WIRELESS NURSE CALL SYSTEM TECHNICAL SPECIFICATION

1. GENERAL PROVISIONS

1.1 Bidding companies must submit the Call Devices Service Adequacy Certificate within the scope of TS 13149, TS 13166 and TS 13401 in the bid file. Manufacturer companies also submit the Industrial Registration Certificate and Capacity Report; Authorized dealers must submit the requested documents together with the authorization certificate issued by the manufacturer.

1.2 After the installation company commissions the system completely and delivers it in working condition, the user must provide the necessary training to the personnel, provide a warranty for at least 24 months for the system and undertake in writing that it will provide spare parts for 10 years.

1.3 Upon the request of the administration, the company should be able to make a demo application regarding the product and system operation before installation.

1.4 The contractor company should be responsible for the installation and commissioning of all devices in the places indicated by the hospital management and the delivery of the system in active working condition.

1.5 In the event of a need for additional buttons or equipment in the future, additional materials should be available as needed and integrated seamlessly into the existing system.

2. DEFINITIONS AND SCOPE

2.1 Nurse Call System; It is the communication and automation infrastructure that enables the calls made from patient rooms, patient toilets, bathrooms and emergency observation areas to be transmitted to the relevant nursing personnel.

2.2 The wireless nurse call system should consist of a one-way structure that uses radio frequency technology and performs data communication entirely on the principle of wireless communication.

2.3 In wireless data communication, frequencies allocated to the ISM band should be used in the subband 433–434 MHz in accordance with the current TGM-STK regulations for short-range radio devices. The system must operate with FSK/ASK modulation support, a maximum output power of 10 mW and a frequency range suitable for health communication.

3. TECHNICAL SPECIFICATIONS

3.1 CALL DASHBOARD

3.1.1 The instrument panel case must be made of ABS plastic or metal material.

3.1.2 The display panel must have the capacity to allow the identification of at least 999 call buttons.

3.1.3 Panel; It should be able to report floor, room and bed numbers and call types both audibly and visually.

3.1.4 The panel should be able to display time information when it is in operation; Even if it is de-energized for a long time, it should not require the time setting to be readjusted when it is turned on again.

3.1.5 The nurse call panel should be able to show at least 5 calls at the same time in 4-digit format in order of priority. When one of the calls ends, the relevant record should be deleted from the screen, the other calls should be shifted to the top row in order of priority, and if there are calls waiting in memory, they should be displayed on the screen.

3.1.6 Identification operations via the menu keypad on the panel should be possible without the need for an additional apparatus or external mechanism.

3.1.7 Defining a new button, deleting or correcting the existing definition, setting the time and similar operations must also be available to authorized hospital personnel.

3.1.8 The instrument panel must be able to give an audible and light warning at the time of the call.

3.1.9 Audible warnings must be distinguishable from each other by short and long sound codes. In normal calls, audible warnings should be given at regular intervals until the call is terminated; In emergency calls, the warning interval should continue to be frequent.

3.1.10 If the volume is completely muted, the system should only warn when the call occurs and the call is canceled, and the continuous audible warning should be disabled.

3.1.11 Calls generated in the system must not be canceled or reset via the call display panel.

3.1.12 When the system is reactivated after any power outage, the calls that were active before the outage but have not yet been terminated should be displayed on the panel again and the necessary audible warning should start again.

3.1.13 Panel display structure; It should be suitable for defining the room and bed number as letters, numbers or letter-number combinations.

3.1.14 The electronic card of the instrument panel must be produced by machine typesetting method and generally consist of SMD components.

3.1.15 The instrument panel antenna should be in PCB antenna structure; It must be integrated into the circuit or visibly positioned on the device. Coiled wire, free cable, antenna or similar structures should not be used.

3.1.16 The display panel should be powered by a 12V DC adapter and the appropriate type of power jack energy input should be available on the device.

3.2 BEDSIDE CALL BUTTON

3.2.1 The device body must be made of ABS plastic material that is resistant to shocks and impacts.

3.2.2 The bedside call button shall have a different design that will not be confused with the existing lighting switches.

3.2.3 The call button and the reset button must be distinct and distinguishable from each other so as not to cause confusion during use.

3.2.4 Considering the emergencies where the personnel cannot leave the patient's side after the call, there should be an additional function that allows calling auxiliary personnel through the bedside unit.

3.2.5 The geriatric handset button connection should be made via the RJ45 connector on the device, and the handset button should be easily installed and disassembled.

3.2.6 The electronic card structure should be machine typesetting and generally composed of SMD components.

3.2.7 The bedside call button antenna must be of PCB antenna type and integrated into the circuit. No coiled wire or similar external antenna should be used.

