

3M Resident Monitoring

7170 W. Donges Bay Road  
Mequon, WI 35092

Toll Free: 800-606-0661

Office: 414-358-8200

Fax: 414-358-8100

[www.3m.com/residentmonitoring](http://www.3m.com/residentmonitoring)



# Pull Cord

## USER MANUAL

DRAFT

Copyright © 2012 all rights reserved

This document contains information that is proprietary to Attenti Ltd. No part of this publication may be reproduced in any form whatsoever without prior written approval by Attenti.

**TABLE OF CONTENTS**

1 Foreword..... 3

1.1 Pull Cord with RFID Device - State machine Drawing: ..... 4

1.2 Pull Cord with RFID Device - Indications: ..... 5

1.3 Pull Cord without RFID Device (emulating PC 830) - State machine Drawing: ..... 6

1.4 Pull Cord without RFID Device (emulating PC 830) - Indications: ..... 7

1.5 Activating the Pull Cord: ..... 8

1.6 Activating a Panic Alert: ..... 8

1.7 Deactivating a Panic Alert: ..... 8

1.8 Deactivating the Pull Cord: ..... 8

1.9 Cleaning Instructions..... 8

2 FCC Notices ..... 9

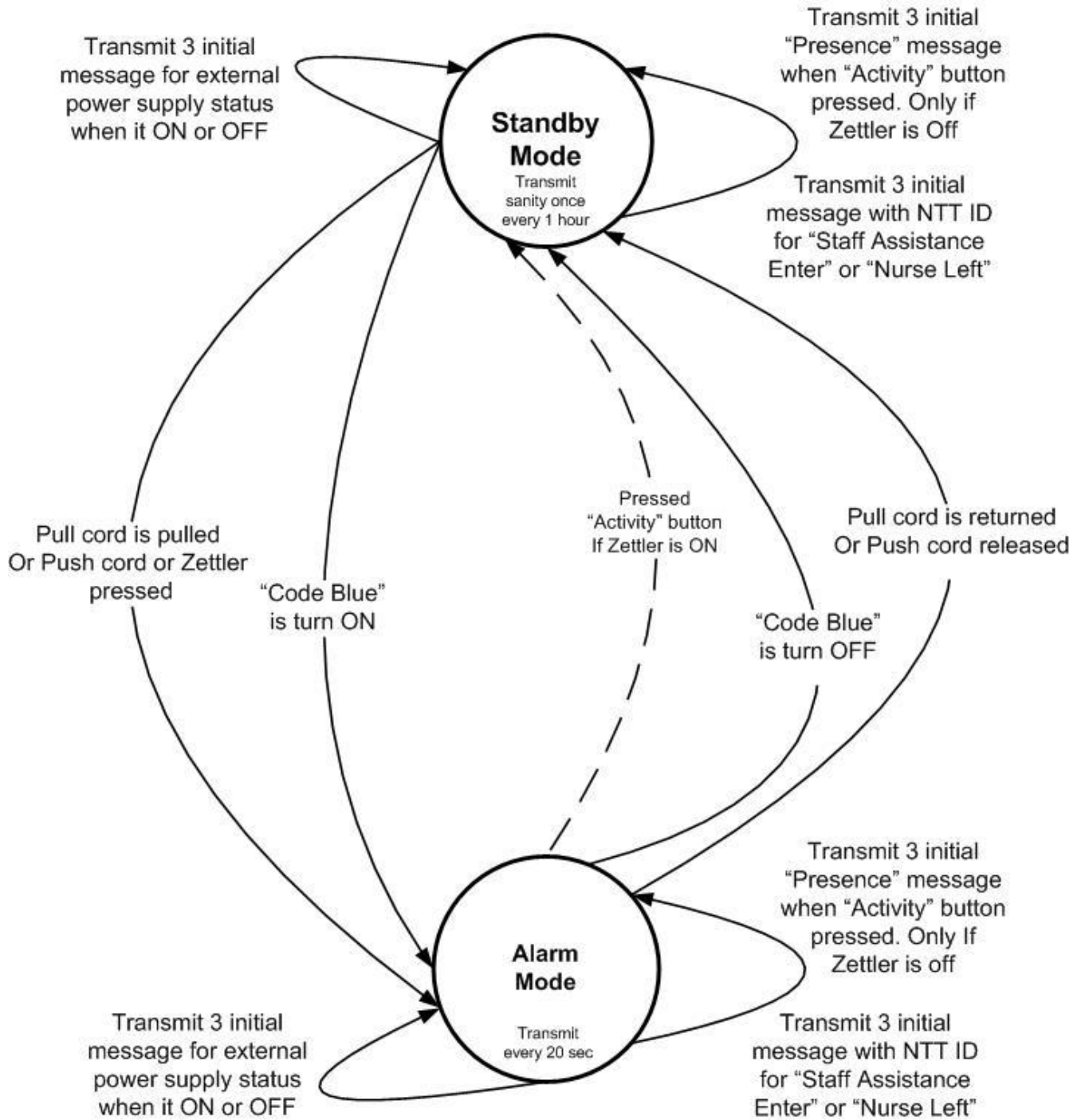
## 1 FOREWORD

The Pull Cord is a small wall-mounted device, to be installed at bedside and in the bathroom of nursing homes and assisted living homes. Once pulled, the Pull Cord Device shall transmit panic messages once every 20 seconds until it is reset by a nurse using NTT device with RFID tag. The Pull cord shall include RFID reader circuit to support handshake with the Nurse Tag Transmitter (NTT). When the staff members present/taps the NTT on the pull cord, the Pull cord will detect the tag and will send NTT ID to the system. The first time that the PC-840 detects the NTT, it shall send a "Staff assistance enters" message to the system. If the same NTT is detected a second time, the PC-840 shall send a "Staff assistance left" message