Figure 93. External Call Contact with Call LED

WARNING:

- The equipment that is connected to this interface is not considered to be part pf the system configuration unless the equipment complies with ANSI/UL 2560 standard for Emergency Call Systems for Assisted Living and Independent Living Facilities.

- The SWITCH and LAMP circuits are not electrically isolated.

- The cable length for the SWITCH circuit must not exceed 33ft (10m) and the cable must be appropriately separated from power cables and sources of electromagnetic interference.

- The LAMP circuit is power limited to 5.5Vdc at 06.mA.

- The SWITCH circuit is power limited to 5.5Vdc at 06.mA.

6.6 Medical Rail Socket (NIMS2)

The Medical Rail Socket (NIMS2) is a teleCARE IP peripheral. The NIMS2 is designed to be flush mounted by two screws in an opening in a medical rail.

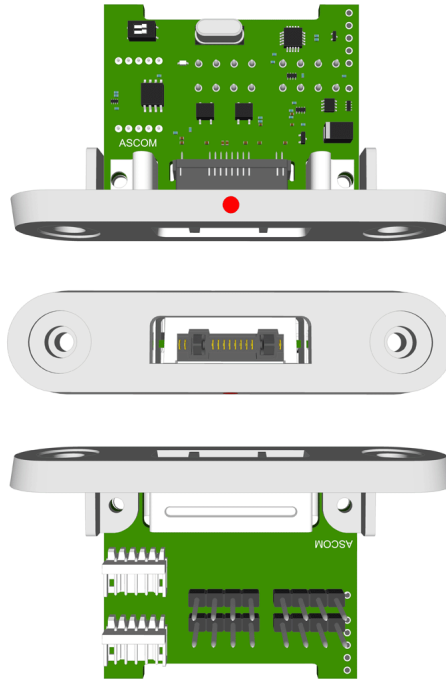The NIMS2 supports teleCARE IP speech and stereo TV audio input from the television interface module.

Figure 94. Medical Rail Module NIMS2 (top, front, bottom)

The NIMS2 is connected to the teleCARE IP room bus by a 4-pin connector. The room bus connector includes the 5.5Vdc power supply for the NIMS2.

The medical rail socket is functionally compatible with the teleCARE IP bedside module. It includes the teleCARE Safe Release Socket.

The medical rail socket is supplied with two self-tapping screws which are used to mount the socket in the medical rail.

In addition to the a 4-pole connector for the room bus, the NIBM2 has connectors for the following inputs and outputs:

- Control outputs for 2 light switching relays

- Stereo TV audio input from the television interface module

- External call input with a reassurance LED output

- NISP speech module

6.6.1 NIMS2 Electrical Connections and DIP Switch Settings

The medical rail socket (NIMS2) is an "active peripheral" which must be connected to one of the three room buses of a teleCARE IP room controller by the 4-pole room bus connector. The room bus connector includes the 5.5Vdc power supply for the NIMS2.

Each room bus offers individual addresses for up to four switch modules. The address is selected using the DIP switch on the switch module printed circuit board. Details of the DIP switch settings are given in 6.4.10, Dip Switch Settings on page 71.

4-Pole Connector
for the
Room Bus

4-Pole Connector
for an External Call Input
and Call Lamp LED Output

Connector for
the Speech
Module

Not supported
with UL 2560
systems

4-Pole Connector for the
Stereo Input from the
Television Interface M

4-Pole Connector for
the Light Switching
Relays

GND
VOICE
DATA
+5V5

SWITCH
GND
LAMP
+5V5

IN LEFT +
IN LEFT -
IN RIGHT +
IN RIGHT -

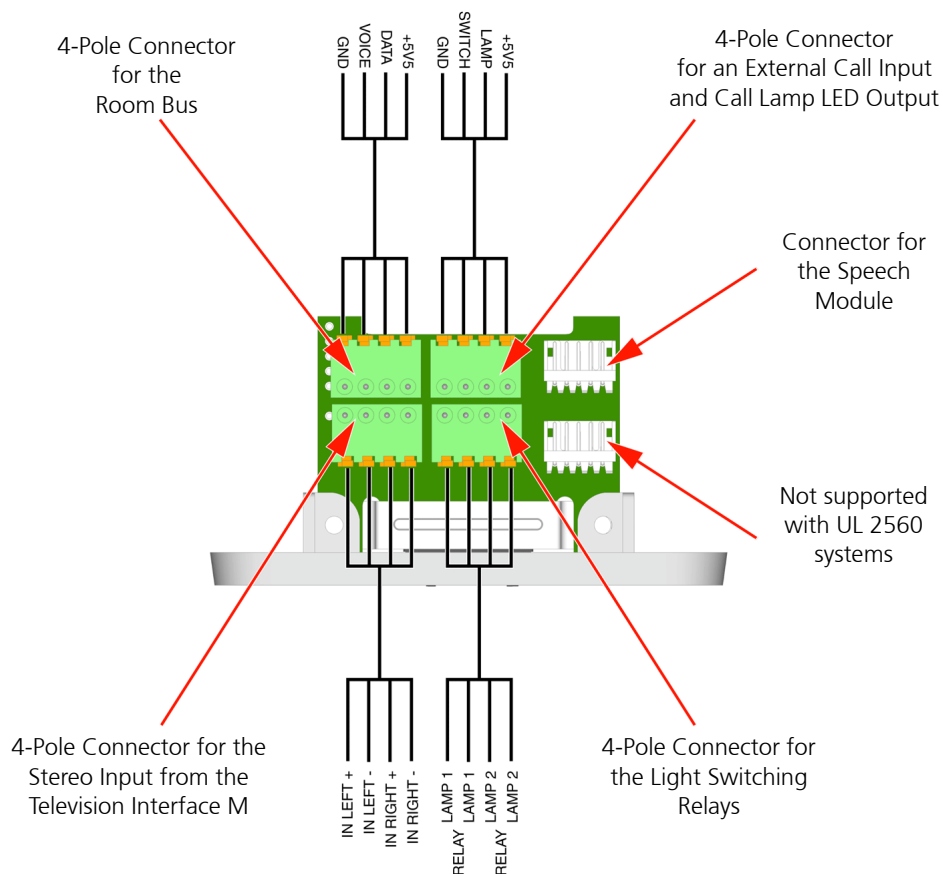RELAY LAMP 1
LAMP 1
RELAY LAMP 2
LAMP 2

Figure 95. Medical Rail Socket NIMS2 electrical connections and address setting

For details of the 4-Pole connector see 6.4.1, 4-Pole Connector Terminal on page 65.

For light switching relay details see 6.5.2, Light Switching Relay Maximum Load and Surge Damping Diode on page 75.

For details of connecting a speech module see 6.15.1, Connecting the Speech Module on page 104.

For details of connecting the external call see 6.5.3, External Call Contact with Call Lamp Output on page 75.

Note: *The 4-pole connector terminals required for the room bus and other inputs and outputs are not supplied with the switch module. They are available as accessories and must be ordered separately.*

6.6.2 NIMS2 Room Bus Address Setting

The room bus address of the medical rail socket is selected using the DIP switch on the top side of the printed circuit board. For details of the DIP switch settings see 6.4.10, Dip Switch Settings on page 71.
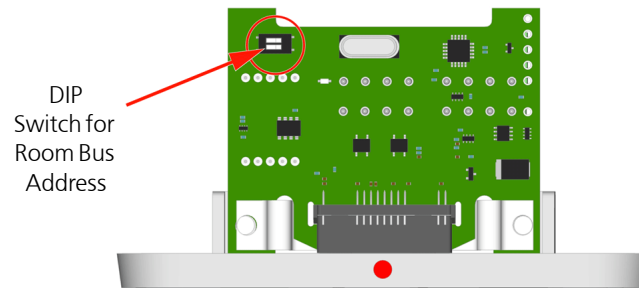

DIP Switch for Room Bus Address

Figure 96. NIMS2 DIP switch

6.6.3 Light Switching Relay Maximum Load and Surge Damping Diode

The medical rail socket NIMS2 includes 2 light switching circuits with normally open (N/O) contacts. The contacts are potential free and galvanically isolated. Each circuit is suitable for switching a bi-stable 24 volt DC external relay. The maximum switching current for each relay must not exceed 0.3A at maximum 30Vdc.
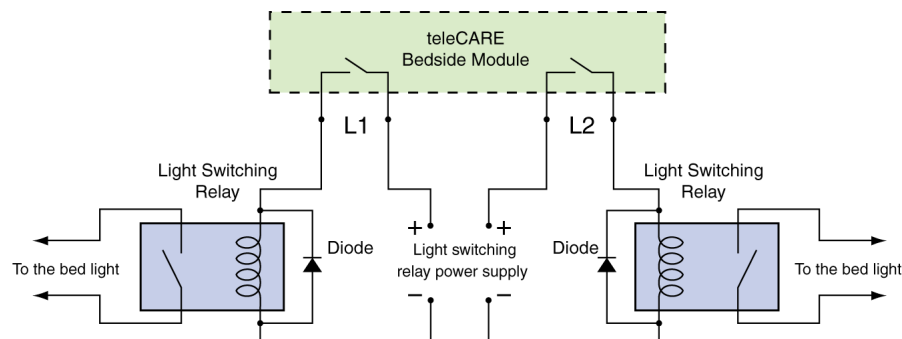

Figure 97. Light switching relay with surge damping diode

WARNING:

• The equipment that is connected to this interface is not considered to be part pf the system configuration unless the equipment complies with ANSI/UL 2560 standard for Emergency Call Systems for Assisted Living and Independent Living Facilities.

• Do not connect the bed light circuitry directly to the L1 and L2 switch contacts on the NIMS2.

• The Light Switching Power Supply and Relay must be UL recognized components.

• The maximum switching current for the L1 and L2 contact on the NIMS2 must not exceed 03.A at 30Vdc.

• A diode (1N4004 or equivalent) must be connected across the coil of the bed light switching relay to prevent surges caused by the relay coil.

6.6.4 External Call Contact with Call LED Output

The external call connection allows an external normally open third-party contact to activate a teleCARE call in parallel to the red button of the bedside module.

The 4-pole connector provides SWITCH and GND terminals for connection to a normally open contact of an external switching device. These terminals provide 5.5Vdc at 0.6mA, for monitoring the external device contact.

