TX3-CX-1NP Installation

These instructions explain how to install the TX3-CX-1NP in the following TX3 units:

TX3-TOUCH-F15-B/C   TX3-200-8U-B/C   TX3-1000-8U-B/C   TX3-2000-8U-B/C

TX3-TOUCH-S15-B/C   TX3-200-8C-B/C   TX3-1000-8C-B/C   TX3-2000-8C-B/C

TX3-TOUCH-F22(-C)   TX3-TOUCH-S22(-C)   TX3-TOUCH-S15B-WR and TX3-TOUCH-S15S-WR

A.   Contents of Kit

Qty 1... TX3-CX-1NP

Qty 2... Nuts for attaching TX3-CX-1NP to the TX3 unit

Qty 1... USB cable for programming TX3-CX-1NP

Qty 1... USB flash containing TX3 software and manuals

B.   Mount TX3-CX-1NP

1.   Mount TX3-CX-1NP on the two posts as shown in Figure 1.

2.   Secure it with the provided nuts.

Installing on a telephone entry unit
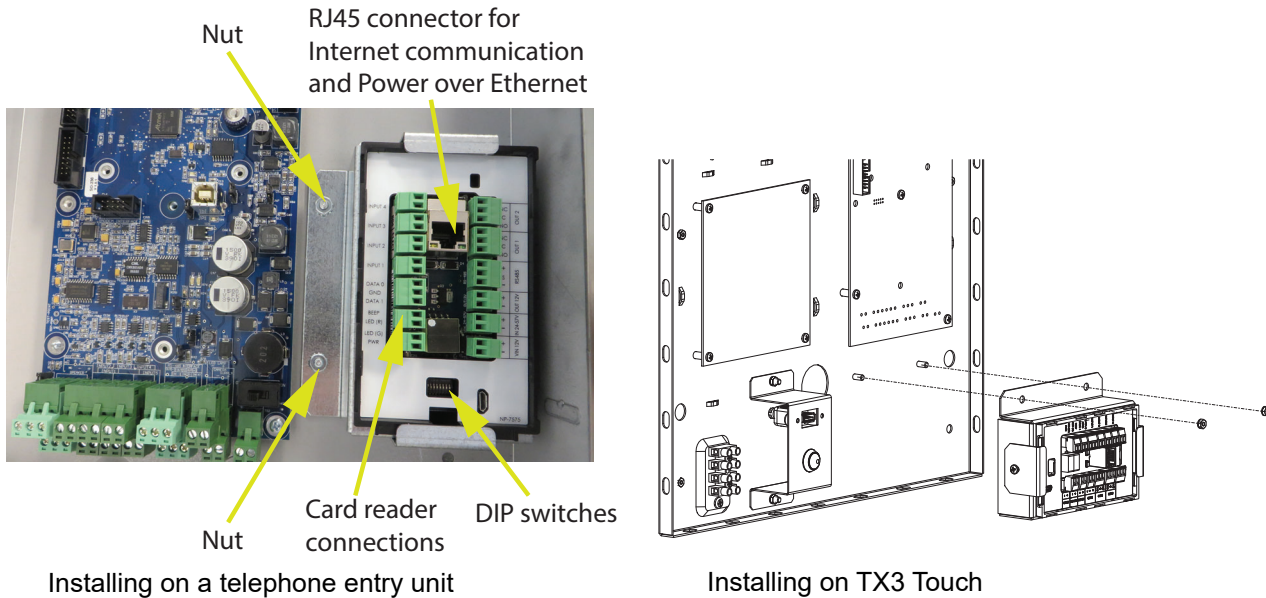
Installing on TX3 Touch

Figure 1   Mount TX3-CX-1NP

C.   Set the RS-485 Address

•   Use DIP switches 1-6 (shown in Figure 1) to set the RS-485 network address.

Figure 2   Set the RS-485 address

Note: You must set the RS-485 address even if you are not using RS-485.

- DIP switch 7: keep off.

- DIP switch 8: Set open (off) to get an IP address from the DCHP server, and set closed (on) to set a fixed IP address using the TX3 Configurator software. The default setting is off.

For more information and the complete list of RS-485 addresses, see LT-980, the TX3 Card Access System Manual, on the Mircom website (www.mircom.com) or the USB flash.

D.   Wiring

- RS-485 wiring maximum total length: 1219.2 m (4000 ft)
- PoE maximum length: 100 m (328 ft)
- Wiegand connection maximum length: 152.4 m (500 ft)

RJ45 connector for Internet communication. Power can be provided through Power over Ethernet if not provided by the DC power terminals.

Set ON if unit is used as first or last controller on RS-485 network. Otherwise set OFF. The default setting is OFF.

Outputs labeled OUT 1 and OUT 2 are relay contact programmable outputs with the following characteristics:
normally open (NO)
normally closed (NC) available
30 VDC/2 A
or
125 VAC/0.5 A

OUT 2: General purpose output (18 AWG)

OUT 1: Door lock (18 AWG)

RS485: Twisted shielded pair

OUT 12V: Solid state output for a DC lock (22-18 AWG) 12 VDC/700 mA max.

