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NTT – 830 Nurse Tracking Tag
Operational Description

The Nurse Tracking Tag is a small transmitter that shall be designed to be allocated to nurse to the area monitored by the AMS system.
The device comprises a printed circuit board (PCB) that includes a RF transceiver module with an integral antenna, microcontroller that controls its operation and RFID tag for identification.

The NTT-830 has one RF channel (318MHz, 433MHz) over which it communicates with its monitoring system. The RFID tag is read from Pull cord 840

The unit is powered by an internal 3V Lithium battery.

The NTT – 830 shall be stored in a specific location when not in use (e.g. a cupboard or drawer). When a nurse arrives at work, she should activate a NTT. The NTT allocate nurses in order to track their location during the work. The NTT – 830 include an accelerometer that enable it to sense that the tracked nurse is in motion and generate a "Motion" transmissions event. In this mode device transmit variably once approximately every 18-22 seconds (non-periodic). If 2 minutes have not motion detection device return in standby mode.

In standby mode the NTT transmit RF sanity message once every 15 minutes during first hour, after that, transmit sanity once every one hour in order to indicate that the tag is functional.

When the nurse goes to room equipped with Pull Cord 840 she should put NTT over PC- 840. The PC-840 will read RFID tag and the Pull cord transmit “Nurse Presence” identification with NTT ID to AMS system. When the nurse leaves room she should put again NTT over PC-840. In this case the Pull Cord will read RFID tag and transmits “Nurse Left” for identification with NTT ID. At the end of the work, the nurse shall deactivate NTT.

Periodic transmissions on NTT for signal integrity occurs only in standby mode. The maximum duration within the first hour:
4 signals (once every 15 minutes) => 4 X 6 ms (max.) = 24 ms
The maximum duration after one hour:
1 transmission per hour => 1 X 6ms = 6ms