to the system. In case the nurse did not tap the NTT on leave, the PC-840 will send "Auto-left" message after 240 min. The PC-840 save up to 10 NTT ID, for each NTT the PC-840 send "Staff assistance enters" and "Staff assistance left" message and have separate timer for "auto-left" message. Once pulled, the PC-840 shall close a Normally Open (N/O) output or open a Normally Closed (N/C) output that will used to turn on/off a corridor indication light. While the Pull Cord is ON, it shall transmit a status message, once every hour, to indicate that it is still functioning and to report its power supply state. A button, on the PC-840, shall be used for perform resident wellness check-in, while an additional switch will be used, for a nurse request for help ("Code Blue"). When "Code Blue" is activated the Pull cord shall turn on the corridor light and when the "Code Blue" is deactivated device shall turn off corridor light.

The pull cord has three main variants:

1. With RFID reader- Pull Cord 840
2. Without RFID reader (emulating PC 830)
3. Without RFID with external power option (emulating PC 830)

1.1 Pull Cord with RFID Device - State machine Drawing:



## 1.2 Pull Cord with RFID Device - Indications:

LED Indication	External power	Battery	Alarm	Nurse present	Swipe
<b>Steady Green</b>	OK	OK	No	...	...
<b>Orange (flash every 2 sec.)</b>	Missing	OK	No	...	...
<b>Orange (flash every 10 sec.)</b>	Don't Care	Low	No	...	...
<b>Steady Red</b>	OK	OK	Yes	...	...
<b>Red (flash every 10 sec.)</b>	Missing	Don't Care	Yes	...	...
<b>Green (flash 3 times fast)</b>	Don't Care	Don't Care	No	...	Yes
<b>Red (flash 3 times fast)</b>	Don't Care	Don't Care	Yes	...	Yes
<b>Green (slow flashing)</b>	Don't Care	Don't Care	No	Yes	...
<b>Red (slow flashing)</b>	Don't Care	Don't Care	Yes	Yes	...

