Honeywell

INNCOM DIRECT D1-529 THERMOSTAT & D-X47 HVAC CONTROLLER

INSTALLATION INSTRUCTIONS

ABOUT THIS GUIDE

This Guide provides information about the Installation details of the INNCOM direct D1-529 Thermostat and D-X47 Relay to the system integrator, technicians, and end-users. All the electrical engineers and technicians working with the product must have basic training on HVAC Sensors, Smart sensors, and Room Controllers and their application.

GENERAL SAFETY INFORMATION

Follow the safety instructions provided in this manual while doing any operation such installation, mounting, or starting.

- In the case of any modification, except by Honeywell, the operation and safety warranties become void.
- Observe all applicable local standards and regulations.
- Use only Honeywell supplied or approved accessories.

CERTIFICATION AND REGULATION

Waste Electrical and Electronic Equipment (WEEE)

- At the end of the product life, dispose of the packaging and product in an appropriate recycling center.
- Do not dispose of the device with the usual domestic refuse.
- Do not burn the device.

FCC Part 15 compliant

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference caused by undesired operation.

IMPORTANT:
Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE:
This equipment has been tested and found to comply with the limits for a 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.

NOTE:
This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment 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 try 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 receiver.
—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
—Consult the dealer or an experienced radio/TV technician for help.

Canadian Regulatory Statement

This device complies with Industry Canada license-exempt RSS standard(s).

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le present appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisee aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioelectrique subi, meme si le brouillage est susceptible d'en compromettre le fonctionnement.

EMF Statement: To maintain compliance with the RF exposure requirement, a separation distance of 20 cm between the device and the human should be maintained.

Déclaration d'exposition Attention: Cet émetteur doit être installé pour fournir une distance de separation d'au moins 20 cm de toute personne.

Professional installation Warning

- This device must be professionally installed, this should be noted on grantee.
- To maintain compliance, only the antenna types that have been tested shall be used.
- This device requires a significant technology engineering expertise towards understanding of the tools and relevant technology, not readily available to average consumer. Only a person professionally trained in the technology is competent.
- This device is not directly marketed or sold to general public.
- This radio transmitter IC: 1609A-24DX47 has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Antenna Type	Operating Frequency	Peak Gain
Rubber Antenna	2.4 GHz-2.5 GHz	1.93 dBi (Max)

Power Supply Guidelines and Requirements

D1-529 Thermostat uses 6 VDC power (Four AA Batteries of 1.5VDC each).

D-X47 Relay uses 24 VAC 50/60 Hz, 2.4 VA power.

⚠ WARNING

D1-529 Thermostat is a half-wave rectifier device. If we connect it with another half-wave rectifier device or use the same transformer, INNCOM D1-529 thermostat risks being damaged by short with C, COM, GND or other equivalent connections.

INTRODUCTION

D1-529 Thermostat

D1-529 Thermostat utilize a CC2520 2.4 Ghz IEEE 802.15.4 RF transceiver in their role as part of the Integrated Room Automation System (IRAS). The integration of the radio on-board the PCBA, along with other component changes, makes for a simpler, more efficient, and more cost-effective device.

D-X47 Relay

The D-X47 Universal Relay Pack (PN 201-147) is an INNCOM Integrated Room Automation System (IRAS) device designed for guestroom controls. The D-X47 Relay provides five relay outputs used to switch a variety of loads, including fan coil units (FCU) and light-duty general loads. The D-X47 Relay can integrate with and receive data from multiple points throughout the IRAS using low-voltage wired communication (S5bus) or radio frequency (RF) communication (when connected to a D1-529 Thermostat). The D-X47 Relay is a 24 VAC line power controller.

FEATURES

D1-529 Thermostat

The D1-529 Thermostat provides

- Accurate temperature measurement ± 1 °F
- Motion sensor for occupancy detection.
- RF transceiver for wireless 2.4 Ghz communication with its D-X47 partner.

D-X47 Relay

- Controls a full range of 24 VAC FCU systems, complex light-duty lighting circuits.
- Supports two communication modes: S5bus and RF.
- Installs inside FCU/HVAC enclosures
- Connects to remote thermistor (04-1096, 04-1096.MOD 04-1095) for external temperature sensing (+/- 1%temperature accuracy at 25 °C)
- Enclosed to protect sensitive circuitry
- Complies with agency-approved recommendations for worldwide usage
- In combination with the INNCOM D1-529 Thermostat, the D-X47 FCU controller is a feature-rich, cost-saving energy management tool.