The 4-pole connector also provides a +5.5V output and an open collector driver on the Lamp terminal. Together, the +5.5V and Lamp terminals provide power and switching for an external LED lamp. The external LED lamp will be switched on when the contact on the external switching device connected to the SWITCH and GND terminals closes.
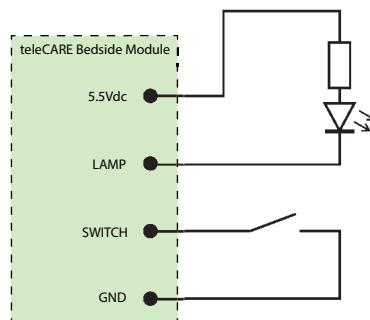

Figure 98. External Call Contact with Call LED

WARNING:

- The equipment that is connected to this interface is not considered to be part pf the system configuration unless the equipment complies with ANSI/UL 2560 standard for Emergency Call Systems for Assisted Living and Independent Living Facilities.

- The SWITCH and LAMP circuits are not electrically isolated.

- The cable length for the SWITCH circuit must not exceed 33ft (10m) and the cable must be appropriately separated from power cables and sources of electromagnetic interference.

- The LAMP circuit is power limited to 5.5Vdc at 06.mA.

- The SWITCH circuit is power limited to 5.5Vdc at 06.mA.

6.6.5 Mounting the Medical Rail Socket

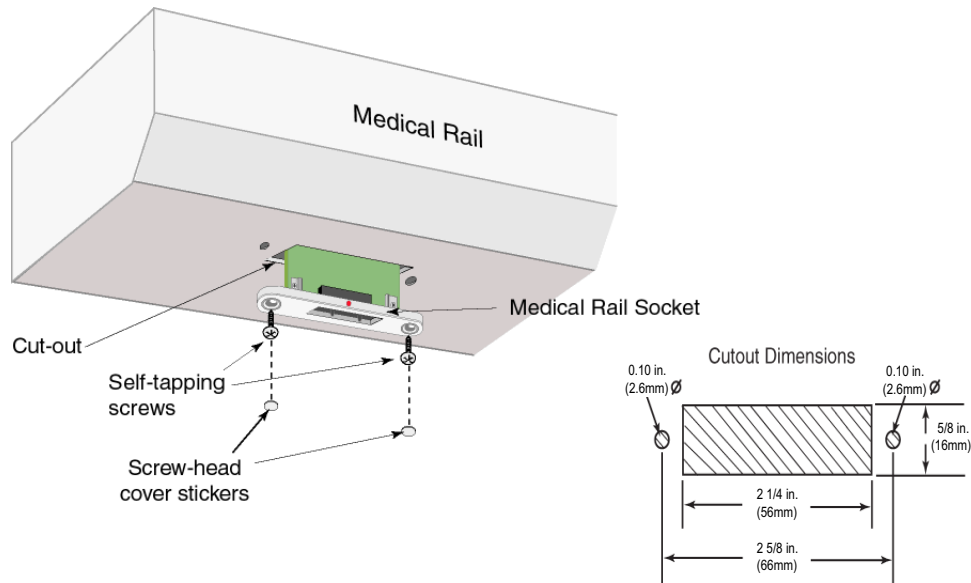The following illustration shows how the medical rail socket is mounted in the underside of a medical rail.

Figure 99. Medical rail socket mounting and cut-out dimensions

6.7   Door Side Module (NIDM)

The Door Side Module (NIDM) is a three-button switch module which is connected to the teleCARE IP room bus. It has a buzzer which can be used to signal calls, a 4-pole connector for the room bus, a 4-pole connector for a passive bus and connector for speech module.
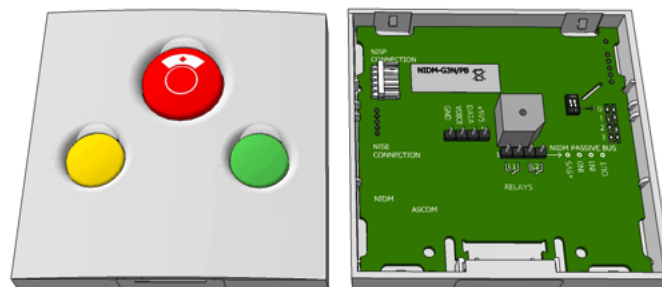
Figure 100. Door-Side module: front and back view

6.7.1 Door Side Module Electrical Connections and DIP Switch Settings

The Door Side (NIDM) Module is an "active peripheral" therefore it must be connected to one of the three room buses of a teleCARE IP room controller by the 4-pole room bus connector (see 6.4.1, 4-Pole Connector Terminal on page 65).

Each room bus offers individual addresses for up to four switch modules. The address is selected using the DIP switch on the switch module printed circuit board. The door Side module also has another 4-pole connector for a "passive bus" which is used to connect a passive pull cord switch module and a
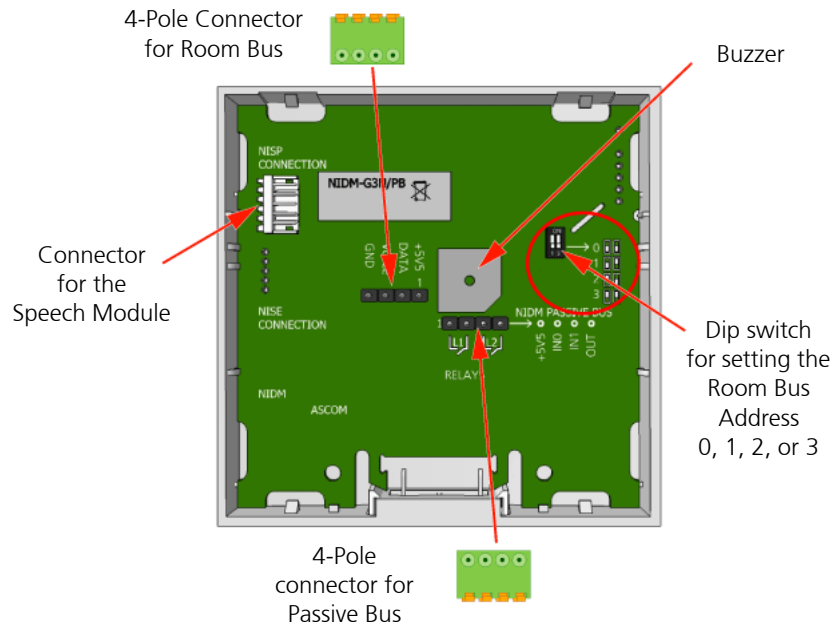
passive cancel switch module.

Figure 101. Door Side module electrical connections and address setting

The NIDM has a 5-pin connector for connecting a speech module. Refer to 6.15.1, Connecting the Speech Module on page 104 for details of the speech module.

Note: *The 4-pole connector terminals required for the room bus and the passive bus connections module must be ordered separately.*

6.8 Pull Cord Module - Active (NIPC-G3A and NIPC-W3A)

The Pull Cord Module (NIPC) is intended for use in the teleCARE IP system, in areas such as bathrooms and toilets. It is an "active peripheral" therefore it must be connected to one of the three room buses of a teleCARE IP room controller.
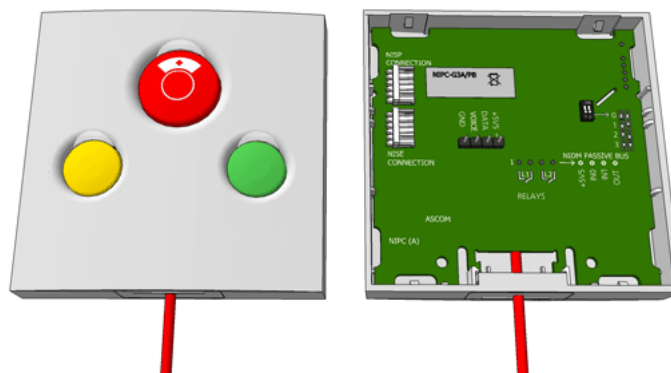

Figure 102. Pull cord module (active)

The NIPC has a 4-pin connector for the room bus, a 5-pin connector for the speech module and a 5-pin connector for future use.

Each room bus offers individual addresses for up to four switch modules. The address is selected using the DIP switch on the switch module printed circuit board.

The NIPC has a 2 meter long pull cord for call activation with two safety break plastic balls, and it is available with three function buttons: red, green and yellow.

Important: At least one active NIPC module must be permanently located in the bathroom of each resident apartment.

Note: The 4-pole connector terminal required for the room bus is not supplied with the switch module. It is available as an accessory and must be ordered separately.

The NIPC requires a single backplate which must be ordered separately. The backplate enables this switch module to be mounted over different types of back-boxes. Alternatively, a spacer with installation kit is available for surface mounting the switch module.

6.8.1 Pull Cord Module (Active) Electrical Connections and DIP Switch Settings

This pull cord module is an "active peripheral" therefore it must be connected to one of the three room buses of a teleCARE IP room controller by the 4-pole room bus connector (see 6.4.1, 4-Pole Connector Terminal on page 65).

Each room bus offers individual addresses for up to four switch modules. The address is selected using the DIP switch on the switch module printed circuit board.

For details of connecting a speech module refer to 6.15.1, Connecting the Speech Module on page 104
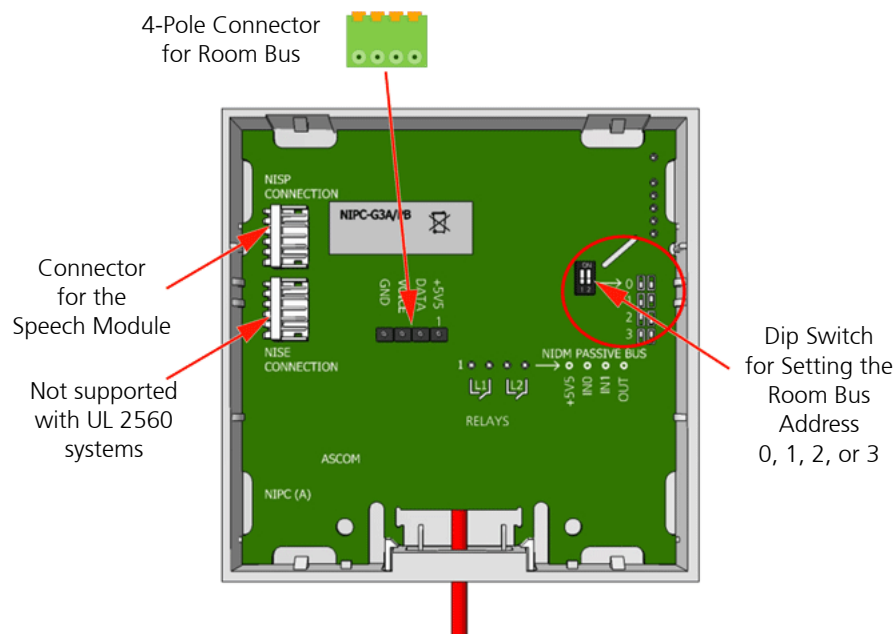

Figure 103. Pull cord module electrical connections and address setting

Note: The 4-pole connector terminals required for the room bus connections is not supplied with the switch module. It is available as accessories and must be ordered separately.

