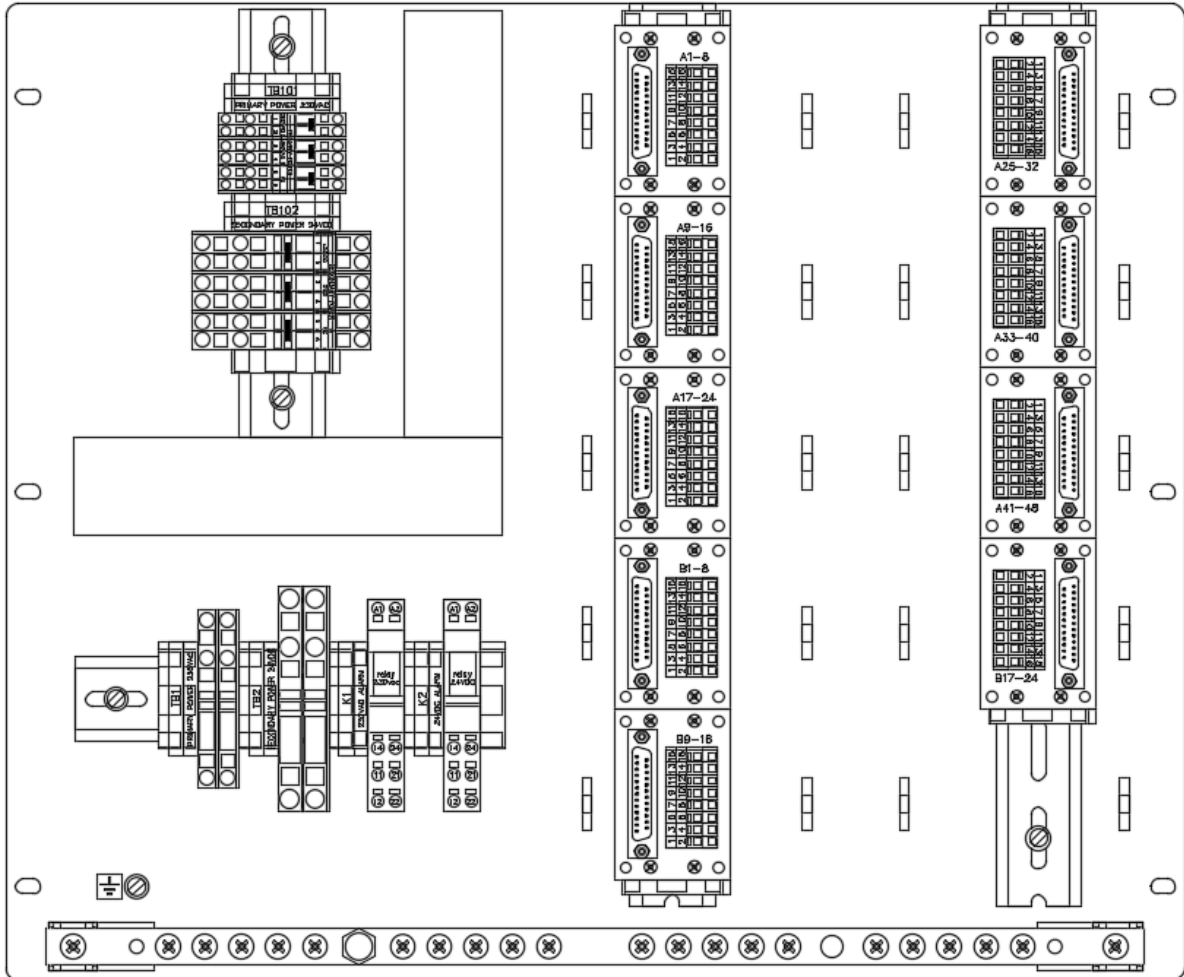


**Layout example (14848-001-ML-07) 1 pc 6200; 0 Lines, 48 VoIP.**

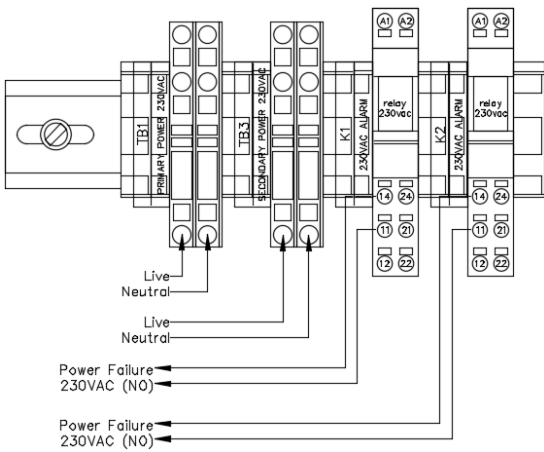
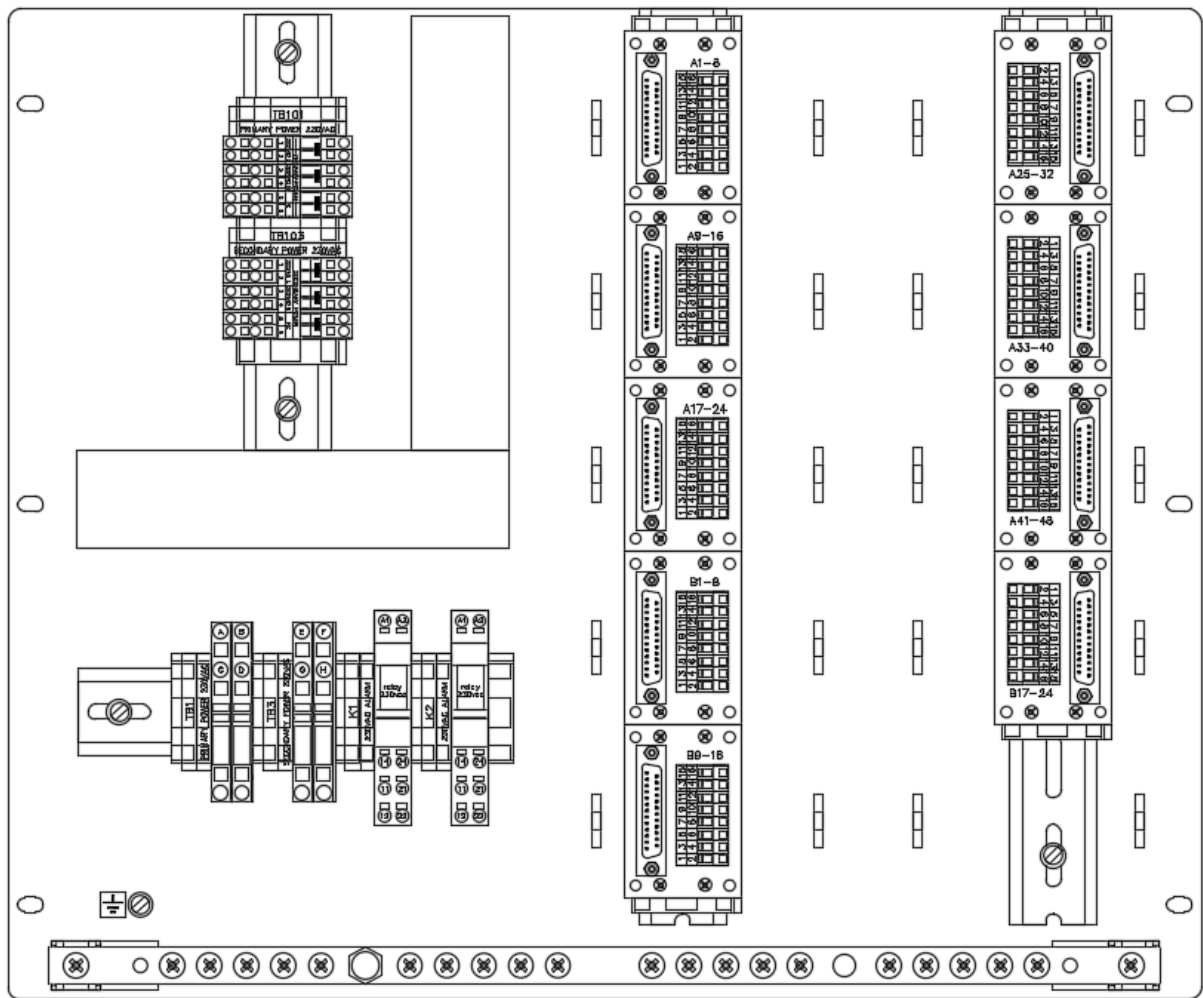


**Terminal arrangement and connection**

**AC/DC (14848-001-TA-01 / 14848-001-EC-01):**



**AC/AC (14848-001-TA-02 / 14848-001-EC-02):**



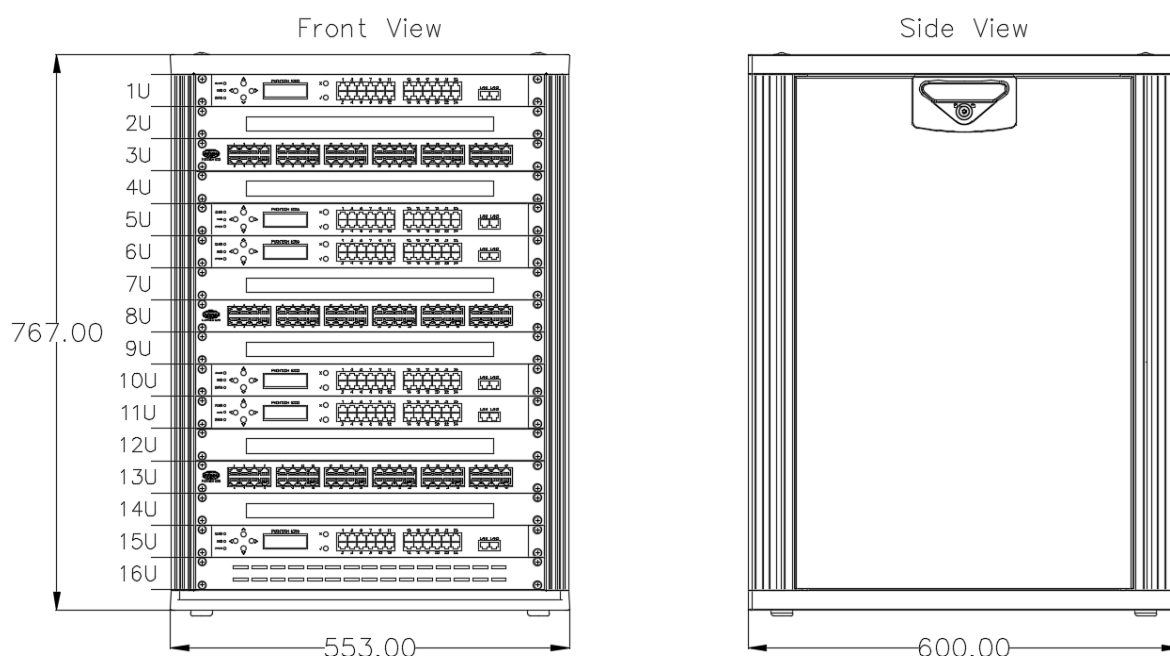
For further connection details each system is supplied with a project dependent cable plan. This is during production filled in with factory defaults and may be added further installation specific cable details. See chapter 3.3 for details.

### 3.1.2 4000018935ICS, 16U PHONTECH SYSTEM CABINET

This 16U cabinet has a flexible configuration. Specific Layout drawings are available upon request within the standard configurations. Each layout is further configurable within each Phontech 6200 module (24L (FXS/FXO/UpN/E&M) and 48IP (VoIP registrations):

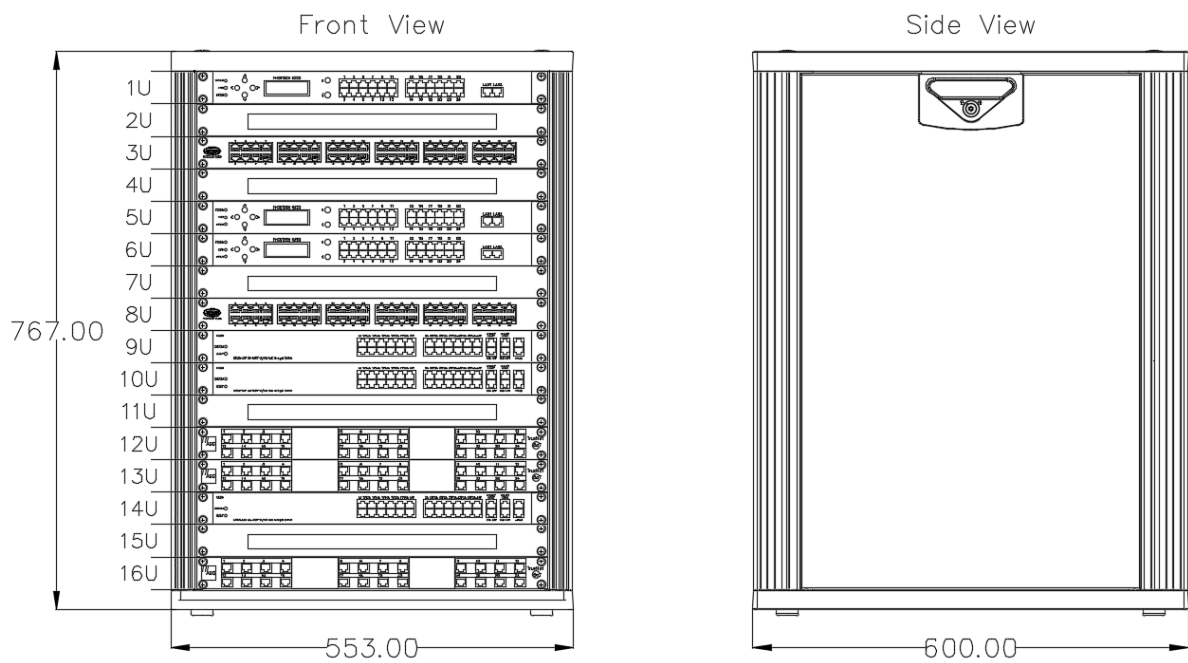
Drawing No.:	Sequence No:	Max configuration	Drawing No.:	Sequence No:	Max configuration
14848-004-ML	-01	144L / -IP	14848-004-ML	-14	48L / 72IP
-"-	-02	120L / -IP	-"-	-15	48L / 48IP
-"-	-03	96L / -IP	-"-	-16	48L / 24IP
-"-	-04	72L / -IP	-"-	-17	24L / 96IP
-"-	-05	48L / -IP	-"-	-18	24L / 72IP
-"-	-06	24L / -IP	-"-	-19	24L / 48IP
-"-	-07	120L / 24IP	-"-	-20	24L / 24IP
-"-	-08	96L / 48IP	-"-	-21	-L / 120IP
-"-	-09	96L / 24IP	-"-	-22	-L / 96IP
-"-	-10	72L / 72IP	-"-	-23	-L / 72IP
-"-	-11	72L / 48IP	-"-	-24	-L / 48IP
-"-	-12	72L / 24IP	-"-	-25	-L / 24IP
-"-	-13	48L / 96IP			

Layout example (14848-004-ML-01), 6 pcs 6200; 144 Lines, 0 VoIP.

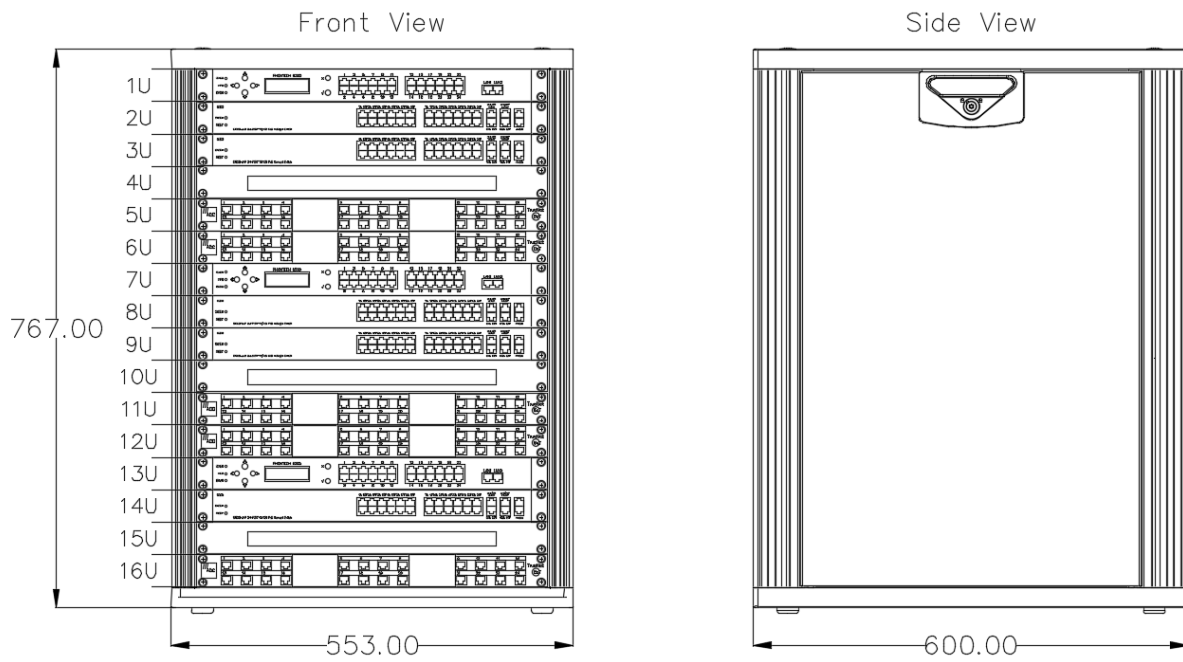


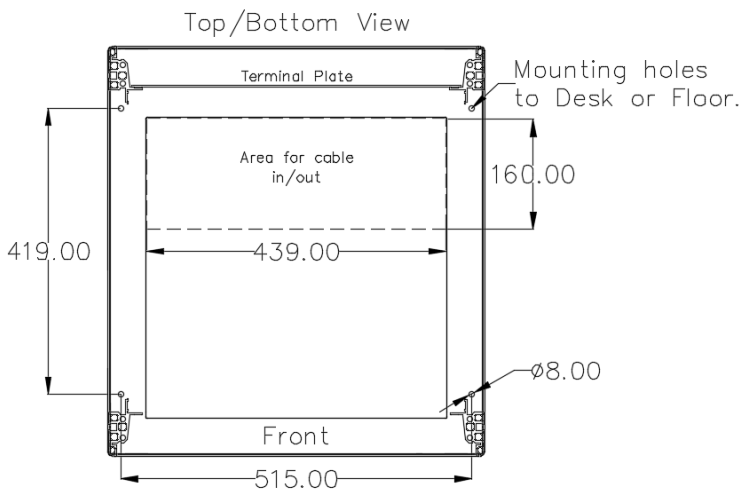
Layout example (14848-004-ML-10), 3 pcs 6200, 3 Lan Sw; 72 Lines, 72 VoIP.



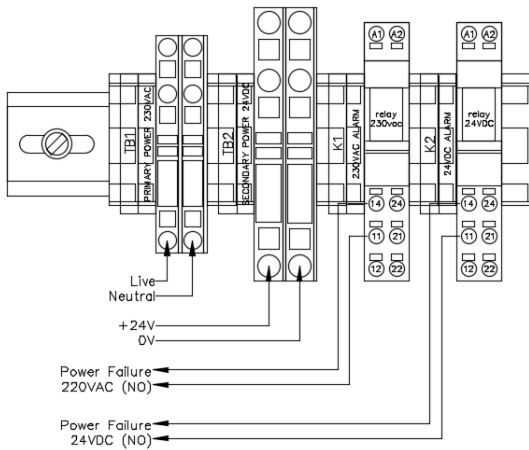


**Layout example (14848-004-ML-21), 3 pcs 6200, 5 Lan Sw; 0 Lines, 120 VoIP.**

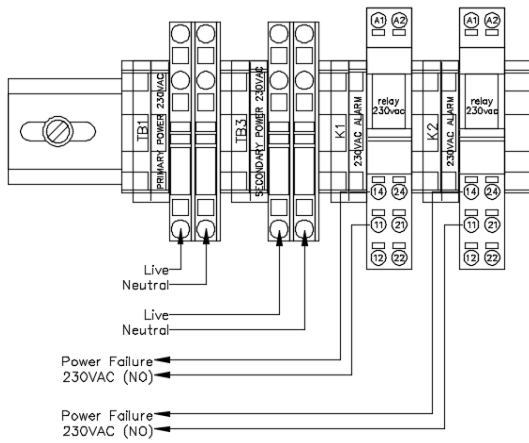




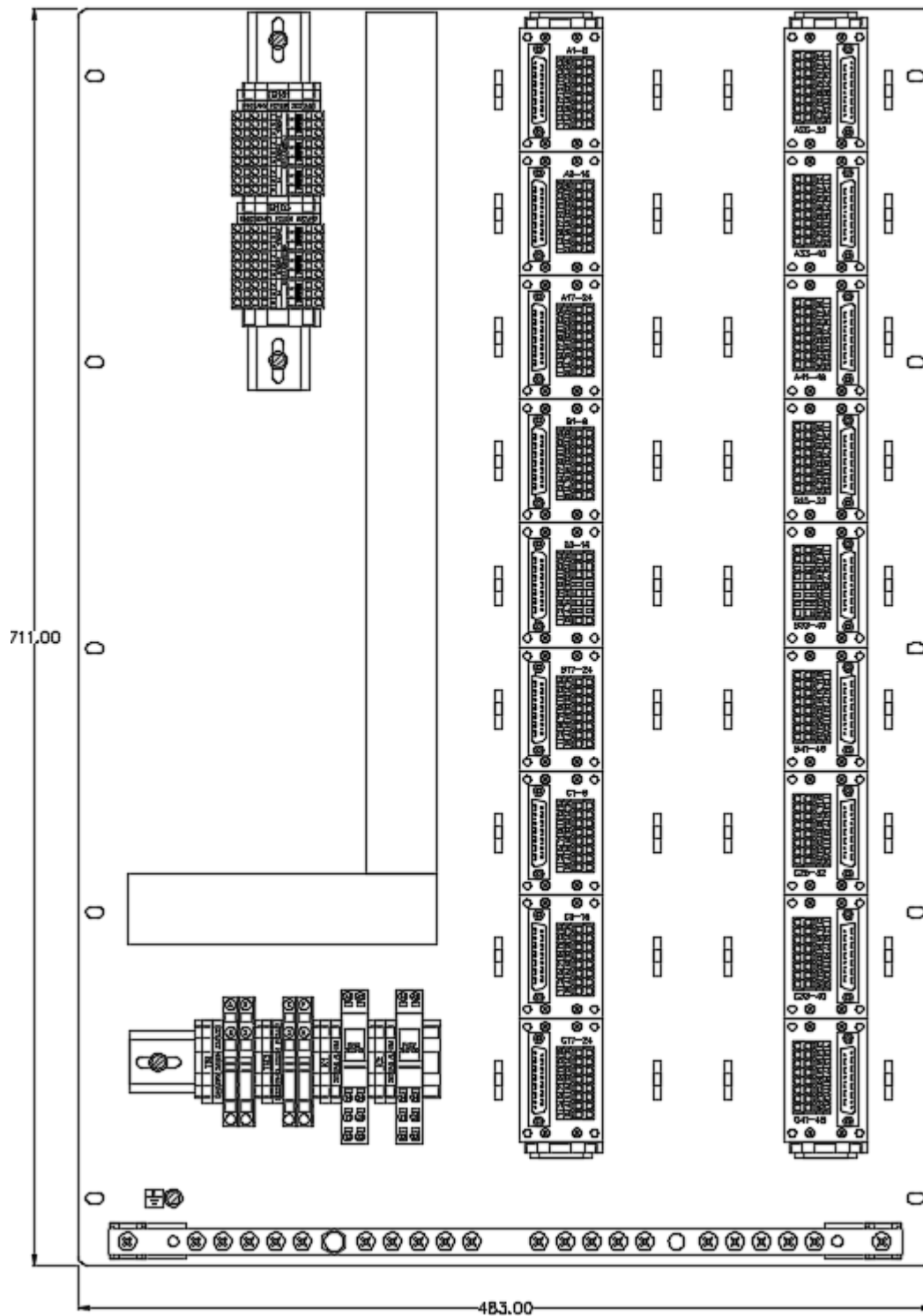




**AC/AC (14848-004-TA-02 / 14848-004-EC-02):**



For further connection details each system is supplied with a project dependent cable plan. This is during production filled in with factory defaults and may be added further installation specific cable details. See chapter 3.3 for details.

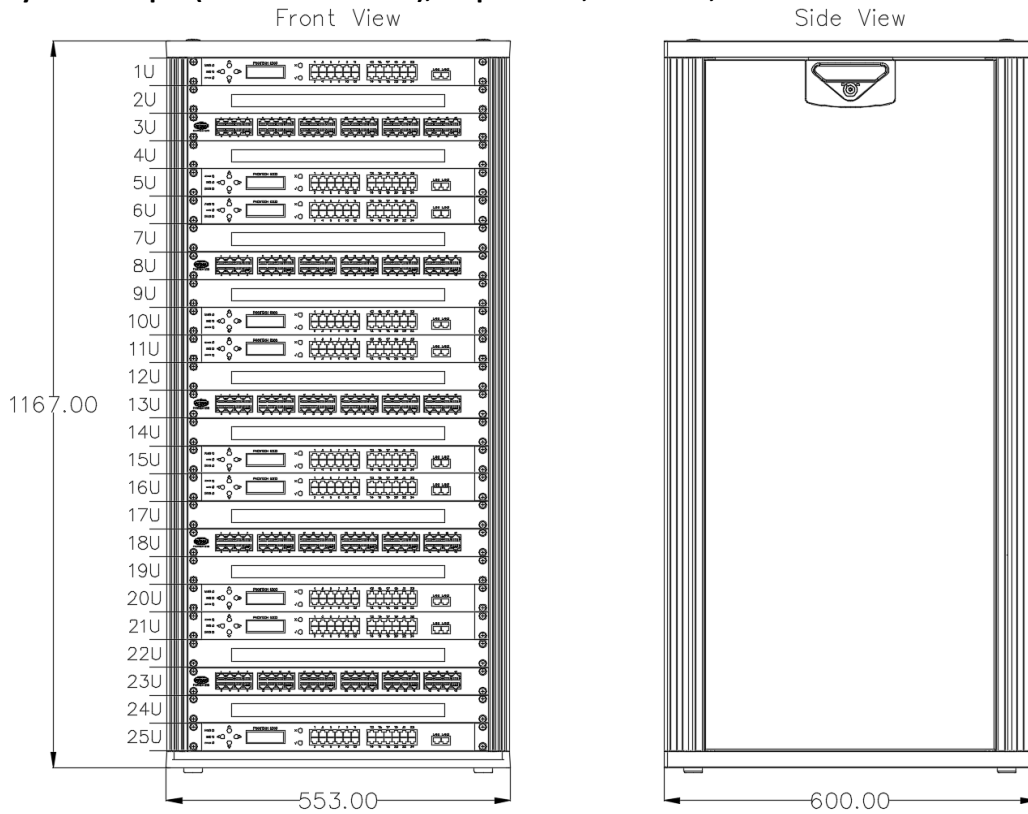


### 3.1.3 18936ICS, 25U PHONTECH SYSTEM CABINET

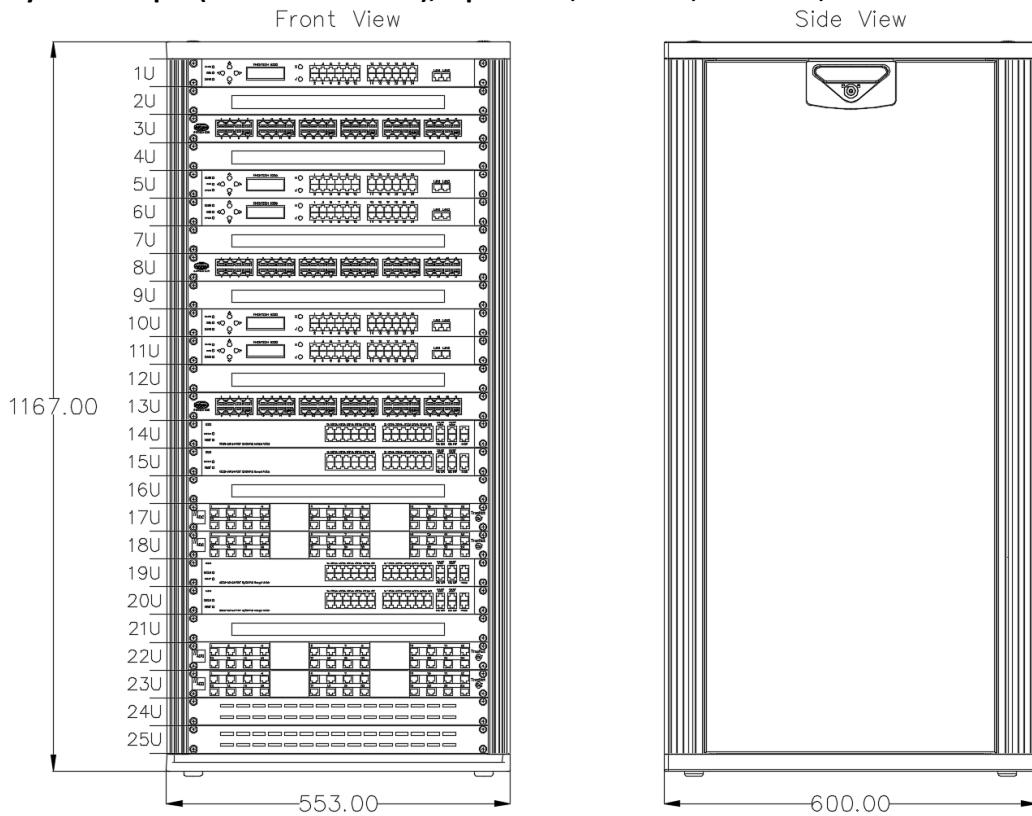
This 25U cabinet has a flexible configuration. Specific Layout drawings are available upon request within the standard configurations. Each layout is further configurable within each Phontech 6200 module (24L (FXS/FXO/UpN/E&M) and 48IP (VoIP registrations):

Drawing No.:	Sequence No:	Max configuration	Drawing No.:	Sequence No:	Max configuration
14848-007-ML	-01	240L / -IP	14848-007-ML	-29	72L / 120IP
-"-	-02	216L / -IP	-"-	-30	72L / 96IP
-"-	-03	192L / -IP	-"-	-31	72L / 72IP
-"-	-04	168L / -IP	-"-	-32	72L / 48IP
-"-	-05	144L / -IP	-"-	-33	72L / 24IP
-"-	-06	120L / -IP	-"-	-34	48L / 168IP
-"-	-07	96L / -IP	-"-	-35	48L / 144IP
-"-	-08	72L / -IP	-"-	-36	48L / 120IP
-"-	-09	48L / -IP	-"-	-37	48L / 96IP
-"-	-10	24L / -IP	-"-	-38	48L / 72IP
-"-	-11	24L / -IP	-"-	-39	48L / 48IP
-"-	-12	192L / 24IP	-"-	-40	48L / 24IP
-"-	-13	168L / 48IP	-"-	-41	24L / 168IP
-"-	-14	168L / 24IP	-"-	-42	24L / 144IP
-"-	-15	144L / 72IP	-"-	-43	24L / 120IP
-"-	-16	144L / 48IP	-"-	-44	24L / 96IP
-"-	-17	144L / 24IP	-"-	-45	24L / 72IP
-"-	-18	120L / 96IP	-"-	-46	24L / 48IP
-"-	-19	120L / 72IP	-"-	-47	24L / 24IP
-"-	-20	120L / 48IP	-"-	-48	-L / 192IP
-"-	-21	120L / 24IP	-"-	-49	-L / 168IP
-"-	-22	96L / 144IP	-"-	-50	-L / 144IP
-"-	-23	96L / 120IP	-"-	-51	-L / 120IP
-"-	-24	96L / 96IP	-"-	-52	-L / 96IP
-"-	-25	96L / 72IP	-"-	-53	-L / 72IP
-"-	-26	96L / 48IP	-"-	-54	-L / 48IP
-"-	-27	96L / 24IP	-"-	-55	-L / 24IP
-"-	-28	72L / 144IP			

**Layout example (14848-007-ML-01), 10 pcs 6200; 240 Lines, 0 VoIP.**

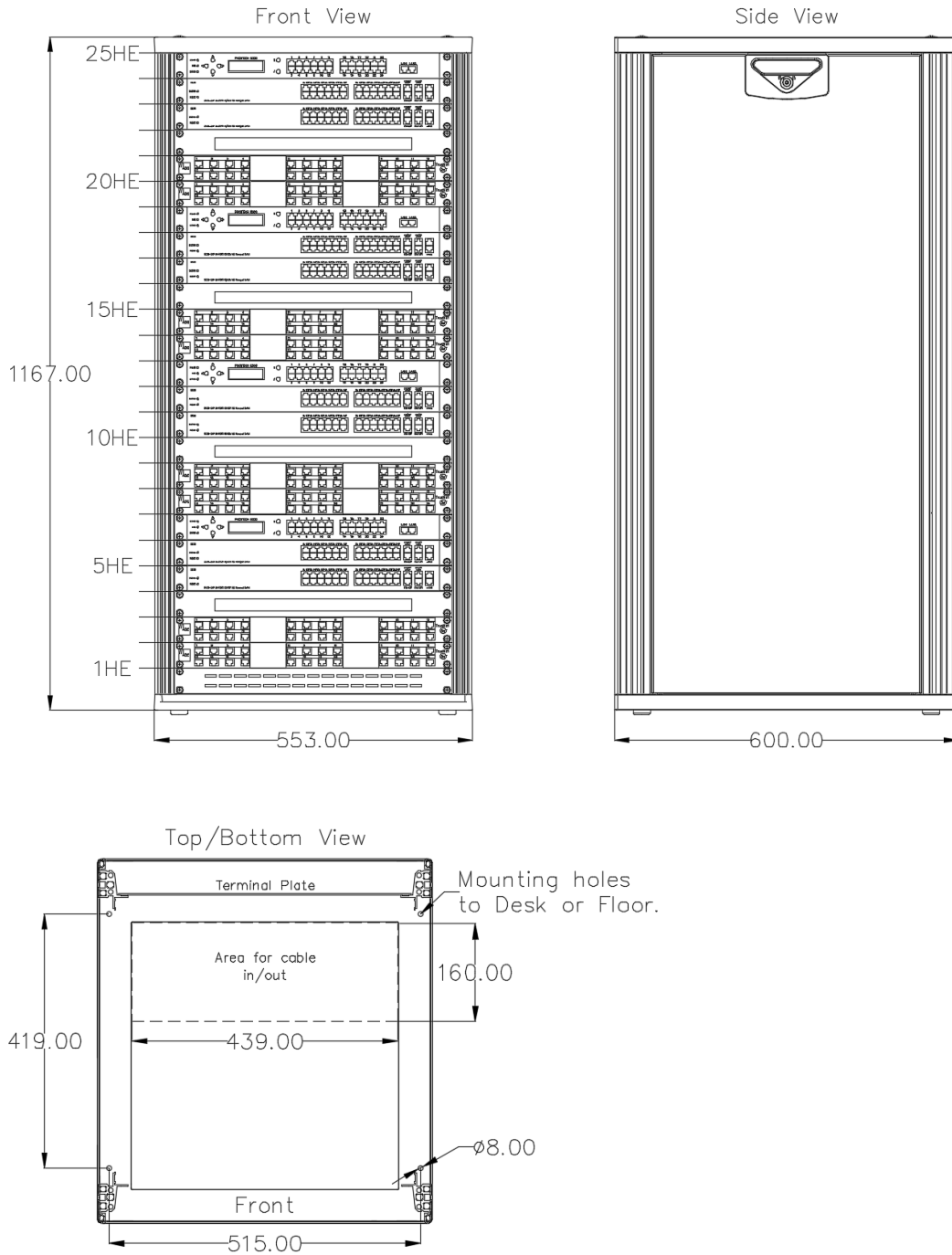


**Layout example (14848-007-ML-18), 5 pcs 6200, 4 Lan Sw; 120 Lines, 96 VoIP.**





**Layout example (14848-007-ML-48), 4 pcs 6200, 8 Lan Sw; 0 Lines, 192 VoIP.**



**Terminal arrangement and connection**

**AC/DC (14848-007-TA-01 / 14848-007-EC-01):** See documents 14848-007-TA-01 and 14848-007-EC-01

**AC/AC (14848-007-TA-02 / 14848-007-EC-02):** See documents 14848-007-TA-02 and 14848-007-EC-02

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For further connection details each system is supplied with a project dependent cable plan. This is during production filled in with factory defaults and may be added further installation specific cable details. See chapter 3.3 for details.

