

User Manual for Microcontroller based Nurse Calling System

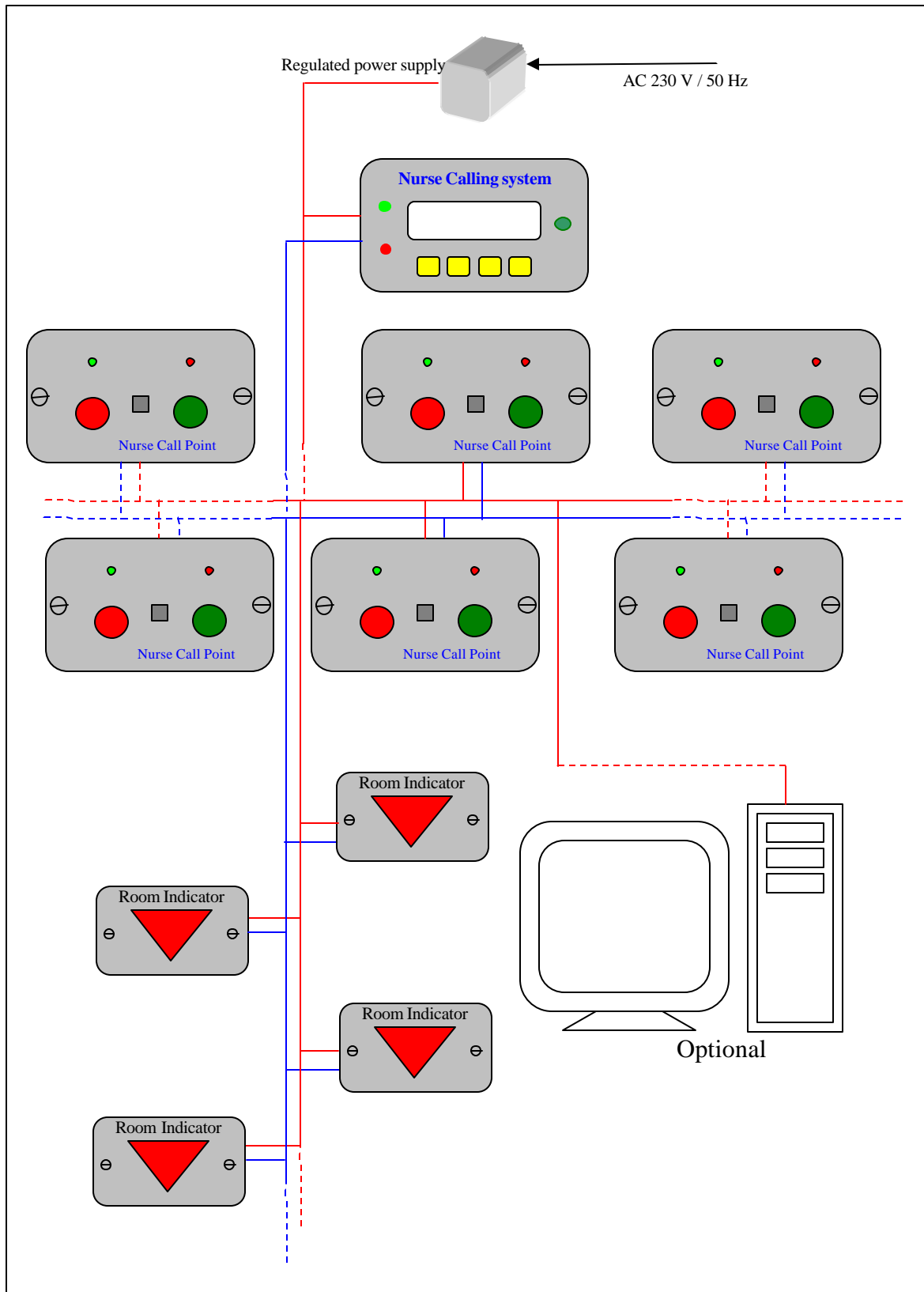
Doc Ref:CS/CGH/NCS/V1.02-1

INDEX

Sl.No	DESCRIPTION	Page No
1	INTRODUCTION	2
2	CENTRAL MONITORING STATION (CMS)	3
3	NURSE CALLING SYSTEM (NCP)	3
4	ROOM INDICATOR (RI)	3
5	ELECTRICAL SPECIFICATION	4
6	WIRING DETAILS	5
7	HARDWARE CONNECTION	5