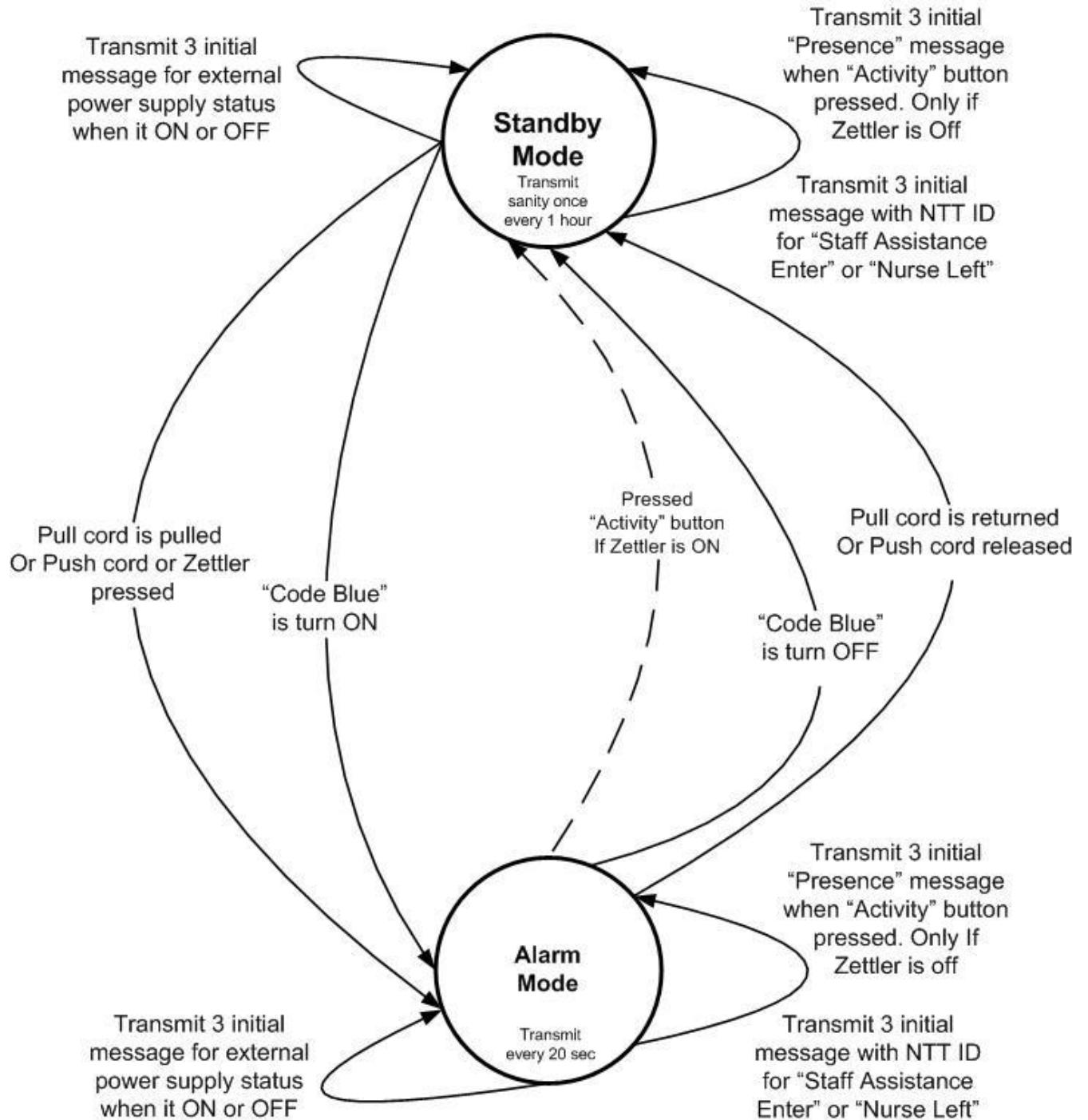
- Steady Green = OK
- Orange = Power Trouble
- Red = Alarm
- Fast flashing = Swipe confirmation
- Slow flashing = Nurse present

### Activity Button and Nurse Presence LED Functionality

- 1) When switch pressed Once– Long Red LED blink (1 Second)
- 2) When switch pressed twice – Long Red LED blink (1 Second)

The buzzer shall beep shortly one-time when RFID reader successful read NTT RFID tag and send "Nurse Presence" message. The buzzer shall beep shortly two time when read NTT RFID tag and send "Nurse left" message.