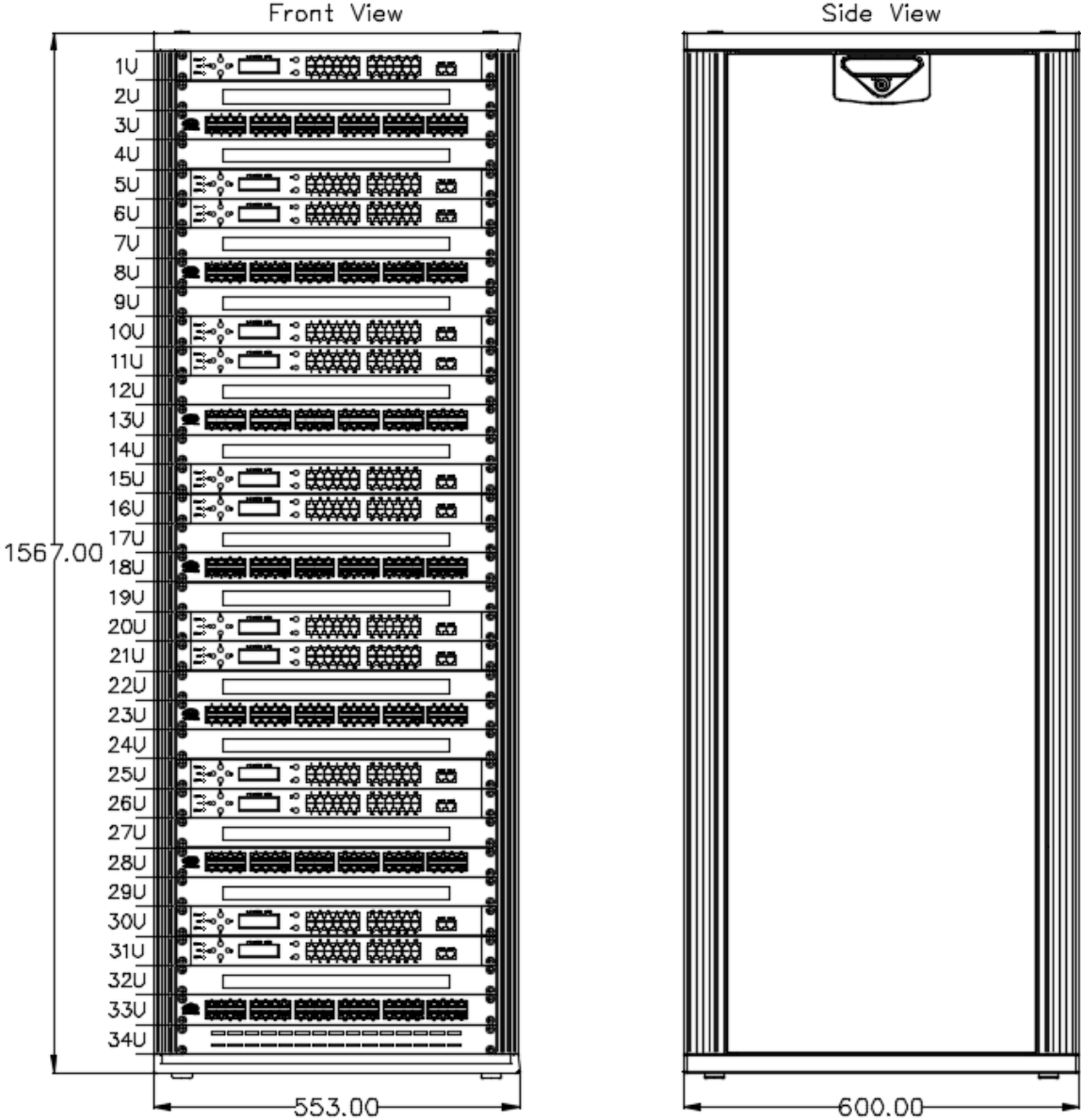
### 3.1.4 18937ICS, 34U PHONTECH SYSTEM CABINET

This 34U cabinet has a flexible configuration. Specific Layout drawings are available upon request within the standard configurations. Each layout is further configurable within each Phontech 6200 module (24L (FXS/FXO/UpN/E&M) and 48IP (VoIP registrations):

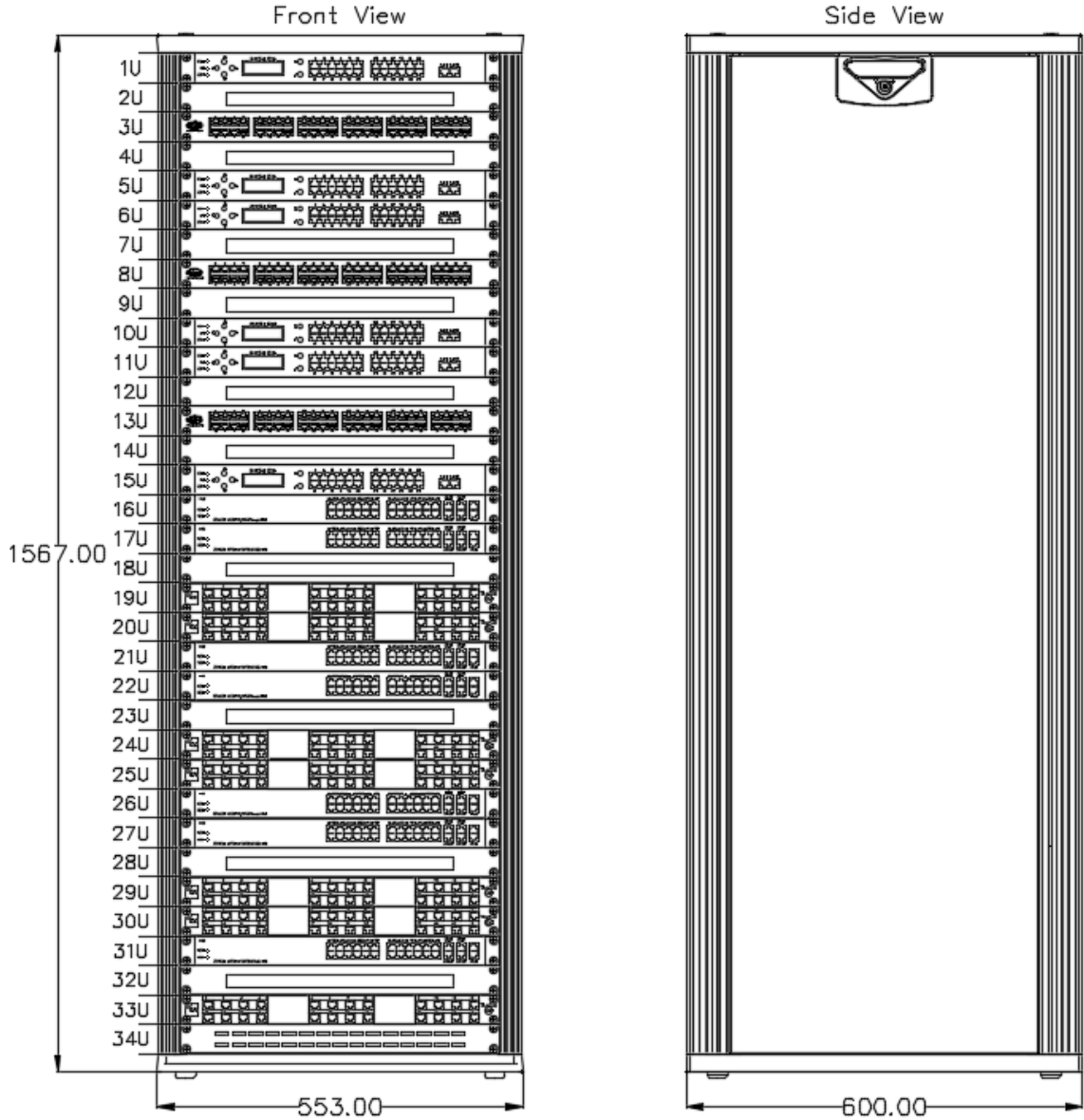
Drawing No.:	Sequence No:	Max configuration	Drawing No.:	Sequence No:	Max configuration
14848-007-ML	-01	312L / -IP	14848-007-ML	-50	96L / 192IP
-"-	-02	288L / -IP	-"-	-51	96L / 168IP
-"-	-03	264L / -IP	-"-	-52	96L / 144IP
-"-	-04	240L / -IP	-"-	-53	96L / 120IP
-"-	-05	216L / -IP	-"-	-54	96L / 96IP
-"-	-06	192L / -IP	-"-	-55	96L / 72IP
-"-	-07	168L / -IP	-"-	-56	96L / 48IP
-"-	-08	144L / -IP	-"-	-57	96L / 24IP
-"-	-09	120L / -IP	-"-	-58	72L / 216IP
-"-	-10	96L / -IP	-"-	-59	72L / 192IP
-"-	-11	72L / -IP	-"-	-60	72L / 168IP
-"-	-12	48L / -IP	-"-	-61	72L / 144IP
-"-	-13	24L / -IP	-"-	-62	72L / 120IP
-"-	-14	288L / 24IP	-"-	-63	72L / 96IP
-"-	-15	264L / 48IP	-"-	-64	72L / 72IP
-"-	-16	264L / 24IP	-"-	-65	72L / 48IP
-"-	-17	240L / 72IP	-"-	-66	72L / 24IP
-"-	-18	240L / 48IP	-"-	-67	48L / 240IP
-"-	-19	240L / 24IP	-"-	-68	48L / 216IP
-"-	-20	216L / 96IP	-"-	-69	48L / 192IP
-"-	-21	216L / 72IP	-"-	-70	48L / 168IP
-"-	-22	216L / 48IP	-"-	-71	48L / 144IP
-"-	-23	216L / 24IP	-"-	-72	48L / 120IP
-"-	-24	192L / 120IP	-"-	-73	48L / 96IP
-"-	-25	192L / 96IP	-"-	-74	48L / 72IP
-"-	-26	192L / 72IP	-"-	-75	48L / 48IP
-"-	-27	192L / 48IP	-"-	-76	48L / 24IP
-"-	-28	192L / 24IP	-"-	-77	24L / 240IP
-"-	-29	168L / 144IP	-"-	-78	24L / 216IP
-"-	-30	168L / 120IP	-"-	-79	24L / 192IP
-"-	-31	168L / 96IP	-"-	-80	24L / 168IP
-"-	-32	168L / 72IP	-"-	-81	24L / 144IP
-"-	-33	168L / 48IP	-"-	-82	24L / 120IP
-"-	-34	168L / 24IP	-"-	-83	24L / 96IP
-"-	-35	144L / 168IP	-"-	-84	24L / 72IP
-"-	-36	144L / 144IP	-"-	-85	24L / 48IP
-"-	-37	144L / 120IP	-"-	-86	24L / 24IP
-"-	-38	144L / 96IP	-"-	-87	-L / 264IP
-"-	-39	144L / 72IP	-"-	-88	-L / 240IP
-"-	-40	144L / 48IP	-"-	-89	-L / 216IP

<b>Drawing No.:</b>	<b>Sequence No:</b>	<b>Max configuration</b>	<b>Drawing No.:</b>	<b>Sequence No:</b>	<b>Max configuration</b>
14848-007-ML	-41	144L / 24IP	14848-007-ML	-90	-L / 192IP
-"-	-42	120L / 192IP	-"-	-91	-L / 168IP
-"-	-43	120L / 168IP	-"-	-92	-L / 144IP
-"-	-44	120L / 144IP	-"-	-93	-L / 120IP
-"-	-45	120L / 120IP	-"-	-94	-L / 96IP
-"-	-46	120L / 96IP	-"-	-95	-L / 72IP
-"-	-47	120L / 72IP	-"-	-96	-L / 48IP
-"-	-48	120L / 48IP	-"-	-97	-L / 24IP
-"-	-49	120L / 24IP			

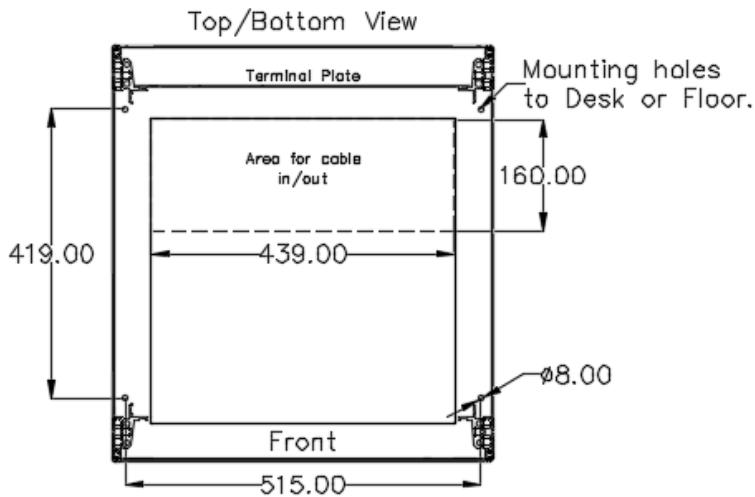
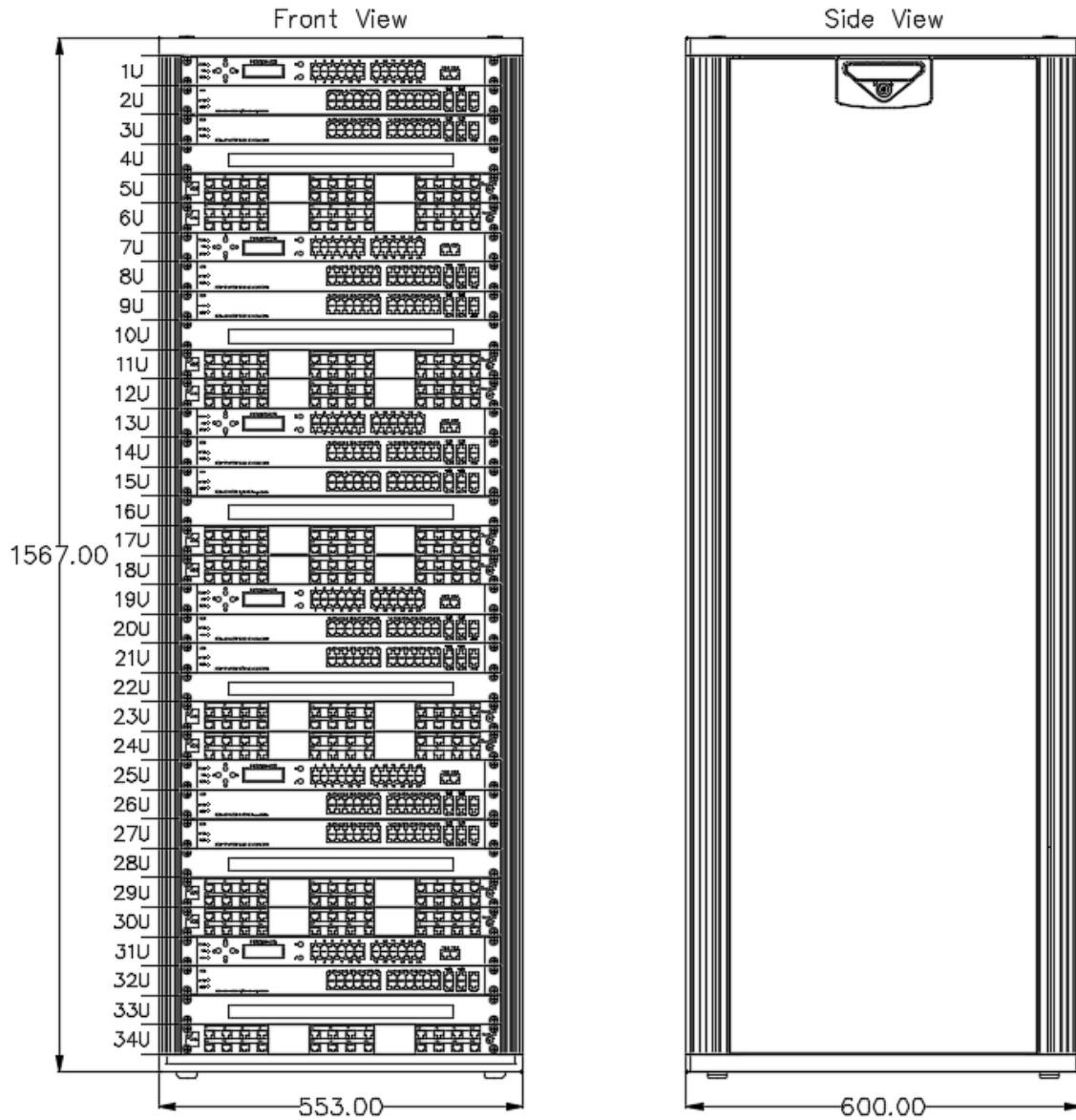
Layout example (14848-010-ML-01), 13 pcs 6200; 312 Lines, 0 VoIP.



Layout example (14848-010-ML-35), 6 pcs 6200, 7 Lan Sw; 144 Lines, 168 VoIP.



Layout example (14848-010-ML-87), 6 pcs 6200, 11 Lan Sw; 0 Lines, 264 VoIP.



Terminal arrangement and connection



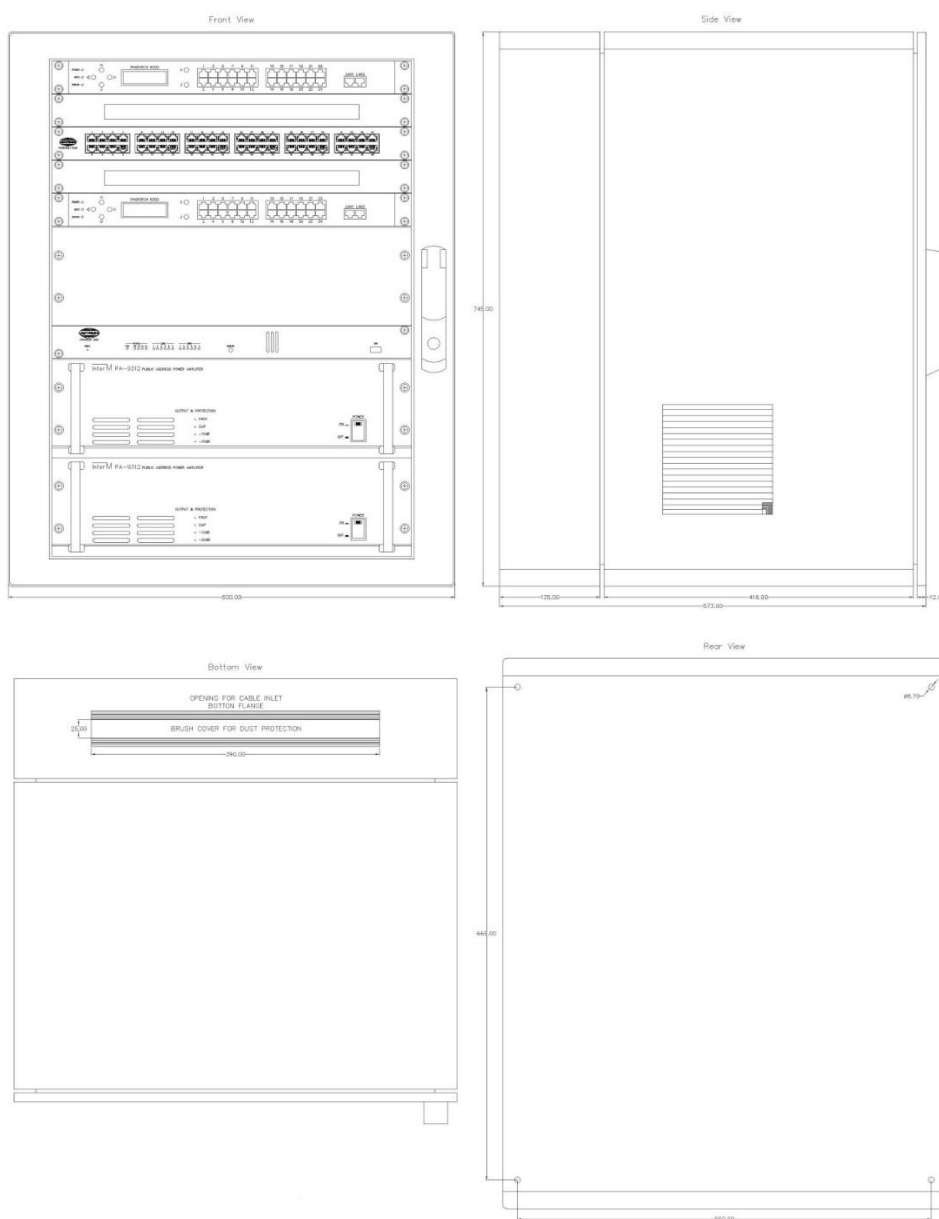
**AC/DC (14848-010-TA-01 / 14848-010-EC-01):** See documents 14848-010-TA-01 and 14848-010-EC-01

**AC/AC (14848-010-TA-02 / 14848-010-EC-02):** See documents 14848-010-TA-02 and 14848-010-EC-02

For further connection details each system is supplied with a project dependent cable plan. This is during production filled in with factory defaults and may be added further installation specific cable details. See chapter 3.3 for details.

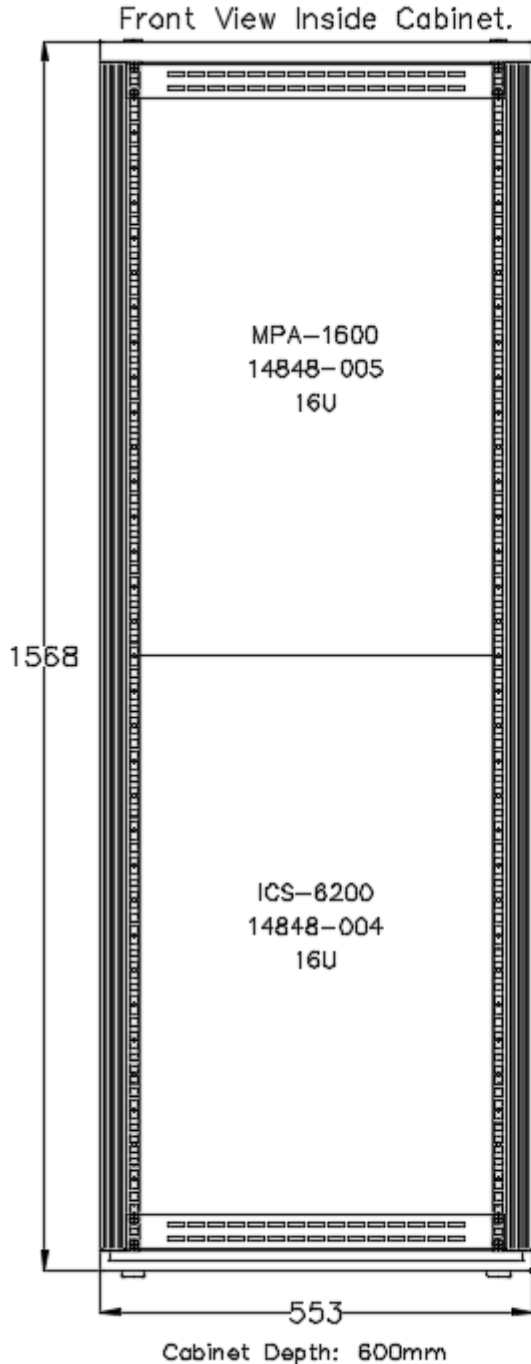
### 3.1.5 15U PABX/PA/GA COMBINATION ENCLOSURE

Three-part 15U wall-mounted enclosure. When combining the PABX with PA/GA equipment or amplifiers this enclosure style is used. Solid top and cable entry brush insert at bottom.



### 3.1.6 18937COM, 34U PHONTECH SYSTEM CABINET

This 34U cabinet is a dual functionality cabinet where one half contains the flexible configuration of the 16U cabinet 4000018935ICS (see chapter 3.1.2). The other half contains an MPA1600 PAGA system of up to 1440W output power into 6 zones. See MPA 1600 system documentation handbook for details.



Variants/Drawings:

- 14848-005-ML-01
- 14848-005-ML-02
- 14848-005-ML-03
- 14848-005-ML-04
- 14848-005-ML-05
- 14848-005-ML-06
- 14848-005-ML-07
- 14848-005-ML-08
- 14848-005-ML-09
- 14848-005-ML-10

Variants/Drawings:

- 14848-004-ML-01
- 14848-004-ML-02
- 14848-004-ML-03
- 14848-004-ML-04
- 14848-004-ML-05
- 14848-004-ML-06
- 14848-004-ML-07
- 14848-004-ML-08
- 14848-004-ML-09
- 14848-004-ML-10
- 14848-004-ML-11
- 14848-004-ML-12
- 14848-004-ML-13
- 14848-004-ML-14
- 14848-004-ML-15
- 14848-004-ML-16
- 14848-004-ML-17
- 14848-004-ML-18
- 14848-004-ML-19
- 14848-004-ML-20
- 14848-004-ML-21
- 14848-004-ML-22
- 14848-004-ML-23
- 14848-004-ML-24
- 14848-004-ML-25

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## 3.2 CONFIGURATIONS FOR 6200R

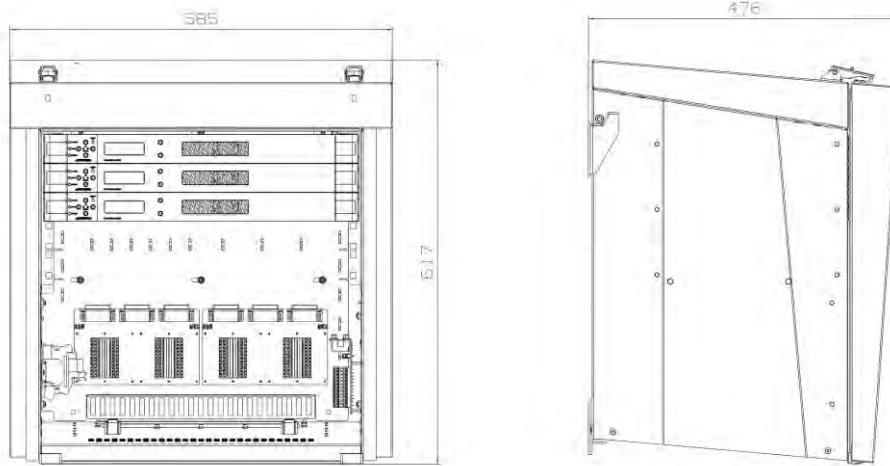
### 3.2.1 X-100278C, PHONTECH COMPACT CABINET

This 5U cabinet has a flexible configuration. Specific Layout drawings are available upon request within the standard configurations. Each layout is further configurable within each Phontech 6200R module (24L (FXS/FXO/UpN/E&M) and 23IP (VoIP registrations):

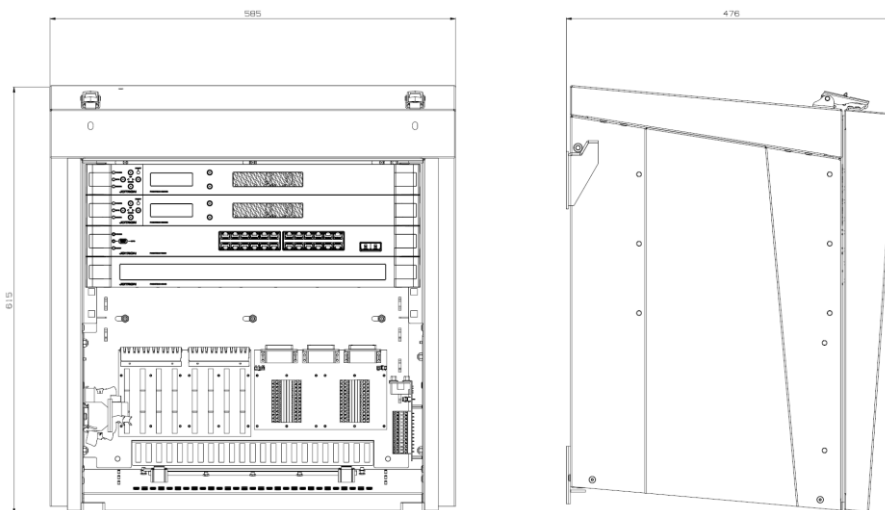
Drawing No.:	Sequence No:	Max configuration
100278C-ML	-01	72L / -IP
-"-	-02	48L / 23IP

It's also possible to add Amplifier 1671 for PA-functionality and/or a Billing Unit 6202R in the Compact Cabinet.

#### 3.2.1.1 Layout example (100278C-ML-01), 3 pcs 6200R; 72 Lines, 0 VoIP



#### 3.2.1.2 Layout example (100278C-ML-02), 2 pcs 6200R; 48 Lines, 23 VoIP



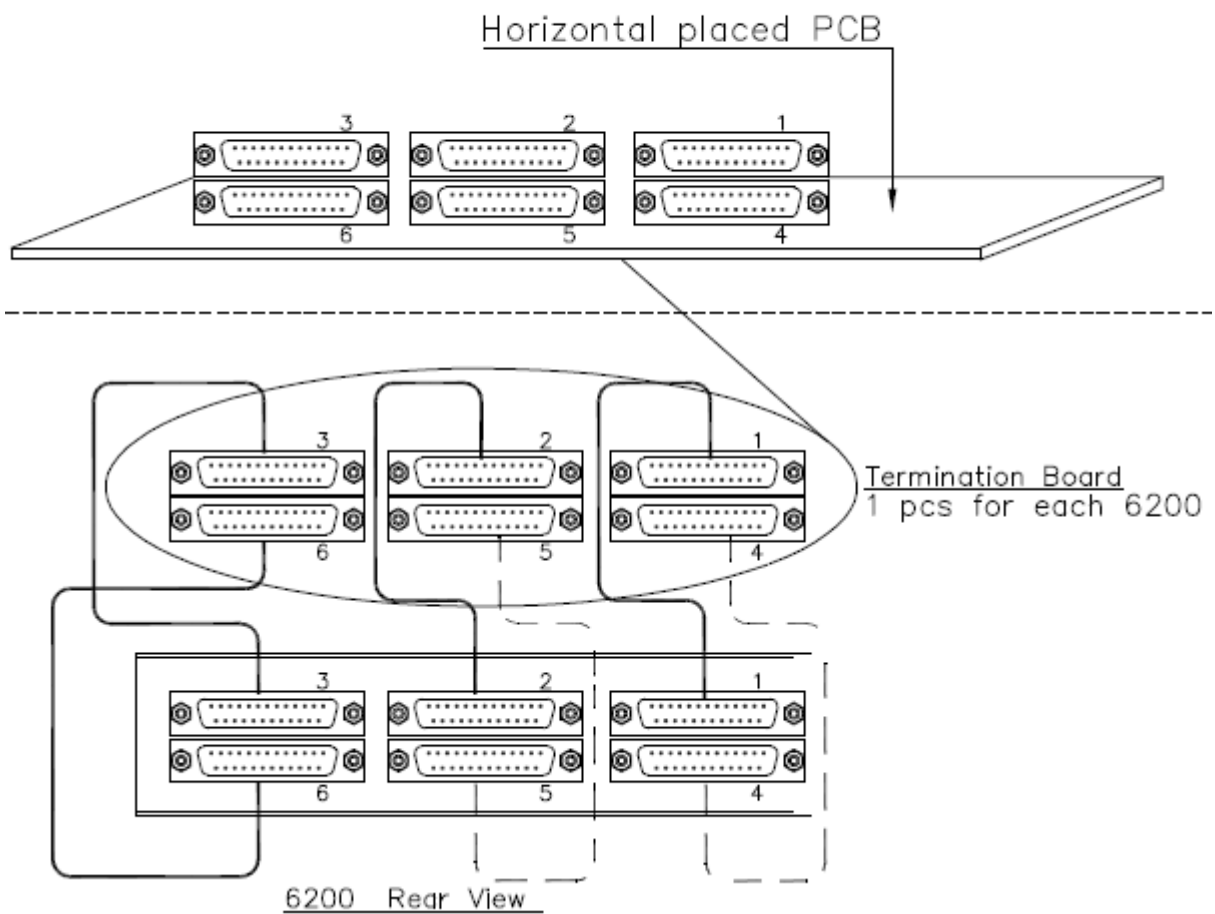
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### 3.2.1.3 Terminal arrangement and connection

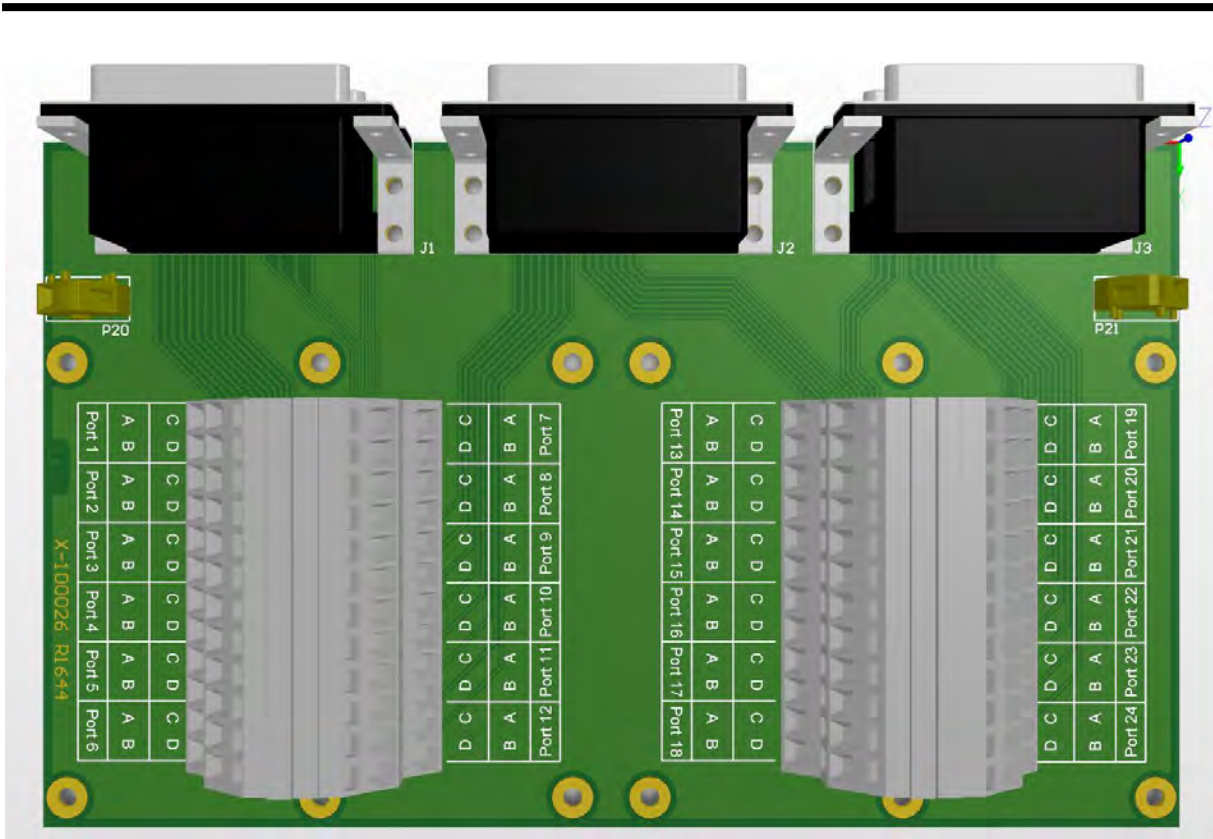
#### 3.2.1.3.1 6200R Interface board

For easy connection, we recommend to use the 4000019813 interface board.