IN 24-48V: 24-48 VDC / 15 W input power (20-18 AWG)

IN 12V: 12 VDC / 15 W input power (18 AWG)

INPUT 4
General purpose
22 AWG

INPUT 3
General purpose
22 AWG

INPUT 2
Request to Exit (built-in reader)
22 AWG

INPUT 1
Door contact (built-in reader)
22 AWG

READER
Wiegand connections for external card reader
22-16 AWG

Micro USB port:
Connect to computer for network firmware upgrade and configuration
(maximum length of USB cable: 8 feet/2.4 m)

DIP switches for setting RS-485 address

Figure 3   Wiring TX3-CX-1NP

RS-485

Connect the RS-485 input terminal to the RS-485 output terminal of another controller. See Figure 4.

Set the 120Ω switch ON (shown in Figure 3) if unit is used as first or last controller on RS-485 network. Otherwise set OFF. The default setting is OFF.

Note: Use twisted shielded pair.

Recommended cables:

- RS485 cables
  - Belden 3109A RS-485, (4 pr) 22 AWG (7x30) or equivalent
  - Belden 9842 RS-485, (2 pr) 24 AWG (7x32) or equivalent
  - Belden 9841 RS-485, (1 pr) 24 AWG (7x32) or equivalent
- CAT5 Cables

- Belden 72001E ETHERNET Cat 5e 2 Pair, 24 AWG or equivalent
- Belden 70006E Cat 5e, 100Mb/s, Quad, AWG 22 (1) or equivalent

Maximum total length:

- 4000 feet (1244 m) for 22 AWG
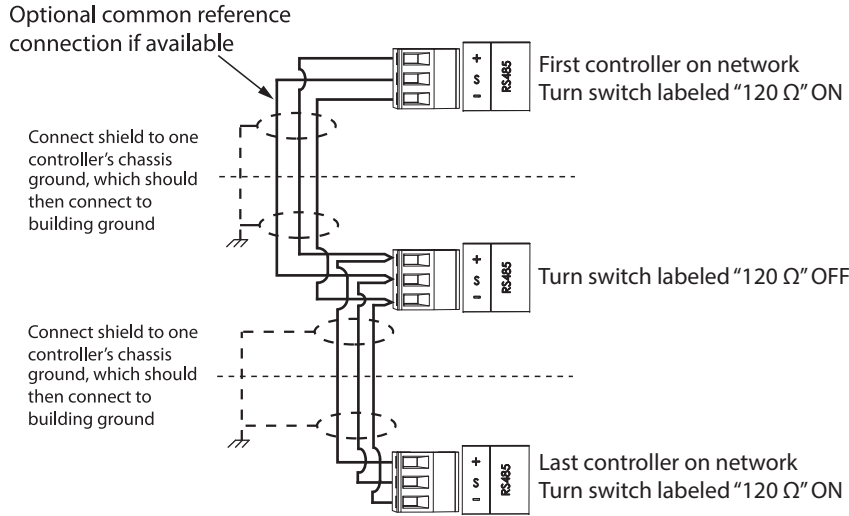- 2500 feet (762.5 m) for 24 AWG

Figure 4   RS-485

USB Port

The USB port provides a connection to a PC, for configuring the Card Access System and upgrading the firmware.

Inputs

Inputs 1 to 4 are programmable inputs. For details on the active state and supervision of the inputs, see LT-980 on the Mircom website (www.mircom.com) or the USB flash.

For details on programming the inputs, see LT-995 on the Mircom website (www.mircom.com) or the USB flash.

Outputs

For details on programming the outputs, see LT-995 on the Mircom website (www.mircom.com) or the USB flash.

E.   Connect the Power

The Single Door Controller can be powered in three ways. Use only one of the power inputs.

- Power over Ethernet (PoE) - use Cat 5 cable
- 12 VDC/15 W - use 18 AWG
- 24-48 VDC/15 W - use 20-18 AWG

F.   Card Reader Beeper

The beeper indicates specific events at different beep rates as follows:

- **Card Presented.** One short beep.
- **Access Granted.** Two short beeps.
- **Access Denied**. One short beep and one long beep.
- **Mode of Operation Changed.** Three short beeps indicate a change in the on or off state for the high security or the unlock mode.

- **Alarm.** Continuous short beeps.

G. Update Firmware

Refer to LT-995 on the Mircom website (www.mircom.com) or the USB flash for instructions on how to upgrade the firmware.

H. Install the TX3-P300-HA Card Reader

See LT-969 the Telephone Access Installation and Operation Manual on the Mircom website (www.mircom.com) or the USB flash for instructions on installing the TX3-P300-HA card reader in the lobby control units.

I. Wire the TX3-P300-HA Card Reader to TX3-CX-1NP

Color of Reader Wire	Terminal on TX3-CX-1NP
Green	DATA0
Black	GND
White	DATA1
Blue	BEEP
Brown	LED (R)
Orange	LED (G)
Red	PWR

Card reader requirements

Card readers must meet the following minimum requirements in order to be compatible with Mircom's Card Access System:

- Standard Wiegand interface
- LED status indicator
- Warning or alarm buzzer
- 12 Volt operation
- Maximum distance 500 ft (152.4 m)
- Use 20 AWG for 500 ft (152.4 m)
- Use 22 AWG for 250 ft (76.2 m)
- For other card readers, consult your reader installation manual for recommended distances and gauges

See LT-980 the Card Access System Manual on the Mircom website (www.mircom.com) or the USB flash for more information.