1.3 Pull Cord without RFID Device (emulating PC 830) - State machine Drawing:



**1.4 Pull Cord without RFID Device (emulating PC 830) - Indications:**

AC Power	Battery	Alarm	Code Blue	LED Indication
OK	OK	No	No	<b>LED Off</b>
Missing	OK	No	No	<b>LED Off</b>
OK	OK	Yes	No	<b>Steady Red</b>
Missing	OK	Yes	No	<b>Flashing Red (every 20 sec.)</b>
OK	OK	No	Yes	<b>Steady Red</b>
Missing	OK	No	Yes	<b>Flashing Red (every 20 sec.)</b>
OK	OK	Yes	Yes	<b>Steady Red</b>
Missing	OK	Yes	Yes	<b>Flashing Red (every 20 sec.)</b>
OK	Low	No	No	<b>On startup 5 Red Flashes of 100 mSec</b>
Missing	Low	No	No	<b>On startup 5 Red Flashes of 100 mSec</b>
OK	Low	Yes	No	<b>Alarm Start with 5 Red Flashed of 100 mSec and then Steady Red</b>
Missing	Low	Yes	No	<b>5 Red Flashes of 100 mSec (every 20 sec.)</b>
OK	Low	No	Yes	<b>Alarm Start with 5 Red Flashed of 100 mSec and then Steady Red</b>
Missing	Low	No	Yes	<b>5 Red Flashes of 100 mSec (every 20 sec.)</b>
OK	Low	Yes	Yes	<b>Alarm Start with 5 Red Flashed of 100 mSec and then Steady Red</b>
Missing	Low	Yes	Yes	<b>5 Red Flashes of 100 mSec (every 20 sec.)</b>

**Activity Button and Nurse Presence LED Functionality**

- 3) When switch pressed Once– Long Red LED blink (1 Second)
- 4) When switch pressed twice – Long Red LED blink (1 Second)

**Notes**

- 1) In Power operated Mode – The Red LED will light constantly during alarm.
- 2) In Battery operated mode – Same as 830 – Battery consumption led blinking
- 3) Orange and Green Colors are not in use in this mode.
- 4) Alarm = Pull Cord or Push Cord or Zettler (or any combination)
- 5) Activity button LED work the same regardless the battery and power status
  - Red = Alarm

### **1.5 Activating the Pull Cord:**

The Pull Cord have an on/off function, to enable battery life saving while not in use, and aviation safety while being shipped.

The Pull Cord is turned off by the manufacturer before shipment and must be activated before use. To activate, hold the Pull Cord insert the battery into the PCB.

Once the Pull Cord is working, it sends a status message every 60sec to the monitoring station. The monitoring station then indicates the current battery status. This status message is sent until the Pull Cord is deactivated.

### **1.6 Activating a Panic Alert:**

To move from an ACTIVE – NO ALARM mode to an ACTIVE – PANIC ALARM mode – the user will have to pull the PCD cord.

Once in panic alert mode, the Pull Cord sends a panic alert message to the monitoring station. This message is sent until the panic alert is deactivated.

### **1.7 Deactivating a Panic Alert:**

To move back from an ACTIVE – PANIC ALARM mode to an ACTIVE – NO ALARM mode (= Reset operation) – the user will have to move the pulled down knob to its original upper position.

Even though the panic alert has been deactivated, the Pull Cord is still working. Therefore, the Pull Cord still sends a status message to the monitoring station. This status message is sent until the Pull Cord is deactivated.

### **1.8 Deactivating the Pull Cord:**

Holding the Pull Cord and take off the Battery. The Pull Cord is now in deactivated mode (turned off).

### **1.9 Cleaning Instructions**

A soft brush and any cleaning solution are all that is needed to clean the Pull Cord.

Alcohol based solutions; Soapy water or Lysol can be used to clean the Pull Cord.



## 2 FCC NOTICES

This note is applicable to the American Pull Cord

### **NOTE**

*The Pull Cord complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:*

- (1) This device may not cause harmful interference, and*
- (2) This device must accept any interference received, including interference that may cause undesired operation.*

This device has been tested and found to comply with the limits of the Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device generates, uses and can radiate radio frequency energy and, if installed and used in accordance with the instruction, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to correct the interference by one or more of the following measures

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver.
- Consult the dealer or an experienced radio/TV technician for help.

### **CAUTION**

*Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.*

### **For Customer Support contact:**

#### **3M Resident Monitoring.**

**Toll Free**            **1-800-606-0661**

**Fax**                    **+1-414-358-8100**

**Web:**                [www.3M.com/residentmonitoring](http://www.3M.com/residentmonitoring)