#### Actual Dsub numbering on termination board



Interface board x-19813:



FXS, FXO and UpN line board:

Port (x) – Line: A and B (C and D not in use)

E/M line board:

The inputs are connected to odd-numbered ports, while outputs are connected the next even numbered port. The audio is connected to lines A/B, while key is connected to lines C/D.

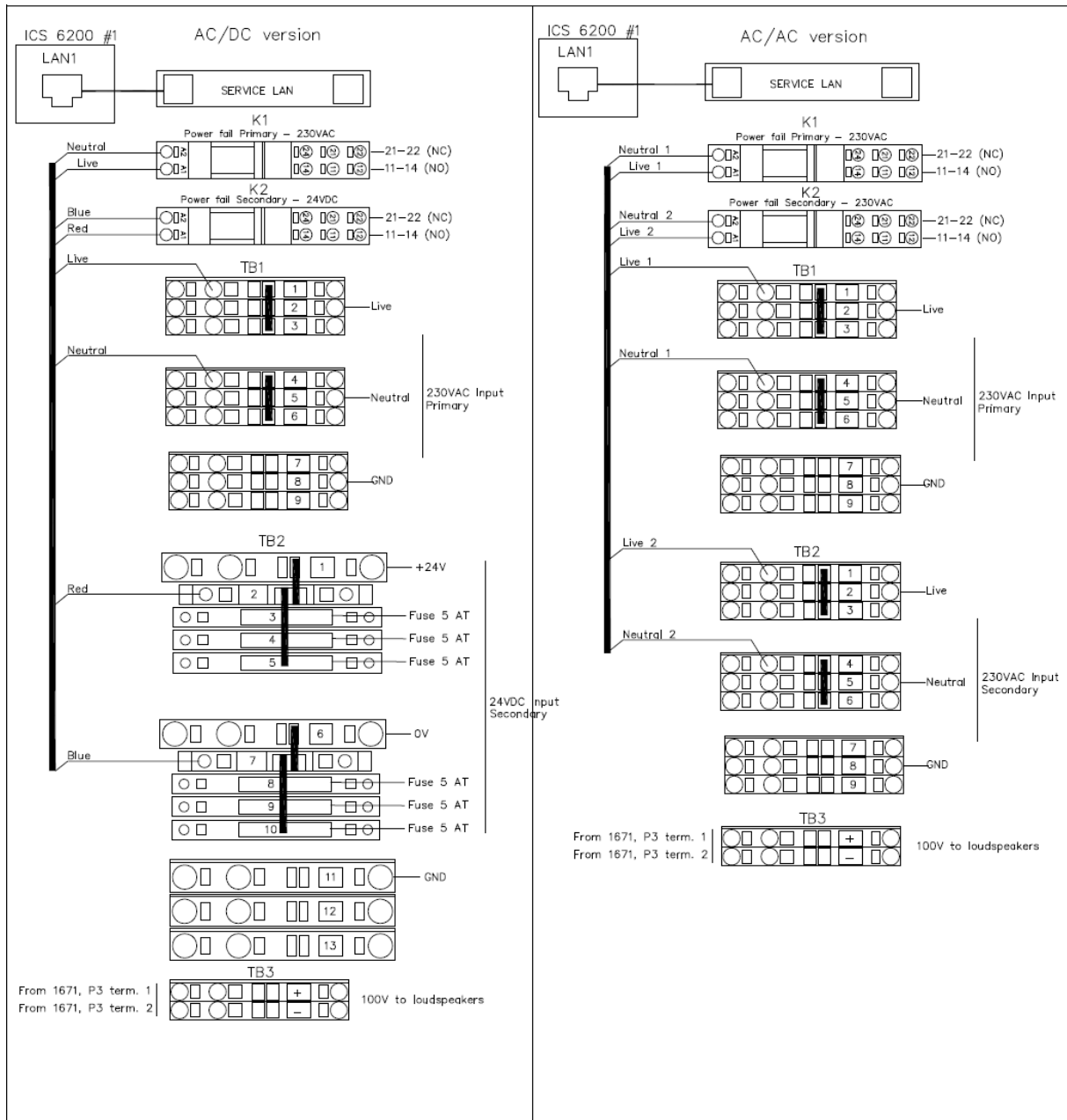
Port 1 – Audio in: A and B

Key In: C and D

Port 2 – Audio out: A and B

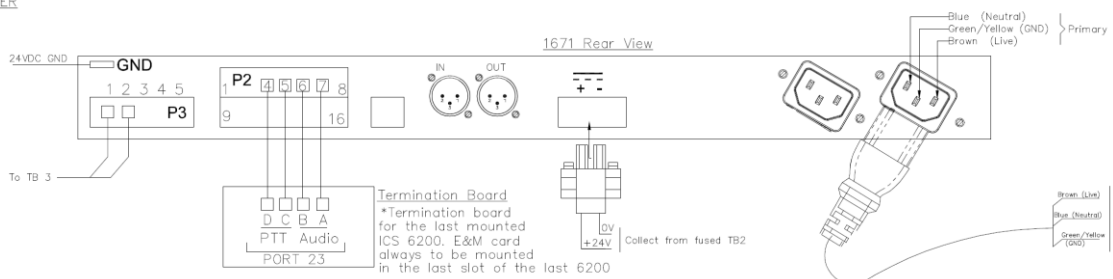
Key out: C and D

### 3.2.1.3.2 Power/Service/Loudspeaker Terminals

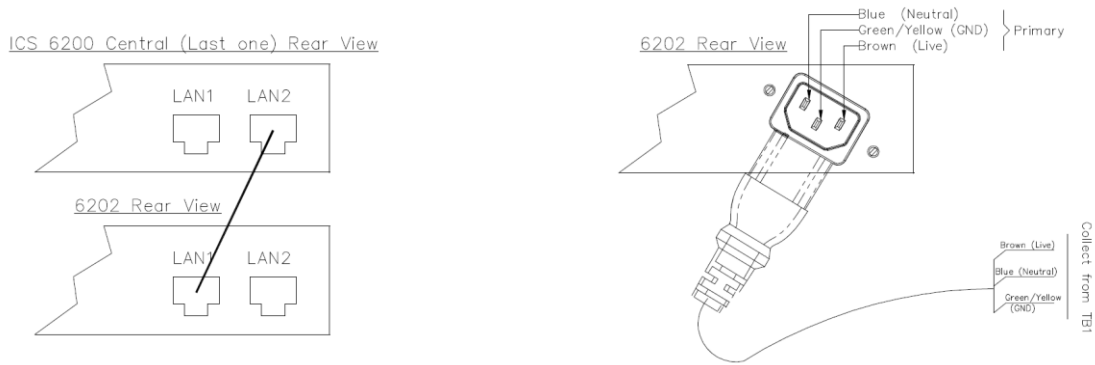


### 3.2.1.3.3 1671 Amplifier - Electrical connection

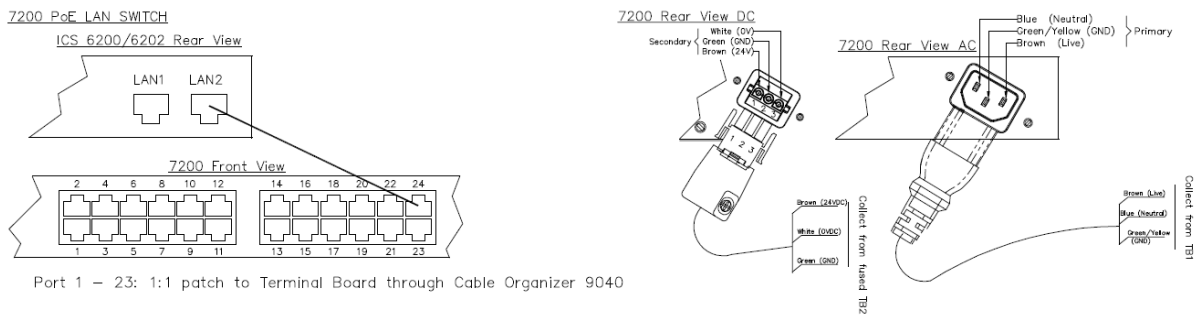
1671\_AMPLIFIER



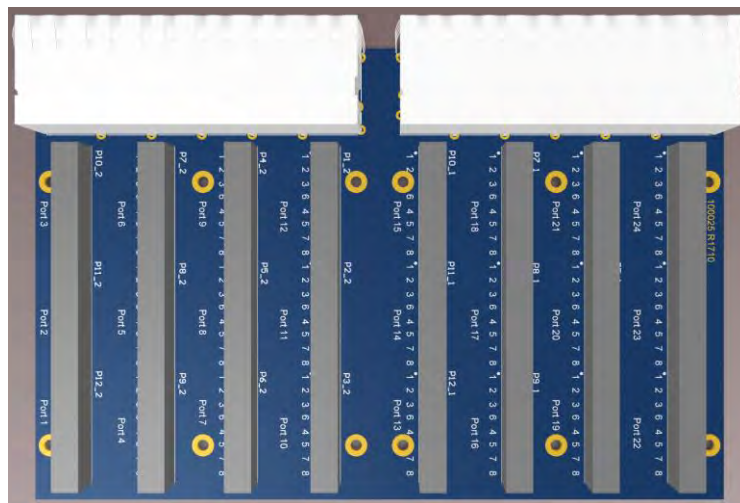
### 3.2.1.3.4 6202R Billing Unit - Electrical connection



### 3.2.1.3.5 7200 PoE Lan Switch - Electrical connection



### Interface board 4000019812



#### Termination:

- Port (x) 1- White/Orange  
 2- Orange  
 3- White/Green  
 4- Blue  
 5- White/Blue  
 6- Green  
 7- White/Brown  
 8- Brown

### 3.3 PROJECT DEPENDANT CABLE PLAN

Together with all new Phontech 6200 systems, a USB memory stick is attached. This contains all necessary handbooks together with a project dependent Cable plan.

#### FXS/UpN/FXO/E&M Cable detail plan:

ICS No.:	Slot	BRD Type	Port:	Ext.No:	Cross termination:	Patch Panel No.:	Port:	D-sub/TB	Terminal No.:	Field Cable:	TI ph. Conn
1	1	--	--	100	1:1	1	--	--	--	--	--
				101	1:1						
				102	1:1						
				103	1:1						
				104	1:1						
				105	1:1						
	2	--	--	106	1:1						
				106	1:1						
				107	1:1						
				108	1:1						
				109	1:1						
				110	1:1						
	3	--	--	111	1:1						
				112	1:1						
				113	1:1						
				114	1:1						
				115	1:1						
				116	1:1						
	4	--	--	117	1:1						
				118	1:1						
				119	1:1						
				120	1:1						
				121	1:1						
				122	1:1						
5	--	--	123	1:1							
			124	1:1							
			125	1:1							
			126	1:1							
			127	1:1							
			128	1:1							
6	--	--	129	1:1							
			130	1:1							
			131	1:1							
			132	1:1							
			133	1:1							
			134	1:1							
2	1	--	135	1:1							
			136	1:1							
			137	1:1							
			138	1:1							
			139	1:1							
			140	1:1							
	2	--	--	141	1:1						
				142	1:1						
				143	1:1						
				144	1:1						
				145	1:1						
				146	1:1						
3	1	--	147	1:1							
			148	1:1							
			149	1:1							
			150	1:1							
			151	1:1							
			152	1:1							
	2	--	--	153	1:1						
				154	1:1						
				155	1:1						
				156	1:1						
				157	1:1						
				158	1:1						
	3	--	--	159	1:1						
				160	1:1						
				161	1:1						
				162	1:1						
				163	1:1						
				164	1:1						
4	--	--	165	1:1							
			166	1:1							
			167	1:1							
			168	1:1							
			169	1:1							
			170	1:1							
5	--	--	171	1:1							
			172	1:1							
			173	1:1							
			174	1:1							
			175	1:1							
			175	1:1							

And so on.



**VoIP Cable detail plan:**

ICS No.:	Ext.No:	Switch port:	Cross termination:	Patch Panel No.:	Port:	Field Cable:	Tlph. Conn
1	100	1	1:1	---	--		
	101	2	1:1	1	--		
	102	3	1:1		--		
	103	4	1:1		--		
	104	5	1:1		--		
	105	6	1:1		--		
	106	7	1:1		--		
	107	8	1:1		--		
	108	9	1:1		--		
	109	10	1:1		--		
	110	11	1:1		--		
	111	12	1:1		--		
	112	13	1:1		--		
	113	14	1:1		--		
	114	15	1:1		--		
	115	16	1:1		--		
	116	17	1:1		--		
	117	18	1:1		--		
	118	19	1:1		--		
	119	20	1:1		--		
	120	21	1:1		--		
	121	22	1:1		--		
	122	23	1:1		--		
	123	24	1:1		--		
1	124	1	1:1		---	--	
	125	2	1:1	2	--		
	126	3	1:1		--		
	127	4	1:1		--		
	128	5	1:1		--		
	129	6	1:1		--		
	130	7	1:1		--		
	131	8	1:1		--		
	132	9	1:1		--		
	133	10	1:1		--		
	134	11	1:1		--		
	135	12	1:1		--		
	136	13	1:1		--		
	137	14	1:1		--		
	138	15	1:1		--		
	139	16	1:1		--		
	140	17	1:1		--		
	141	18	1:1		--		
	142	19	1:1		--		
	143	20	1:1		--		
	144	21	1:1		--		
	145	22	1:1		--		
	146	23	1:1		--		
	147	24	1:1		--		
1	148	1	1:1		---	--	
	149	2	1:1	1	--		
	150	3	1:1		--		
	151	4	1:1		--		
	152	5	1:1		--		
	153	6	1:1		--		

And so on.

---

## 4 INTERCOM UNITS

### 4.1 FIRST GENERATION INTERCOM UNITS 6111 6112 6113 6114 6123 6124

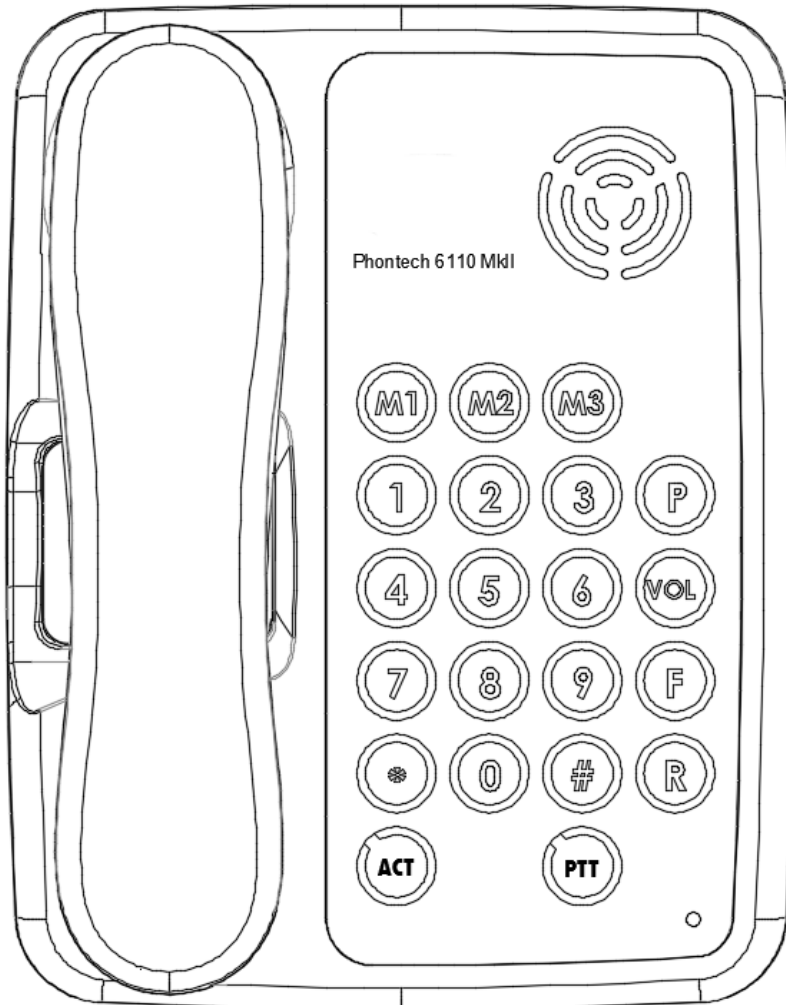
#### 4.1.1 GENERAL CONFIGURATION INFORMATION

All intercom units (Phontech 6111, 6112, 6113, 6114, 6123 and 6124) are equipped with an internal DIP-Switch block containing 8 switches. These configure some individual settings for each unit:

DIP Sw	Description
1	Activate Backlight DIMMER function in the Phontech 6123
2	For future use
3	For future use
4	Disable OFF HOOK sensor (ACT key is the only way to activate the unit)
5	For future use
6	For future use
7	For future use
8	For future use

---

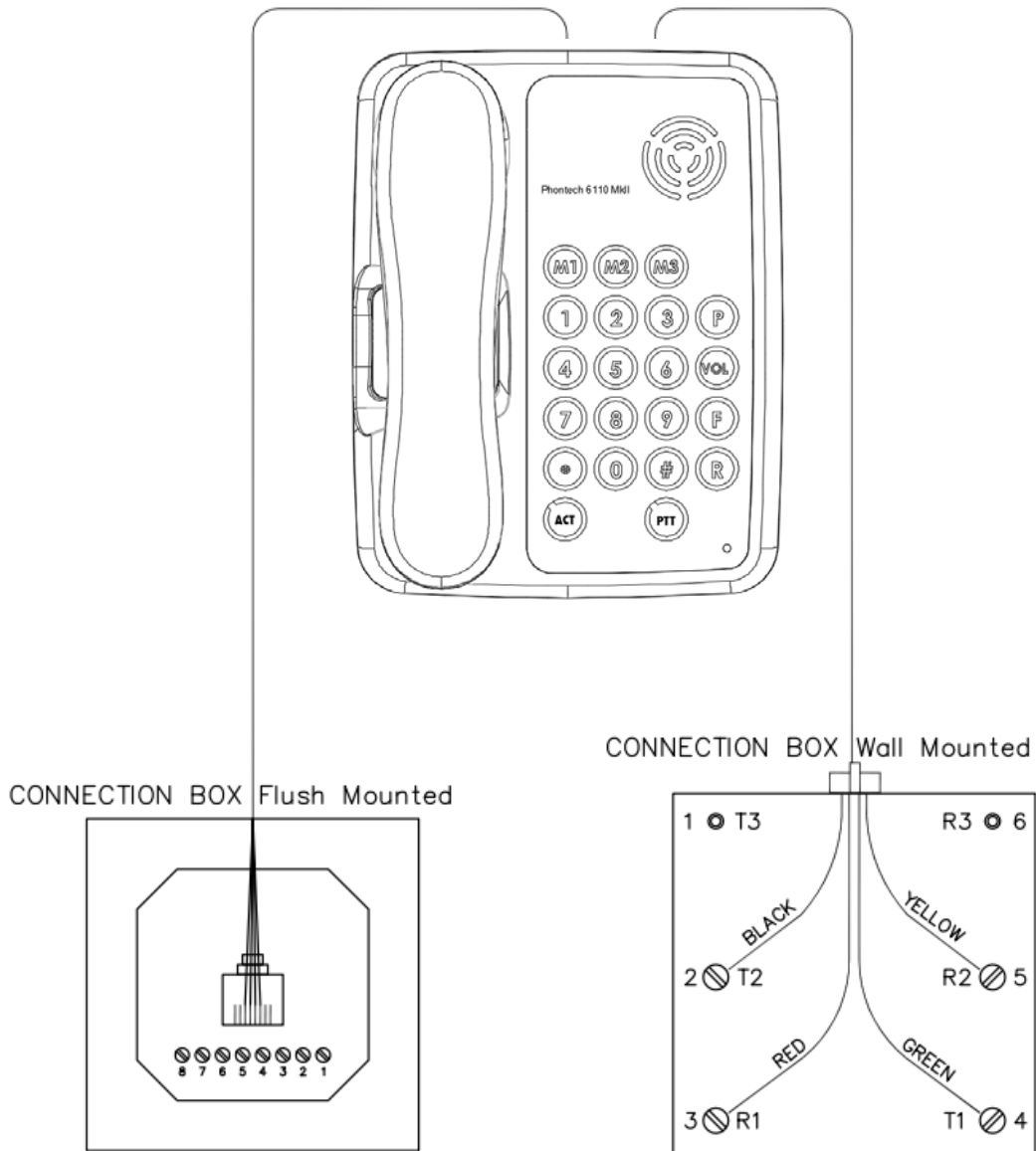
#### 4.1.2 PHONTECH 6110 MKII, ACCOMODATION UNIT



- Built- in WP loudspeaker.
- Hands free, duplex communication.
- Privacy switch.
- Telecom standard alphanumeric keypad.
- Manual PTT (push-to-talk) key.
- ACT key. (line active)
- 3 direct access programmable keys. (M1-M2-M3)
- 10 pcs. accessible programmable keys. (0-9)
- Volume control key (VOL) with override (important message priority)
- Program key. (P)
- Connection: One Pair – line feed
- Desk or bulkhead mounted.

Operation voltage 37VDC provided by line  
Current drain 70 mA max, provided by line  
Sound pressure level 80dBA@1m typical  
Weight 1.0 kg

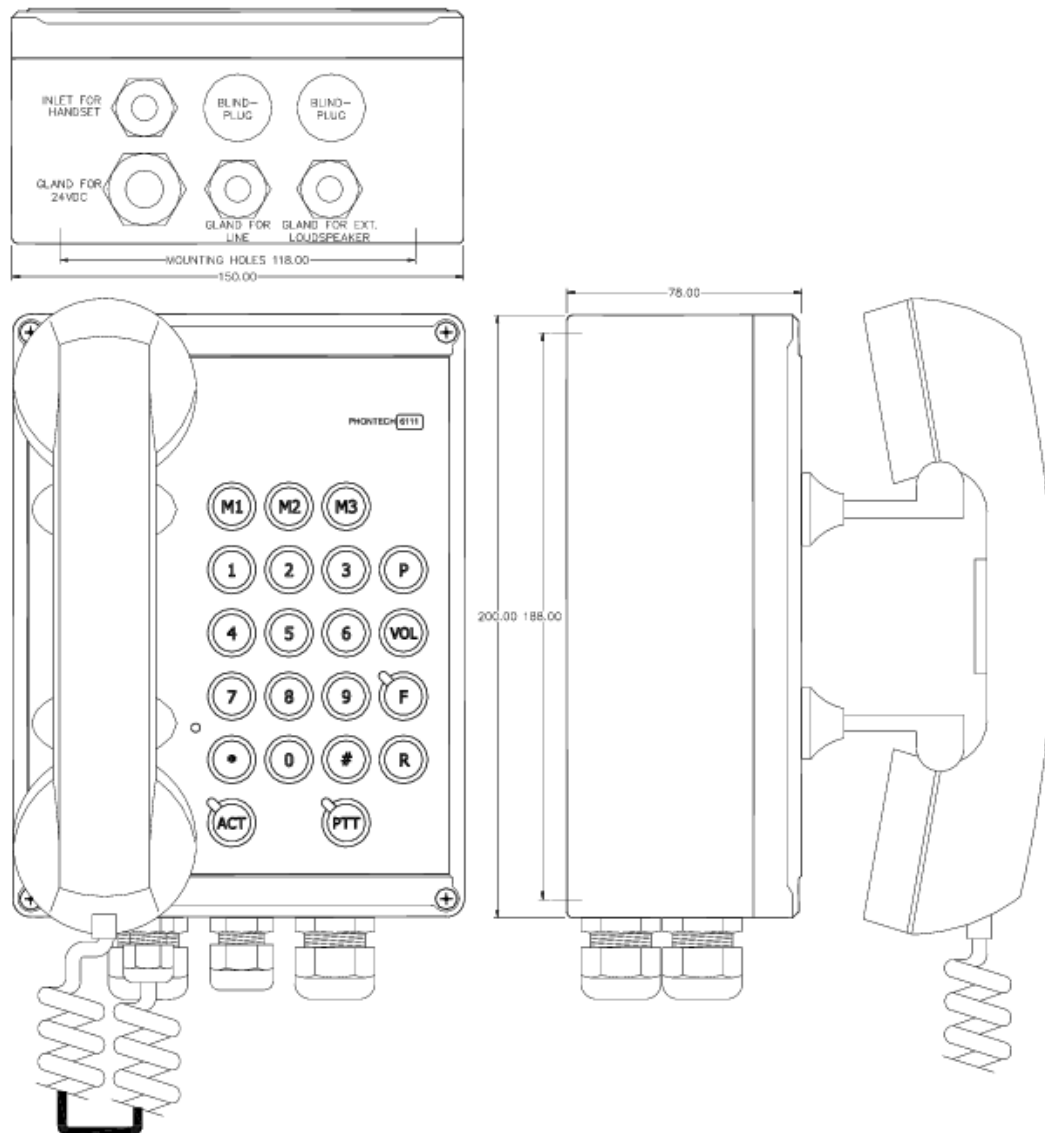
External connections Phontech 6110 MkII



LINE CONNECTION TO DICS  
 EXCHANGE 610X = 2 CENTER CORES  
 Term. 4  
 Term. 5

LINE CONNECTION TO DICS  
 EXCHANGE 610X = 2 CENTER CORES  
 - RED / GREEN  
 - R1 / T1  
 - 3 / 4

### 4.1.3 PHONTECH 6111, WP UNIT WITH HANDSET



- Bulkhead mounted.
- Output for external loudspeaker.
- Hands free (requiring external loudspeaker), duplex communication.
- Telecom standard alphanumeric keypad.
- Rugged handset of WP type.
- Manual PTT (push-to-talk) key.
- ACT key. (line active)
- Direct access programmable keys. (M1-M2-M3)
- 10 pcs. accessible programmable keys. (0-9)
- Volume control key (VOL) with override (important message priority)
- Program key. (P)
- Call signal relay. (For external signal organ, flashlight, siren etc.)
- Connection:
  - o Handset only: One Pair – line feed connection
  - o External loudspeaker or relay for external signal device: Line + 24V DC

Operation voltage 37VDC provided by line  
Current drain 70 mA max, provided by line

External loudspeaker and relay function requires an additional power input.

Power requirement, additional input  
1A/24VDC

External loudspeaker:

Max power 10W

Impedance 20 ohms

External signal organ current capabilities:

24 VDC: max. 5A

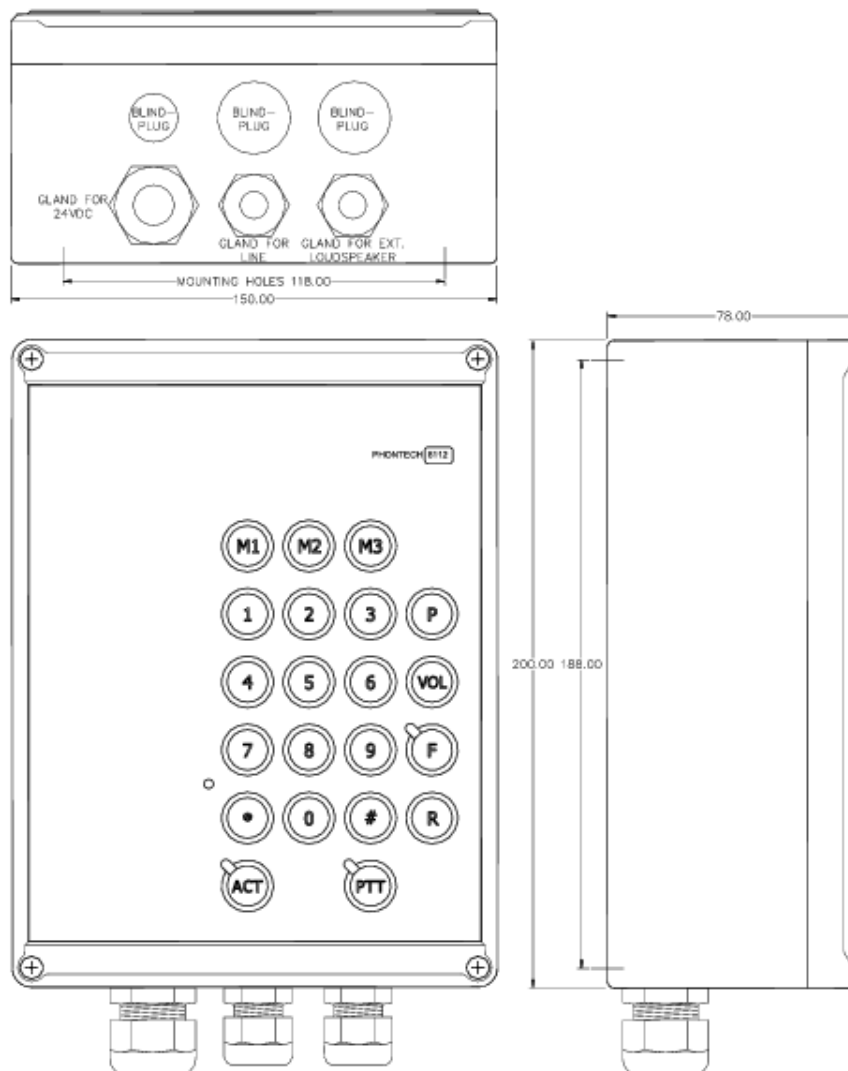
115 VAC: max. 6,3A

220 VAC: max. 5A

Weight 1.0 kg.

Ingress protection IP 56

#### 4.1.4 PHONTECH 6112 WEATHERPROOF UNIT



- 
- Bulkhead mounted.
  - For external loudspeaker.
  - Hands free (requiring external loudspeaker), duplex communication.
  - Telecom standard alphanumeric keypad.
  - Manual PTT (push-to-talk) key.
  - ACT key. (line active)
  - Three direct access programmable keys. (M1-M2-M3)
  - 10 accessible programmable keys. (0-9)
  - Volume control key (VOL) with override (important message priority)
  - Program key. (P)
  - Call signal relay. (For external signal organ, flashlight, siren etc.)
  - Connection:
    - o Line
    - o 24V DC

Operation voltage 37VDC provided by line

Current drain 70 mA max, provided by line

External loudspeaker and relay function requires an additional power input.

Power requirement, additional input

1A/24VDC

External loudspeaker:

Max power 10W

Impedance 20 ohms

External signal organ current capabilities:

24 VDC: max. 5A

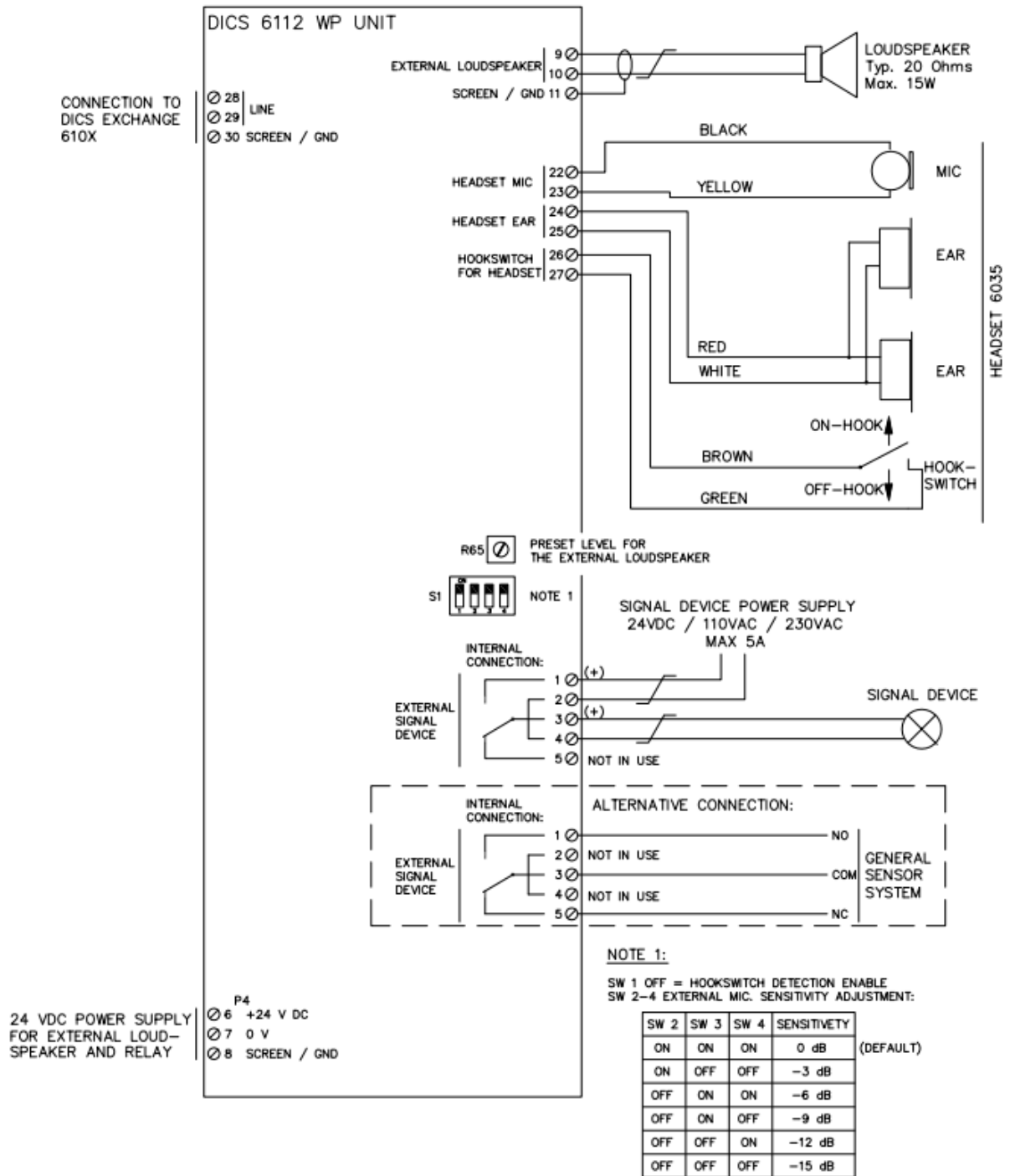
115 VAC: max. 6,3A

220 VAC: max. 5A

Weight 1.0 kg.