6.8.2 Assembling and Attaching the Pull Cord

It is important to assemble and attach the pull cord to the pull switch module correctly to ensure the cord is securely attached and that the "safety break" mechanism works reliably. The following illustrations show how to attach the pull cord:
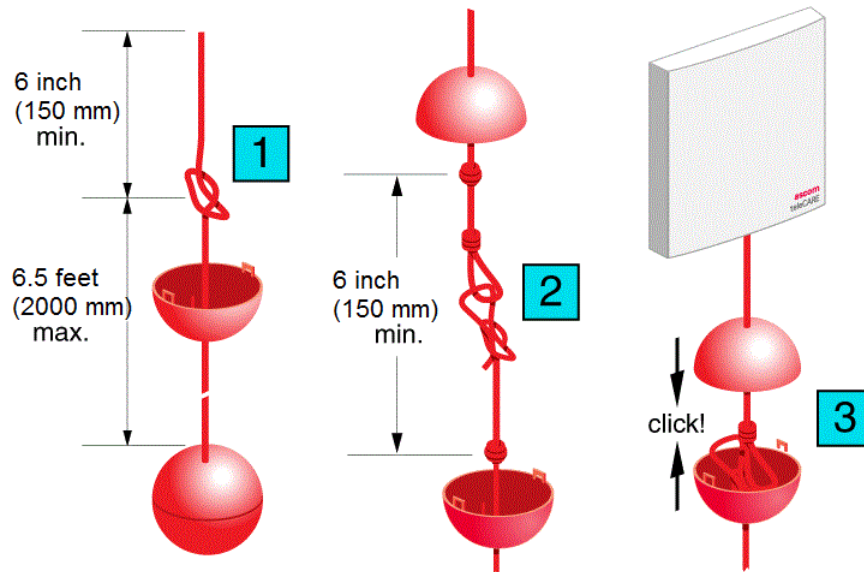

Figure 104. Assembling and attaching the pull cord
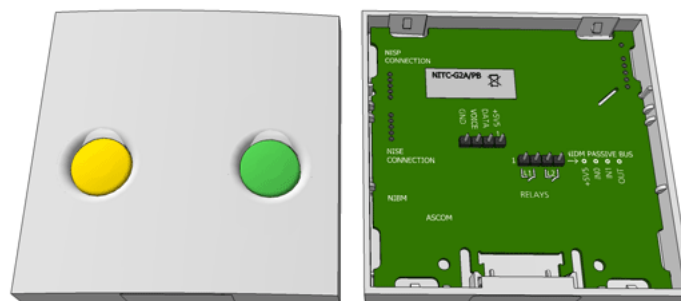
6.9 Toilet Cancel Module - Active (NITC-XXA)

Figure 105. Toilet cancel module (active)

The Toilet Cancel Module is designed for use in the teleCARE IP system. It is a wall mounted single switch module used to cancel toilet calls made by linked toilet call devices.

Each room bus offers individual addresses for up to four switch modules. The address is of the active toilet cancel module is fixed at number 4 and cannot be changed.

The toilet cancel module requires a single backplate which must be ordered separately. The backplate enables this switch module to be mounted over different types of back-boxes. Alternatively, a spacer with installation kit is available for surface mounting.

6.9.1 Toilet Cancel Module (Active) Electrical Connections

The toilet cancel module is an "active peripheral" therefore it must be connected to one of the three room buses of a teleCARE IP room controller by the 4-pole room bus connector (see 6.4.1, 4-Pole Connector Terminal on page 65).

The toilet cancel module also has a 4-pole connector for the passive bus to which a passive pull-cord call module can be connected (see 6.10.1, Pull Cord Module (Passive) Electrical Connections on page 86).
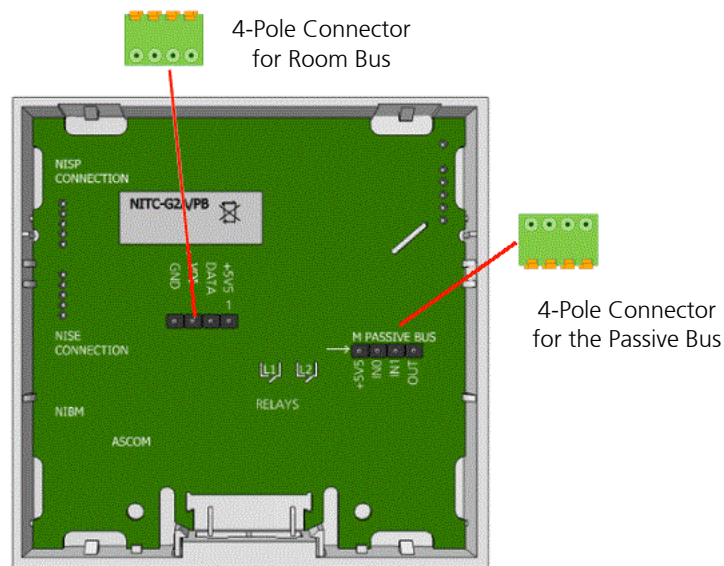
Figure 106. Toilet cancel module electrical connections

Note: *The 4-pole connector terminals required for the room bus and the passive bus must be ordered separately as accessories.*

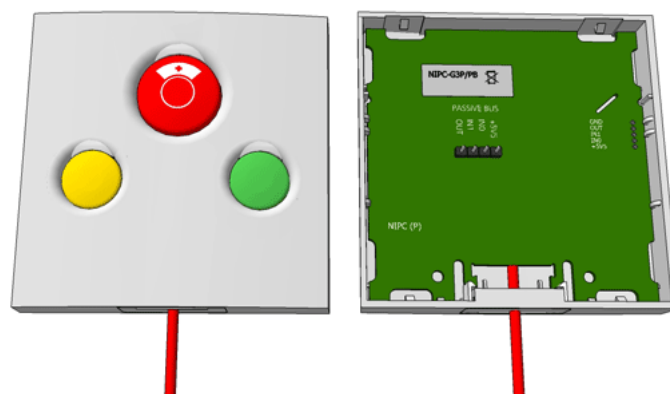## 6.10 Pull Cord Module - Passive (NIPC-XXP)

Figure 107. Passive pull cord module 3 buttons

The Passive Pull Cord Module is intended for use in the teleCARE IP system, in areas such as bathrooms and toilets. It must be connected to the passive bus of a door side module or active pull cord cancel module. When connected to the door side module, it can be combined with the passive toilet cancel module on the same passive bus. The passive bus consists of four wires (see 6.4.1, 4-Pole Connector Terminal on page 65).

For assembly and attaching instructions for the pull cord refer to 6.8.2, Assembling and Attaching the Pull Cord on page 84.

The Passive Pull Cord Module requires a single backplate which must be ordered separately. The backplate enables this switch module to be mounted over different types of back boxes. Alternatively, a spacer with installation kit is available for surface mounting.

6.10.1 Pull Cord Module (Passive) Electrical Connections

The passive pull cord module is a "passive peripheral" therefore it must be connected to the passive bus of the linked door side module or active pull cord module by the 4-pole passive bus connector (see 6.4.1, 4-Pole Connector Terminal on page 65).
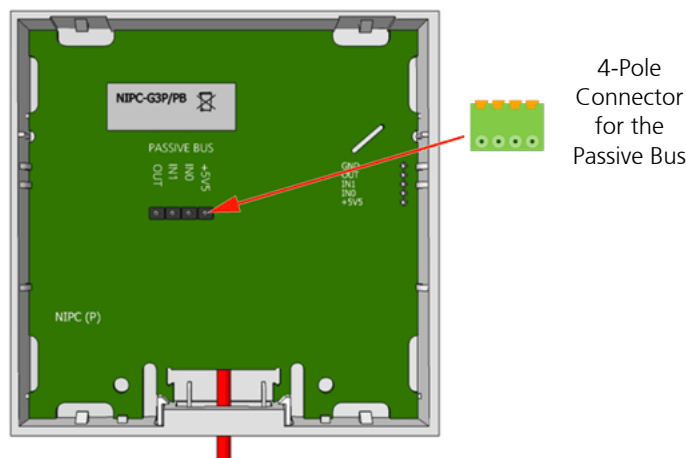

Figure 108. Passive pull cord module electrical connections
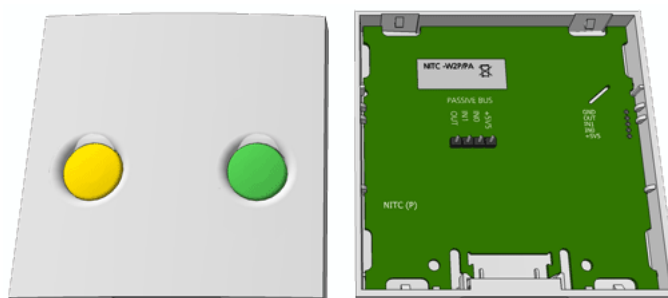
6.11 Toilet Cancel Module - Passive (NITC-XXP)

Figure 109. Passive toilet cancel module

The Passive Toilet Cancel Module is intended for use in the teleCARE IP system, in areas such as bathrooms and toilets. It must be connected to the passive bus of a door side module or a room display module.

IMPORTANT: *Together with the passive toilet cancel module a passive pull cord module which contains the line break detection circuitry must be installed. The passive pull cord module must be connected at the end of the passive bus.*

The Passive Toilet Cancel Module requires a single backplate which must be ordered separately. The backplate enables this switch module to be mounted over different types of back boxes. Alternatively, a spacer with installation kit is available for surface mounting the switch module.

