Tune Up the XP-3 Processor with RF Communication and non-Ethernet In-Wall Keypads

Contents

A. Overview

Learn how to expand the XP-3's capabilities by connecting a RM-433 antenna for simple RF communication with remotes and by adding RK1+ or RKM-1+ keypads to an XP-3 system.

B. Limitations

The methods described in this tech bulletin to add RF wireless remotes or wired keypads to an XP-3 result in one-way communication with these control devices with no feedback from or to the devices. RTI recommends using one-way communication only in secondary zones that are not frequently used such as guest bedrooms, outdoor areas etc. as it might limit the intended available resources and functionalities (processing, macro engines).
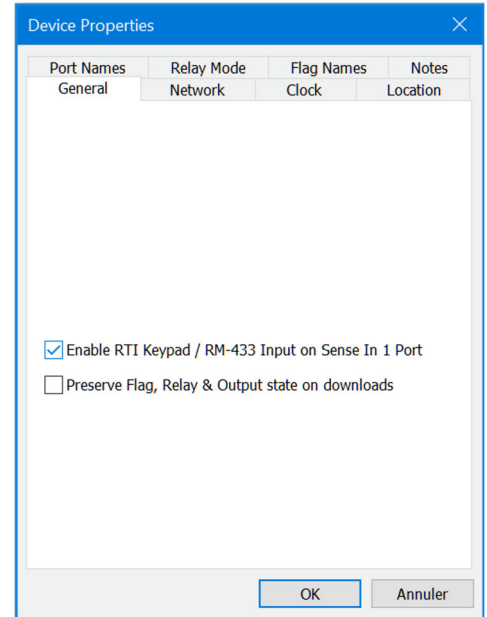
Important Notes:

- Connecting the above-mentioned control devices requires to configure the Sense IN 1 port as an RTI trigger input. This does not allow IR pass-through from external devices and does not support IR receivers.
- The XP-3 cannot be used as an expansion processor when using the Sense IN 1 port as a trigger input.
- Use of PoE on the XP-3 disables the capability of utilizing the sense inputs for voltage sensing or as an RM-433 antenna / keypad communication option.

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C. Connecting an RM-433 Antenna to an XP-3

Use the +12VDC, Ground, and Sense IN 1 terminal block to connect the RM-433 antenna.

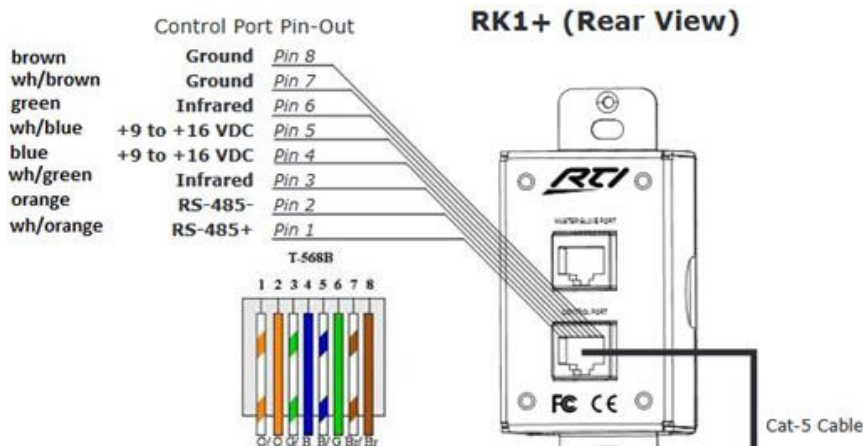Configure the Sense IN 1 input as an RTI trigger input in the Integration Designer software.

Device Properties

Port Names	Relay Mode	Flag Names	Notes
General	Network	Clock	Location

☑ Enable RTI Keypad / RM-433 Input on Sense In 1 Port
☐ Preserve Flag, Relay & Output state on downloads

OK   Annuler

D. Connecting non-Ethernet Keypads RK1+ / RKM-1+ to an XP-3

To allow communications from RK1+ or RMK-1+ keypads to the XP-3, the output pins from the control port Cat5 connector need to be wired properly to the Ground and Sense IN 1 terminal.

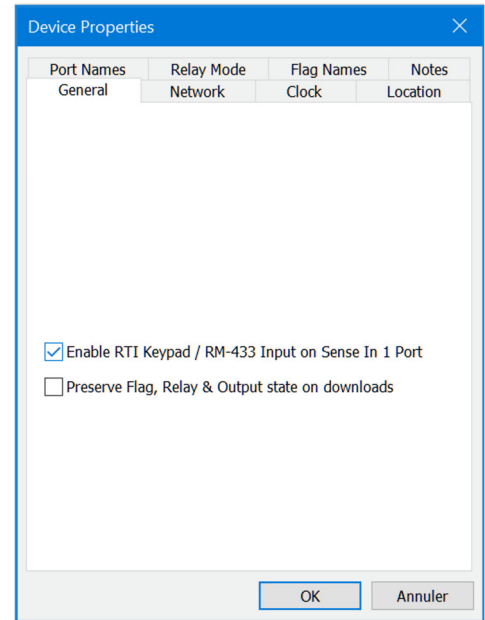This can be done by splicing a standard Cat5 cable and wiring:

- The IR output (Pin 3 & 6) of the RK1+/RKM-1+ to the Sense Input 1 on the XP-3 terminal block
- The Ground (Pin 7 & 8) of the RK1+/RKM-1+ to the Ground port of the XP-3 terminal block

Control Port Pin-Out

brown	Ground	Pin 8
wh/brown	Ground	Pin 7
green	Infrared	Pin 6
wh/blue	+9 to +16 VDC	Pin 5
blue	+9 to +16 VDC	Pin 4
wh/green	Infrared	Pin 3
orange	RS-485-	Pin 2
wh/orange	RS-485+	Pin 1

T-568B

1 2 3 4 5 6 7 8

O/O G/B B/G Br/Br

RK1+ (Rear View)

RTI

Cat-5 Cable

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Configure the Sense IN 1 input as an RTI trigger input in the Integration Designer software.

The RK1 output must be set to IR trigger codes for control system.

Note: The RTI keypads RK1+ / RKM-1+ need their own power source, such as a power supply or a CB-8 connecting block.

Set the Default Output Mode in the keypad's device properties to "IR trigger codes for Control System" in order to enable proper communication to the XP-3.

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