



UNICONT



**MARINE
TELEPHONE SYSTEM**

DTS-100



USER MANUAL

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1. Introduction

All technical characteristics, specifications, commissioning procedure and maintenance of UNICONT DTS-100 key telephone system are given in the following manual. This information is intended for the technical specialists, performing mounting and testing of the system.

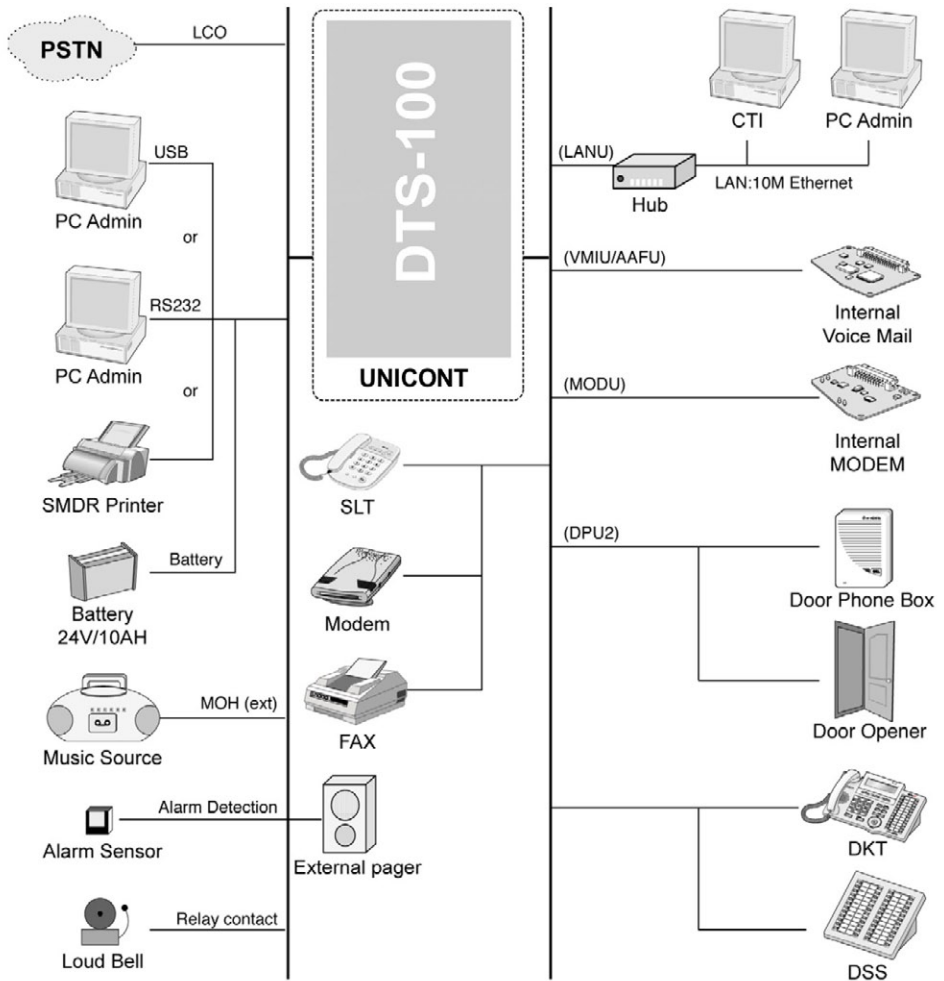


Fig 1. System Connection Diagram

2. System specifications

2.1. General overview

UNICONT DTS-100 marine telephone system was specially designed for applications at industrial facilities, marine vessels and river boats. System design is adapted to harmful effects of the ambient environment. Key telephone and carrier sockets are suspended on the anti-vibrating absorbers in the sealed case (IP 53 protection). The boards are processed with corrosion-resistant coating in order to protect from harmful impact of increased humidity. Locks with latches are installed on the case door in order to prevent sticking of the door.

UNICONT DTS-100 is a full-featured PBX telephone system that includes everything you need to sound big. It is basically a small communication system with big-company features usually not found from other similar PBXs. Outstanding feature in UNICONT DTS-100 is the ability to add digital feature into simple analog line without additional cost or a need of special equipment. Essential business services such as Caller ID, SMS and voice/fax tone detection, voice mail, auto attendant, conferencing capability, and LAN interface for Ethernet connectivity and much more are already available as part of standard features.