6.11.1 Passive Toilet Cancel Module (Passive) Electrical Connections

This toilet cancel module is a "passive peripheral" therefore it must be connected to the passive bus of the linked door side module by the 4-pole passive bus connector (see 6.4.1, 4-Pole Connector Terminal on page 65).
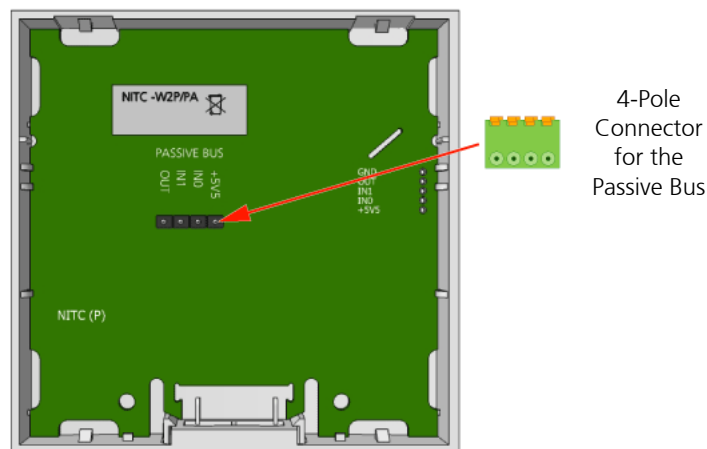

Figure 110. Passive toilet cancel module electrical connections

Note: *The 4-pole connector terminal for the passive bus is not supplied with the switch module. It is available as an accessory and must be ordered separately.*

6.12 Pull Cord Module (NIPC2) Active and Passive

The NIPC2 Pull Cord Modules are designed for use in the teleCARE IP system. They are IP44 splash proof and therefore suitable for use in rooms with showers, baths and in similar wet areas. They are available as an "active" module and a "passive" module.

The NIPC2 is available in gray or white and has a pull cord of length 2 meter with two plastic balls. The top ball acts as a safety break by splitting in half when the cord is pulled with excessive force.
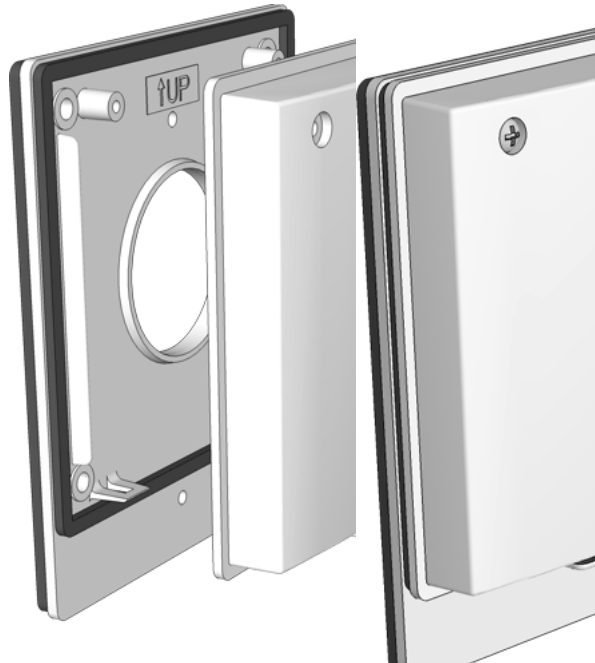

Figure 111. NIPC2 Pull cord module (exploded/assembled)

The active version of the NIPC2 is connected to one of the room buses of the IP Room Controller. It has a 4-pin connector for the connection of the room bus, consisting of: 5.5Vdc, data, voice and ground (0V). The room bus address is set by DIP switches.

The passive version must be connected to the passive bus of a door side module, a room display or a toilet cancel module. It has a 4-pin connector for the connection of the passive bus, consisting of: 5.5Vdc, Aux-In0, Aux-In1 and Aux-out.

Note: *The 4-pole connector terminal required for the room bus is not supplied with the switch module. It is available as an accessory and must be ordered separately.*

The NIPC2 Pull Cord Module includes a special backplate with two urethane foam gaskets which makes the NIPC2 splash water resistant to IP44 standard. The backplate must be mounted on a flat wall surface using the four corner holes in the backplate.

The module is fixed on to the backplate by two latches and two screws through the cover plate. The screws are supplied with the module.

WARNING: The NIPC2 can only be mounted on the supplied IP44 backplate. It is not compatible with the standard teleCARE switch module backplate and it is not compatible with the teleCARE surface mounting spacer.

6.12.1 Mounting the NIPC2 Pull Cord Module

In order to avoid physical damage to the module and to reduce the risk of exposure to excessive spray water in shower rooms, bathrooms and similar wet areas, the NIPC2 should be installed with the pull cord module mounted above the height of any water source.

The NIPC2 should be mounted in a location which ensures that the pull cord hangs free of any obstructions, is clearly seen and within easy reach so that it can be pulled to activate a call by residents or staff in an emergency or when assistance is required.

The NIPC2 should be mounted at a minimum height of 90.5in (2300mm) above the floor and at least 8in (200mm) above the highest position of the shower head. Where possible the pull cord should extend down to approximately 9in (200mm) above the floor.

The following illustration shows some examples of suitable locations for the pull cord module.
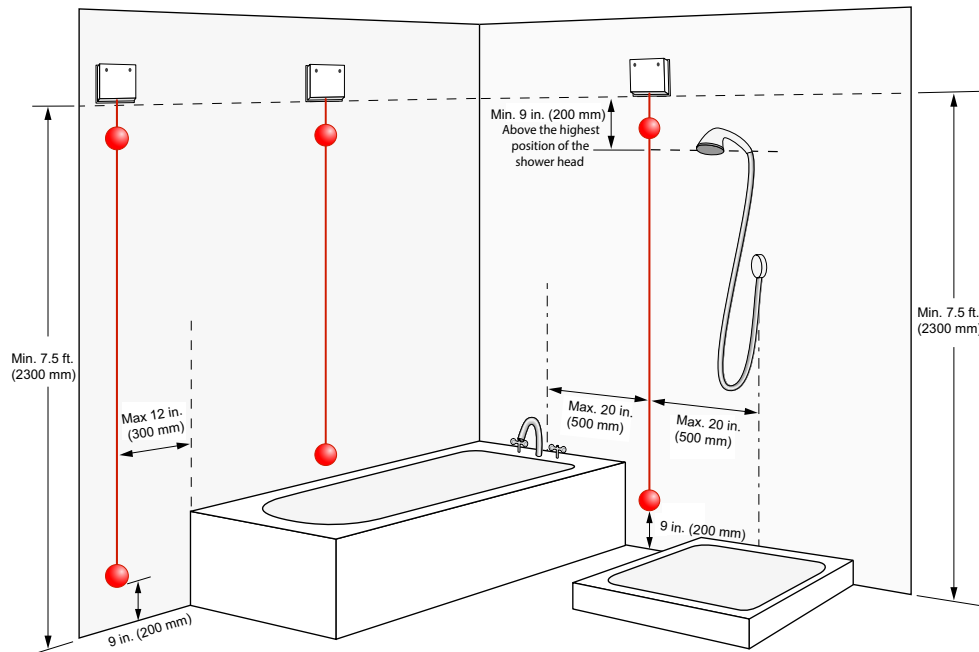

Figure 112. Examples of suitable locations for mounting the NIPC2

6.12.2 Positioning the Back box for the Pull Cord Module

The NIPC2 pull cord module must be mounted on a smooth flat surface in order to ensure that it is splash water proof in accordance with IP44. The ideal surface is a ceramic tiled wall with the back box for the NIPC2 situated in the center of a tile so that the pull cord module backplate does not sit over a gap between tiles, as shown in the following illustration:
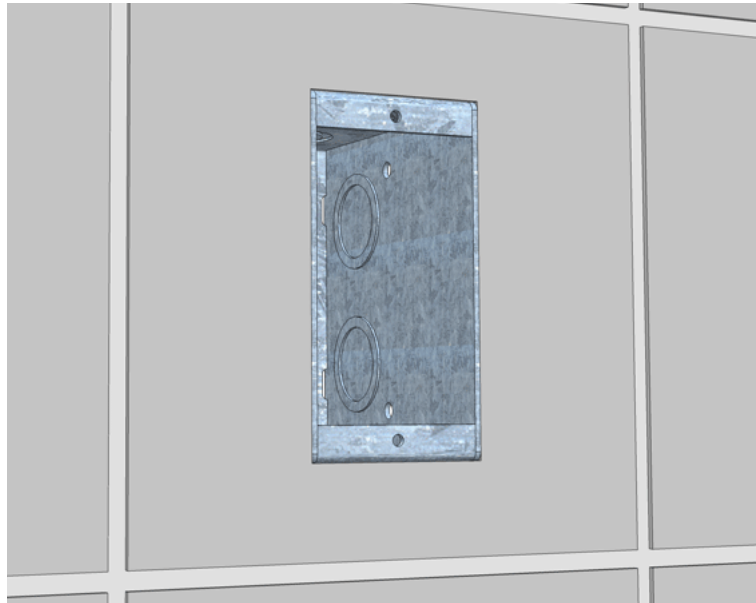
Figure 113. Positioning the back box on a tiled wall

6.12.3 NIPC2 Back plate

The NIPC2 back plate has a urethane foam gasket on both sides to prevent water entering the pull cord module. With the NIPC2 switch module mounted correctly on the back plate the switch module conforms to the ingress protection rating of IP44.
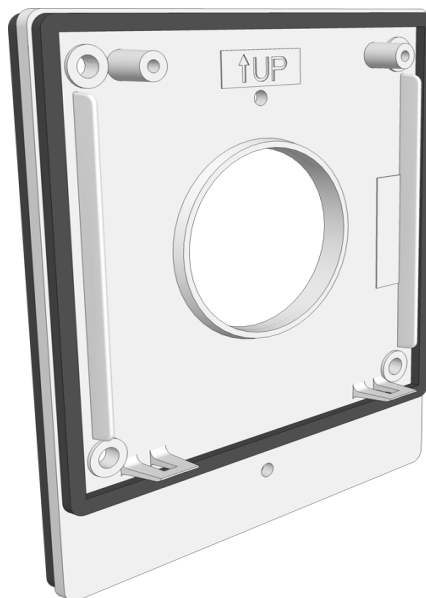

Figure 114. NIPC2 backplate

6.12.4 Mounting the NIPC2 Backplate

The backplate of the NIPC2 must be mounted over the back box using the holes in the corners of the backplate in order to ensure that the NIPC2 is IP44 splash water proof.