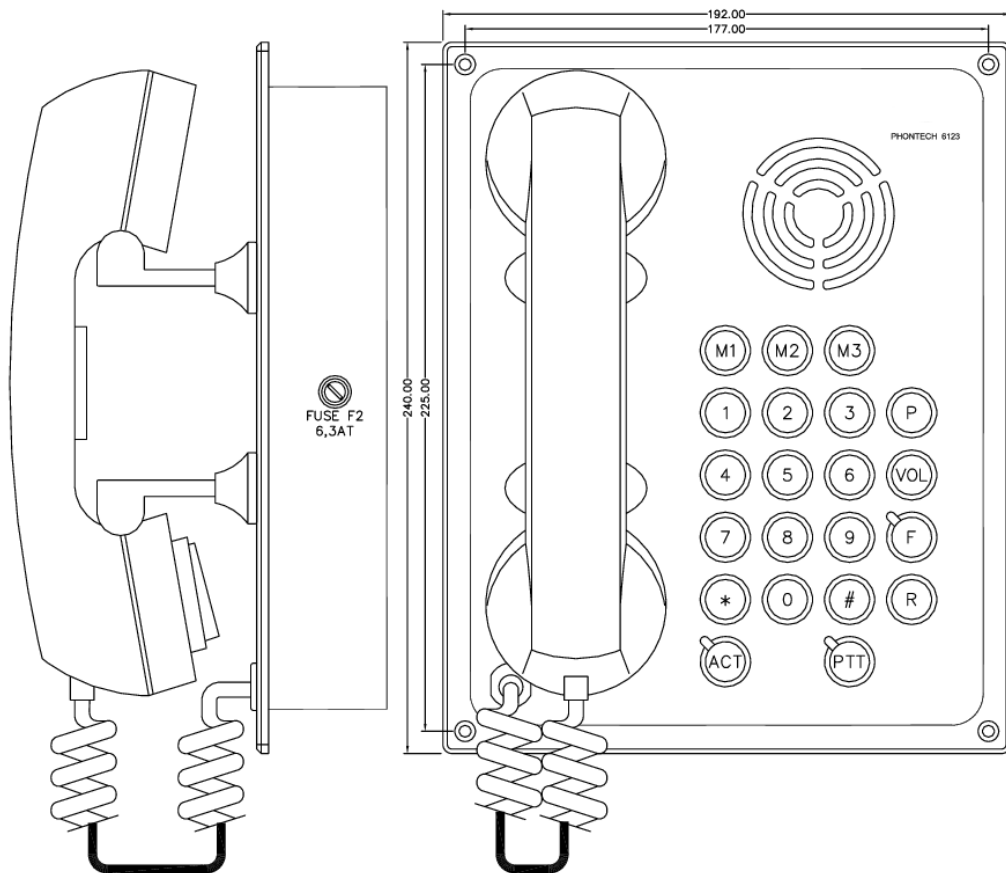
Ingress protection IP 56

External connections Phontech 6111/6112





#### 4.1.5 PHONTECH 6113 AND 6123 FLUSHMOUNTING UNIT



- Flush-mounting.
- Built-in WP loudspeaker.
- Output for external loudspeaker.
- Hands free, duplex communication.
- Telecom standard alphanumeric keypad.
- Manual PTT (push-to-talk) key.
- ACT key. (line active)
- Three direct access programmable keys. (M1-M2-M3)
- 10 accessible programmable keys. (0-9)
- Volume control key (VOL) with override (important message priority)
- Program key. (P)
- Call signal relay. (for external signal organ, flashlight, siren etc.)
- Phontech 6123 only; backlighting with dimmer.
- Connections:
  - o Handset only: One Pair – line feed connection
  - o External loudspeaker or relay for external signal device: Line + 24V DC
  - o Phontech 6123 Backlight: Line + 24V DC

Operation voltage 37VDC provided by line  
Current drain 70 mA max, provided by line  
Sound pressure level 80dBA@1m typical

Backlight dimmer 5 steps : 10mLux – 1 Lux

External loudspeaker and relay function requires an additional power input.

Power requirement, additional input

1A/24VDC

External loudspeaker:

Max power 10W

Impedance 20 ohms

External signal organ current capabilities:

24 VDC: max. 5A

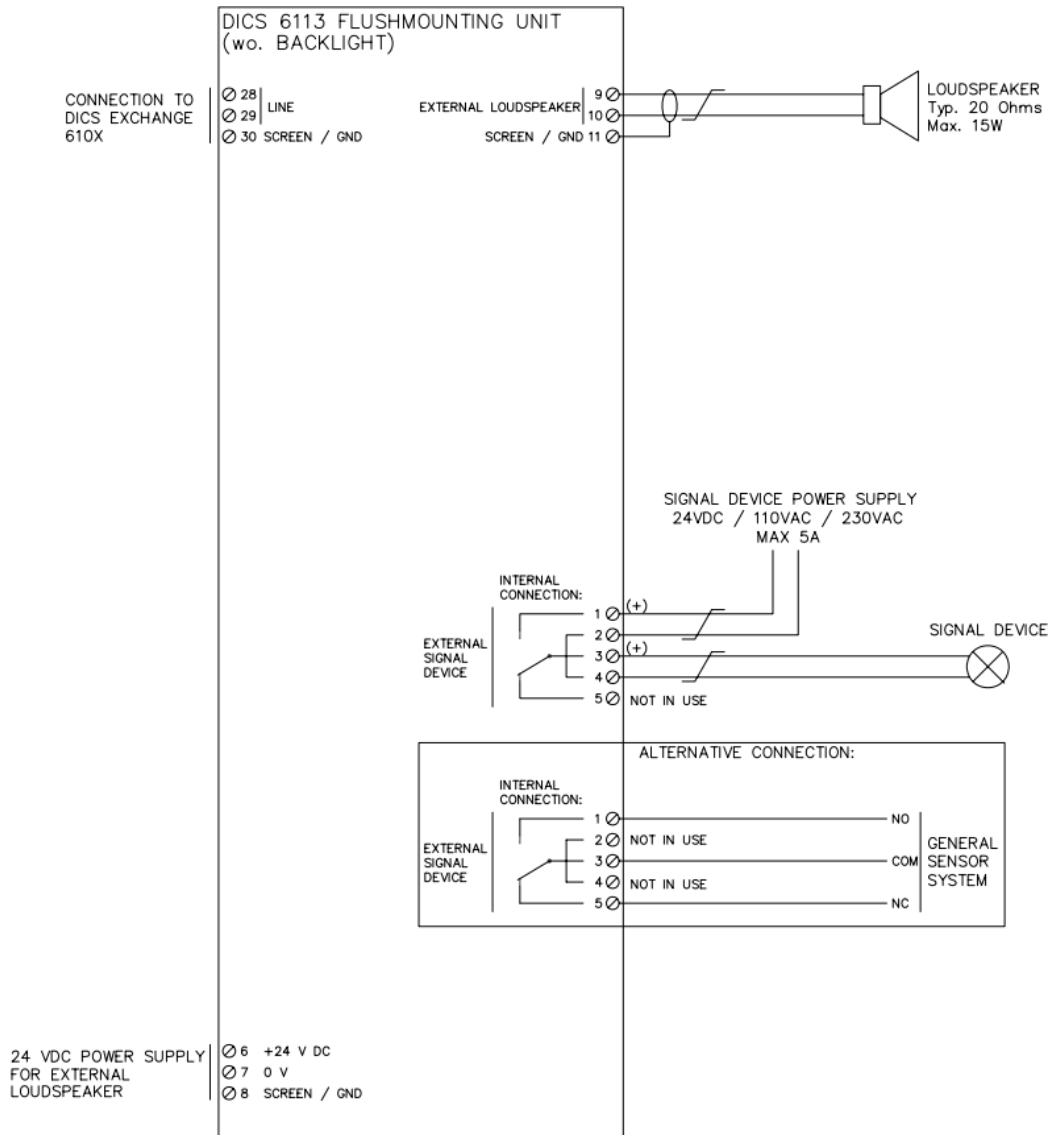
115 VAC: max. 6,3A

220 VAC: max. 5A

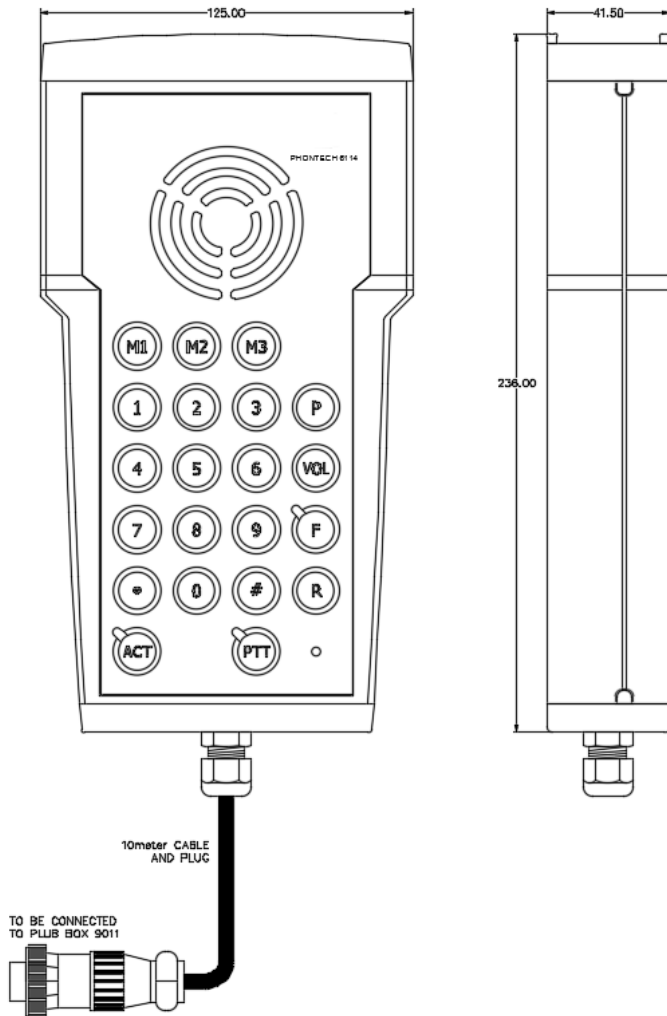
Weight 1.5 kg.

Ingress protection IP 44

External connections Phontech 6113/6123



#### 4.1.6 PHONTECH 6114 WP PORTABLE UNIT

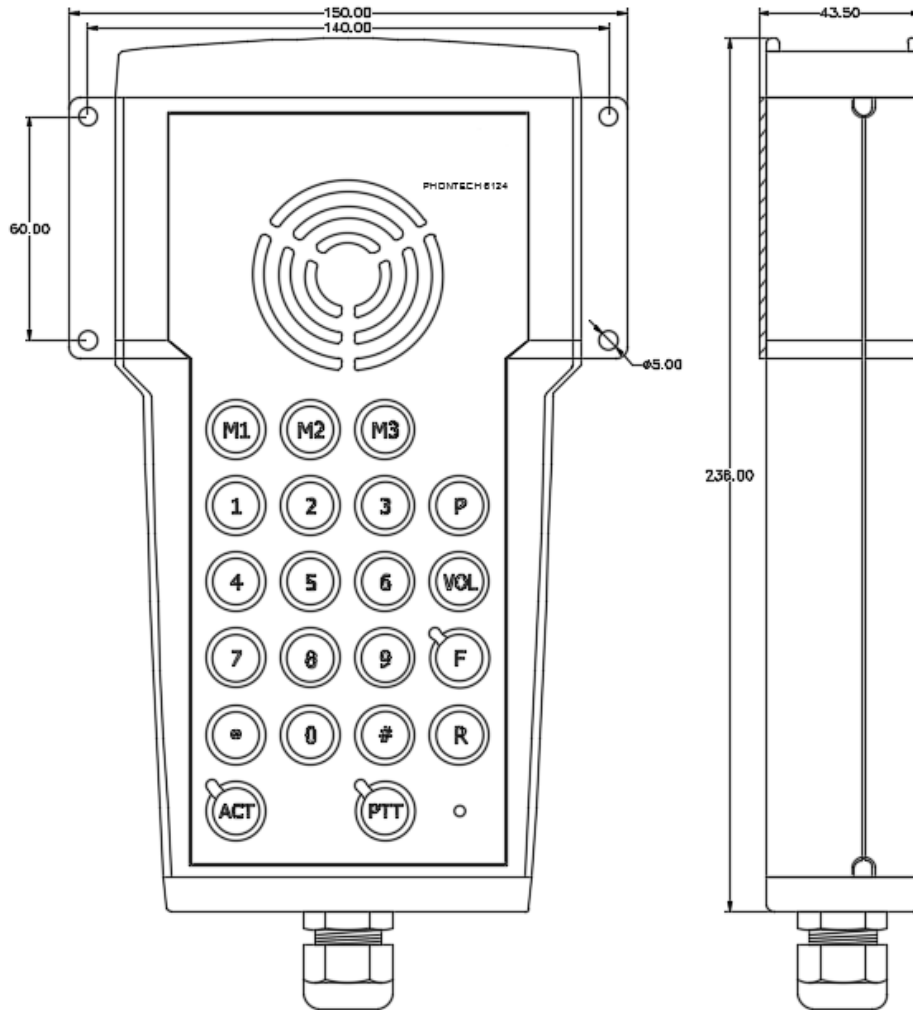


- Built-in WP loudspeaker.
- Internal microphone.
- Duplex communication.
- Telecom standard alphanumeric keypad.
- 10 m. cable and connector.
- Manual PTT (push-to-talk) key.
- ACT key. (line active)
- Three direct access programmable keys. (M1-M2-M3)
- 10 accessible programmable keys. (0-9)
- Volume control key (VOL) with override (important message priority)
- Program key. (P)
- Connection: Pluggable one pair – line feed
- Bulkhead mounting.

Operation voltage      37VDC provided by line  
Current drain            70 mA max, provided by line

Weight                    1.5 kg.  
Ingress protection      IP 56

#### 4.1.7 PHONTECH 6124 WP BULKHEAD UNIT

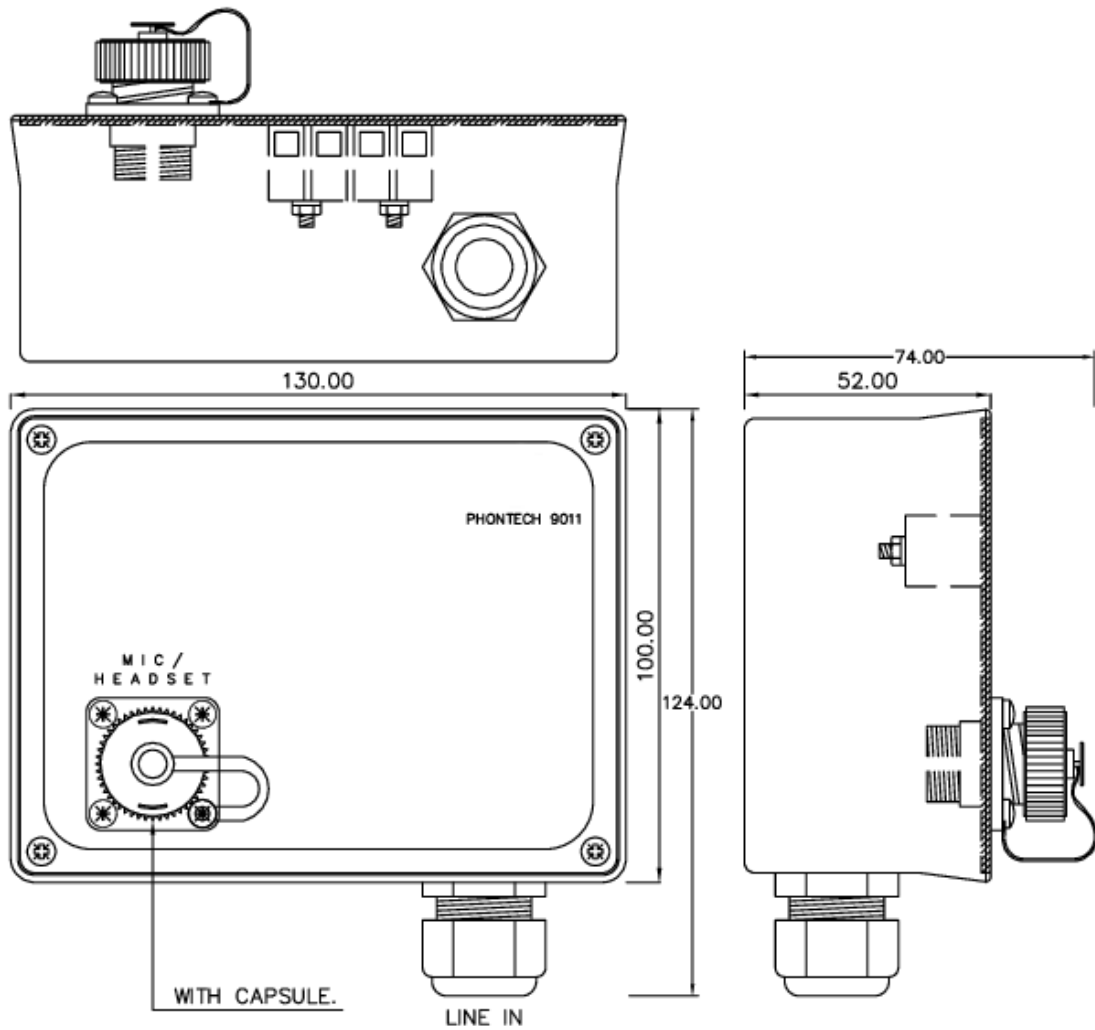


- Built-in WP loudspeaker.
- Internal microphone.
- Duplex communication.
- Telecom standard alphanumeric keypad.
- 10 m. cable and connector.
- Manual PTT (push-to-talk) key.
- ACT key. (line active)
- Three direct access programmable keys. (M1-M2-M3)
- 10 accessible programmable keys. (0-9)
- Volume control key (VOL) with override (important message priority)
- Program key. (P)
- Connection: Pluggable one pair – line feed
- Bulkhead mounting

Operation voltage      37VDC provided by line  
Current drain            70 mA max, provided by line

Weight                    1.5 kg.  
Ingress protection      IP 56

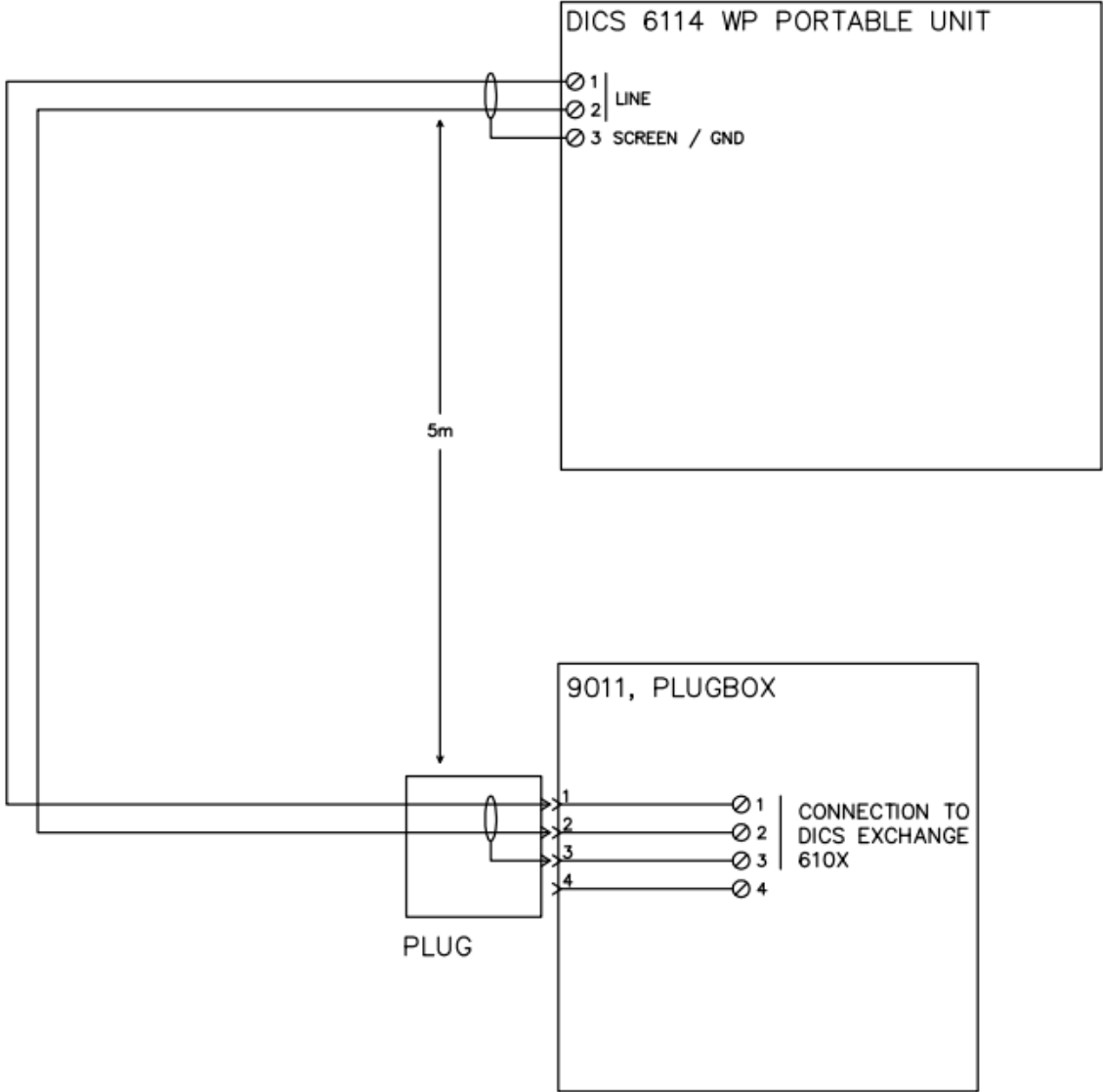
#### 4.1.8 TYPE 9011 PLUGBOX (FOR PHONTECH 6114)



- Receptacle with cover.
- Rugged plastic box.
- Bulkhead mounting

Weight                    0.3 Kg  
Ingress protection    IP 56

External connections Phontech 6114 and 9011



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## 4.2 SECOND GENERATION INTERCOM UNITS 6210 6211 6212 6223 7210 7211 7212 7223

### 4.2.1 PHONTECH 6210, ACCOMODATION UNIT, TWO WIRE



#### DESCRIPTION:

The Telephone 6210 is an indoor accommodation unit, normally used in cabins, offices, etc. This is a UpN digital station with handset, loudspeaker, internal microphone, memory functions etc. The unit can be desk or bulkhead mounted.

#### FEATURES:

- Integrated loudspeaker / microphone
- Handset, 2 m sturdy curled cord
- Hands-free, duplex communication
- 2" Graphic backlit display
  - Menus and navigation wheel/key
  - Contact list
  - Caller ID
- Dimmable backlight (keypad)
- Privacy switch (Do not disturb) with priority override
- Manual PTT (push-to-talk) key
- 3 pcs programmable direct access keys (A-B-C)
- Volume adjustment with override
- Speakerphone SPL level >85dB(A)
- Desk or bulkhead mounted
- MMI according to IEC 62288 Ed 2.0
- Status/health indicator
- Multiple ring melodies



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#### ELECTRICAL SPECIFICATIONS:

Line format	UpN (Digital 2Wire – 2B+D)
Power supply	System / Line feed
Power consumption	3W (max)
Heat dissipation (typ/max)	NA
Termination	RJ45, two centre cores / Wall Contact
Compass safe distance	TBD (>5m)

#### ENVIRONMENTAL SPECIFICATIONS:

Temperature	-15°C to +55°C
Humidity	+93% (at +40°C)

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Protection	IP22 (protected environment)
UL94	V0

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#### MECHANICAL SPECIFICATIONS:

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Dimension (WxHxD)	144 x 216 x 95.5mm
Weight	0.9kg
Material	Plastic (PC/ASA)
Colour	Grey – RAL 7021/7043
Mounting	Table / Wall with wall contact
Fixing	Bulkhead: 2 x M4 bolts
Access	Front
Cable entry	Rear
Connector type	RJ 45 (line) / RJ 12 (headset)
Manufacturer	Zenitel AS

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#### CERTIFICATES / COMPLIANCES:

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IEC 60945 Marine equipment (pending)
The unit has a pending DNV/ABS/RMRS/CCS type approval and is also compatible with NORSOK.

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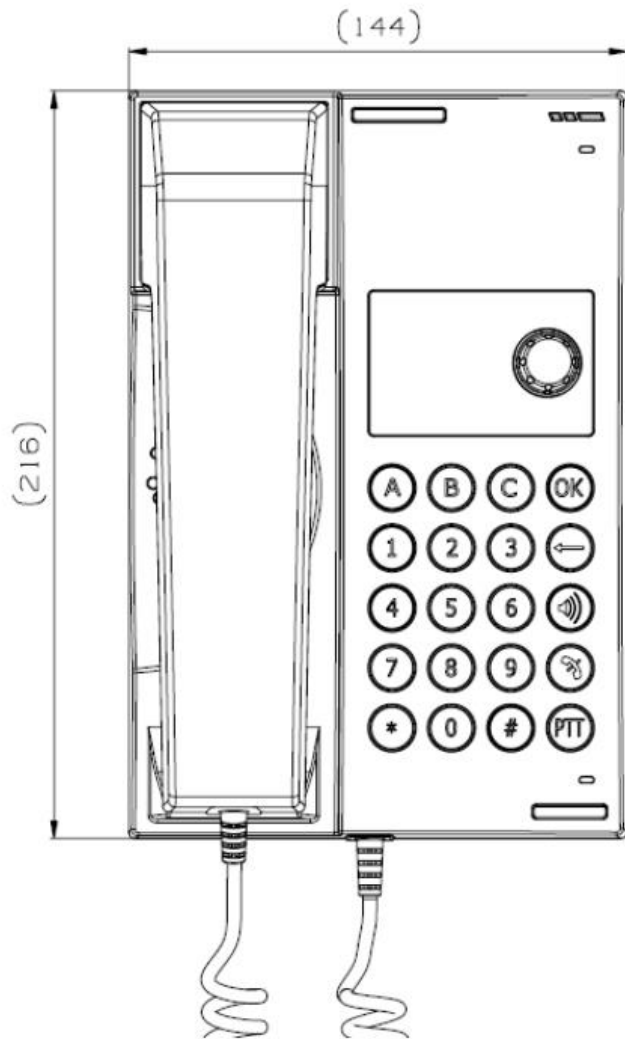
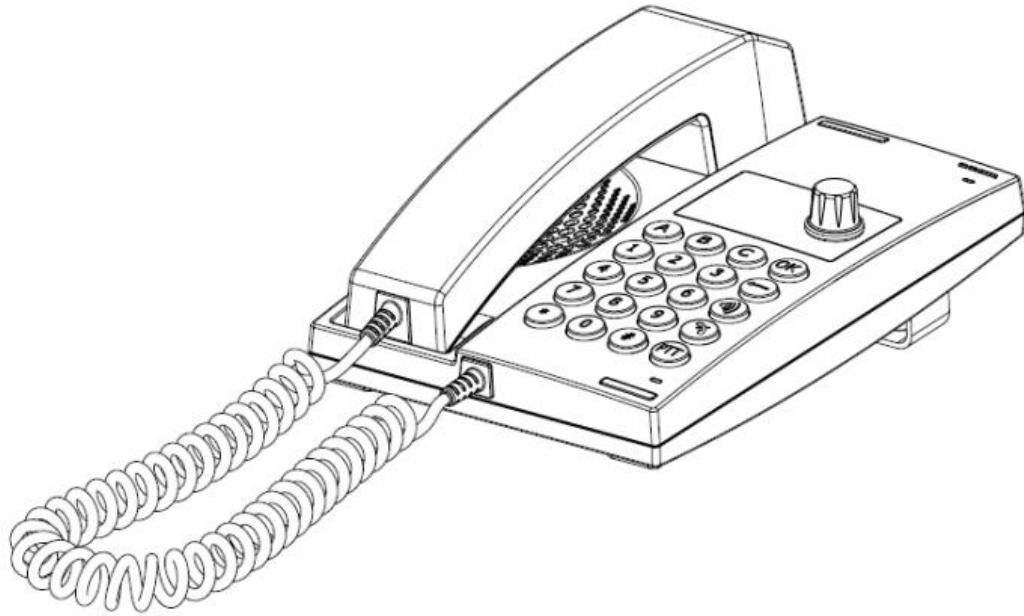
#### RELATED PRODUCTS:

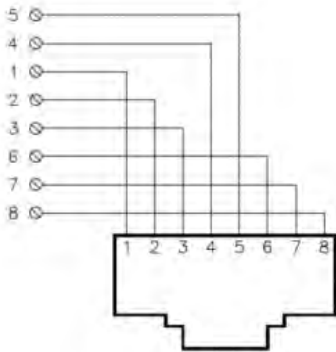
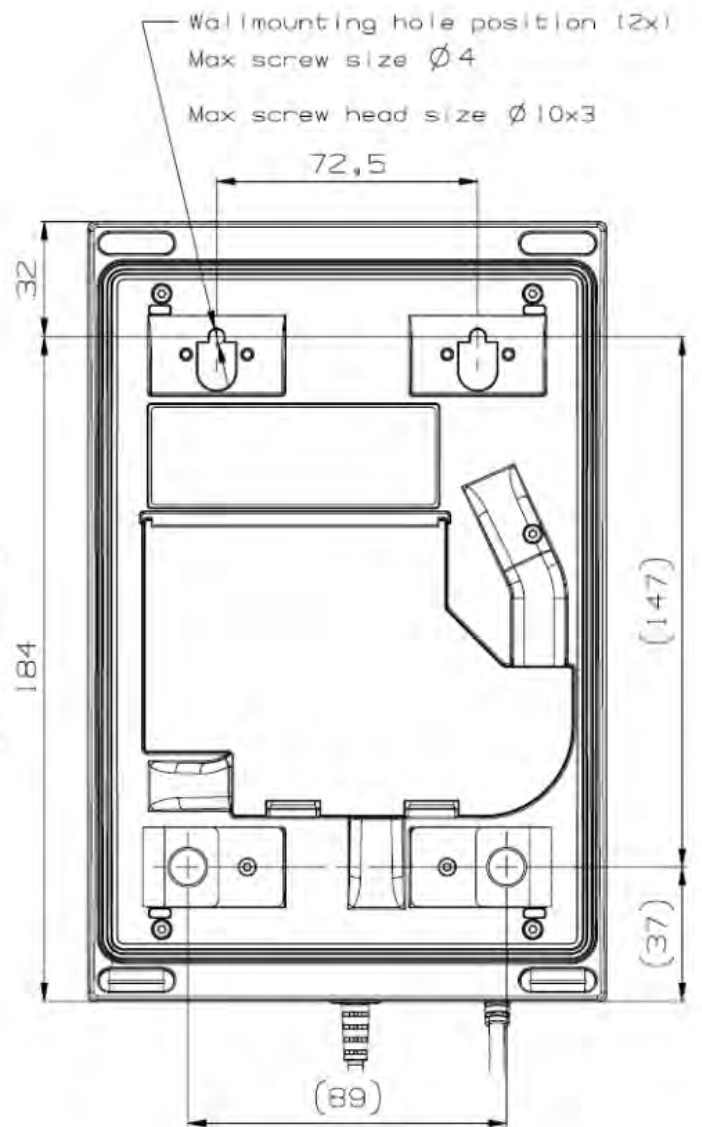
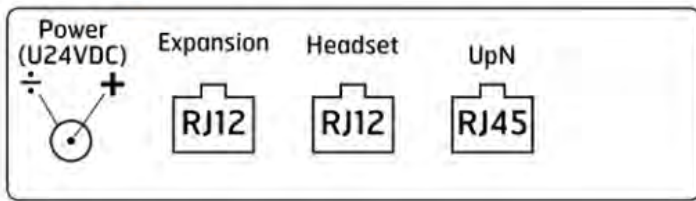
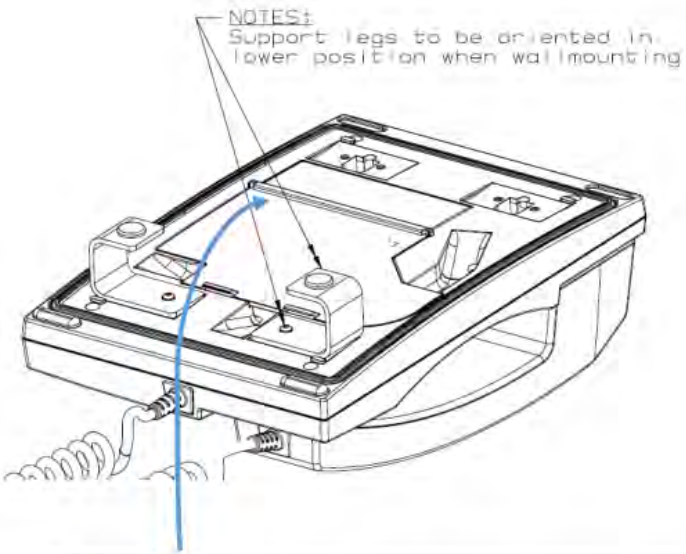
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ICS 6200	Integrated Communication System
4000019064	RJ45/Cat5/Cat6 modular outlet
4000017213	RJ45 modular outlet, screw terminals for TP ships cable

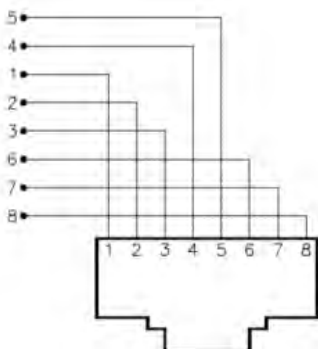
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Modular outlet, 4000017213; RJ45/screw terminals for TP ships cable



Modular outlet, 4000019064; RJ45/Cat5/Cat6

## 4.2.2 PHONTECH 6211, WP UNIT W/HANDSET, TWO WIRE



### DESCRIPTION:

The Telephone 6211 is intended for installation outdoor or in harsh environments inside. This is a UpN digital station with handset, loudspeaker, internal microphone, memory functions etc. It is equipped with an amplifier for additional external loudspeaker and relay for external call signal device (Beacon, Siren etc.)

The unit is bulkhead mounted.