3.2.8 The bedside call button should be powered by a 12V/23A lithium-ion battery; the battery should be easy and economical to procure; The device must be able to generate at least 1000 calls on a single battery. In addition, the product should be able to be powered by an external 12V DC adapter.

3.2.9 Long holding of any button should not cause signal interference in the system. The pressed call button should not generate continuous calls; In this case, the cancel button should continue to work even if the call line may be locked. The operation of other nurse call and WC/Bathroom call buttons should not be affected by this situation.

3.3 GERIATRICS HANDSET BUTTON

3.3.1 It should be designed in an ergonomic structure suitable for manual use.

3.3.2 The nurse should be able to be connected to the call button unit with an independent spiral cable with a 170 cm long, lock type RJ45 socket end.

3.3.3 There should be an easily recognizable call start button on the front side.

3.3.4 When the call is created, the LED on the nurse call button should light up to indicate that the call is active.

3.3.5 There must be a wall hanger for the hand set; The apparatus in question should be mounted on the wall and the hand set should be able to be securely placed on this apparatus.

3.4 WC/BATHROOM ROPE CALL BUTTON

3.4.1 The WC/Bathroom rope call apparatus must have the ability to both initiate and cancel calls.

3.4.2 The appliance must be suitable for use in damp and humid places; It should not be affected by moisture and should be able to reliably generate a call signal by pulling the rope.

3.4.3 The product must be of a structure that can be fixed to the wall; It should not be used with a special detachable apparatus that increases the risk of loss.

3.4.4 The call rope should be connected to the electronic circuit board with a specially designed latch; It should not be attached to the button with unhealthy or temporary methods.

3.4.5 The device case must be made of ABS plastic material that is resistant to impact and impact.

3.4.6 The rope length of the WC rope call apparatus should not be shorter than 140 cm and should be adjustable according to the place of use.

3.4.7 There must be a hand grip on the call rope; this handle must be made of ABS plastic material.

3.4.8 The phrase "PULL THE ROPE IN CASE OF EMERGENCY" must appear on the device.

3.4.9 The electronic card structure should be machine typesetting and generally composed of SMD components.

3.4.10 WC/Bathroom rope call apparatus antenna must be of PCB antenna type and integrated into the circuit. No coiled wire or similar antenna should be used.

3.4.11 Holding down any button must not cause signal jamming. The pressed call button should not generate continuous calls; In this case, even if the device can lock itself, the cancel button should continue to work.

3.4.12 WC/Bathroom rope paging apparatus should be powered by 12V/23A lithium-ion battery; the battery should be easy and economical to procure; The device should be able to make at least 1000 calls on a single battery. The battery compartment should be protected by screws and should not be easily accessible to everyone. In addition, the product should be able to work with an external 12V DC adapter.

3.5 SIGNAL REPEATER UNIT

3.5.1 The signal repeater unit should be used in areas where there is a distance or coverage problem between the WC/Bathroom rope call button and the nurse call button and the instrument panel and call recording unit.

3.5.2 It should have a compact and suitable design that will not create visual pollution in the place where it is used.

3.5.3 There should be an LED on the unit indicating the power status; there should also be a separate indicator LED to show when the call signal is received.

3.5.4 Antenna structure integrated with PCB should be used in the signal repeater unit.

3.5.5 The signal repeater unit must work with a 12V DC adapter.

3.6 DOOR WARNING LIGHT

3.6.1 Device; It should consist of red, blue and green warning lights.

3.6.2 The green light should be on steadily in normal operation.

3.6.3 The lamp should light up red when the call occurs and should continue until the call is terminated.

3.6.4 The blue light must be on for emergency support calls made via the emergency button.

3.6.5 The lamp should light up green when the call is canceled. Following cancellation, the green light should flash for 10 seconds; After this time, it should continue to light up as a solid green light.

3.6.6 The over-the-door warning lamp must operate with 220V energy.

3.7 RECORDING UNIT AND SOFTWARE

3.7.1 If the software and reporting system is not included in the scope of the current procurement, all hardware components used in the system must be compatible with the software and reporting infrastructure if the administration requests it in the future.

4. WARRANTY AND TERMS OF SERVICE

4.1 The Nurse Call System must be under warranty for at least 2 (two) years; In addition, spare parts supply guarantee should be provided for 10 (ten) years.

4.2 Parts that cannot be repaired must be replaced with new ones. Within the warranty period, defects caused by manufacturing, assembly, material, workmanship or design must be eliminated free of charge by the contractor company; Faulty parts must be replaced free of charge.

4.3 The periods during which the devices remain defective should not be counted as the warranty period. Malfunctions occurring within the scope of the warranty must be intervened within 24 hours at the latest and the malfunction must be eliminated within 48 hours following the intervention.

4.4 Technical service and parts replacement services that will be needed after the expiration of the warranty period will be provided by paying the relevant costs to the contractor company.