Caution: The screws inside the back box must not be used to mount the backplate. Four holes must be drilled in the wall surface and fitted with suitable wall plugs to allow the backplate to be mounted using the four corner holes.

6.12.5 Drilling the Backplate Mounting Holes

Four suitably sized holes should be drilled around the back box at 3in (77mm) between the centers (1). A wall plug which will accept a screw of diameter 0.14in (3.5mm) to 0.15in (3.8mm) should be inserted in each hole (2).
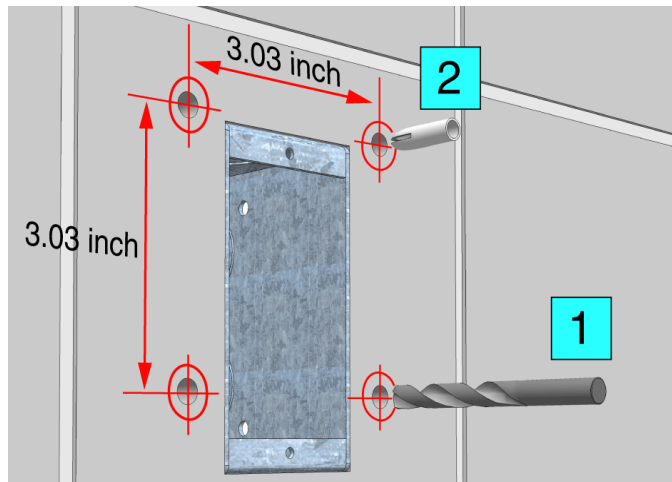
Figure 115. Drilling the backplate mounting holes

Note: The type and length of the screw depends on the type of wall and the wall plugs. The diameter of the screw must not exceed 0.15in (3.8mm).

6.12.6 Mounting the Backplate on the Wall

The backplate should be placed over the back box, with the four holes in the corners of the backplate lining up holes in the wall and with the side marked "UP" at the top.
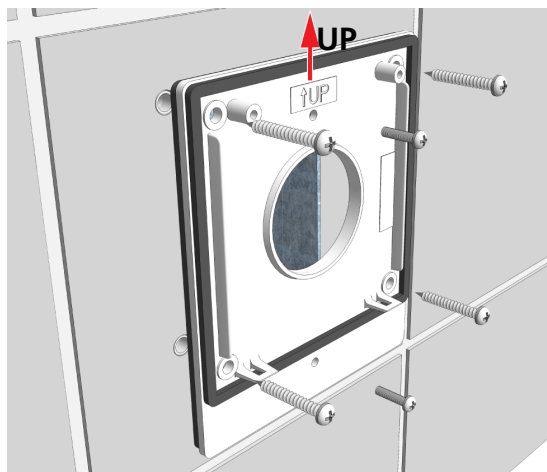

Figure 116. Fixing the backplate to the wall

The four screws should be tightened carefully so that just enough pressure is applied on the gasket to compress it evenly all around between the backplate and the wall surface.
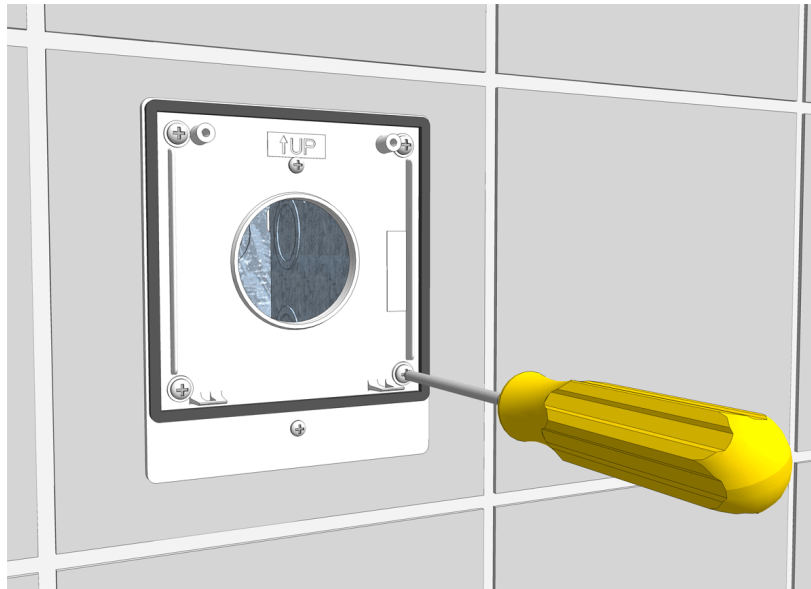

Figure 117. Fixing the backplate to the wall

Caution: *Do not excessively tighten the fixing screws as this will distort the backplate and the foam gasket resulting in an ineffective waterproof seal.*

6.12.7 Preparing the Cable for the Pull Cord Module

After fixing the backplate to the back box, pull the cable through. It is important to ensure that a minimum of 6in (15cm) of free cable is pulled out of the back box where teleCARE pull cord switch module is to be installed.
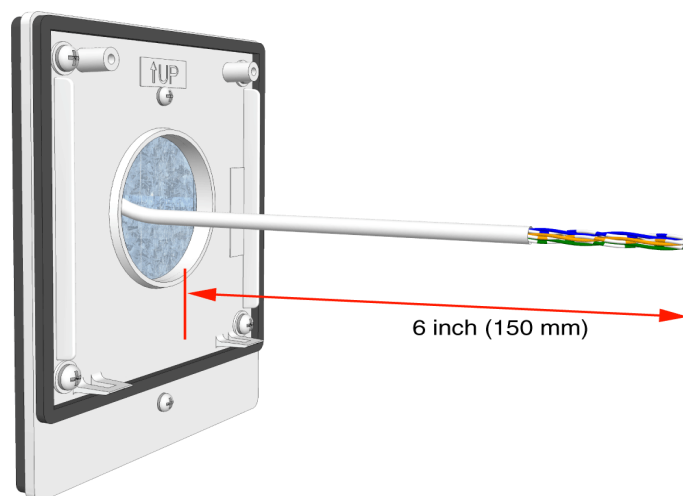

Figure 118. Preparing the cable for the pull cord module

6.12.8 Room Bus Electrical Connections

The NIPC2 GAA and NIPC2 WAA are active teleCARE IP peripherals which must be connected to the 4-pin room bus connector on the switch module.

Refer to section 6.4.2, Preparing the Wires for the 4-pole Connector Terminal on page 66). in order to correctly strip the cable and prepare the wires for the 4-pole connector.

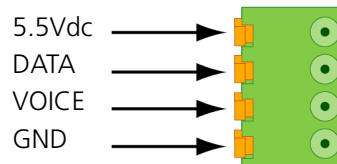The connections of the room bus wires in the 4-pole connector are shown in the following illustration.

Figure 119. 4-pole connector terminal with the room bus

6.12.9 Room Bus Address DIP Switch Settings

The NIPC2 (GAA and WAA) uses one of the first four addresses (0, 1, 2 and 3) of the room bus. The address is set by a DIP switch.

The illustration below shows the location of the room bus connector and the location of the DIP switch with the address settings.
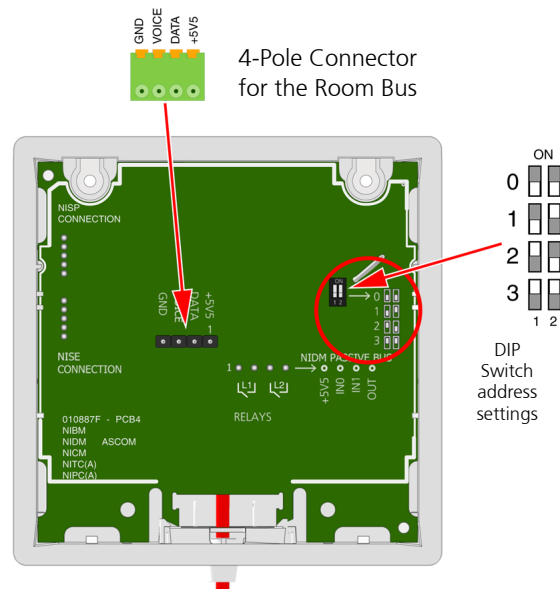

Figure 120. Room bus connector and DIP switch location

6.12.10 Passive Pull Cord Module Electrical Connections

The NIPC2 GAP and NIPC2 WAP are passive teleCARE IP peripherals which must be connected to the passive bus of a door side module or a toilet cancel module.

Refer to section 6.4.2, Preparing the Wires for the 4-pole Connector Terminal on page 66). in order to correctly strip the cable and prepare the wires for the 4-pole connector.