Moreover, ability to cut-down your communications cost (phone bill) by up to 60% by utilizing Call cost control/monitoring as well as sophisticated Least Cost Routing (LCR) capability are already built in as part of value-added features not offered by other competitors.

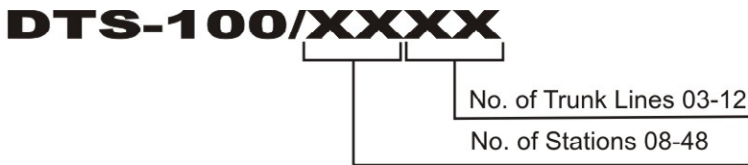


Fig 2. DTS-100 reference designator

A powerful ARM7 microprocessor digitally controls all speech paths and system functions. The operating program with default settings is stored in non-volatile ROM. User's data is protected by a rechargeable Ni-Cd battery for up to seven day's continuous loss of system power. After resumption of system supply, the battery is recharging automatically.

On the whole, the system which consists of key telephone, extension boards and regular phones, represents a contemporary, flexible and convenient telephone system.

2.2. Maximum capacity

Maximum number stations	47+2*
Maximum number of trunk lines	12
Public address system ports	1
External music source port	1

* – 48 of internal stations is present, only in case of 1 digital and 47 analog or digital phones are connected to DTS-100.

2.3. Electrical specifications

Input voltage	220-240 VAC , 50Hz
Power consumption	91W (max)
Ring generator	80 VRMS, 25Hz
Battery backup supply	24 VDC

2.4. Mechanical specifications

Case color	Gray
Protection	IP 53
Door locking	Latch locks 2 pcs.
Marine vibration absorber	4 pcs. (AKCC-25M type)

2.5. Dimensions

Case dimensions	760x600x210 mm
Weight	43 kg

2.6. Environment limitations

Operating temperatures	0 ~ 40 °C
Operating humidity	10 ~ 90%

2.7. Cable requirements

Equipment	Cable	AWG	Max distance
Digital keysets	2 twisted pairs	24 (0,22 mm ²)	400 m
Single line station	1 twisted pair	24 (0,22 mm ²)	1 km
Add-on modules	1 twisted pair	24 (0,22 mm ²)	400 m
Door phone	2 twisted pairs	24 (0,22 mm ²)	100 m

2.8. Power supply requirements

220–240VAC, 50Hz input voltage is required for power supply of the key telephone system. In case of input voltage significant drop, the system immediately switches to backup power supply, 24VDC. To supply 24 VDC, use four 6V or 12V batteries connected in series, with battery capacity of 6 ~ 40 ampere-hours.

2.9. Key telephone parameters

Key telephone system are advanced, user-friendly digital keysets, offering the convenience of 3 soft buttons and a navigation key.

Features:

- Trendy and Stylish LDP Family design
- Multi Level 3 Line LCD (3 x 24)
- 24 Flexible buttons with dual-color LED's
- Call Log Feature
- Wall Mountable (Bracket Optional)



Fig 3. Physical configuration of key telephone of DTS-100

2.10. Phones

The system is able to dial by means of either tone or pulse phones. It should be taken into consideration, that only tone dialing phones are suitable for programming the majority of functions. Pulse phones don't have access to the system functions and parameter changing.

Housing and overall dimensions of additional phones P-2350, that is also available upon request.

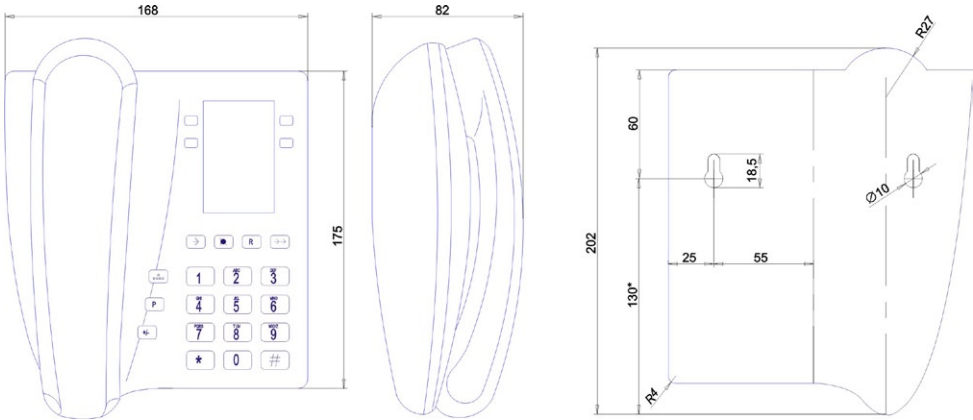


Fig 4. Physical configuration and overall dimensions of P-2350

3. Mounting and wiring

This chapter shortly describes how to mount and wire UNICONT DTS-100 system. It is recommended to read this chapter thoroughly before mounting the system.