### FEATURES:

- Integrated loudspeaker / microphone
- Handset, 2 m sturdy curled cord
- Hands-free, duplex communication
- 2" Graphic backlit display
  - Menus and navigation wheel/key
  - Contact list
  - Caller ID
- Dimmable backlight (keypad)
- Privacy switch (Do not disturb) with priority override
- Manual PTT (push-to-talk) key
- 3 pcs programmable direct access keys (A-B-C)
- Volume adjustment with override
- Speakerphone SPL level >85dB(A) (integrated loudspeaker)
- Bulkhead mounted
- MMI according to IEC 62288 Ed 2.0
- Status/health indicator
- Multiple ring melodies
- Integrated call relay for external signal device
- Output to external loudspeaker, 8 W; SPL level > 110dB (loudspeaker dependent)
- Headset connection



### ELECTRICAL SPECIFICATIONS:

Line format	UpN (Digital 2Wire – 2B+D)
Power supply	System / Line feed (Basic telephone operation) Additional 24V/1.5A input for call relay and amplifier for external loudspeaker
Power consumption	NA / 10W (max – external loudspeaker)
Heat dissipation (typ/max)	< 2W (max)
Termination	Line: RJ45, two centre cores External loudspeaker/external signal device etc: clamp terminals



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External loudspeaker	8W / 20Ω
External signal device Call relay	6.3A (max)
Compass safe distance	TBD (> 5m)

#### ENVIRONMENTAL SPECIFICATIONS:

Temperature	-25°C to +55°C
Humidity	+93% (at +40°C)
Protection	IP56 (exposed)
UL94	V0

#### MECHANICAL SPECIFICATIONS:

Dimension (WxHxD)	144 x 216 x 120mm
Weight	1.1kg
Material	Plastic (PC/ASA)
Colour	Grey – RAL 7021/7043
Mounting	Bulkhead / Direct or Bracket
Fixing	4 x pcs M4 bolts
Access	Front
Cable entry	Side / Bottom – through Glands (optional)
Connector type	RJ 45
Manufacturer	Zenitel AS

#### CERTIFICATES / COMPLIANCES:

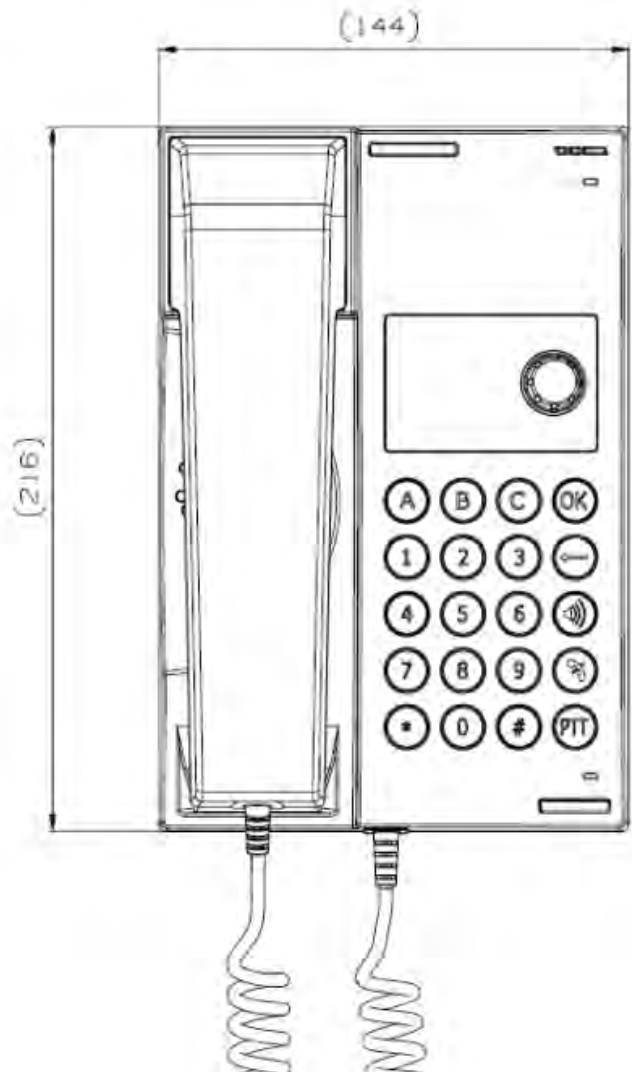
IEC 60945 Marine equipment
The unit has a pending DNV/ABS/RMRS/CCS type approval and is also compatible with NORSOK.

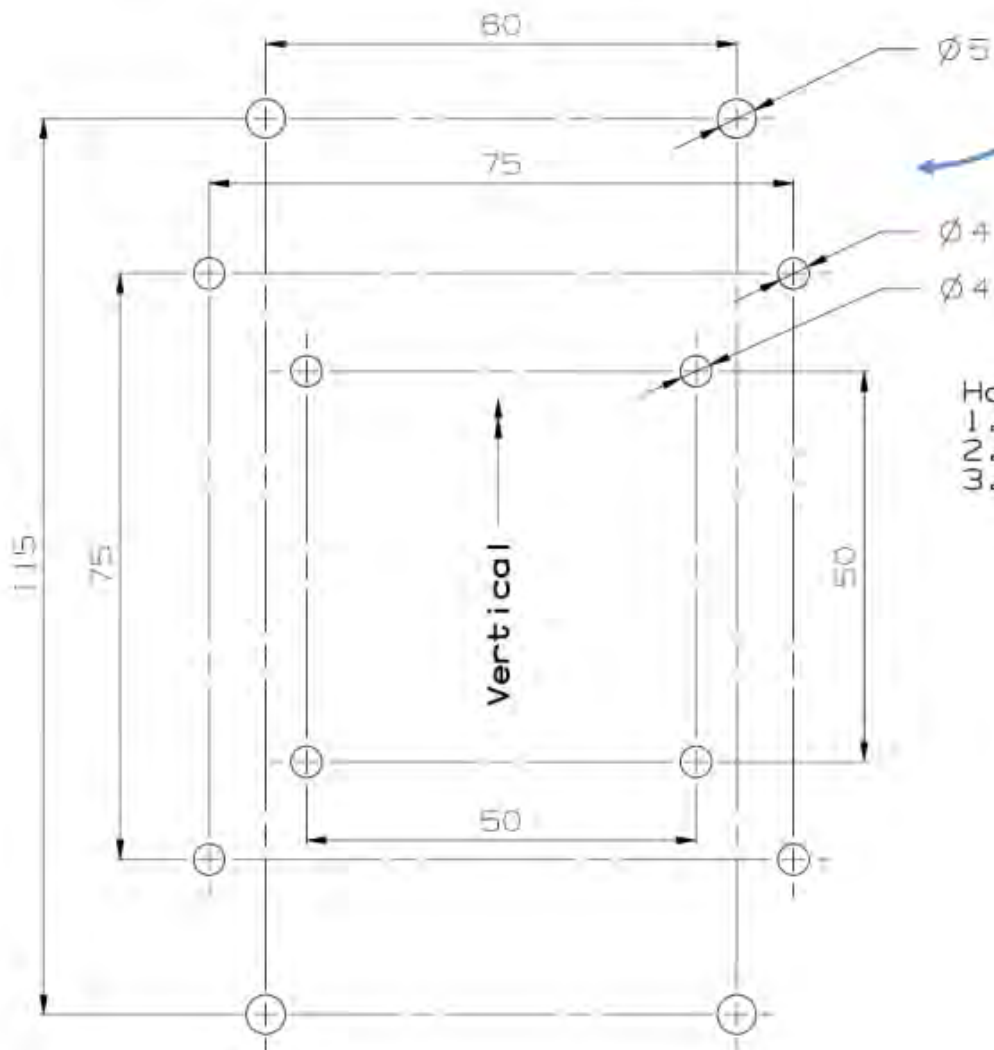
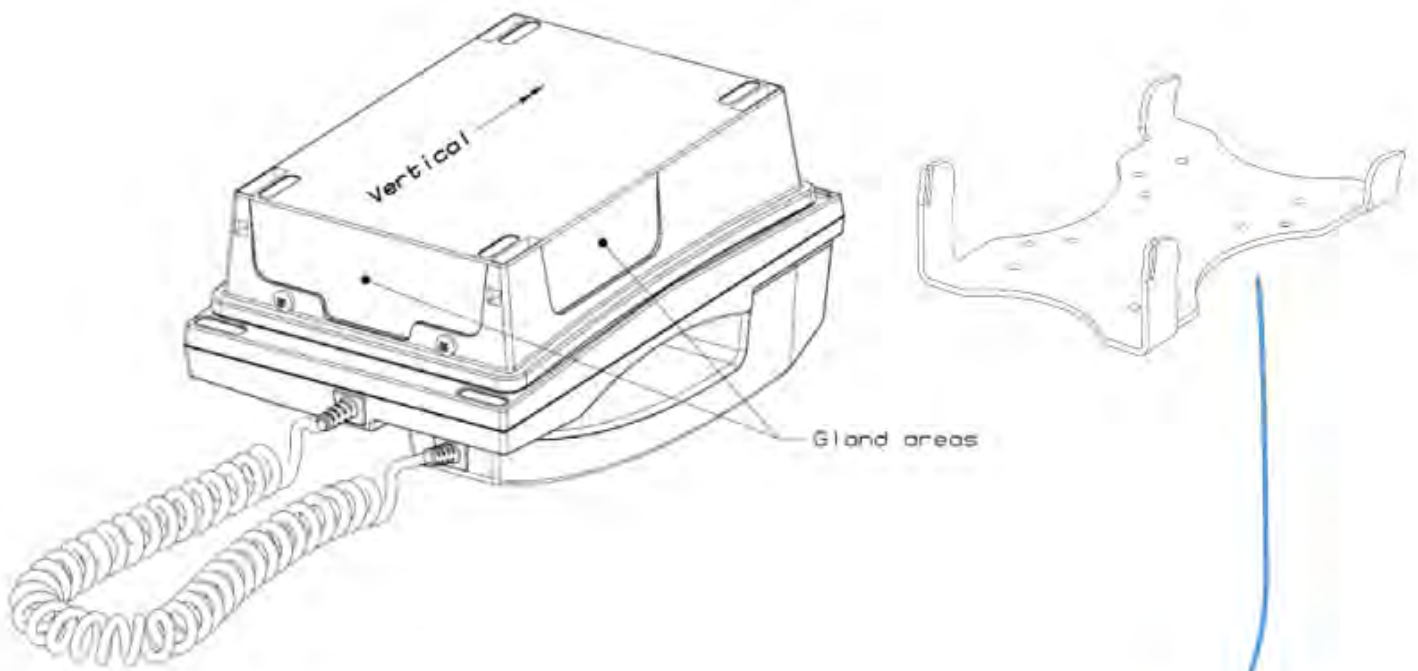
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#### RELATED PRODUCTS:

ICS 6200	Integrated Communication System
4000014774	Headset – hearing protective 6035 (10 / 15 / 20 m cable)
4000017147	
4000019061	

**DIMENSION / LAYOUT**

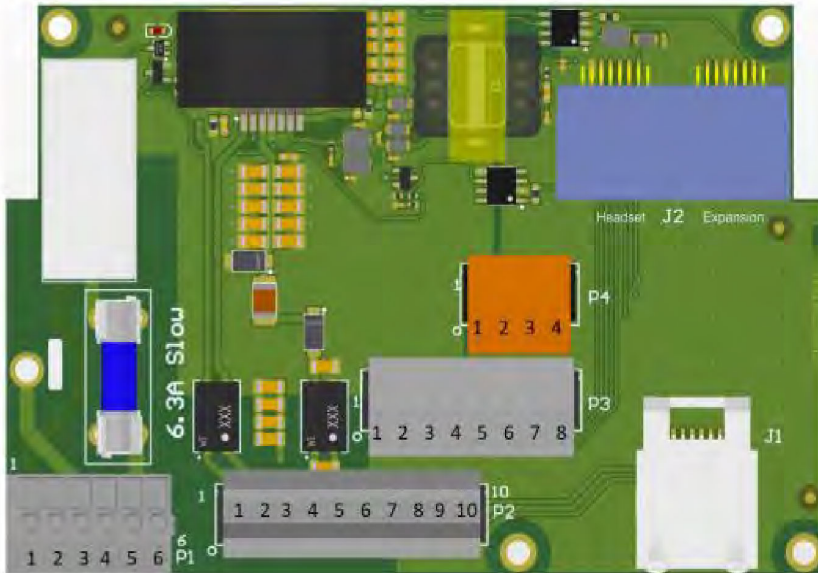




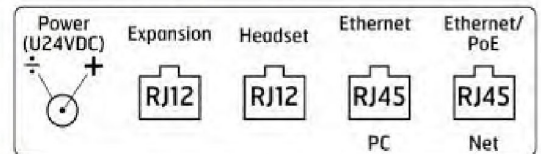
- Hole Patterns:
1. 50mm x 50mm
  2. 75mm x 75mm
  3. 115mm x 60mm

## EXTERNAL CONNECTIONS

### Terminal board:



### Main module terminations:



### Internal connections:

J2 – RJ12 (Expansions/Headset)

### Optional External connection

RJ45 – Ethernet/PoE (net)

RJ45 – Ethernet (PC)

P1.1 – External signal device Relay NO  
 P1.2/3 – PE (Protective Earth)  
 P1.4/6 – Common VIA point  
 P1.5 – External signal device Relay Com

P3.1 – Headset Earphone L Ref  
 P3.2 – Headset Earphone L  
 P3.3 – Headset mic. +  
 P3.4 – Headset mic. -  
 P3.5 – Headset Earphone R  
 P3.6 – Headset Earphone R Ref  
 P3.7 – Headset PTT  
 P3.8 – Headset PTT Ref

P2.1 – External Loudspeaker +  
 P2.2 – Screen  
 P2.3 – External Loudspeaker -  
 P2.4/5 – +24V DC Power supply (amplifier/relay)  
 P2.6/7 – 0V DC Power supply (amplifier/relay)  
 P2.8/9 - UpN two-wire line  
 P2.10 – Screen

P4.1 – Expansion CAN Hi  
 P4.2 – Expansion 3.3V  
 P4.3 – Expansion GND  
 P4.4 – Expansion CAN Lo



### 4.2.3 PHONTECH 6212, WP UNIT WO/HANDSET, TWO WIRE



#### DESCRIPTION:

The Telephone 6212 is intended for installation outdoor or in harsh environments inside. This is a UpN digital station with loudspeaker, internal microphone, memory functions etc. It is equipped with an amplifier for additional external loudspeaker and relay for external call signal device (Beacon, Siren etc.)

The unit is bulkhead mounted.

#### FEATURES:

- Integrated loudspeaker / microphone
- Hands-free, duplex communication
- 2" Graphic backlit display
  - Menus and navigation wheel/key
  - Contact list
  - Caller ID
- Dimmable backlight (keypad)
- Privacy switch (Do not disturb) with priority override
- Manual PTT (push-to-talk) key
- 3 pcs programmable direct access keys (A-B-C)
- Volume adjustment with override
- Speakerphone SPL level >85dB(A) (integrated loudspeaker)
- Bulkhead mounted
- MMI according to IEC 62288 Ed 2.0
- Status/health indicator
- Multiple ring melodies
- Integrated call relay for external signal device
- Output to external loudspeaker, 8 W;  
SPL level > 110dB (loudspeaker dependent)
- Headset connection



#### ELECTRICAL SPECIFICATIONS:

Line format	UpN (Digital 2Wire – 2B+D)
Power supply	System / Line feed (Basic telephone operation) Additional 24V/1.5A input for call relay and amplifier for external loudspeaker
Power consumption	NA / 10W (max – external loudspeaker)
Heat dissipation (typ/max)	< 2W (max)
Termination	Line: RJ45, two centre cores External loudspeaker/external signal device etc: clamp terminals
External loudspeaker	8W / 20Ω
External signal device Call relay	6.3 A (max)



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Compass safe distance	TBD (> 5m)
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**ENVIRONMENTAL SPECIFICATIONS:**

Temperature	-25°C to +55°C
Humidity	+93% (at +40°C)
Protection	IP56 (exposed)
UL94	V0

**MECHANICAL SPECIFICATIONS:**

Dimension (WxHxD)	144 x 216 x 91.3mm
Weight	1.0kg
Material	Plastic (PC/ASA)
Colour	Grey – RAL 7021/7043
Mounting	Bulkhead / Direct or Bracket
Fixing	4 x pcs M4 bolts
Access	Front
Cable entry	Side / Bottom – through Glands (optional)
Connector type	RJ 45
Manufacturer	Zenitel AS

**CERTIFICATES / COMPLIANCES:**

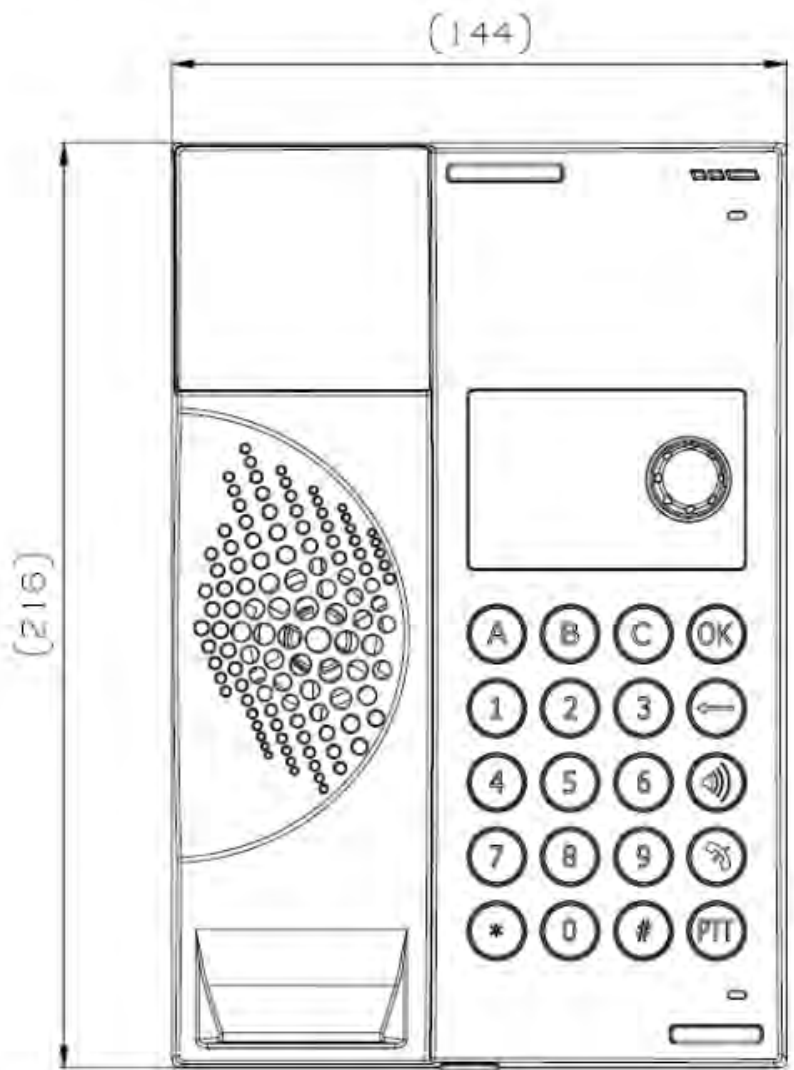
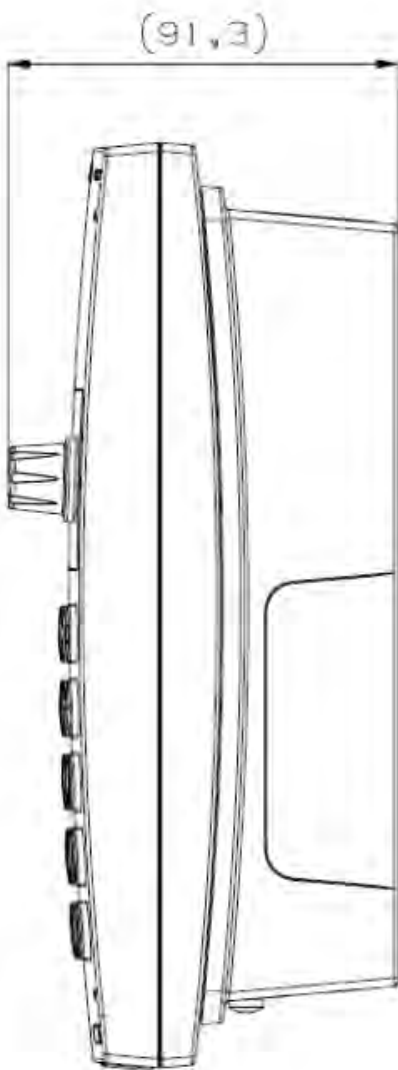
IEC 60945 Marine equipment
The unit has a pending DNV/ABS/RMRS/CCS type approval and is also compatible with NORSOK.

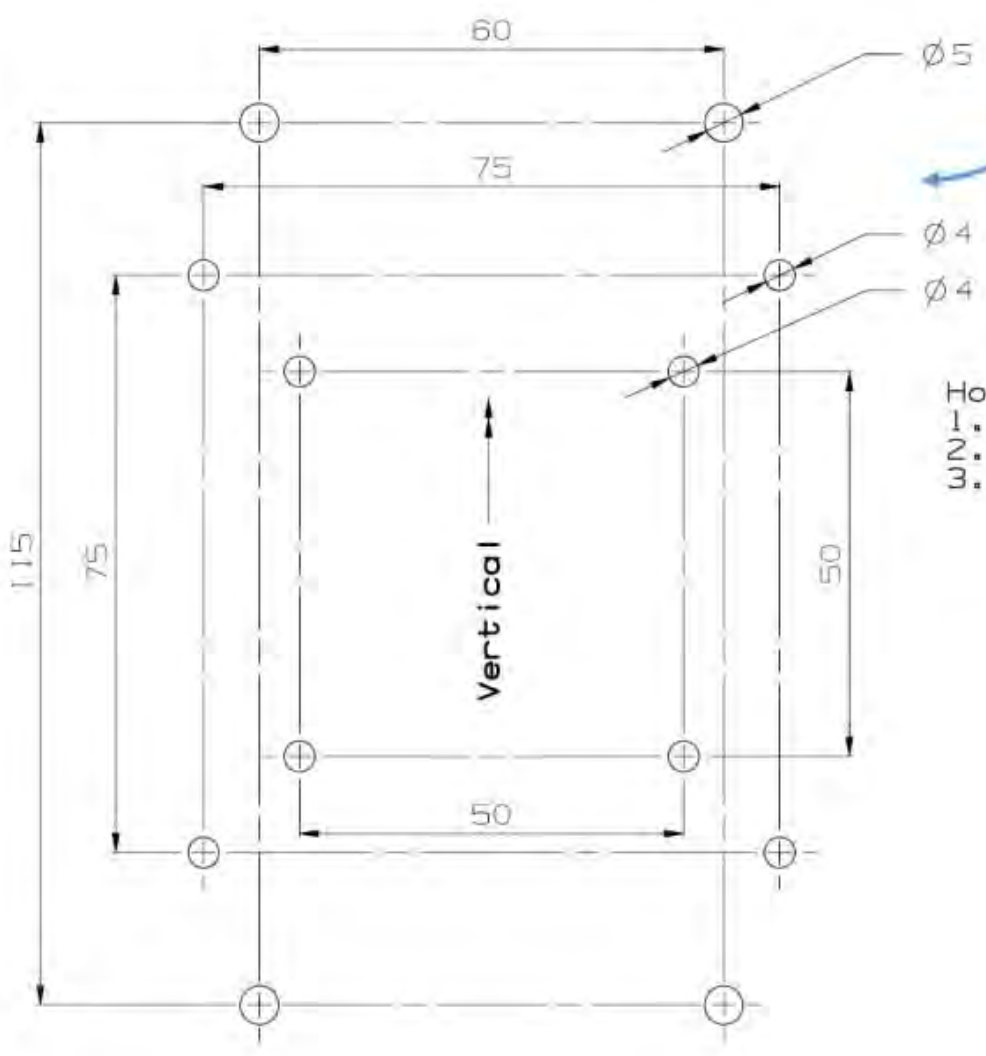
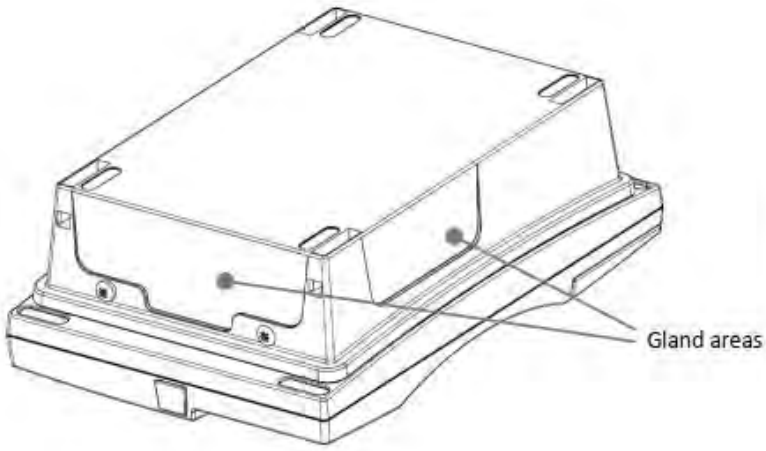
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**RELATED PRODUCTS:**

ICS 6200	Integrated Communication System
4000014774	Headset – hearing protective 6035 (10 / 15 / 20 m cable)
4000017147	
4000019061	

DIMENSION / LAYOUT

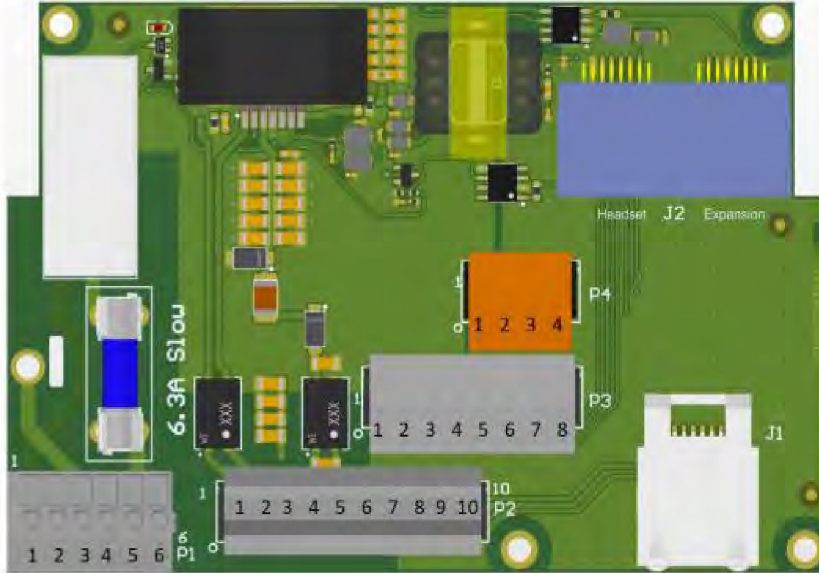




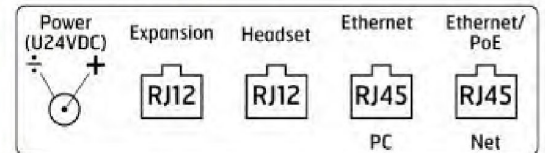
- Hole Patterns:
1. 50mm x 50mm
  2. 75mm x 75mm
  3. 115mm x 60mm

## EXTERNAL CONNECTIONS

### Terminal board:



### Main module terminations:



### Internal connections:

J2 – RJ12 (Expansions/Headset)

### Optional External connection

RJ45 – Ethernet/PoE (net)

RJ45 – Ethernet (PC)

P1.1 – External signal device Relay NO  
 P1.2/3 – PE (Protective Earth)  
 P1.4/6 – Common VIA point  
 P1.5 – External signal device Relay Com

P3.1 – Headset Earphone L Ref  
 P3.2 – Headset Earphone L  
 P3.3 – Headset mic. +  
 P3.4 – Headset mic. -  
 P3.5 – Headset Earphone R  
 P3.6 – Headset Earphone R Ref  
 P3.7 – Headset PTT  
 P3.8 – Headset PTT Ref

P2.1 – External Loudspeaker +  
 P2.2 – Screen  
 P2.3 – External Loudspeaker -  
 P2.4/5 – +24V DC Power supply (amplifier/relay)  
 P2.6/7 – 0V DC Power supply (amplifier/relay)  
 P2.8/9 - UpN two-wire line  
 P2.10 – Screen

P4.1 – Expansion CAN Hi  
 P4.2 – Expansion 3.3V  
 P4.3 – Expansion GND  
 P4.4 – Expansion CAN Lo



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#### 4.2.4 PHONTECH 6223. CONSOLE MOUNTED UNIT. TWO WIRE



##### DESCRIPTION:

The Telephone 6223 is intended for console installations in protected environments. This is a UpN digital station with handset, loudspeaker, internal microphone, memory functions etc. It is equipped with an amplifier for additional external loudspeaker and relay for external call signal device (Beacon, Siren etc.)

##### FEATURES:

- Integrated loudspeaker / microphone
- Handset, 2 m sturdy curled cord
- Hands-free, duplex communication
- 2" Graphic backlit display
  - Menus and navigation wheel/key
  - Contact list
  - Caller ID
- Dimmable backlight (keypad)
- Privacy switch (Do not disturb) with priority override
- Manual PTT (push-to-talk) key
- 3 pcs programmable direct access keys (A-B-C)
- Volume adjustment with override
- Speakerphone SPL level >85dB(A) (integrated loudspeaker)
- Console mounted
- MMI according to IEC 62288 Ed 2.0
- Status/health indicator
- Multiple ring melodies
- Integrated call relay for external signal device
- Output to external loudspeaker, 8 W; SPL level > 110dB (loudspeaker dependent)
- Headset connection



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##### ELECTRICAL SPECIFICATIONS:

Line format	UpN (Digital 2Wire – 2B+D)
Power supply	System / Line feed (Basic telephone operation) Additional 24V/1.5A input for call relay and amplifier for external loudspeaker
Power consumption	NA / 10W (max – external loudspeaker)
Heat dissipation (typ/max)	< 2W (max)
Termination	Line: RJ45, two centre cores External loudspeaker/external signal device etc: clamp terminals

External loudspeaker	8W / 20Ω
External signal device Call relay	6.3A (max)
Compass safe distance	TBD (> 5m)

#### ENVIRONMENTAL SPECIFICATIONS:

Temperature	-15°C to +55°C
Humidity	+93% (at +40°C)
Protection	IP22 (protected) (above console)
UL94	V0

#### MECHANICAL SPECIFICATIONS:

Dimension (WxHxD)	144x216x57.3mm (above console) Depth below: 57.8mm
Cut out dimension	117.5 x 189.8mm
Weight	1.5kg (inclusive console bracket)
Material	Plastic (PC/ASA) / Console bracket: Aluzinc coated steel
Colour	Grey – RAL 7021/7043
Mounting	Console
Fixing	6 x pcs M3 bolts (console bracket)
Access	Front
Cable entry	Side / Bottom
Connector type	RJ 45
Manufacturer	Zenitel AS

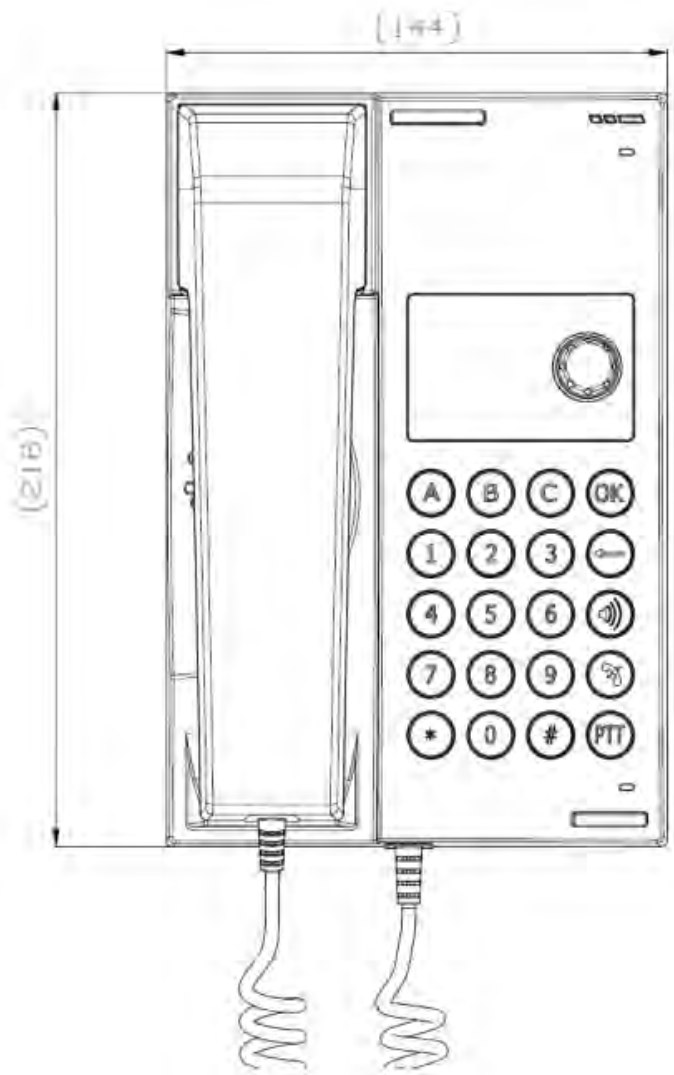
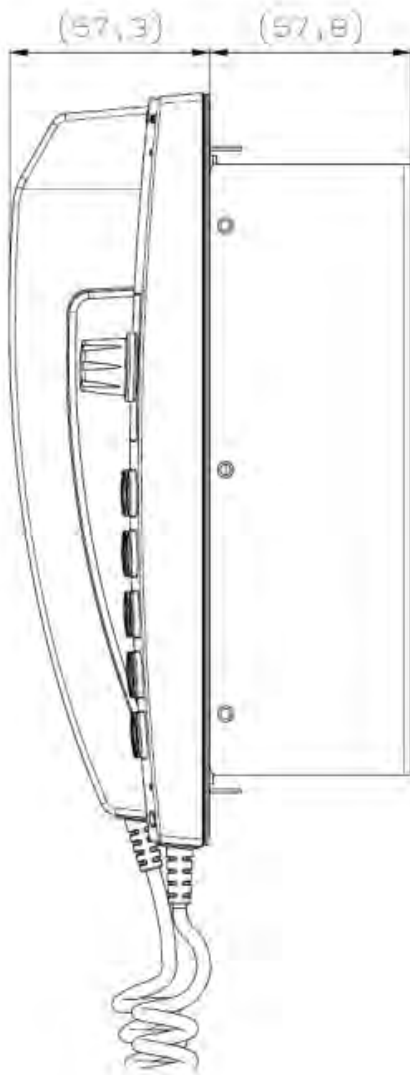
#### CERTIFICATES / COMPLIANCES:

IEC 60945 Marine equipment
The unit has a pending DNV/ABS/RMRS/CCS type approval and is also compatible with NORSOK.