The connections of the passive bus wires is shown in the following illustration.
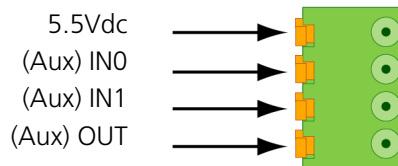
5.5Vdc
(Aux) IN0
(Aux) IN1
(Aux) OUT

Figure 121. 4-pole connector terminal with the passive bus

The illustration below shows the location of the passive bus connector:

4-Pole
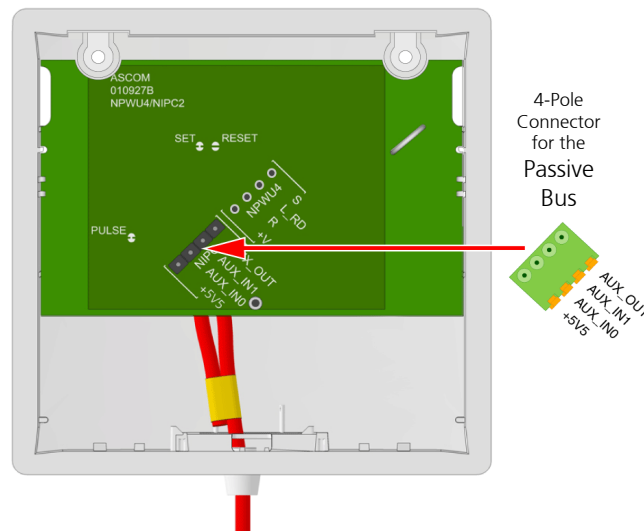Connector
for the
Passive
Bus

Figure 122. Passive bus connector location

6.12.11 Mounting the NIPC2 Pull Cord Module to the Backplate

The method described for mounting the switch module to the backplate is basically the same for the active and the passive pull cord switch modules. The following illustration shows the back plate mounted on the back box with the cable pulled through and connected to the 4-pole connection terminal.
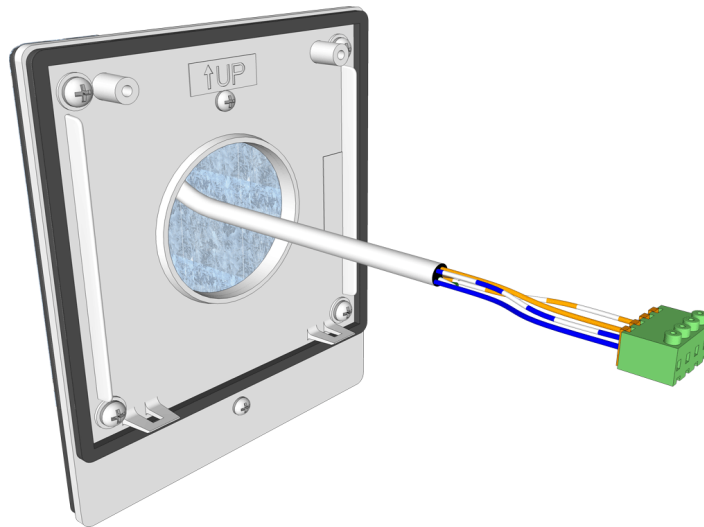
Figure 123. Cable of the pull cord module with the 4-pole connector

Plug in the connection terminal to the appropriate 4-pin connector of the pull cord module (active = room bus connector, passive = passive bus connector).
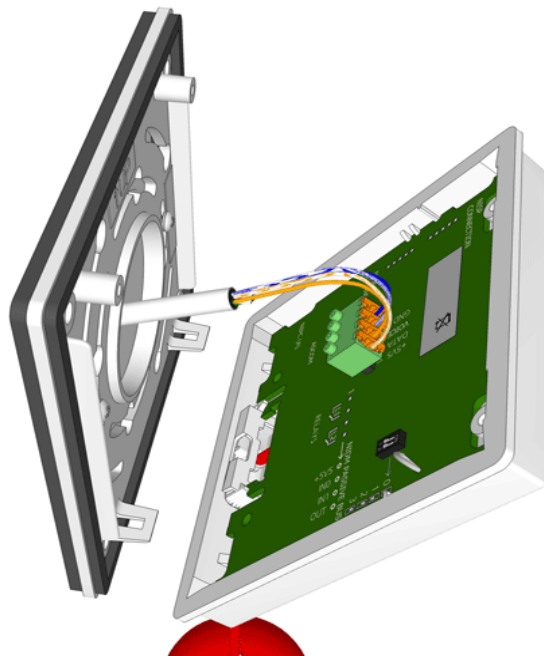

Figure 124. Connecting the room bus to the switch module

Mount the switch module on the backplate by first position the two latch fasteners of the backplate over the two teeth on the inside of the lower edge of the cover plate (1). Next rotate the pull cord module up to the backplate (2) so that the screws line up with the fixing posts on the back plate.
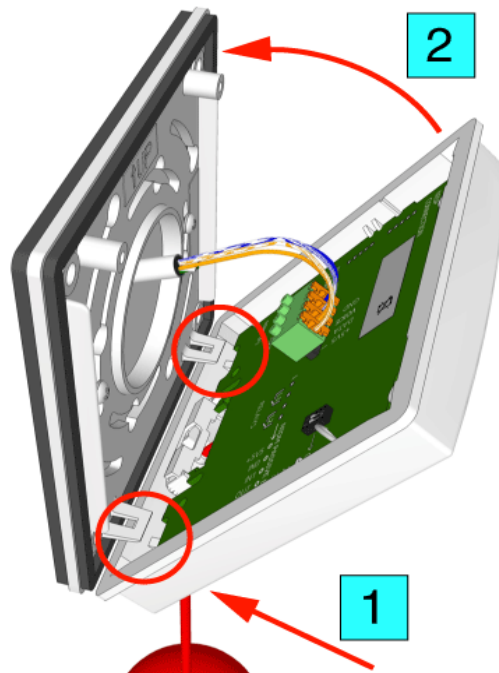
Figure 125. Mounting the switch module on the backplate

Press the pull cord module on to the backplate (making sure that the latch fasteners stay engaged) and carefully tighten the two fixing screws. The screws should be tightened to apply just enough pressure on the gasket to compress it evenly all around between the cover plate and the backplate.
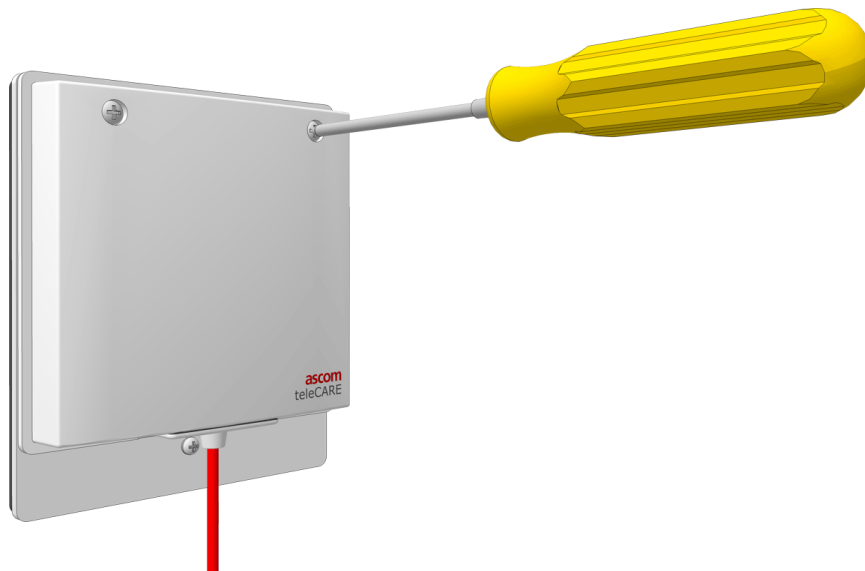

Figure 126. Tightening the pull cord fixing screws

Caution: *Do not excessively tighten the fixing screws as this will distort the cover plate and the foam gasket resulting in an ineffective waterproof seal.*

6.12.12 Assembling and Attaching the Pull Cord

It is important to assemble and attach the pull cord to the pull switch module correctly to ensure the cord is securely attached and that the "safety break" mechanism works reliably. The following illustrations show how to prepare the pull cord:
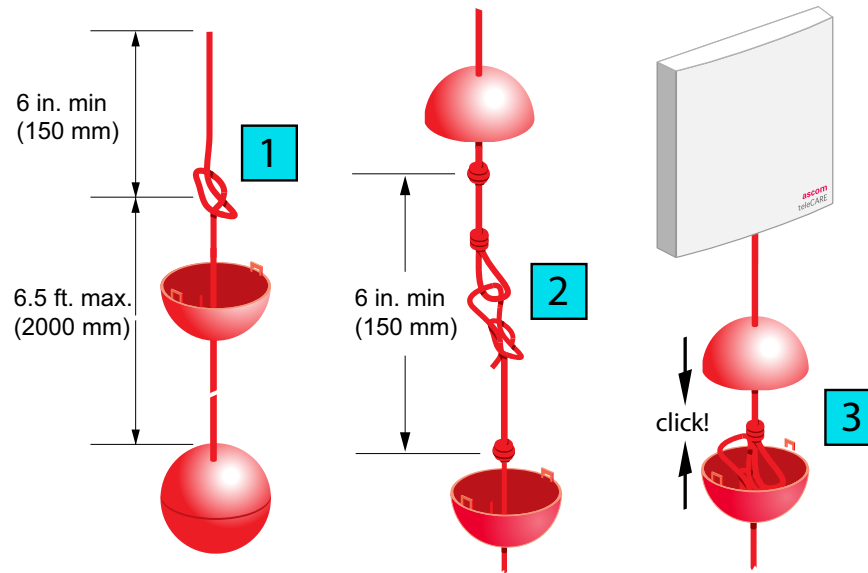

Figure 127. Assembling and attaching the pull cord
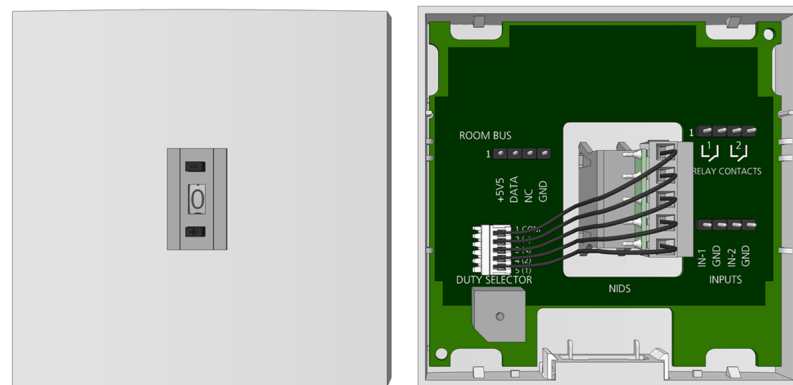
6.13 Duty Selector (NIDS)

Figure 128. Duty Selector front and back view

The Duty Selector is an auxiliary peripheral which can be connected to any one of the three room buses from the room controller. It has a fixed address number 5 on the room bus which cannot be changed.

It has the same basic housing as the teleCARE IP switch modules but it must be mounted on a surface mounting spacer which is delivered with the Duty Selector (see 6.3.2, Surface Mounting Spacer on page 63 for details).

The Duty Selector decides the call forwarding groups and response sequences according to the duty configurations which have been configured in the system setup.

It has a push-button selector switch allowing up to 10 pre-programmed duties to be selected. The numbers from 0 to 9 are displayed in the window at center of the unit to indicate the selected duty.

The Duty Selector includes a buzzer which can be configured in the system setup to signal calls etc. when a specific selection on the duty selector.