3.1. Site requirements

When planning the installation of the UNICONT DTS-100 system, choose a site that meets the following requirements:

- Select a location that minimizes cable lengths.
- The equipment should not be exposed corrosive fumes, dust, or strong magnetic fields such as those generated by motors and copying machines.
- Select a location for the system that has enough space for ventilation.
- The equipment should not be exposed to direct sunlight. The equipment must be located in an environment that will maintain a temperature range of 0 ~ 40°C and a humidity range of 10% ~ 90% non-condensing. The location should have adequate lighting and ventilation, and should be dry and clean.

Overall and mounting dimensions of the case are given at Fig 5

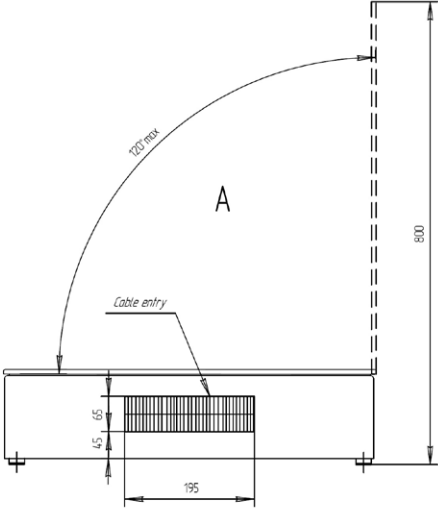
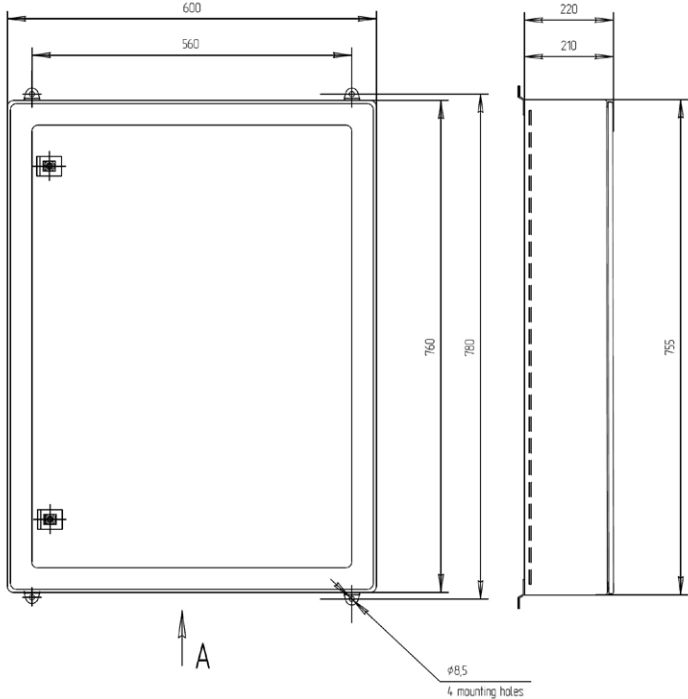


Fig 5. System overall and mounting dimensions

3.2. System unpacking

Check to see that the system package includes the following items (see also sec. 4):

- system distribution cabinet;
- mounting screws set;
- digital keyset;
- operating instructions;
- technical manual.

3.3. Examination before mounting

After unpacking the key telephone system, inspect for signs of physical damage inflicted during transit.

- Check the insulation integrity of the cables at the contacts, as well as the contacts in the terminal block, completeness of all the screws.
- Check the presence of fuses.

3.4. Stations and trunk lines wiring

According to the labeling of the terminal blocks, given at Fig 6:

- XS1 Group: IN LINE (C.O. №1~6) is designed for input trunk lines wiring;
- XS2 Group: Sys.tel.(STN №1) is designed for digital keyset wiring;
- XS3 Group: OUT LINE is designed for standard pulse and tone phones wiring.