#### RELATED PRODUCTS:

ICS 6200	Integrated Communication System
4000014774	Headset – hearing protective 6035 (10 / 15 / 20 m cable)
4000017147	
4000019061	

DIMENSION / LAYOUT



p/n 4000087299 v.K

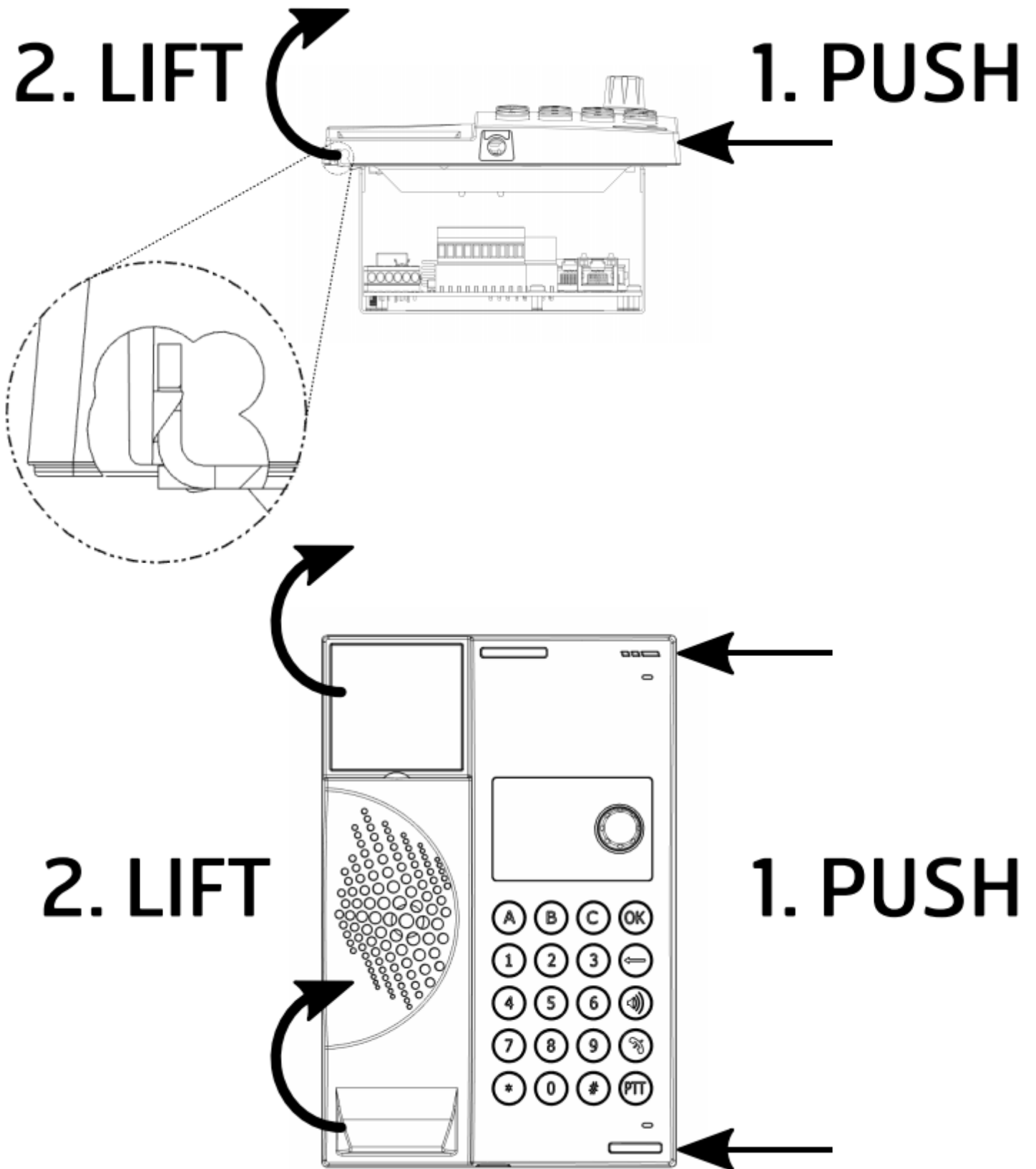






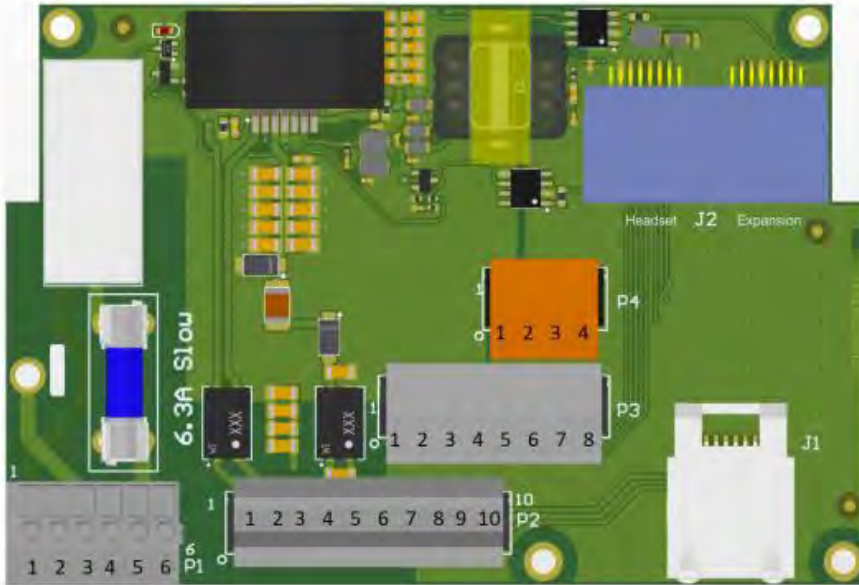
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**CONSOLE UNMOUNTING INSTRUCTIONS**

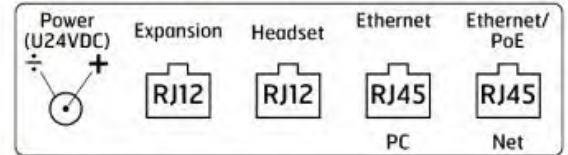


## EXTERNAL CONNECTIONS

### Terminal board:



### Main module terminations:



### Internal connections:

J2 – RJ12 (Expansions/Headset)

### Optional External connection

RJ45 – Ethernet/PoE (net)

RJ45 – Ethernet (PC)

P1.1 – External signal device Relay NO  
 P1.2/3 – PE (Protective Earth)  
 P1.4/6 – Common VIA point  
 P1.5 – External signal device Relay Com

P3.1 – Headset Earphone L Ref  
 P3.2 – Headset Earphone L  
 P3.3 – Headset mic. +  
 P3.4 – Headset mic. -  
 P3.5 – Headset Earphone R  
 P3.6 – Headset Earphone R Ref  
 P3.7 – Headset PTT  
 P3.8 – Headset PTT Ref

P2.1 – External Loudspeaker +  
 P2.2 – Screen  
 P2.3 – External Loudspeaker -  
 P2.4/5 – +24V DC Power supply (amplifier/relay)  
 P2.6/7 – 0V DC Power supply (amplifier/relay)  
 P2.8/9 - UpN two-wire line  
 P2.10 – Screen

P4.1 – Expansion CAN Hi  
 P4.2 – Expansion 3.3V  
 P4.3 – Expansion GND  
 P4.4 – Expansion CAN Lo

#### 4.2.5 PHONTECH 7210, ACCOMODATION UNIT, VOIP



#### DESCRIPTION:

The Telephone 7210 is an indoor accommodation unit, normally used in cabins, offices, etc. This is a VoIP station with handset, loudspeaker, internal microphone, memory functions etc. The unit can be desk or bulkhead mounted.

#### FEATURES:

- Integrated loudspeaker / microphone
- Handset, 2 m sturdy curled cord
- Hands-free, duplex communication
- 2" Graphic backlit display
  - Menus and navigation wheel/key
  - Contact list
  - Caller ID
- Dimmable backlight (keypad)
- Privacy switch (Do not disturb) with priority override
- Manual PTT (push-to-talk) key
- 3 pcs programmable direct access keys (A-B-C)
- Volume adjustment with override
- Speakerphone SPL level >85dB(A)
- Desk or bulkhead mounted
- MMI according to IEC 62288 Ed 2.0
- Status/health indicator
- Multiple ring melodies
- 2-port 100Mbit Eth switch for data connectivity



#### ELECTRICAL SPECIFICATIONS:

Line format	VoIP, PoE
Power supply	PoE / 24VDC (Optional external power)
Power consumption	3W (max)
Heat dissipation (typ/max)	NA
Termination	RJ45
Compass safe distance	TBD (>5m)

#### ENVIRONMENTAL SPECIFICATIONS:

Temperature	-15°C to +55°C
Humidity	+93% (at +40°C)

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Protection	IP22 (protected environment)
UL94	V0

### MECHANICAL SPECIFICATIONS:

Dimension (WxHxD)	144 x 216 x 95.5mm
Weight	0.9kg
Material	Plastic (PC/ASA)
Colour	Grey – RAL 7021/7043
Mounting	Table / Wall with wall contact
Fixing	Bulkhead: 2 x M4 bolts
Access	Front
Cable entry	Rear
Connector type	RJ 45 (line) / RJ 12 (headset)
Manufacturer	Zenitel AS

### CERTIFICATES / COMPLIANCES:

IEC 60945 Marine equipment

The unit has a pending DNV/ABS/RMRS/CCS type approval and is also compatible with NORSOK.

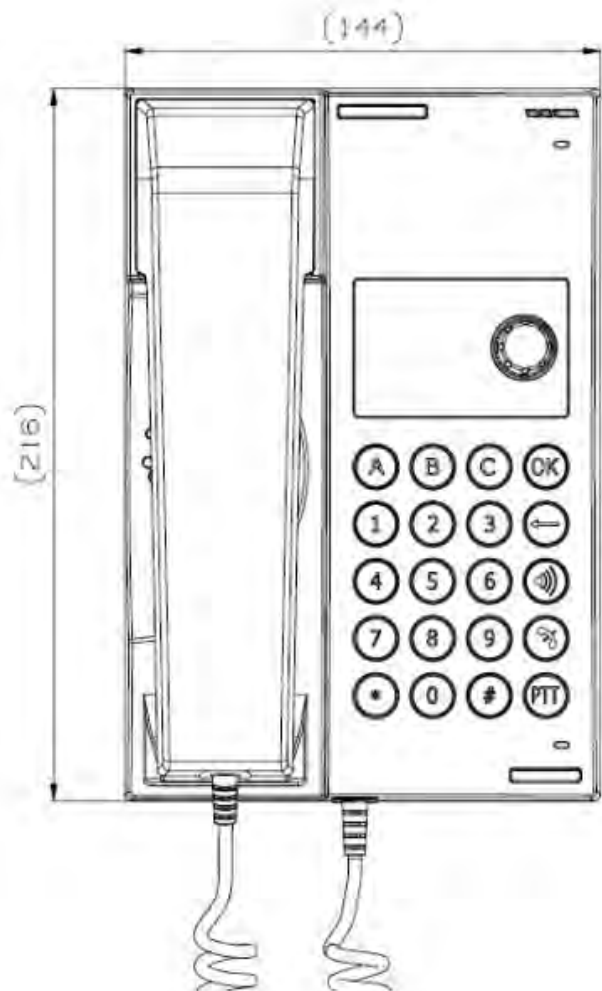
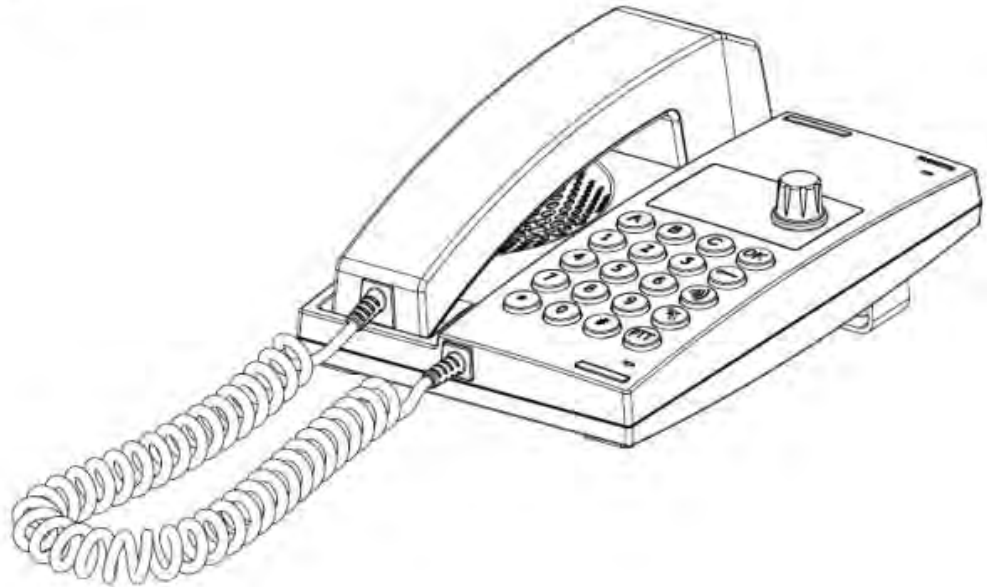
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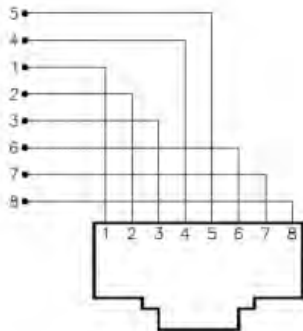
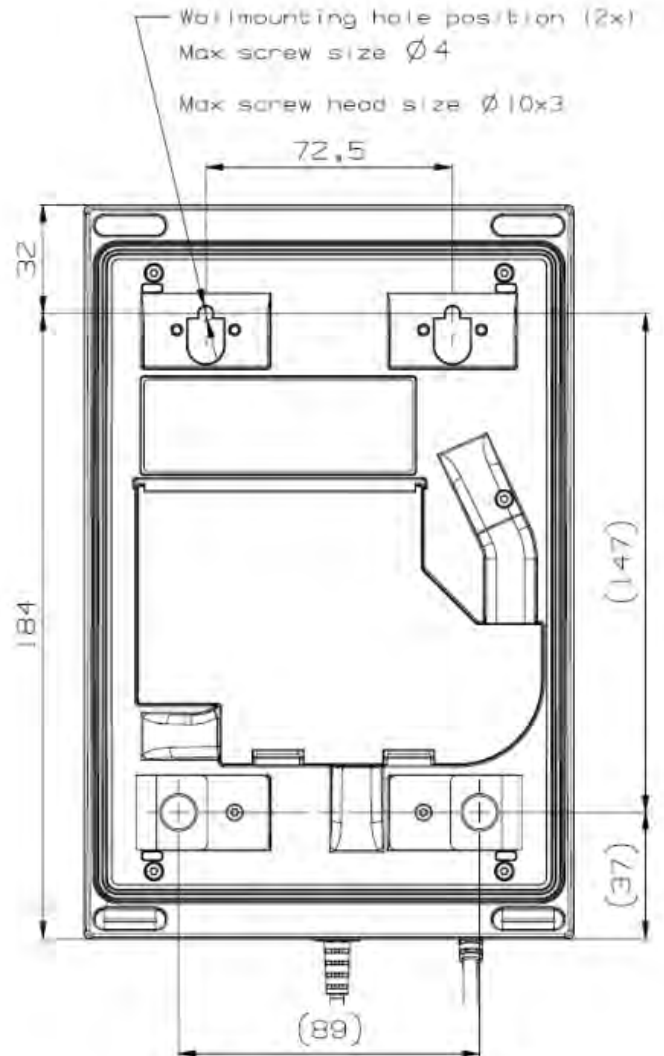
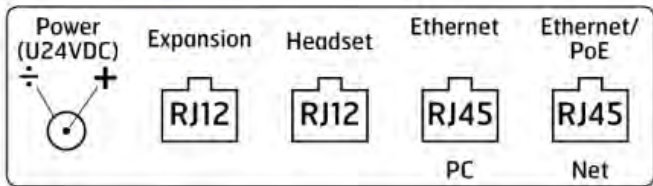
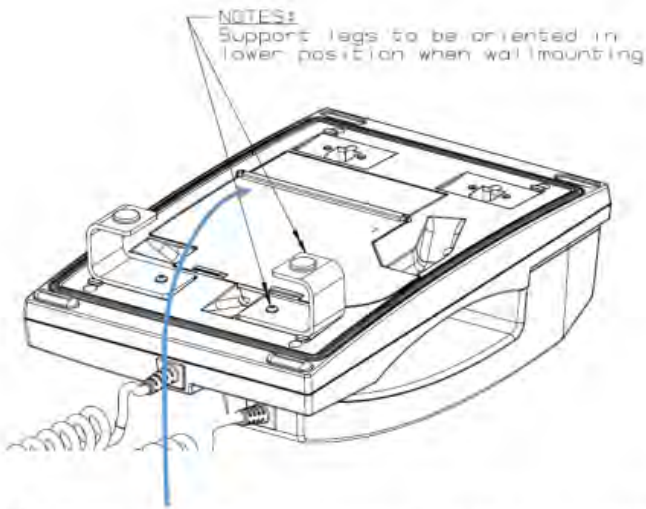
### RELATED PRODUCTS:

ICS 6200	Integrated Communication System
4000019064	RJ45/Cat5/Cat6 modular outlet



DIMENSION / LAYOUT





Modular outlet, 4000019064; RJ45/Cat5/Cat6

## 4.2.6 PHONTECH 7211, WP UNIT W/HANDSET, VOIP



### DESCRIPTION:

The Telephone 7211 is intended for installation outdoor or in harsh environments inside. This is a VoIP station with handset, loudspeaker, internal microphone, memory functions etc. It is equipped with an amplifier for additional external loudspeaker and relay for external call signal device (Beacon, Siren etc.)

The unit is bulkhead mounted.

### FEATURES:

- Integrated loudspeaker / microphone
- Handset, 2 m sturdy curled cord
- Hands-free, duplex communication
- 2" Graphic backlit display
  - Menus and navigation wheel/key
  - Contact list
  - Caller ID
- Dimmable backlight (keypad)
- Privacy switch (Do not disturb) with priority override
- Manual PTT (push-to-talk) key
- 3 pcs programmable direct access keys (A-B-C)
- Volume adjustment with override
- Speakerphone SPL level >85dB(A) (integrated loudspeaker)
- Bulkhead mounted
- MMI according to IEC 62288 Ed 2.0
- Status/health indicator
- Multiple ring melodies
- Integrated call relay for external signal device
- Output to external loudspeaker, 8 W; SPL level > 110dB (loudspeaker dependent)
- Headset connection
- 2-port 100Mbit Eth switch for data connectivity



### ELECTRICAL SPECIFICATIONS:

Line format	VoIP, PoE
Power supply	PoE / 24VDC (Optional external power) Additional 24V/1.5A input for call relay and amplifier for external loudspeaker
Power consumption	NA / 10W (max – external loudspeaker)
Heat dissipation (typ/max)	< 2W (max)
Termination	RJ45 External loudspeaker/external signal device etc: clamp terminals



External loudspeaker	8W / 20Ω
External signal device Call relay	6.3A (max)
Compass safe distance	TBD (>5m)

#### ENVIRONMENTAL SPECIFICATIONS:

Temperature	-25°C to +55°C
Humidity	+93% (at +40°C)
Protection	IP56 (exposed)
UL94	V0

#### MECHANICAL SPECIFICATIONS:

Dimension (WxHxD)	144 x 216 x 120mm
Weight	1.1kg
Material	Plastic (PC/ASA)
Colour	Grey – RAL 7021/7043
Mounting	Bulkhead / Direct or Bracket
Fixing	4 x pcs M4 bolts
Access	Front
Cable entry	Side / Bottom – through Glands (optional)
Connector type	RJ 45
Manufacturer	Zenitel AS

#### CERTIFICATES / COMPLIANCES:

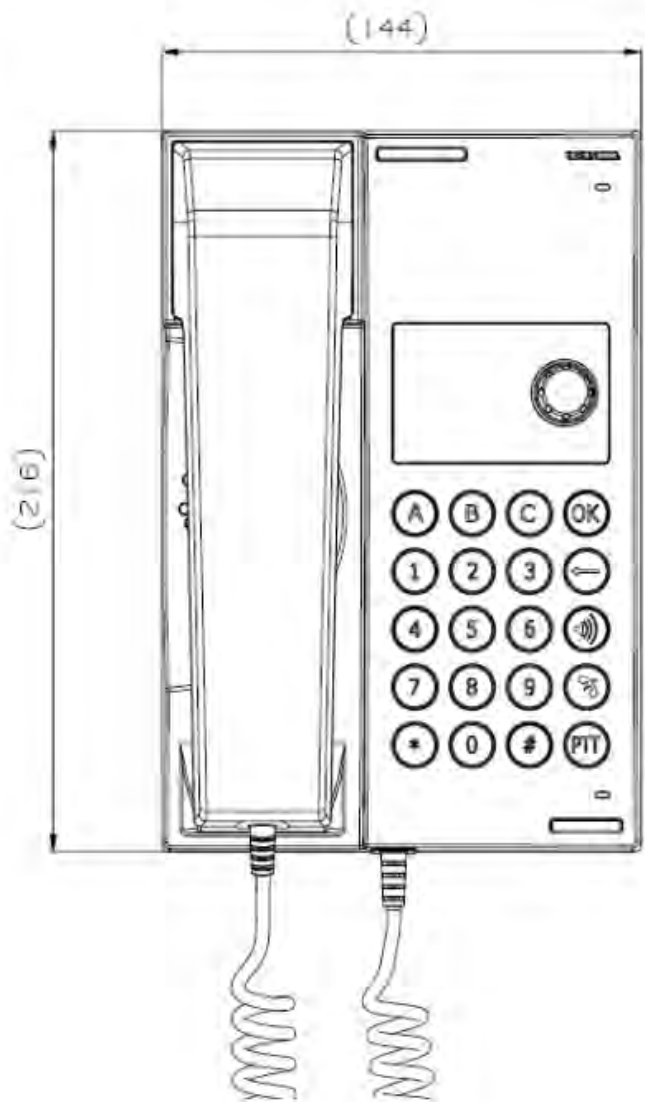
IEC 60945 Marine equipment
The unit has a pending DNV/ABS/RMRS/CCS type approval and is also compatible with NORSOK.

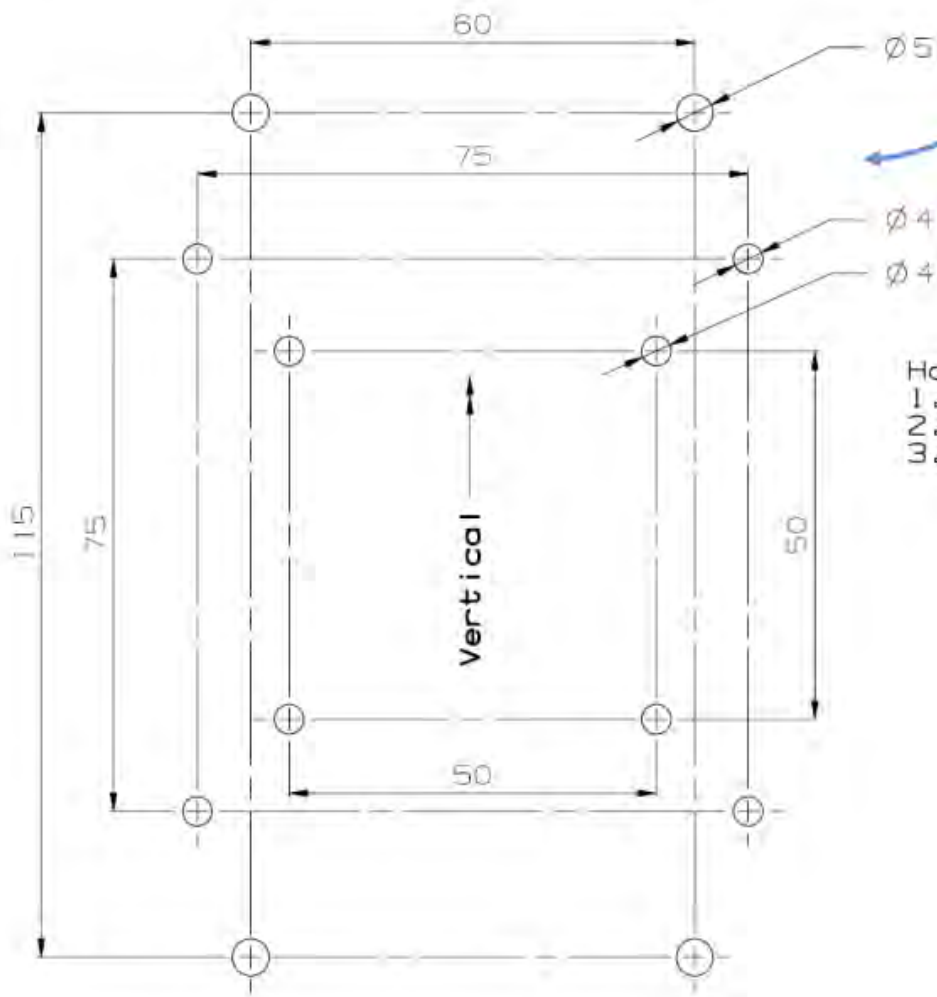
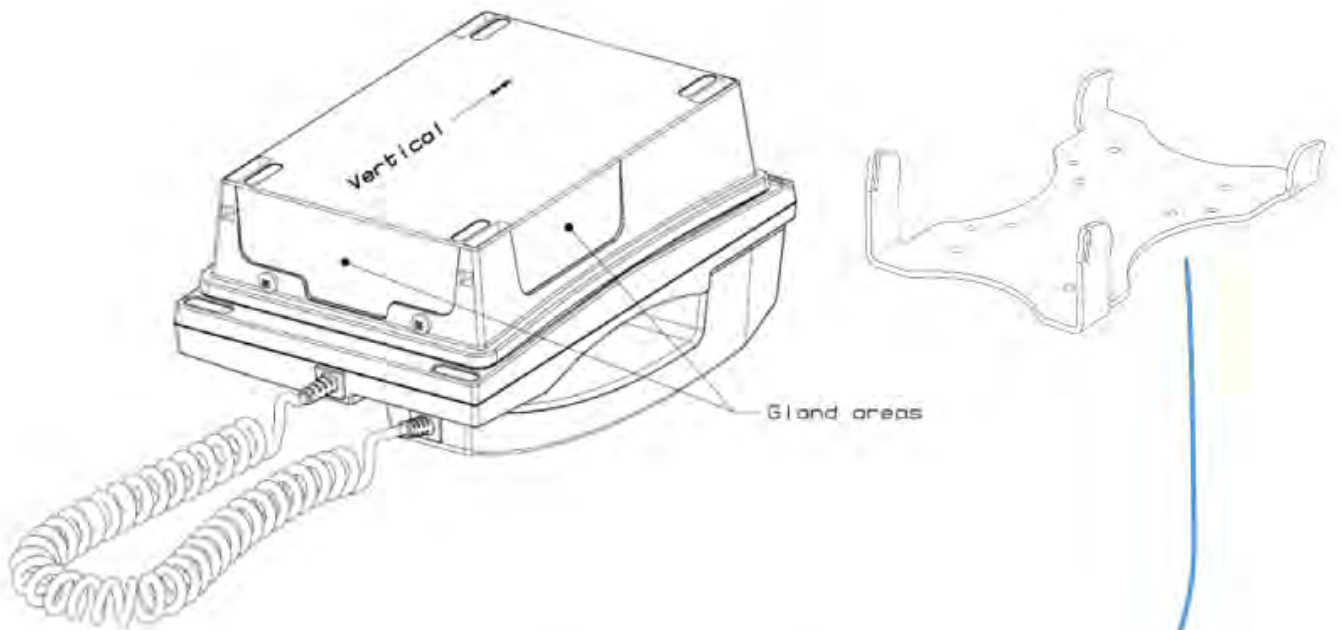
#### RELATED PRODUCTS:

ICS 6200	Integrated Communication System
4000014774	Headset – hearing protective 6035 (10 / 15 / 20 m cable)
4000017147	
4000019061	



DIMENSION / LAYOUT

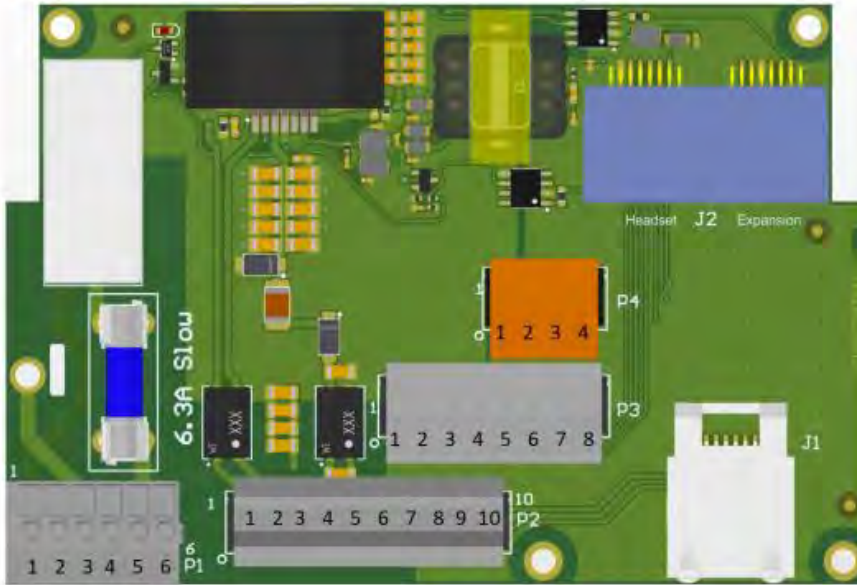




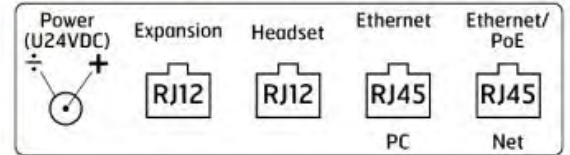
- Hole Patterns:**
1. 50mm x 50mm
  2. 75mm x 75mm
  3. 115mm x 60mm

## EXTERNAL CONNECTIONS

### Terminal board:



### Main module terminations:



### Internal connections:

J2 – RJ12 (Expansions/Headset)

### Optional External connection

RJ45 – Ethernet/PoE (net)

RJ45 – Ethernet (PC)

P1.1 – External signal device Relay NO  
 P1.2/3 – PE (Protective Earth)  
 P1.4/6 – Common VIA point  
 P1.5 – External signal device Relay Com

P3.1 – Headset Earphone L Ref  
 P3.2 – Headset Earphone L  
 P3.3 – Headset mic. +  
 P3.4 – Headset mic. -  
 P3.5 – Headset Earphone R  
 P3.6 – Headset Earphone R Ref  
 P3.7 – Headset PTT  
 P3.8 – Headset PTT Ref

P2.1 – External Loudspeaker +  
 P2.2 – Screen  
 P2.3 – External Loudspeaker -  
 P2.4/5 – +24V DC Power supply (amplifier/relay)  
 P2.6/7 – 0V DC Power supply (amplifier/relay)  
 P2.8/9 – No Connection  
 P2.10 – Screen

P4.1 – Expansion CAN Hi  
 P4.2 – Expansion 3.3V  
 P4.3 – Expansion GND  
 P4.4 – Expansion CAN Lo



## 4.2.7 PHONTECH 7212, WP UNIT WO/HANDSET, VOIP



### DESCRIPTION:

The Telephone 7212 is intended for installation outdoor or in harsh environments inside. This is a VoIP station with loudspeaker, internal microphone, memory functions etc. It is equipped with an amplifier for additional external loudspeaker and relay for external call signal device (Beacon, Siren etc.)

The unit is bulkhead mounted.

### FEATURES:

- Integrated loudspeaker / microphone
- Hands-free, duplex communication
- 2" Graphic backlit display
  - Menus and navigation wheel/key
  - Contact list
  - Caller ID
- Dimmable backlight (keypad)
- Privacy switch (Do not disturb) with priority override
- Manual PTT (push-to-talk) key
- 3 pcs programmable direct access keys (A-B-C)
- Volume adjustment with override
- Speakerphone SPL level >85dB(A) (integrated loudspeaker)
- Bulkhead mounted
- MMI according to IEC 62288 Ed 2.0
- Status/health indicator
- Multiple ring melodies
- Integrated call relay for external signal device
- Output to external loudspeaker, 8 W;  
SPL level > 110dB (loudspeaker dependent)
- Headset connection
- 2-port 100Mbit Eth switch for data connectivity



### ELECTRICAL SPECIFICATIONS:

Line format	VoIP, PoE
Power supply	PoE / 24VDC (Optional external power) Additional 24V/1.5A input for call relay and amplifier for external loudspeaker
Power consumption	NA / 10W (max – external loudspeaker)
Heat dissipation (typ/max)	< 2W (max)
Termination	RJ45 External loudspeaker/external signal device etc: clamp terminals
External loudspeaker	8W / 20Ω

External signal device Call relay	6.3A (max)
Compass safe distance	TBD (>5m)

#### ENVIRONMENTAL SPECIFICATIONS:

Temperature	-25°C to +55°C
Humidity	+93% (at +40°C)
Protection	IP56 (exposed)
UL94	V0

#### MECHANICAL SPECIFICATIONS:

Dimension (WxHxD)	144 x 216 x 91.3mm
Weight	1.0kg
Material	Plastic (PC/ASA)
Colour	Grey – RAL 7021/7043
Mounting	Bulkhead / Direct or Bracket
Fixing	4 x pcs M4 bolts
Access	Front
Cable entry	Side / Bottom – through Glands (optional)
Connector type	RJ 45
Manufacturer	Zenitel AS

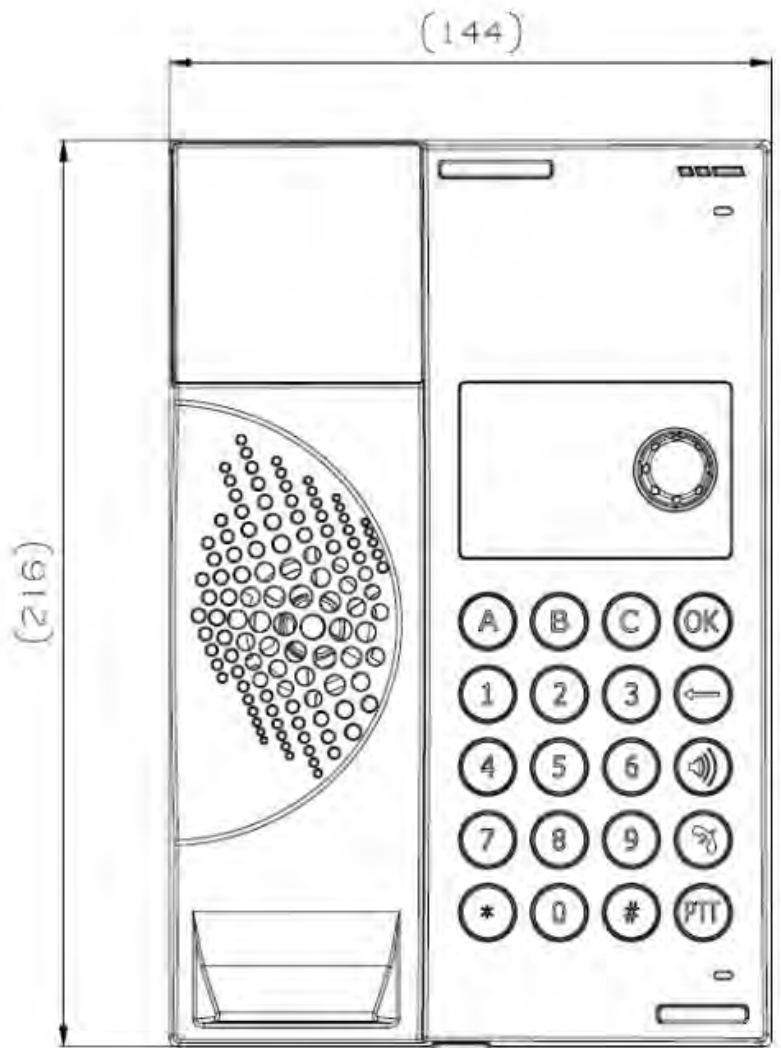
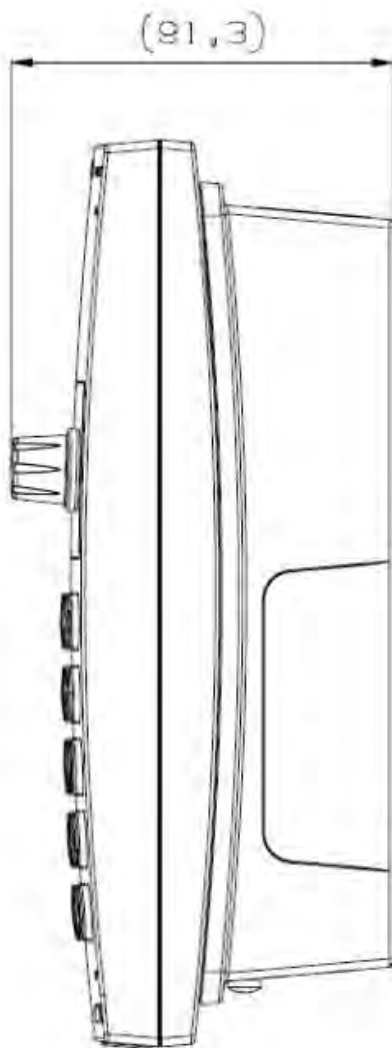
#### CERTIFICATES / COMPLIANCES:

IEC 60945 Marine equipment
The unit has a pending DNV/ABS/RMRS/CCS type approval and is also compatible with NORSOK.