 It also has two inputs and two galvanically isolated outputs via relays. The two input circuits and the two output circuits are available as interfaces to external devices. These inputs and outputs can be controlled over the LAN via the room controller.

6.13.1 Duty Selector Electrical Connections

The duty selector is an "active peripheral" therefore it must be connected to one of the three room buses of a teleCARE IP room controller by the 4-pole room bus connector. It has the fixed room bus address of 5 and this address cannot be changed.

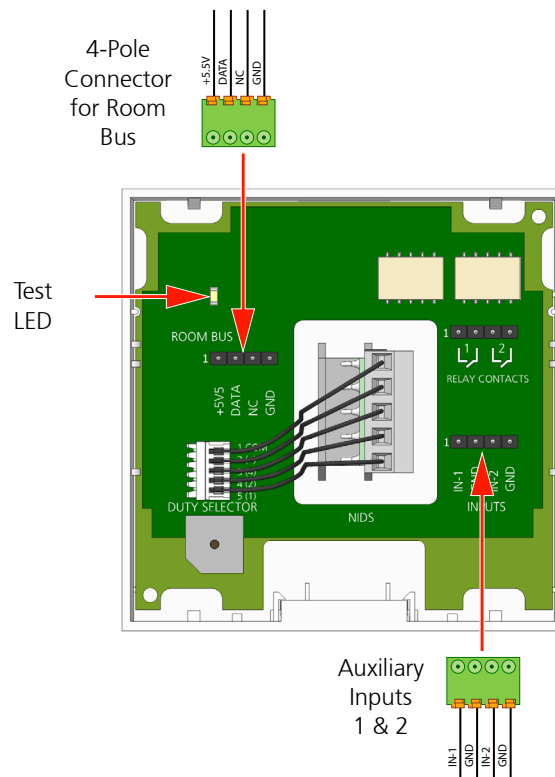*Figure 129. Duty selector electrical connections*

Note: *The 4-pole connector terminals required for the room bus and the inputs/outputs are not supplied with the duty selector. They are available as accessories and must be ordered separately.*

6.13.2 Auxiliary Inputs

The third 4-pole connector is used for auxiliary inputs. It has two input circuits which are available as interfaces to external devices. These terminals provide 5.5Vdc at 0.6mA, for monitoring the external device contacts, as shown in Figure 130.
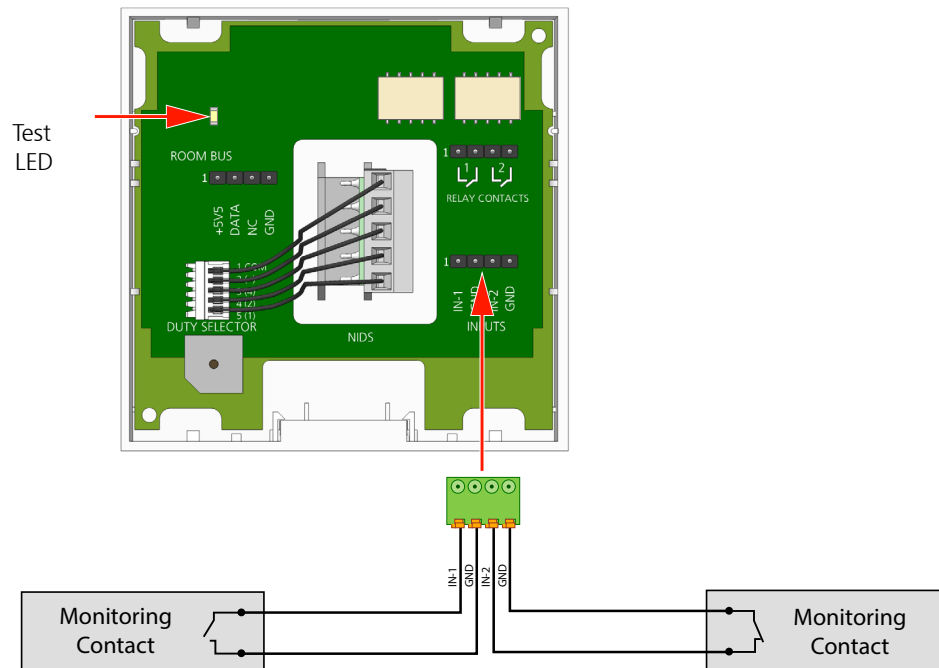

Figure 130. Auxiliary Inputs

WARNING:

- The equipment that is connected to this interface is not considered to be part pf the system configuration unless the equipment complies with ANSI/UL 2560 standard for Emergency Call Systems for Assisted Living and Independent Living Facilities.

- The Auxiliary Monitoring circuits are not electrically isolated.

- The cable length for the Auxiliary Monitoring circuits must not exceed 33ft (10m) and the cables must be appropriately separated from power cables and sources of electromagnetic interference.

- The Auxiliary Monitoring circuits are power limited to 5.5Vdc at 0.6mA.

6.14 Card Reader (NICR)

The Card Reader Module (NICR) is a single switch module suitable for use in the teleCARE IP system. It is an RFID device operating at a frequency of 13.56 MHz for use with contactless smart cards (Mifare Classic technology).
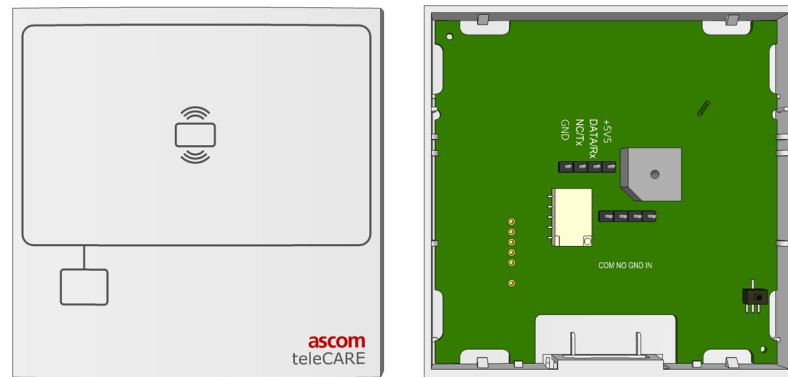
Figure 131. Card reader front and back view

The NICR allows staff members to register their presence in a room or to open an electrically locked door through a contactless proximity authorized smart card.

The NICR should be mounted in an accessible location (usually next to the entrance door of the room) so that the smart card can be held close to the reader when the staff member enters or leaves the room.

The NICR will read the smart card when it is at a distance of up to 0.8in (20mm) in front of the card reader. When a card is detected a buzzer in the NICR sounds.

The NICR has a red LED and a green LED which shine through the cover plate. The green LED shows for two seconds when an authorized card is detected, the red LED shows for two seconds when an unauthorized card is detected, and flashes for two seconds when the card reader is unconfigured. A short flash repeated every second on the red LED indicates that an error has been detected by the watchdog.

The NICR offers two auxiliary functions: a relay circuit for switching an external device, such as an electrically operated door lock, and a connection for monitoring, such as door open detection. The relay connection is a "normally open" potential-free contact and the monitoring connections consist of ground (GND) and an input line (IN).

A tamper alarm switch is mounted on the NICR printed circuit board detects when the card reader is removed from the backplate. The system can be configured, using the System Manager, to generate an alarm call when the tamper switch is operated.

The NICR is available in gray or white and it requires a single backplate which must be ordered separately. A spacer with installation kit is also available for surface mounting the switch module (see 6.3.2, Surface Mounting Spacer on page 63 for details).

WARNING:

• The equipment that is connected to this interface is not considered to be part pf the system configuration unless the equipment complies with ANSI/UL 2560 standard for Emergency Call Systems for Assisted Living and Independent Living Facilities.

• The Axillary monitoring circuits are not electrically isolated.

• The cable length for the Axillary Monitoring circuits must not exceed 33ft (10m) and the cables must be appropriately separated from power cables and sources of electromagnetic interference.

- The Auxiliary Monitoring circuits are power limited to 5.5Vdc at 0.6mA.

Caution: *The tamper alarm function is not possible when the spacer is used.*

6.14.1 Card Reader Electrical Connections

The NICR has two connectors consisting of the room bus and the auxiliary connections. It is an "active peripheral" therefore it must be connected to one of the three room buses of a teleCARE IP room controller by the 4-pole room bus connector (see 6.4.1, 4-Pole Connector Terminal on page 65).
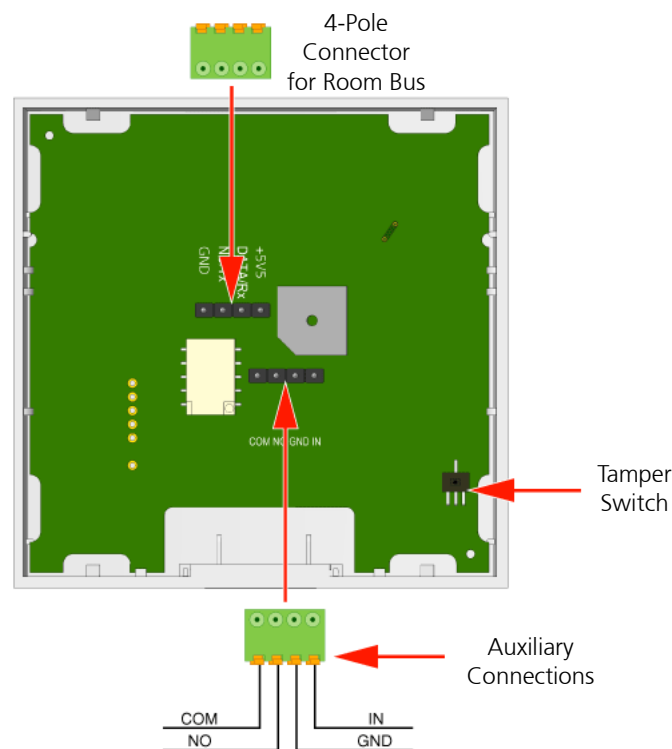

Figure 132. Card reader electrical connections

Note: *The two 4-pole connector terminals required for the room bus and the auxiliary connections are not supplied with the card reader. They are available as accessories and must be ordered separately.*

NICR Room Bus Address

The NICR can be connected to any of the room buses of the IP room controller, in the same way as all other teleCARE IP peripherals. Each room bus supports one NICR and the address of the NICR is fixed at 6.