NOTE:

It should be pointed, that XS2:Sys.tel terminal group is assigned for digital (not analog) telephone only.

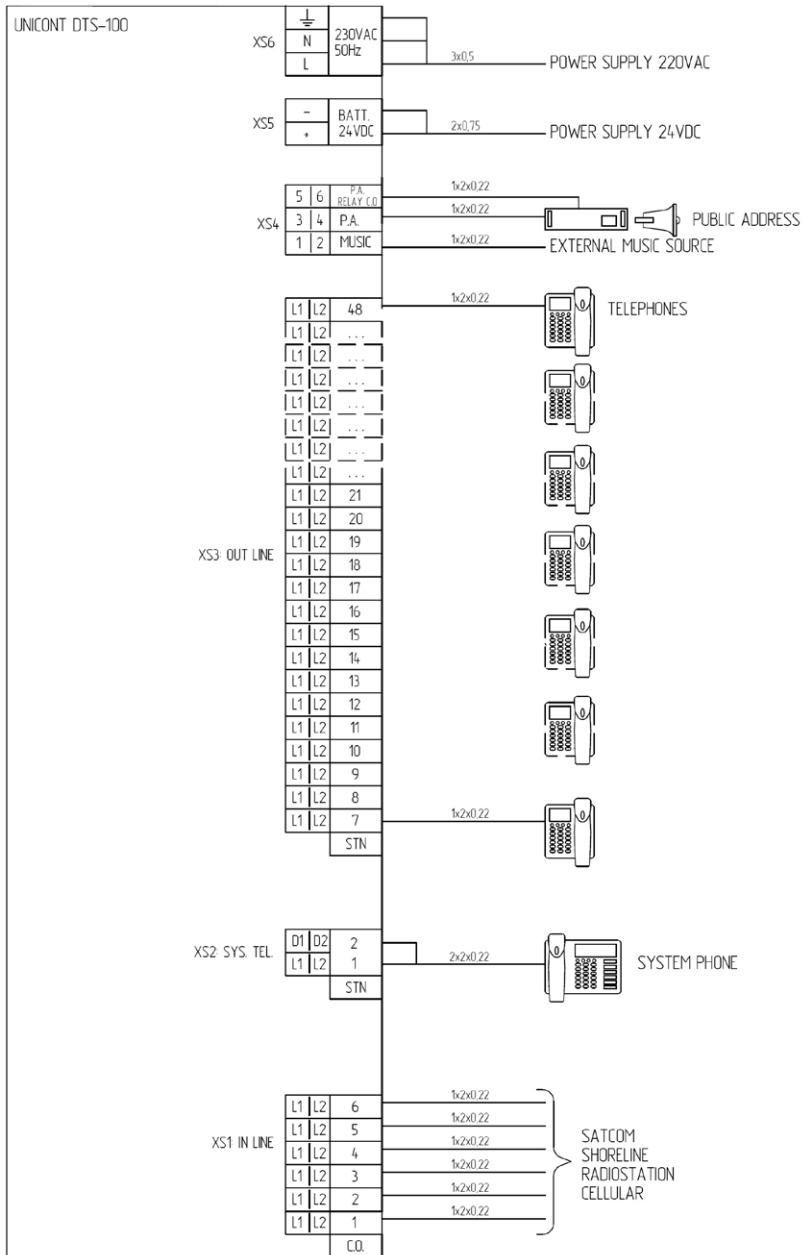


Fig 6. Labeling of the terminals

3.5. External Public Address System and external music source wiring

UNICONT DTS-100 System provides the possibility of connecting of external Public Address system. XS5 (P.A.) terminal group is assigned to wire the key telephone system to the corresponding sockets of Public Address.

In addition to the standard background music, at the Music On Hold (MOH) mode, UNICONT DTS-100 system allows to use other external music sources, such as tape recorder or CD-player. XS5 (MUSIC) terminal block is used for wiring of the external music source.

3.6. Power supply wiring

Main power supply is realized through XS6 terminal block. Backup power supply (24V) is connected to the XS5 terminal block.



Please, check the polarity of power source cable.

3.7. Turning on the system

After system wall mounting, trunk and stations wiring and connecting, UNICONT DTS-100 system is ready to be activated and programmed.