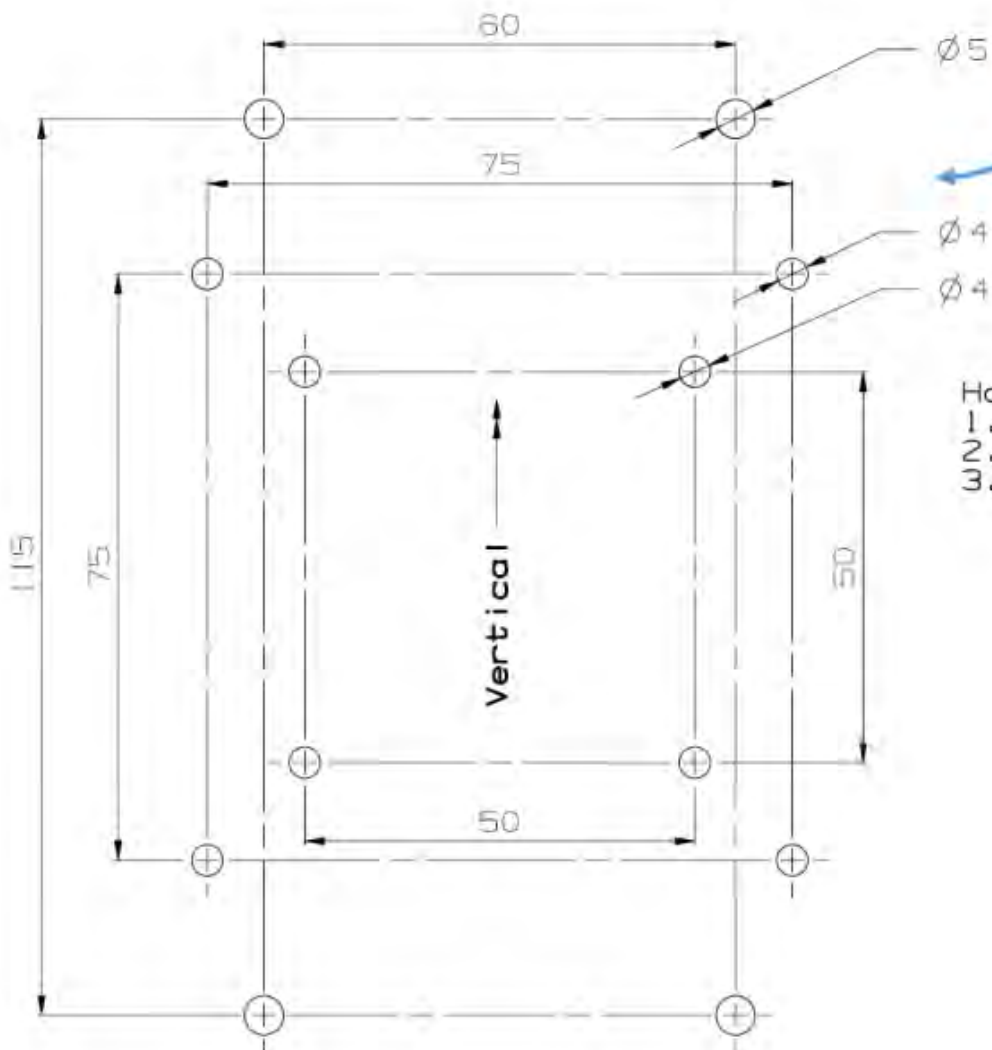
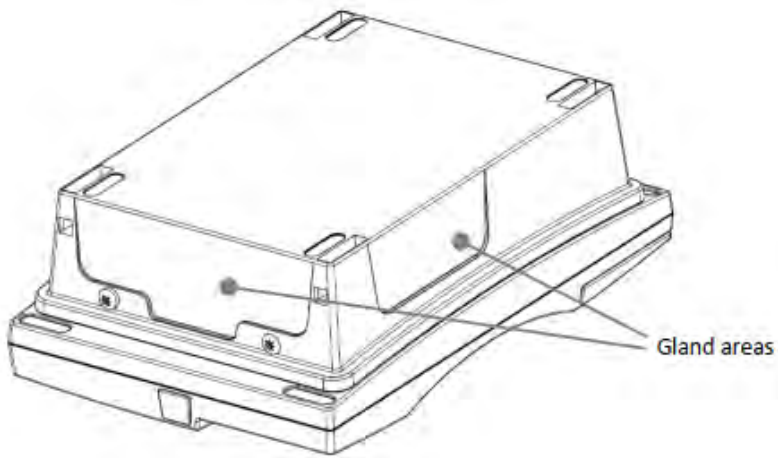
#### RELATED PRODUCTS:

ICS 6200	Integrated Communication System
4000014774	Headset – hearing protective 6035 (10 / 15 / 20 m cable)
4000017147	
4000019061	

DIMENSION / LAYOUT



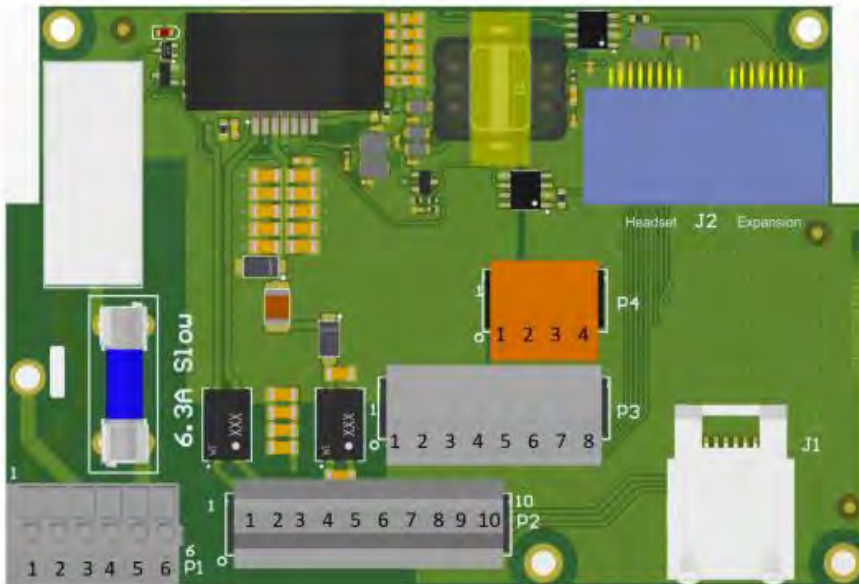




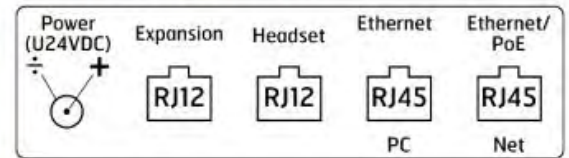
- Hole Patterns:
1. 50mm x 50mm
  2. 75mm x 75mm
  3. 115mm x 60mm

## EXTERNAL CONNECTIONS

### Terminal board:



### Main module terminations:



### Internal connections:

J2 – RJ12 (Expansions/Headset)

### Optional External connection

RJ45 – Ethernet/PoE (net)

RJ45 – Ethernet (PC)

P1.1 – External signal device Relay NO  
 P1.2/3 – PE (Protective Earth)  
 P1.4/6 – Common VIA point  
 P1.5 – External signal device Relay Com

P3.1 – Headset Earphone L Ref  
 P3.2 – Headset Earphone L  
 P3.3 – Headset mic. +  
 P3.4 – Headset mic. -  
 P3.5 – Headset Earphone R  
 P3.6 – Headset Earphone R Ref  
 P3.7 – Headset PTT  
 P3.8 – Headset PTT Ref

P2.1 – External Loudspeaker +  
 P2.2 – Screen  
 P2.3 – External Loudspeaker -  
 P2.4/5 – +24V DC Power supply (amplifier/relay)  
 P2.6/7 – 0V DC Power supply (amplifier/relay)  
 P2.8/9 – No Connection  
 P2.10 – Screen

P4.1 – Expansion CAN Hi  
 P4.2 – Expansion 3.3V  
 P4.3 – Expansion GND  
 P4.4 – Expansion CAN Lo



## 4.2.8 PHONTECH 7223, CONSOLE MOUNTED UNIT, VOIP



### DESCRIPTION:

The Telephone 7223 is intended for console installations in protected environments. This is a VoIP station with handset, loudspeaker, internal microphone, memory functions etc. It is equipped with an amplifier for additional external loudspeaker and relay for external call signal device (Beacon, Siren etc.)

### FEATURES:

- Integrated loudspeaker / microphone
- Handset, 2 m sturdy curled cord
- Hands-free, duplex communication
- 2" Graphic backlit display
  - Menus and navigation wheel/key
  - Contact list
  - Caller ID
- Dimmable backlight (keypad)
- Privacy switch (Do not disturb) with priority override
- Manual PTT (push-to-talk) key
- 3 pcs programmable direct access keys (A-B-C)
- Volume adjustment with override
- Speakerphone SPL level >85dB(A) (integrated loudspeaker)
- Console mounted
- MMI according to IEC 62288 Ed 2.0
- Status/health indicator
- Multiple ring melodies
- Integrated call relay for external signal device
- Output to external loudspeaker, 8 W; SPL level > 110dB (loudspeaker dependent)
- Headset connection
- 2-port 100Mbit Eth switch for data connectivity



### ELECTRICAL SPECIFICATIONS:

Line format	VoIP, PoE
Power supply	PoE / 24VDC (Optional external power) Additional 24V/1.5A input for call relay and amplifier for external loudspeaker
Power consumption	NA / 10W (max – external loudspeaker)
Heat dissipation (typ/max)	< 2W (max)
Termination	RJ45 External loudspeaker/external signal device etc: clamp terminals

External loudspeaker	8W / 20Ω
External signal device Call relay	6.3A (max)
Compass safe distance	TBD (>5m)

#### ENVIRONMENTAL SPECIFICATIONS:

Temperature	-15°C to +55°C
Humidity	+93% (at +40°C)
Protection	IP22 (protected) (above console)
UL94	V0

#### MECHANICAL SPECIFICATIONS:

Dimension (WxHxD)	144x216x57.3mm (above console) Depth below: 57.8mm
Cut out dimension	117.5 x 189.8mm
Weight	1.5kg (inclusive console bracket)
Material	Plastic (PC/ASA) / Console bracket: Aluzinc coated steel
Colour	Grey – RAL 7021/7043
Mounting	Console
Fixing	6 x pcs M3 bolts (console bracket)
Access	Front
Cable entry	Side / Bottom
Connector type	RJ 45
Manufacturer	Zenitel AS

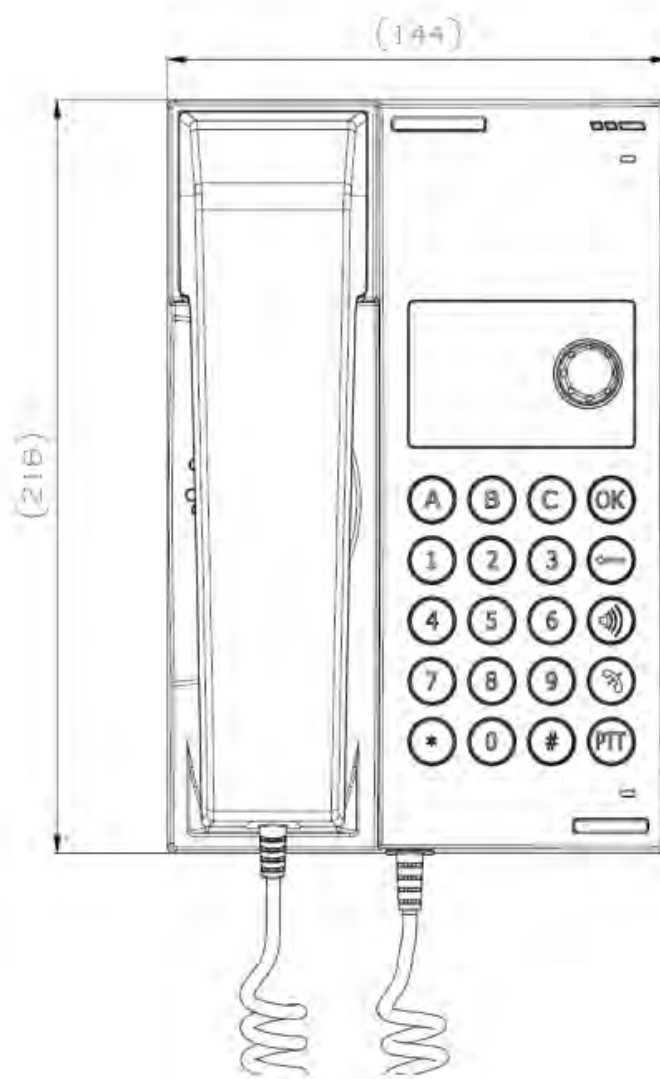
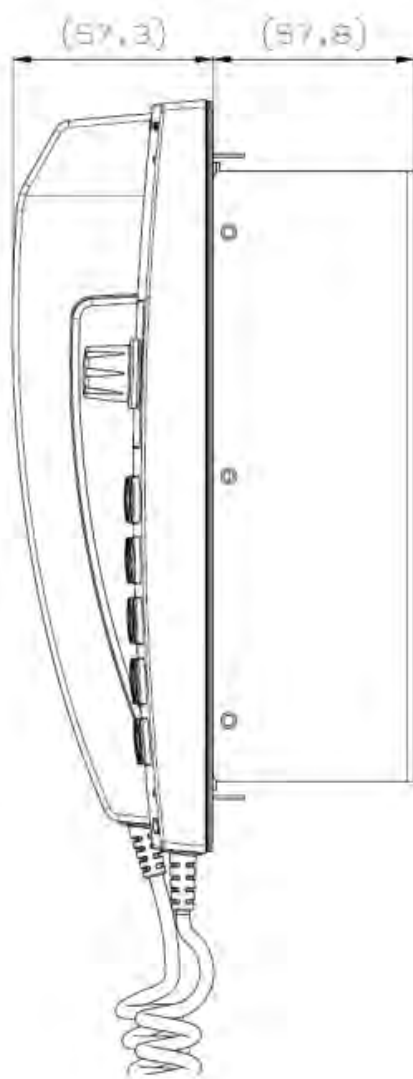
#### CERTIFICATES / COMPLIANCES:

IEC 60945 Marine equipment
The unit has a pending DNV/ABS/RMRS/CCS type approval and is also compatible with NORSOK.

#### RELATED PRODUCTS:

ICS 6200	Integrated Communication System
4000014774	Headset – hearing protective 6035 (10 / 15 / 20 m cable)
4000017147	
4000019061	

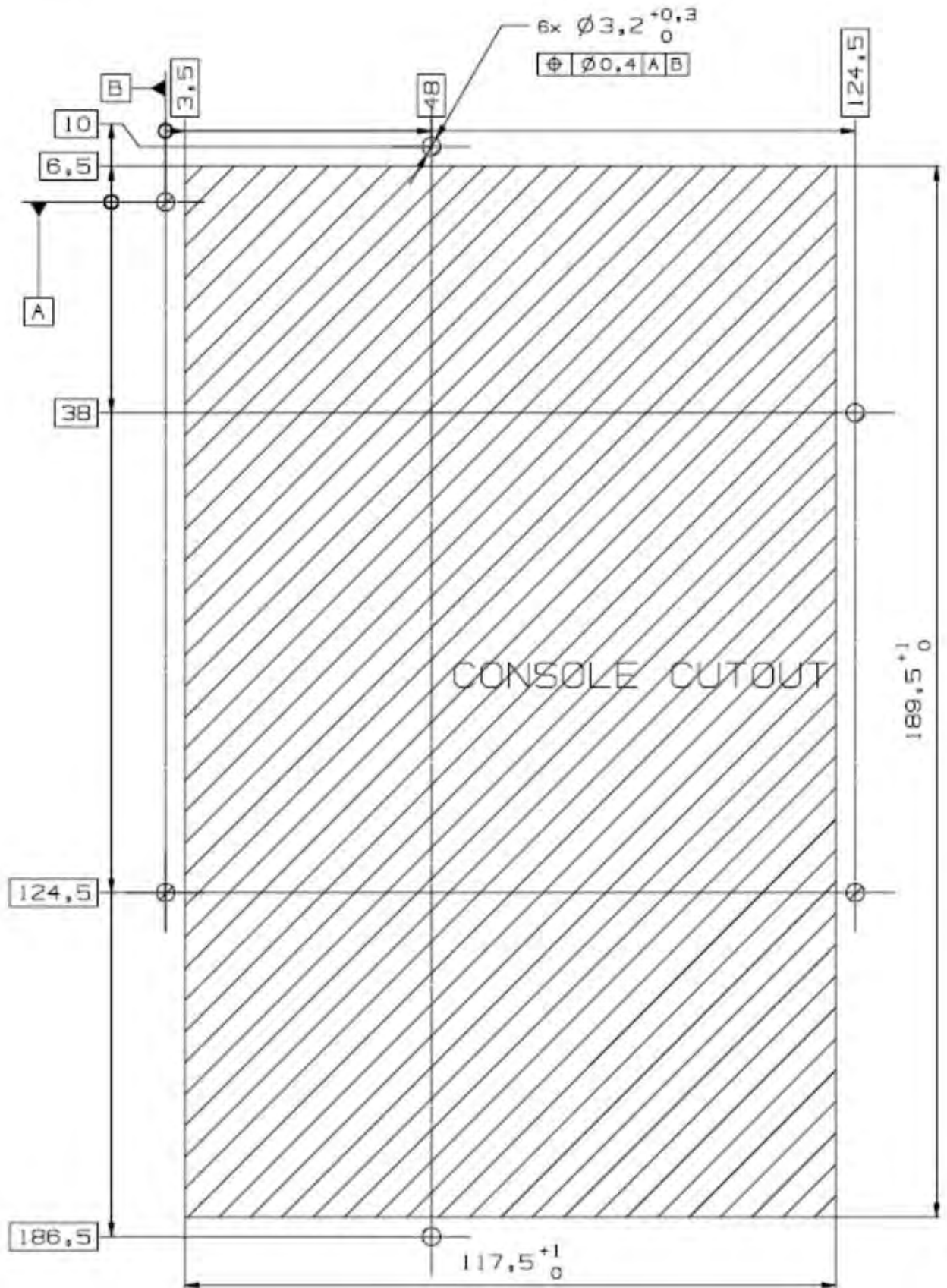
DIMENSION / LAYOUT



p/n 4000087299 v.K

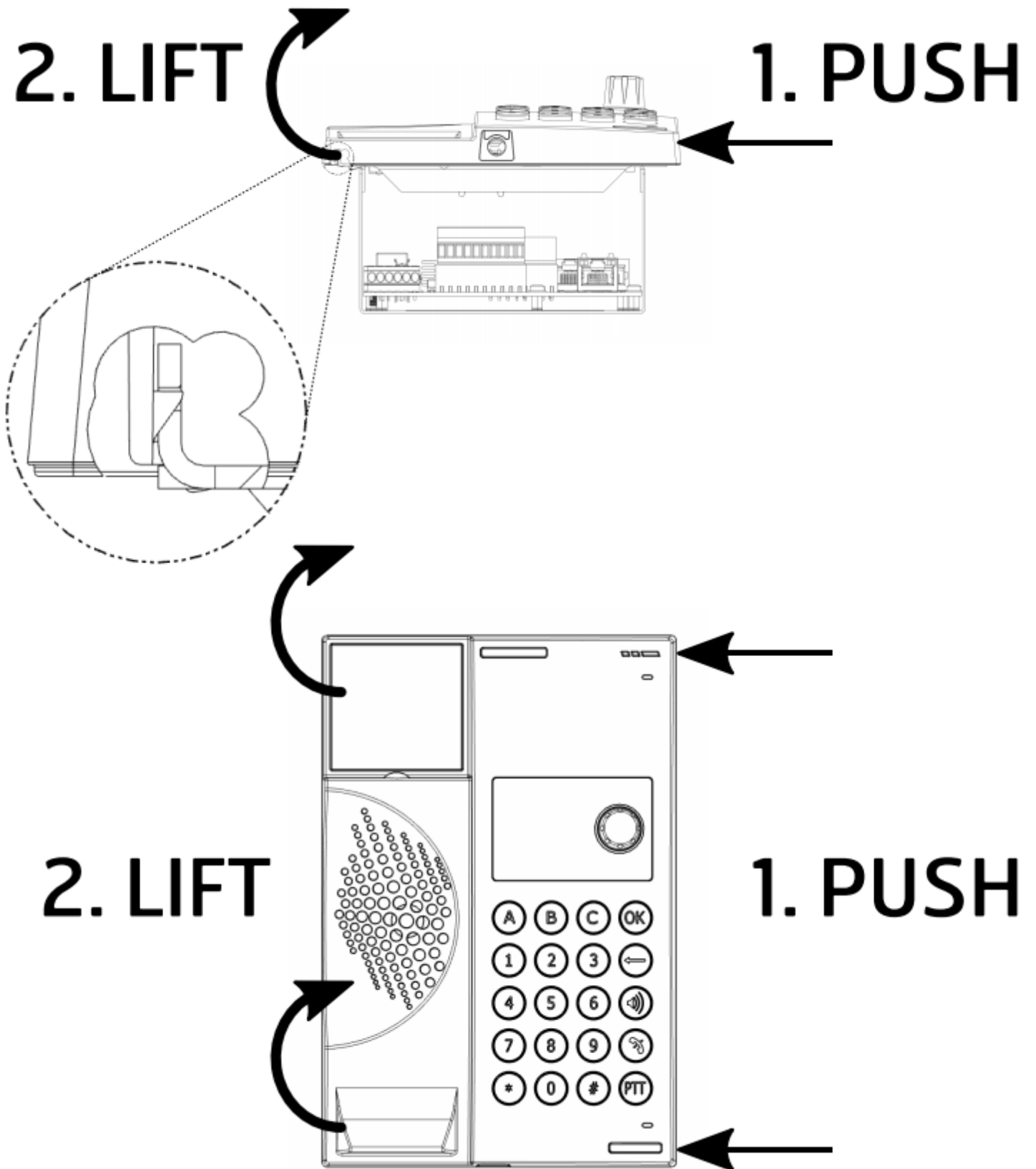


# CONSOLE CUTOUT



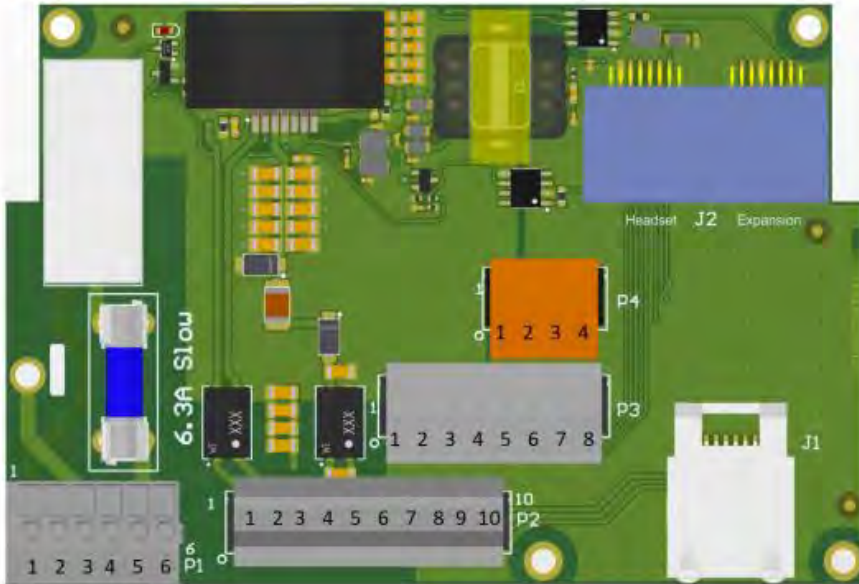
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**CONSOLE UNMOUNTING INSTRUCTIONS**

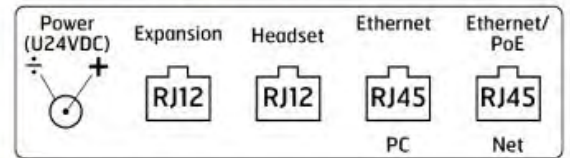


## EXTERNAL CONNECTIONS

### Terminal board:



### Main module terminations:



### Internal connections:

J2 – RJ12 (Expansions/Headset)

### Optional External connection

RJ45 – Ethernet/PoE (net)

RJ45 – Ethernet (PC)

P1.1 – External signal device Relay NO  
 P1.2/3 – PE (Protective Earth)  
 P1.4/6 – Common VIA point  
 P1.5 – External signal device Relay Com

P3.1 – Headset Earphone L Ref  
 P3.2 – Headset Earphone L  
 P3.3 – Headset mic. +  
 P3.4 – Headset mic. -  
 P3.5 – Headset Earphone R  
 P3.6 – Headset Earphone R Ref  
 P3.7 – Headset PTT  
 P3.8 – Headset PTT Ref

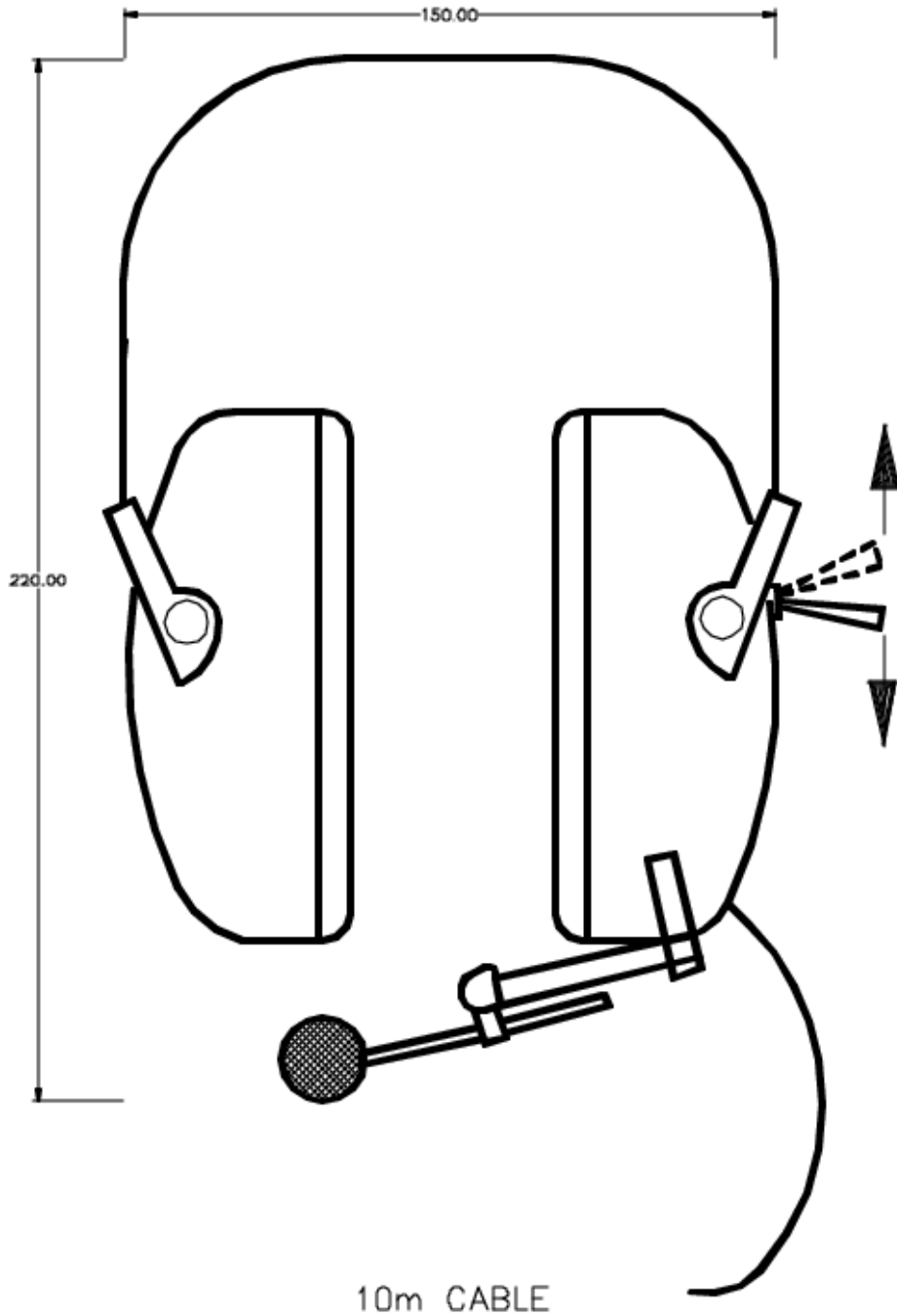
P2.1 – External Loudspeaker +  
 P2.2 – Screen  
 P2.3 – External Loudspeaker -  
 P2.4/5 – +24V DC Power supply (amplifier/relay)  
 P2.6/7 – 0V DC Power supply (amplifier/relay)  
 P2.8/9 – No Connection  
 P2.10 – Screen

P4.1 – Expansion CAN Hi  
 P4.2 – Expansion 3.3V  
 P4.3 – Expansion GND  
 P4.4 – Expansion CAN Lo



---

### 4.3 TYPE 6035 HEADSET WITH HOOKSWITCH



For use with 5111-H, 6112, 6211, 6212, 6223, 7211, 7212 and 7223

- High comfort headset with boom microphone and hook-switch.
- Excellent attenuation at low and high frequencies with maximum comfort for continuous use.
- Ideal in severe noise environments.
- Folds to compact size for easy storage.
- 10 m. cable. (optional 15m)
- Noise cancelling microphone.