It is highly recommended to place the NICR as the first teleCARE IP peripheral on the room bus, closest to the room controller, to minimize the risk of a voltage drop on the room bus power lines caused by
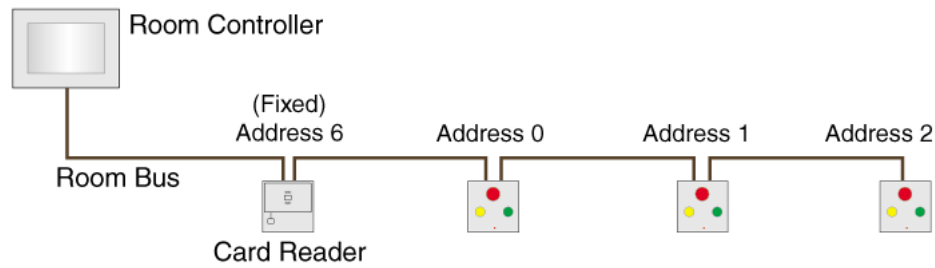
the NICR power fluctuations.

Figure 133. Typical installation with card reader

6.14.2 Card Reader Auxiliary Connections

The NICR has auxiliary connections which provide for the control of external functions such as activating an electrically operated door locks and monitoring door-open alarm contacts or other suitable purposes. The applications of the relay contacts and the auxiliary connections are configured in the System Manager.

Relay Connections

The relay connections (COM and NO) offers a normally open, potential-free relay contacts which can be used to control a remotely operated electrical door lock, or similar applications. The relay contact is rated at a maximum voltage of 30Vdc with a maximum switching current of 1A.

Monitoring Connections

The auxiliary monitoring connections (GND and IN) can be used to monitor a potential-free contact, such as a door open monitoring contact. The monitoring contact can be "normally open" or "normally closed". The functionality of the monitoring connections is configured in the System Manager (NISM).These connections provide 5.5Vdc at 0.6mA, for monitoring the external device contacts.
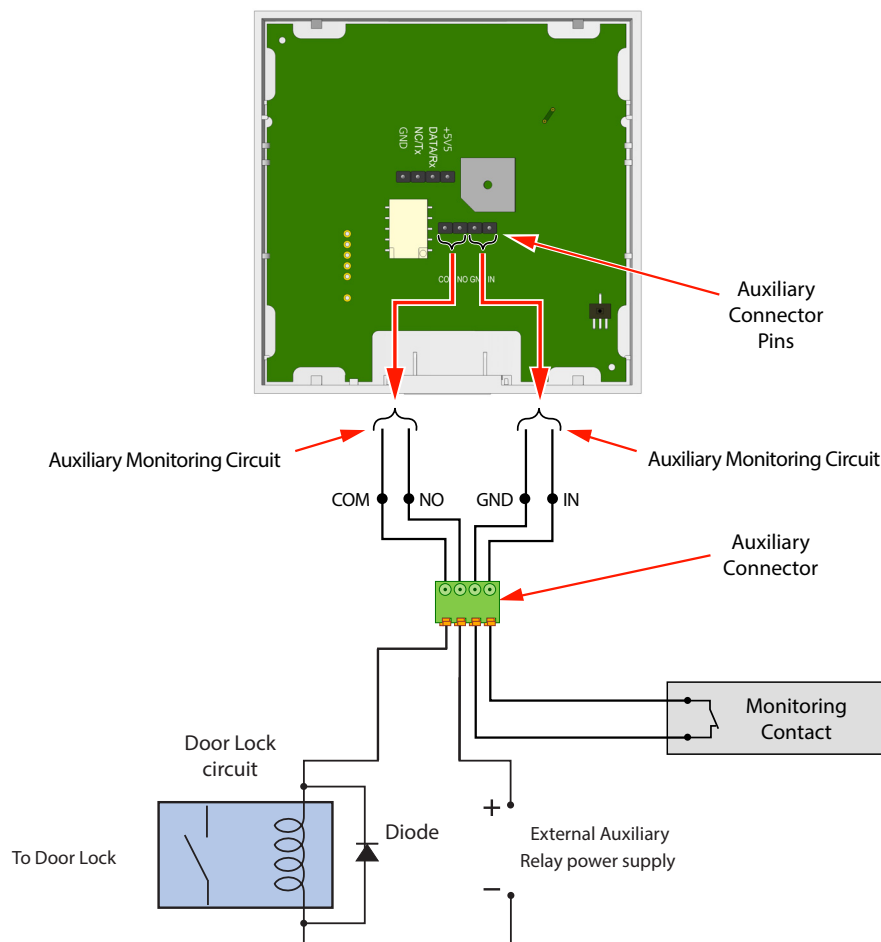
Figure 134. NICR auxiliary connections

WARNING:

- The equipment that is connected to this interface is not considered to be part pf the system configuration unless the equipment complies with ANSI/UL 2560 standard for Emergency Call Systems for Assisted Living and Independent Living Facilities.

- The Auxiliary Monitoring circuit is not electrically isolated.

- The cable length for the Auxiliary Monitoring circuit must not exceed 33ft (10m) and the cable must be appropriately separated from power cables and sources of electromagnetic interference.

- The Auxiliary Monitoring circuit is power limited to 5.5Vdc at 0.6mA.

- The external Auxiliary Relay Power Supply and Relay must be UL listed or recognized components.

- The maximum switching current for the NICR Auxiliary Relay contact must not exceed 30Vdc at 1A.

- A diode (1N4004 or equivalent) must be connected across the coil of the external Auxiliary Relay to prevent surges caused by the relay coil.

- There must be a minimum distance of 1in (30mm) in all directions between the room display and any metal objects to avoid the degradation of the card reader antenna.

6.15 Speech Module (NISP)

The Speech Module (NISP) is a teleCARE IP peripheral which facilitates speech in combination with Ascom Interactive Messaging (IM). It consists of a gray or white plastic body, a printed circuit board and a perforated anodized aluminum face plate.
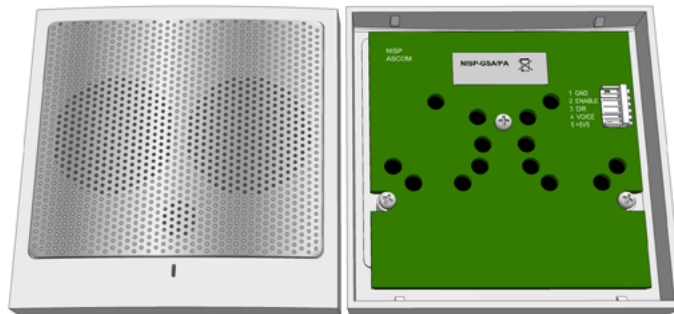

Figure 135. Speech Module (NISP) front and back view

The NISP incorporates a pre-amp circuit and a speaker amplifier and includes two loudspeakers and an electric microphone. It has a two-color LED which shows red to indicate that the speech direction from staff to resident is active and green to indicate that the speech direction from resident to staff is active.

The NISP can only be used in combination with the teleCARE IP Door side Module (NIDM), the bedside module (NIBM2), the Medical Rail Socket (NIMS2) the active Pull Cord Module (NICP), and the Room Display (NIRD.

6.15.1 Connecting the Speech Module

The 5-wire cable with two 5-pole plugs is required to connect the speech module to the associated switch module. It is available in three lengths: 7.0in (170mm) (R190192), 8.0in (200mm) (R190193) and 15.75in (400mm) (660313). The 15.75in (400mm) long cable is used when the speech module is mounted separately from the associated switch module.

For a two-module combination with the speech module mounted to the right side of the switch module (viewed from the front) the R190192 cable 7.0in (170mm) is required.
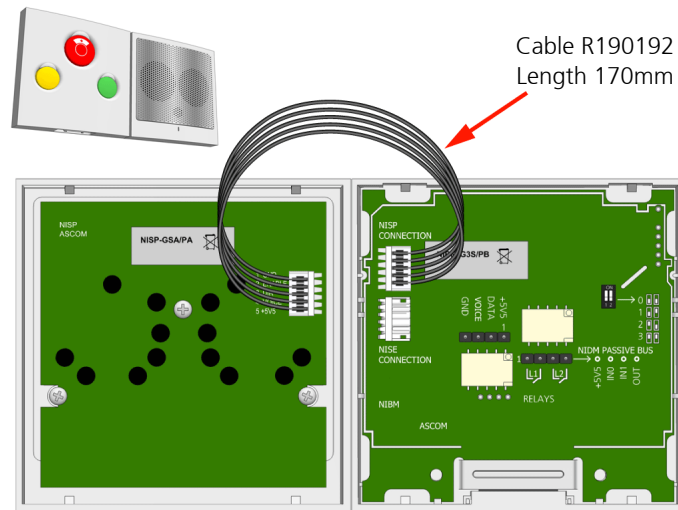
Figure 136. Speech module to the right of the switch module

For a two-module combination with the speech module mounted to the left side of the switch module (viewed from the front) the R190193 cable 8.0in (200mm) is required.
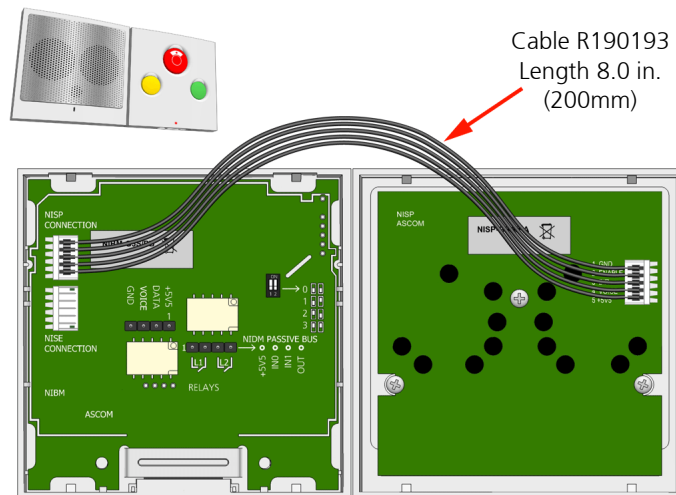

Figure 137. Speech module to the left of the switch module

For a three-module combination the R190192 cable (length 7.0in (170mm) and the R190193 cable length 8.0in (200mm) are both required

.