- Check the presence of the fuses.
- After supply mains connected, turn the power switch on, then the power LED at the face panel inside will be lights on.

3.8. System programming

UNICONT DTS-100 System is shipped with presetting by default. The system comes ready to use after the power is ON. Then you should program your individual settings for system functioning in accordance to your requirements or application. Use Digital Keypad supplied or PC to program the UNICONT DTS-100 system.

The following sections are most commonly used basic settings with marine adaptation. For more detailed information on system programming, please refer to the manual "Programming Guide" given on CD supplied with the system.

3.8.1. First time starting up

Default settings (On the mainboard of system):

- SW2 jumper – ON
- Jumpers group SW1 – all in ON position, except 4.

That configuration allows you to store all new settings.

After switching on the power please wait until the system boots up. All following manipulations are described for system phone keypad.

3.8.2. Entering the programming mode



To get into the programming mode please press on buttons in following sequence: Speaker, TRANS/PGM, *, #, TRANS/PGM

3.8.3. PAGE settings (Public Address output)

- Enter the programming mode sec 3.8.2
- Press 181, CO10 (on the right keyboard – LOOP BUTTONS)
- Set the working timeout (0 – 255 sec.)
- Press HOLD/SAVE
- Press TRANS/PGM (allowing of Public Address transmission)
- Enter 111, then “enter STA ranger” appears.
- Enter 100, 100 for instance. That means that only station no. 100 is able to get on for P.A. contact
- Press CO8 loop button
- Push on 1 (“OFF” is changing to “ON” on the screen).
- Press on HOLD/SAVE

3.8.4. P.A. relay contacts control

- Enter the programming mode sec 3.8.2
- Enter 168, CO1 loop button
- Press on 3 (choosing relay no. 1)
- Press on HOLD/SAVE

Verification: Pick up the phone, ring 545 and speak. At this moment, the system transmits the signal to P.A. output and makes the contact of relay on.

3.8.5. Reset all settings

On the mainboard of system:

- SW2 jumper – OF (battery off)
- Jumpers group SW1 – all in ON position, including 4.

4. Equipment supplied

- Marine telephone station UNICONT DTS-100
- System telephone
- User manual
- Original technical documentation and CD with all supported software and information.

5. Transportation and storage

Transportation is performed using the cardboard wrapper at any enclosed transport facility.

Marine telephone system UNICONT DTS-100 must be stored in enclosed space at $-20...+45^{\circ}\text{C}$.

6. Warranty

This product is warranted to be free of defects in materials and construction.

Warranty period of storage life is within the 18 months from the date of initial purchase.

Warranty period of service life is within the 12 months from the date of installation, but no longer than 18 months from the date of initial purchase.

During these warranty periods the Owner obtains free of charge repairing and part replacement, if only defect caused by Manufacturer's fault.

Warranty repairs available if following documents are present:

- actual User Manual;
- marked Purchase information, Acceptance and Installation reports.

If there is no Acceptance or Installation marks, then the period of warranty is dated by day of System purchasing.

Warranty is void in following cases:

- when the warranty period expired;
- if the rules of mounting, operation and transportation are infringed;
- if device have been interacted with not appropriate electronic equipment;
- if vendibility or case integrity is lost for some reasons, beyond the control of the Manufacturer;
- if device have been repaired by any person who is not an authorized by Manufacturer.

Duplication of actual User Manual is not allowed. If this User manual is lost, the Owner forfeits his right for free repairing and fixing during the warranty period.

7. Purchase information

Marine telephone system UNICONT DTS-100

Serial number _____

Firmware version _____

Package date _____

Manufacturer **UNICONT Co. LTD**

Stamp here

8. Acceptance report

Marine telephone system UNICONT DTS-100 is in accordance with documentation and is considered in working order.

Serial number _____

Delivered by:

Company name _____

Full name _____ signature _____

Accepted by:

Company name _____

Full name _____ signature _____

Acceptance date _____

9. Installation report

Marine telephone system UNICONT DTS-100

Serial number _____

The Unit has been commissioned.

Date _____

Place of installation:

Installed by _____

(full name, signature)

Serial number _____

Delivered by:

Company name _____

Full name _____ signature _____

Accepted by:

Company name _____

Full name _____ signature _____

Acceptance date _____

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