User Manual for Microcontroller based Nurse Calling System

Doc Ref:CS/CGH/NCS/V1.02-1



Call Monitoring Station (CMS)

C-Systems, 18/14, Ramakrishna Nagar Extn, Alwarthirunagar, Chennai.600 087
Telefax: +91-44-43552009. Email: sales@csystemsindia.com www.csystemsindia.com

User Manual for Microcontroller based Nurse Calling System

Doc Ref:CS/CGH/NCS/V1.02-1

The CMS is a microprocessor based intelligent system with tabletop / wall mountable panel. The CMS consists of a 2X20 LCD with backlight. A Green LED blinks, when the system normally functions. A red LED glows & a buzzer beeps when a call point is pressed from a NCP. The display shows the room number in 3 digits and the bed number in 3 digits. A push button is provided in the CMS to mute the buzzer sound. But the red LED continues to glow until the reset switch is pressed from that NCP. The red LED switches OFF when the reset button is pressed from that NCP. When more than one call point is pressed simultaneously, the display shows the first call location and displays "More calls". When the up/down key is pressed, the other locations will be displayed. An amber LED glows when one or more NCP's fails to communicate to the CMS.

Nurse Call point (NCP)

The NCP is a microprocessor based intelligent system. Each NCP is addressable with unique number. In an NCP, a Green LED blinks when it is healthy. A red LED will glow, when the call push button is pressed. Multiple push will not be accepted to avoid continuous false calls. The red LED will turn OFF, when the reset switch is pressed. A RJ 11 female holder is provided in NCP for connecting hand held system. All NCP's communicate to the CMS through standard RS485, 2-wire communication.

Room Indicator (RI)

The RI is a microprocessor based intelligent system with unique address. The RI is an array of high bright red LED's arranged to form an indication. This is fitted in the wall of room entrance. The RI glows when any NCP is pressed in that particular room. The RI turns OFF when the reset button in the NCP is pressed.

Handheld units (HU)

The HI is a handy rectangular ABS plastic enclosure with a push button mounted on it. The output is a wire of 1-meter length with a RJ 11 connector crimped at the end. This can be connected to any NCP to enable handy operation.

User Manual for Microcontroller based Nurse Calling System

Doc Ref:CS/CGH/NCS/V1.02-1

ELECTRICAL SPECIFICATION

Sl.No	Description - Central Monitoring Station	Min	Typ	Max	Units
1.	Supply Voltage	9	12	15	V
2.	Operating current	0.5	0.75	1	A
3.	Back light consumption	70	100	120	mA
4.	Keypad – Membrane switching voltage	-	5	-	V
5.	AC supply to PSU	210	230	240	V
6.	Frequency	-	50	-	Hz
7.	LED indications Red, Green, Amber	-	10	-	mA
8.	Display Characters / line	-	20	-	Char
9.	Number of lines / frame	-	2	-	Lines
10.	Buzzer audio	-	5	-	dB

Sl.No	Description – Nurse Call Point	Min	Typ	Max	Units
1.	Supply Voltage	9	12	15	V
2.	Operating current	20	50	55	mA
3.	Keypad – Tack type switching voltage	-	5	-	V
4.	LED indications Red, Green	-	10	-	mA
5.	Call to Reset time	4	5	-	Sec

Sl.No	Description – Room Indicator	Min	Typ	Max	Units
1.	Supply Voltage	9	12	15	V
2.	Operating current	20	50	55	mA
3.	Indication LED	-	15	-	No
4.	Indication LED current consumption	100	120	150	mA
5.	Flickering time	300	500	1000	ms

WIRING DETAILS

Sl.No	Description	
1.	Power supply	2 core 1 sq mm screened
2.	Communication	2 core 1 sq mm unscreened
3.	Pull card unit	2 core 1 sq mm screened

HARDWARE CONNECTIONS