## 5 ANALOG TELEPHONES

### 5.1 GIGASET DA710



#### Display and keys

- 1 Adjustable display (Changing the language → page 11)
- 2 Control key for the display functions
- 3 Shift key
- 4 Menu key
- 5 Redial/pause key
- 6 Recall key
- 7 Mute key
- 8 Direct dial key
- 9 Insert strip for writing the assignment of direct dial keys
- 10 Star key, selecting/deselecting the ring tone (press and hold)
- 11 Hash key, selecting/deselecting the key lock (press and hold)
- 12 Hands-free/headset key

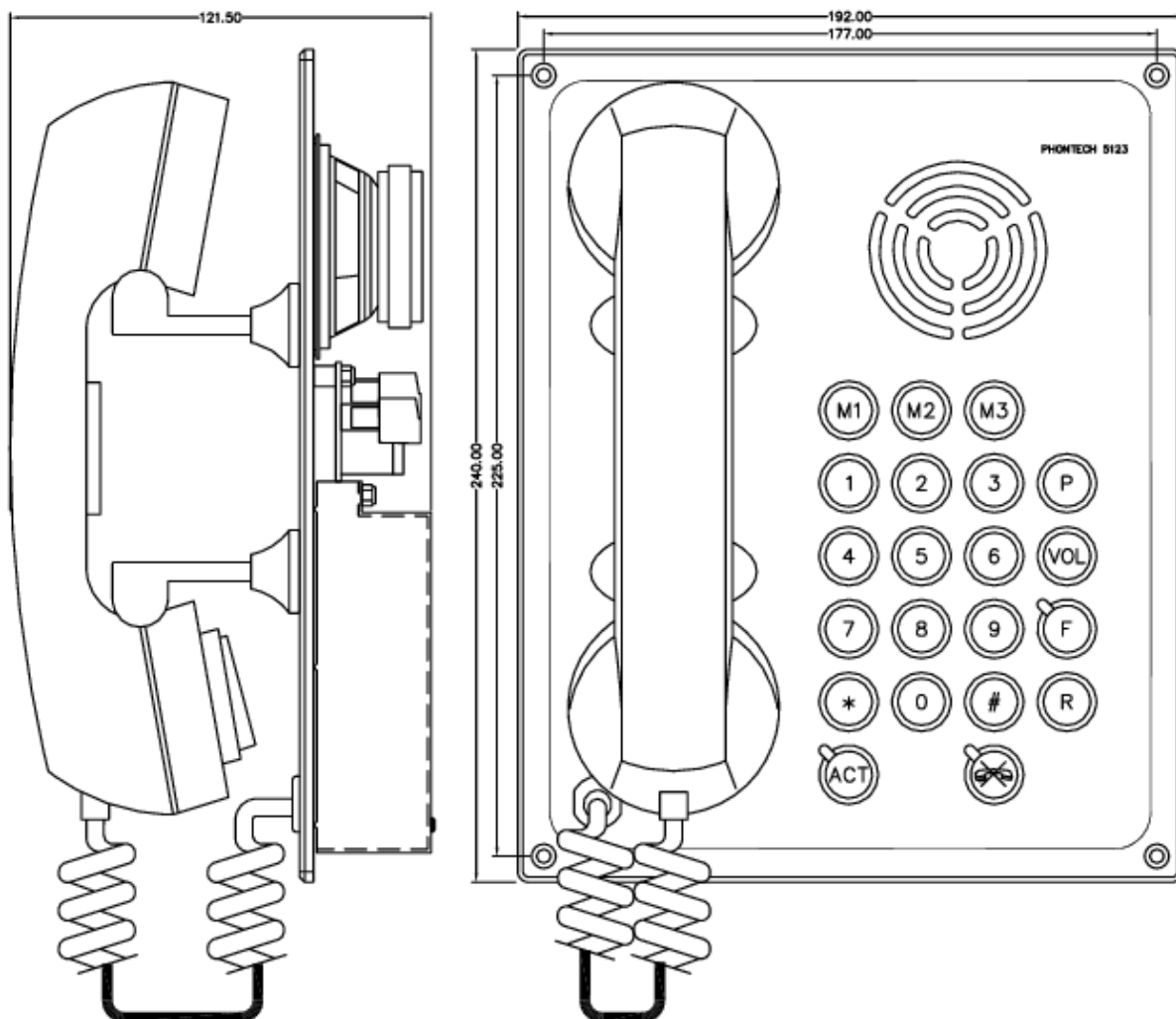
- 13 Key for setting the volume of the handset, headset, speaker and ring tone
- 14 Microphone for hands-free

#### LED

- ▶ Hands-free/headset key
- ▶ flashes on incoming call
  - ▶ lights up when the call is transferred to the speaker or headset
  - ▶ flashes when you hang up the handset, either if a new call or a new message has been received (settings → page 11)

- Dimensions (approx.):
  - o 221 x 202 x 62 mm (LxWxD)
- Weight: 0.9 Kg

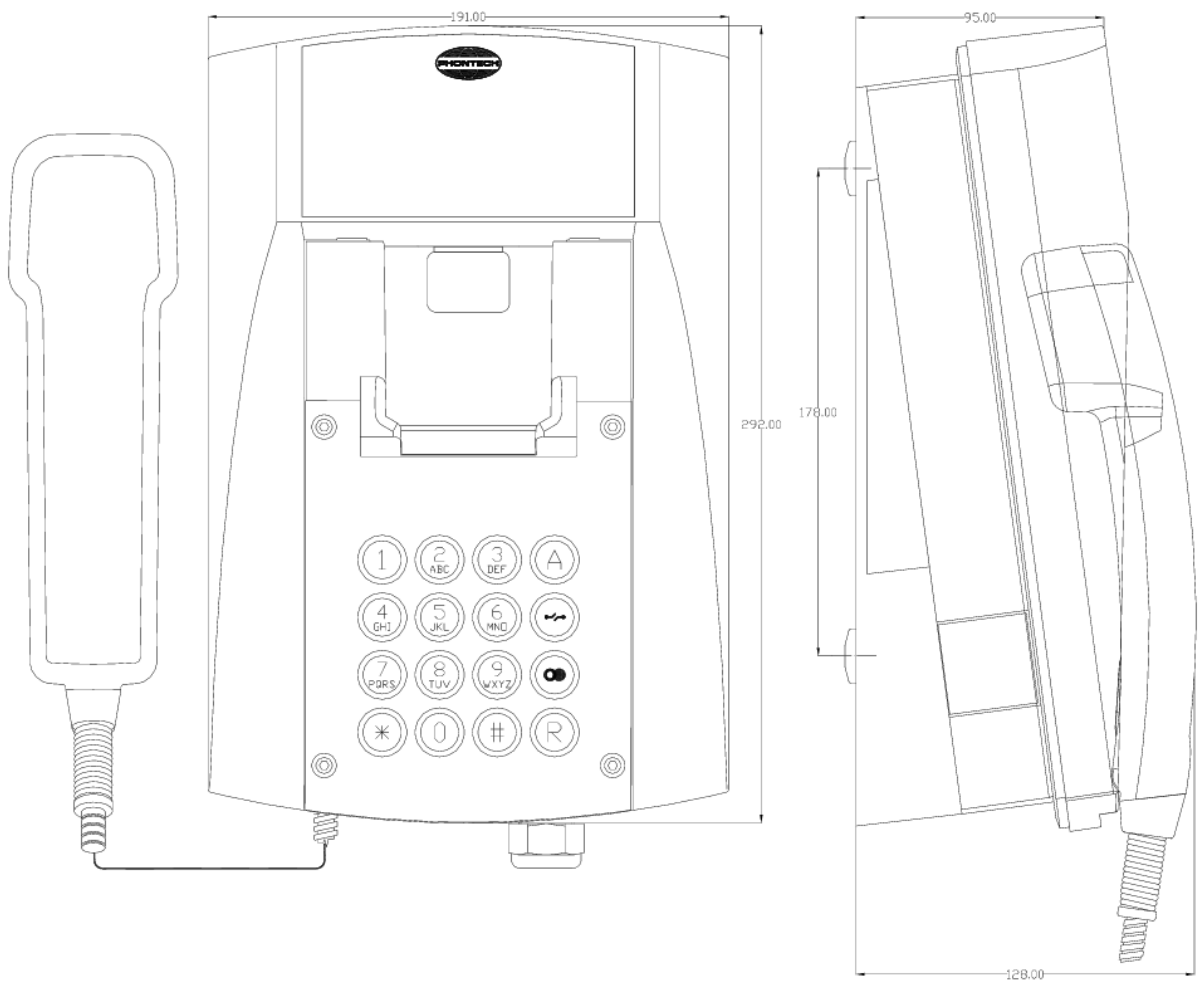
## 5.2 PHONTECH 5113/5123 FLUSHMOUNTING TELEPHONE



- DTMF analogue telephone
- Loudspeaking/handset operation
- 3 Speed dial keys
- Relay for external signal device Max 5A
- Ext. loudspeaker connection
- Console flush mounting
- IEC 60945 Approved
- 5123 only: Backlight /dimmer control

Weight: 1.2 Kg

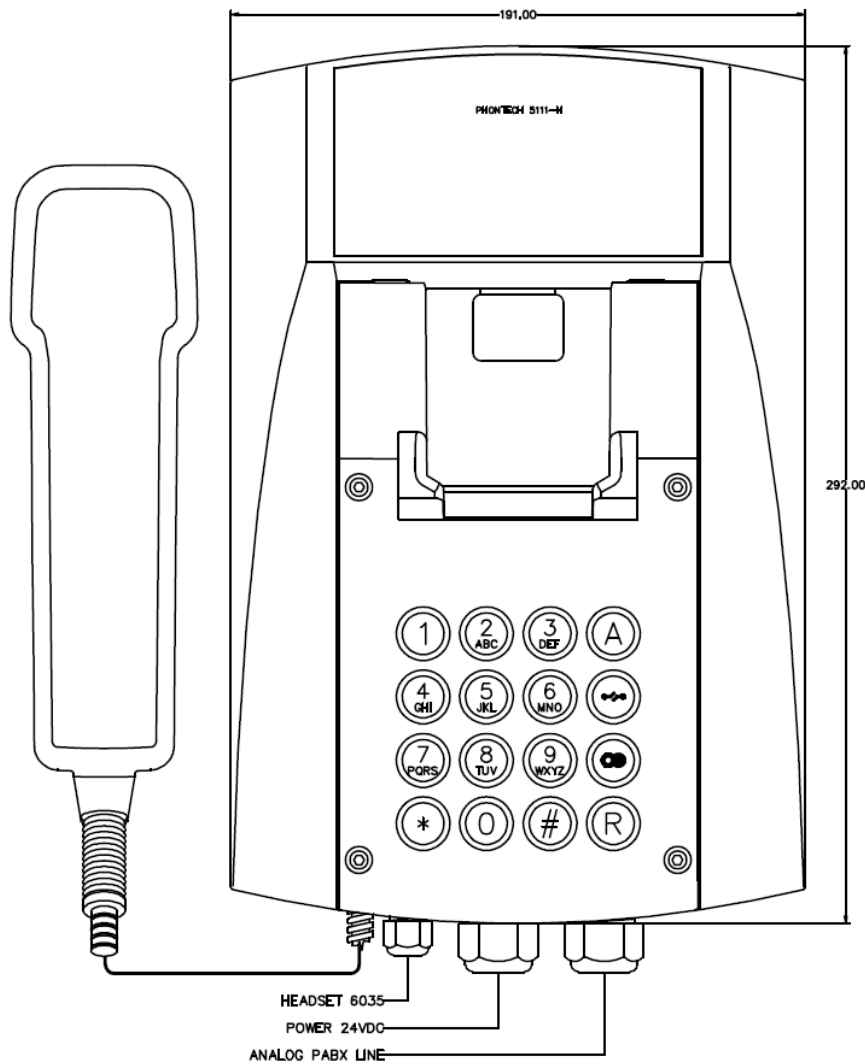
### 5.3 PHONTECH 5111 RUGGED INDUSTRIAL TYPE TELEPHONE



- Housing: Polycarbonate / Colour: Black
- Handset retaining mechanism
- Protection degree: IP65/IEC 529
- Receiver volume can be boosted by 6 or 12 dB(A)
- Ringer output: approx. 96 dB(A) at 1 m distance
- Temperature range: -25°C up to +60°C
- Desktop or bulkhead mounting

Weight: 1.7 Kg

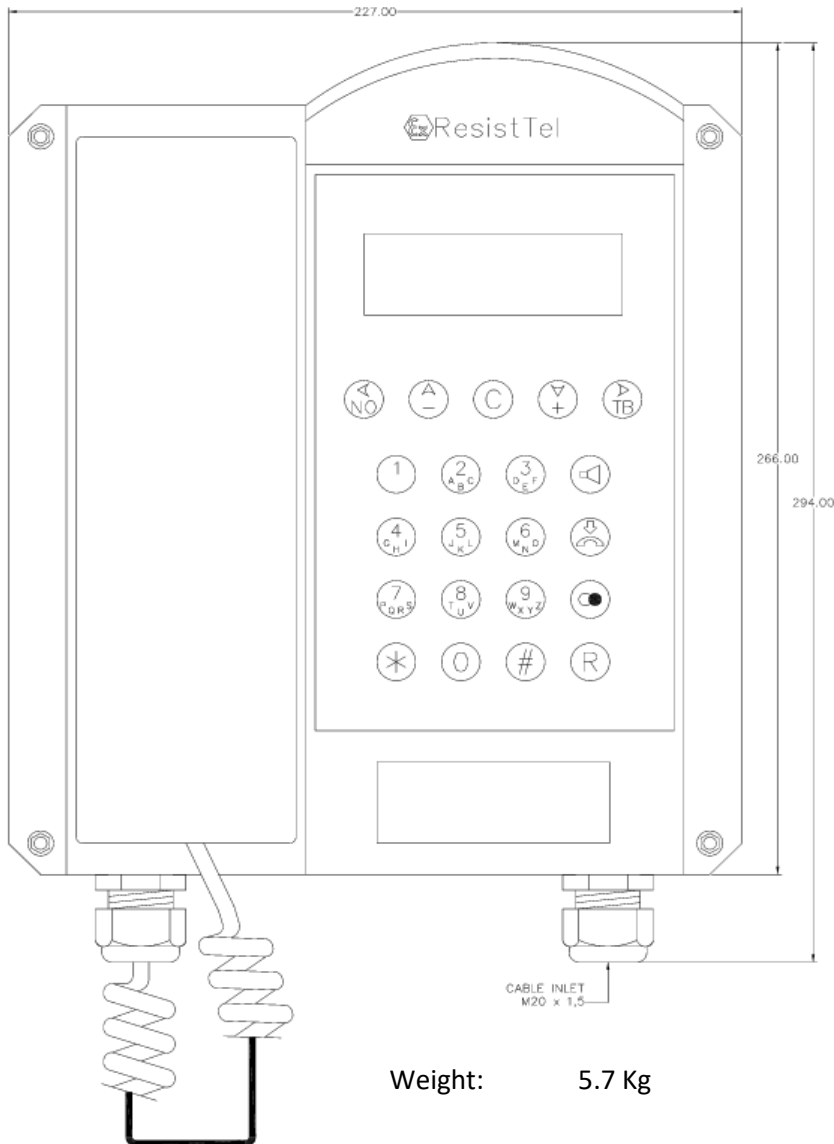
## 5.4 PHONTECH 5111-H RUGGED INDUSTRIAL TYPE TELEPHONE WITH HEADSET INTERFACE



- Housing: Polycarbonate / Colour: Black
- Handset retaining mechanism
- Protection degree: IP65/IEC 529
- Receiver volume can be boosted by 6 or 12 dB(A)
- Ringer output: approx. 96 dB(A) at 1 m distance
- Temperature range: -25°C up to +60°C
- Desktop or bulkhead mounting
- Connection for 6035 headset
- 24VDC power supply required

Weight: 1.7 Kg

## 5.5 EX RESISTTEL TELEPHONE FOR HAZARDOUS AREAS



### Bulkhead mounting

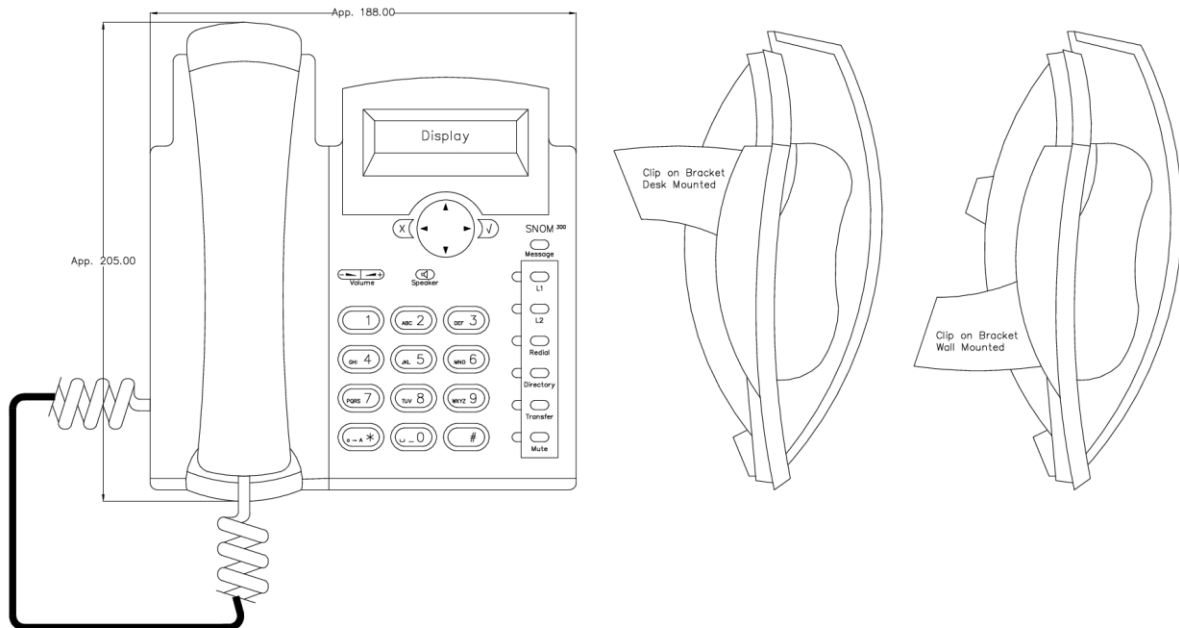
- Types of protection:
  - o II 2 G EEx em[ib] IIC T5 / II 2 D IP66 T100°C / -25°C<=Ta<=60°C
  - o II 2 G EEx em[ib] IIC T6 / II 2 D IP66 T80°C / -25°C<=Ta<=40°C
- Housing Glass fibre reinforced polyester
- Certified for dust and gas atmospheres
- Display 2 lines; alphanumerical / multiple languages
- Telephone directory
- Hands free operation
- Impact protection IK 09
- Integrated adjustable stabilizer bracket
- Operations temperature -25°C to +60°C
- Adjustable receiver volume (7 steps)
- Max audio level approx. 90 dB(A)
- Stainless steel (V4A) keypad and steel armored handset cord with snap-protection



---

## 6 IP TELEPHONES

### 6.1 SNOM 300



#### Basic office IP telephone

- Two line display
- Caller ID (Name / Number)
- Programmable function keys
- Hands free operation
- 2 Eth ports (internal switch)
- PoE / External supply
- SIP Client
- Headset connection
- Intercom operation

Weight: 1.0 Kg

---

## 6.2 SNOM 710



### Key Features

- Wideband audio
- 4-line backlit display
- 4 context sensitive keys
- 5 configurable function keys with LEDs
- 4 SIP identities

### Basic office IP telephone

- Backlit graphical display, 4 lines
- Dual-angle footstand: 46° and 28°
- Wall mountable
- Hands-free talking (speakerphone)
- Digital Signal Processor (DSP) enhanced audio quality
- 2-port 10/100 Mbps Ethernet switch (RJ45)
- Power over Ethernet IEEE 802.3af, Class 1
- Electronic Hook Switch (EHS) support for wireless headsets
- Intercom operation

### Dimensions (approx.):

- o 205 x 185 x 40 mm (LxWxD) w/o footstand
- o 205 x 185 x 200/220 mm (LxWxD) with footstand

Weight: 0.6 Kg

---

## 6.3 FERNTel IP



Industrial Phone for Indoor and Outdoor Environments, IP 65

- Display
- Caller ID (Name / Number)
- Caller ID (Name / Number)
- SIP client
- Desk / Wall mounting
- PoE / External supply
  
- Optional: available as Ex approved type (Zone 2/22)

Dimensions (approx.): 293 x 191 x 128 mm (HxWxD)

Weight: 2.3 Kg

---

## 6.4 RESISTTEL IP2



Industrial Phone for Indoor and Outdoor Environments, IP 66

- Display
- SIP client
- Hands free operation
- 2 Eth ports (internal switch)
- Desk / Wall mounting
- PoE / External supply
- Optional Relay output

Dimensions (approx.): 293 x 227 x 135 mm (HxWxD)

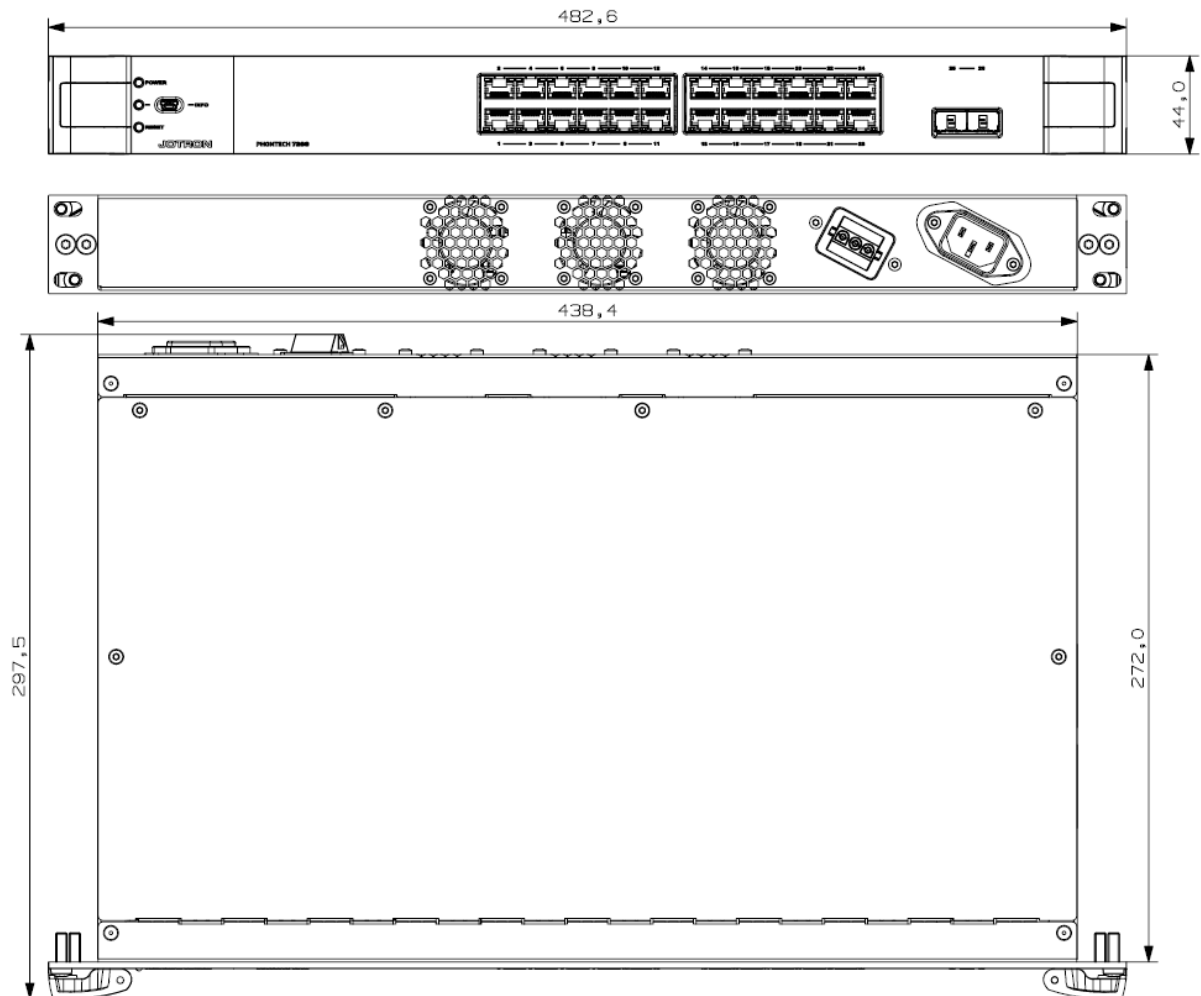
Weight: 5.0 Kg

Temperature: -40°C to + 70°C

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## 7 NETWORKING EQUIPMENT

### 7.1 PHONTECH 7200

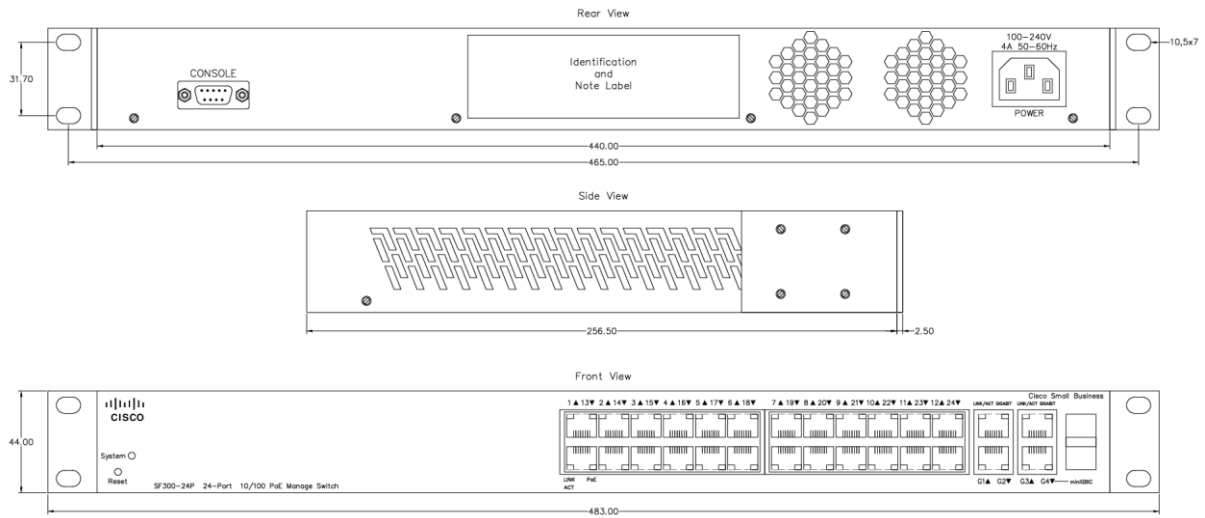


The Phontech 7200 LAN switch includes 24 Gb Ethernet and 2Gb SFP ports for fiber connectivity. 26 ports in total. The switch is fully manageable through the Web and Command line interface.

- 24 Ethernet ports
- 2 SFP Gb ports
- PoE, 24 ports
- Dual power supply
- IEC 60945 approved

Weight: 3.9 Kg  
Temperature: -15°C to + 55°C

## 7.2 SF-300



### 24 port Ethernet switch with PoE

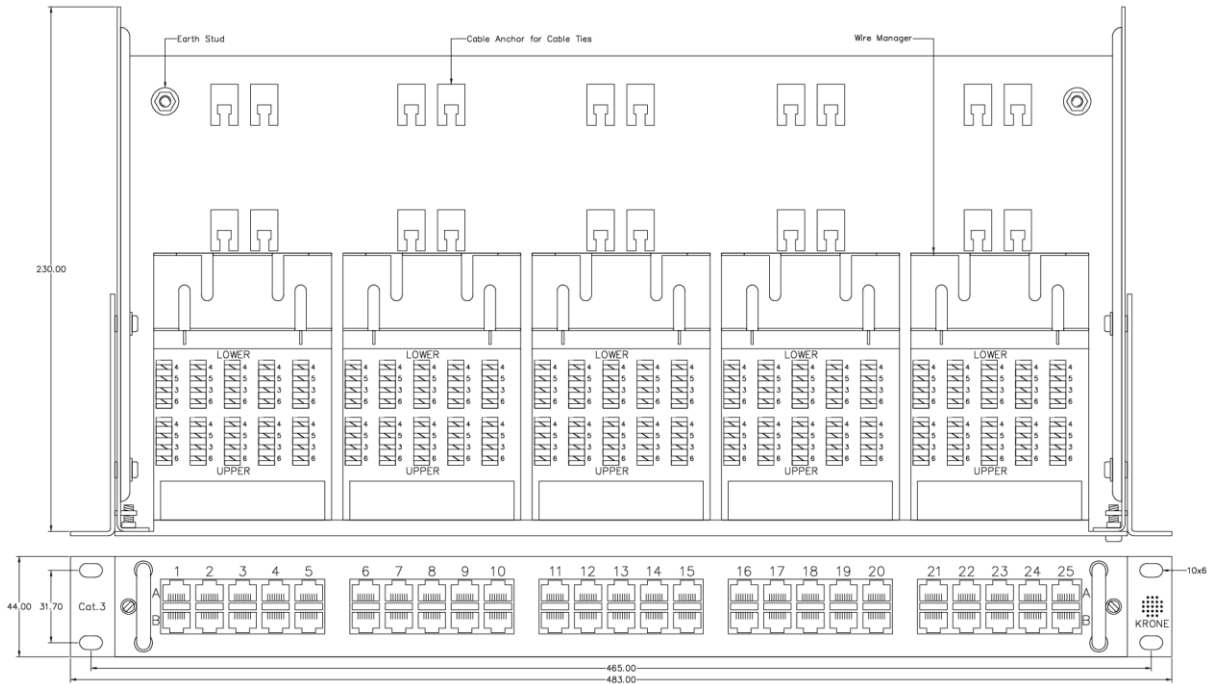
The SF-300 Ethernet switch with Power over Ethernet is required for the connection of IP telephones. Connect the IP telephones to the SF-300 switch using Cat5e patch panels. The SF-300 is in turn connected to the Phontech 6200's Ethernet connection. Power is supplied from the switch to the IP telephones over the Ethernet cable.



## 8 ACCESSORIES

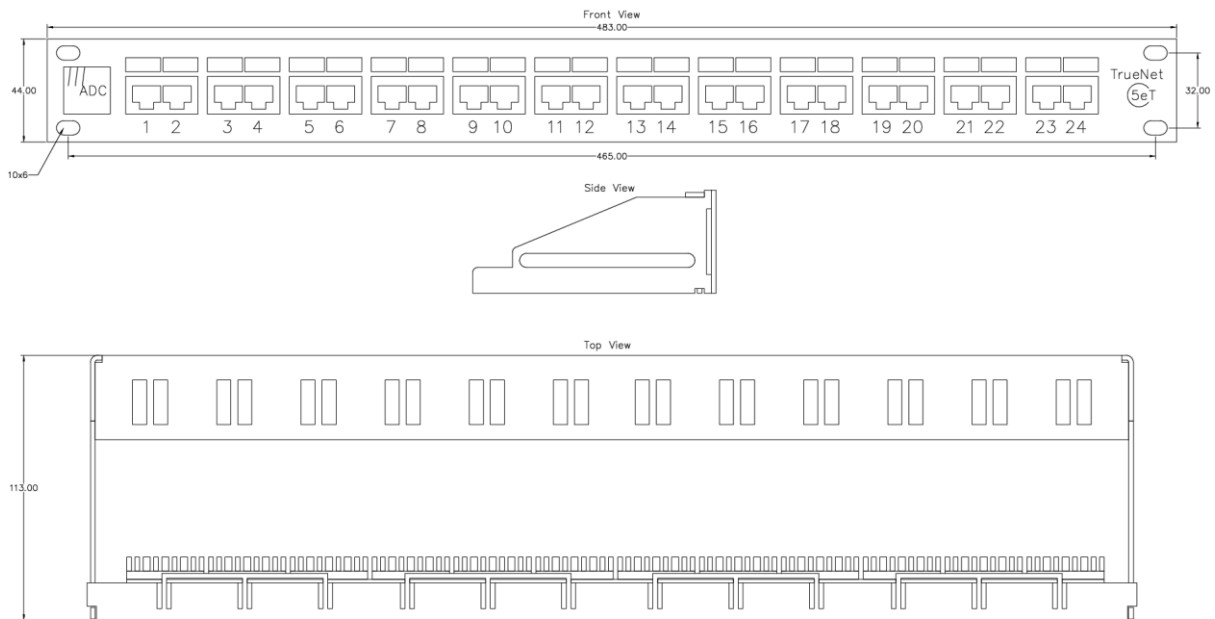
### 8.1 50 PORT TELEPHONY PATCH PANEL

The 50 port Cat3 patch panel can be used when connecting FXS, FXO, UPN and E&M lines to the Phontech 6200 when structured cabling is used in the installation. This drawer style patch panel allows for easy access during termination of the field cable.



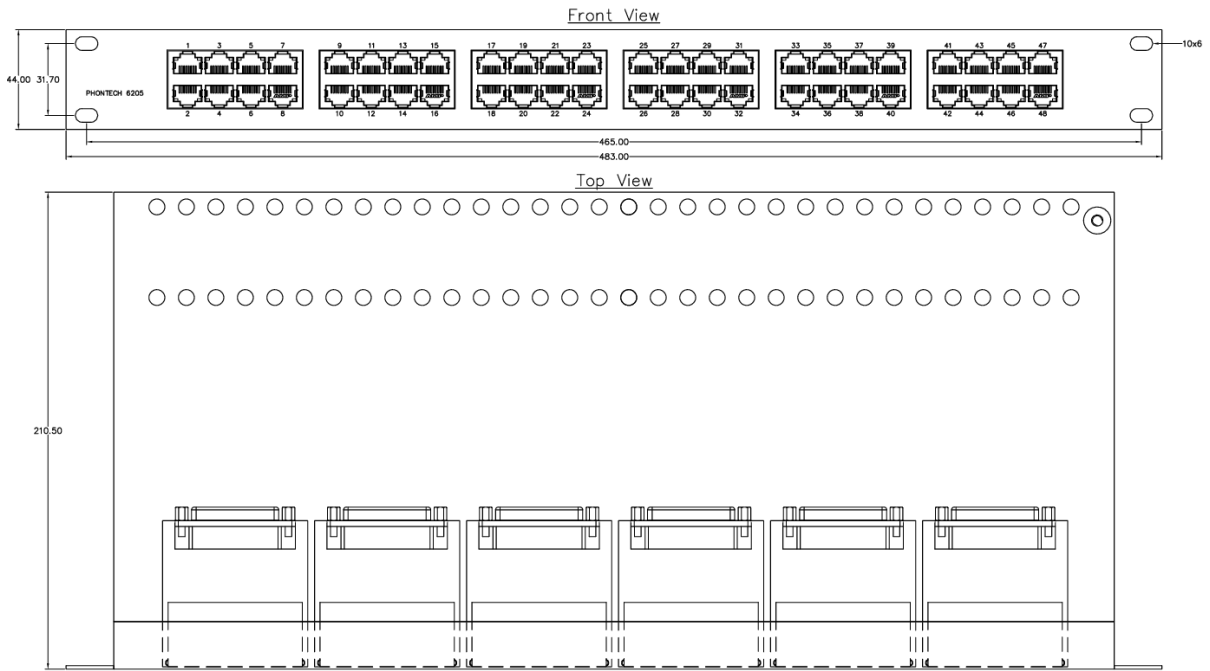
### 8.2 24 PORT CAT5E PATCH PANEL

The 24 port Cat5e patch panel is intended to be used for Ethernet lines, but may also be used for FXS, FXO, UPN and E&M lines.

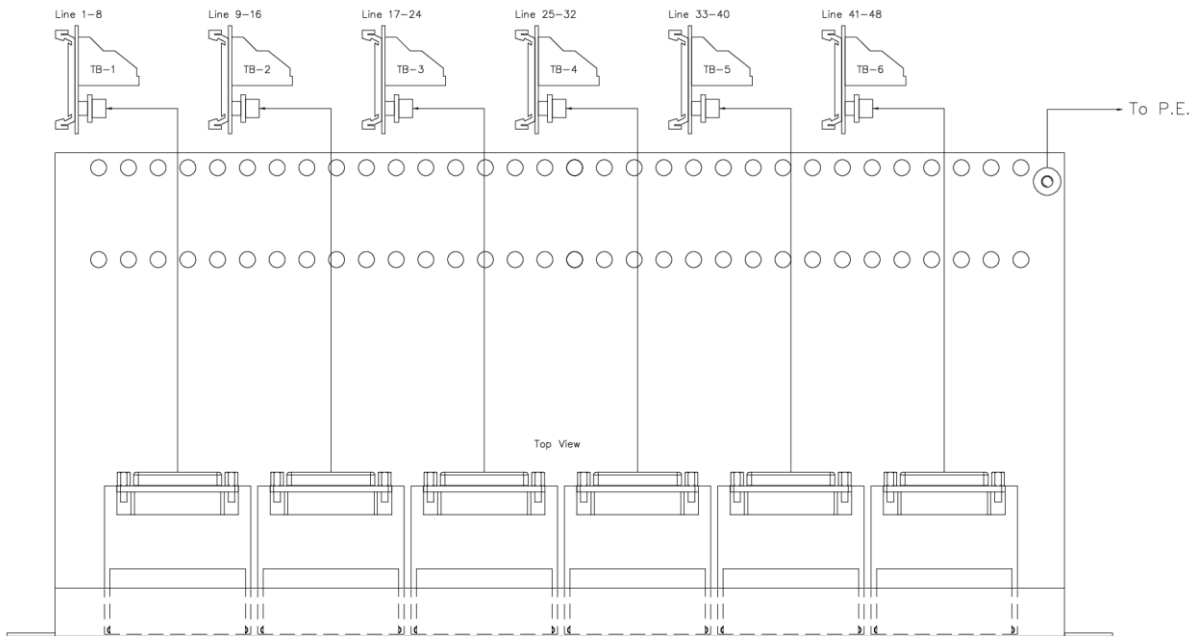


### 8.3 6205 48 PORT PATCH PANEL FOR SHIPS CABLE.

The Phontech 6200 is primarily designed for use with structured cabling. When using traditional ships cable, the 6205 patch panel is used together with the termination module. The patch panel is connected to the termination module using a 25 pin DSUB cable.



#### Electrical connections



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## 8.4 Y-CABLE FOR 6205 PATCH PANEL



When using this patch panel in combination with the E&M line board, and the keying inputs or outputs are used, a special Y-patch cable is required, Zenitel item no: 4000018472.

The black RJ-45 jack is connected to the E&M port on the Phontech 6200 unit, the red RJ-45 jack is the audio line and the yellow RJ-45 jack is the key IO. The red and yellow jack is inserted in the 6205 patch panel at the desired locations.

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## 8.5 PHONTECH 6216 EMERGENCY PA UNIT



### Key Features

- Noise cancelling / Close talk gooseneck microphone
- Emergency PA activation button
- Protection against unintended use: sliding cover

### Dimensions:

144 x 96 x 83 mm (LxWxD)

Microphone height: 360 mm

Zenitel Norway AS  
Bromsveien 17  
3183 Horten  
P.O. Box 1068 Bekkajordet  
3194 Horten  
Norway

Tel. +47 40 00 27 00  
Fax. +47 33 03 16 61  
phontech@zenitel.com