DIMENSIONS

D1-529 Thermostat

Fig. 1 D1-529 Thermostat Dimensions

D-X47 Relay

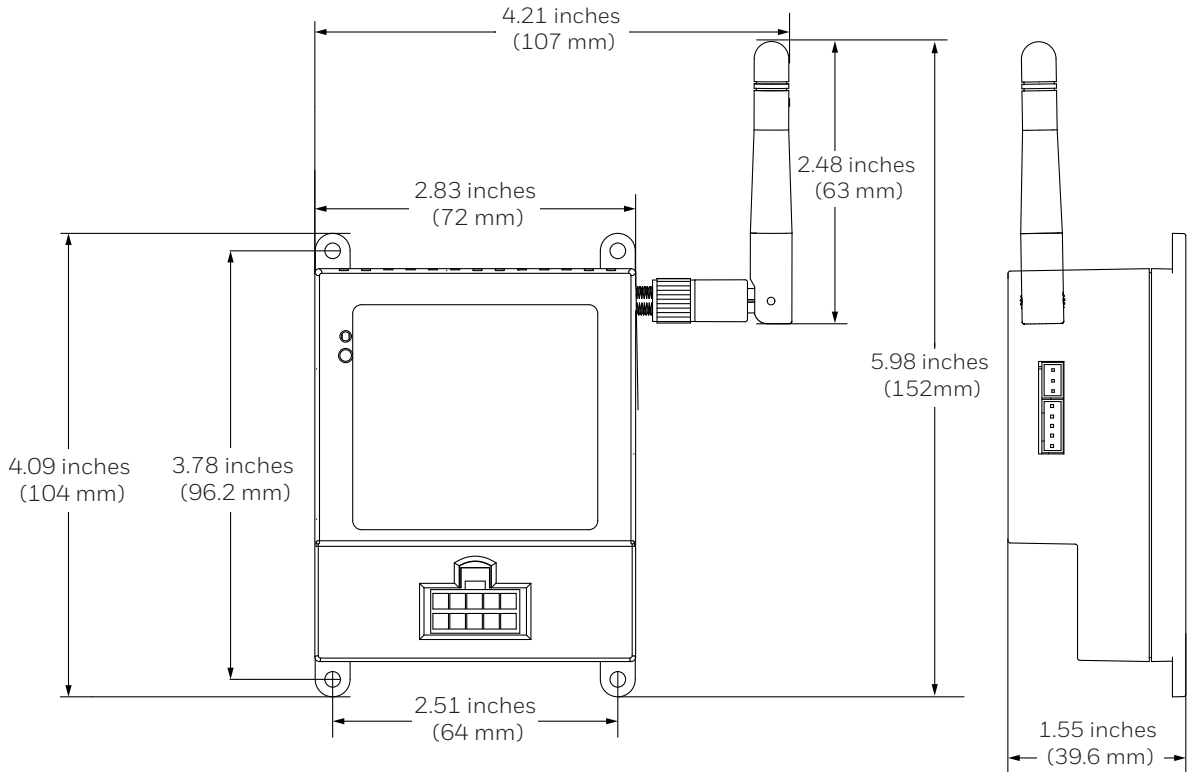

Fig. 2 D-X47 Relay Dimensions

SPECIFICATIONS (D1-529 THERMOSTAT)

General

Table 1 General Specifications

Parameter	Description
Standard Color Options	White
Thermostat Measurement Range	33 °F to 99 °F (1 °C to 37 °C)
Outdoor Air Temperature Display	0 °F to 99 °F (-18 °C to 37 °C)
Standard Deadband	2 °F (1 °C) between heating and cooling
RF Data Rate	250 kbps
Indoor Range	70 ft - 100 ft+ (21.3 m - 30.48 m)
Frequency Band	2.4 Ghz
Frequency Channels	11-26
Protocol	802.15.4

Electrical

Table 2 Electrical Specifications

Parameter	Description
Input Power	6 VDC

Sensors

Table 3 Sensors Specifications

Parameter	Description
Temperature	33 °F to 99 °F ± 1.8 °F (1 °C to 37 °C ±1 °C)
Humidity	3 % RH, in range from 30-95 % RH
PIR (motion)	120° View Angle, 10M line of sight

Environmental Specifications

Table 4 Environmental Specifications

Parameter	Description
Operating Temperature	41 °F to 149 °F (5 °C to 65 °C), 0-95% RH noncondensing
Storage Temperature	60 °F to 85 °F ± 1°F (15 °C to 30 °C ± 0.5 °C)
Ambient Operating Temperature	32 °F to 104 °F (0 °C to 40 °C)
Ambient Storage Temperature	33 °F to 149 °F (1 °C to 65 °C)
Humidity	0-99 % RH noncondensing

Weight and Dimensions

Table 5 Weight and Dimensions

Parameter	Description
Dimensions (W x H x D)	4.7 inches x 4.8 inches x 1.2 inches (119 mm x 123 mm x 30 mm)
Mounting	Standard Double Gang Junction Box (4x4)

Display

Table 6 Display Specifications

Parameter	Description
Display Resolution	Whole degree °F, 0.5 °C (0.1 °F in test mode)
C/F Degrees Display	Toggle Button on front of display

Communications

Table 7 Communications Specifications

Parameter	Description
Wireless Communications	ZigBee RF, Deep Mesh

Standards and Approvals

Table 8 Standards and Approvals

FCC ID: GTC202153TXR (FCC Part 15 subpart B and C class B)	
IC ID: 1609A-202153TXR	
Prop65	
2011/65/EU	Hazardous substances (RoHS I + II), amended by (EU) 2015/863 (RoHS III)

SPECIFICATIONS (D-X47 RELAY)

General

Table 9 General Specifications

Parameter	Description
Parameter Memory	Non-volatile

Electrical

Table 10 Electrical Specifications

Parameter	Description
Input Power	24 VAC 50/60 Hz, 2.4 VA
Output Power	12 VDC
Current Consumption (All relays actuated)	130 mA Maximum Load (including logic board)

Environmental Specifications

Table 11 Environmental Specifications

Parameter	Description
Ambient Operating Temperature	32 °F to 104 °F (0 °C to 40 °C)
Ambient Storage Temperature	-40 °F to 158 °F (-40 °C to 70 °C)
Humidity	15 -99 % RH noncondensing

Weight and Dimensions

Table 12 Weight and Dimensions

Parameter	Description
Dimensions (W x H x D)	2 ¾" x 3 ½" (excluding screw tabs) x 1 ½" (at deepest part) 70 mm x 88 mm x 38 mm
Mounting	4 hole mounting 6/32" bit, ½" screw

Standards and Approvals

Table 13 Standards and Approvals

UL 244A and CSA C22.2 No. 14. file E231654	
FCC ID: 2A8LT-24DX47 (FCC Part 15 subpart B and C class B)	
IC ID: 1609A-24DX47	
Prop65	
2011/65/EU	Hazardous substances (RoHS I + II), amended by (EU) 2015/863 (RoHS III)

SYSTEM ARCHITECTURE

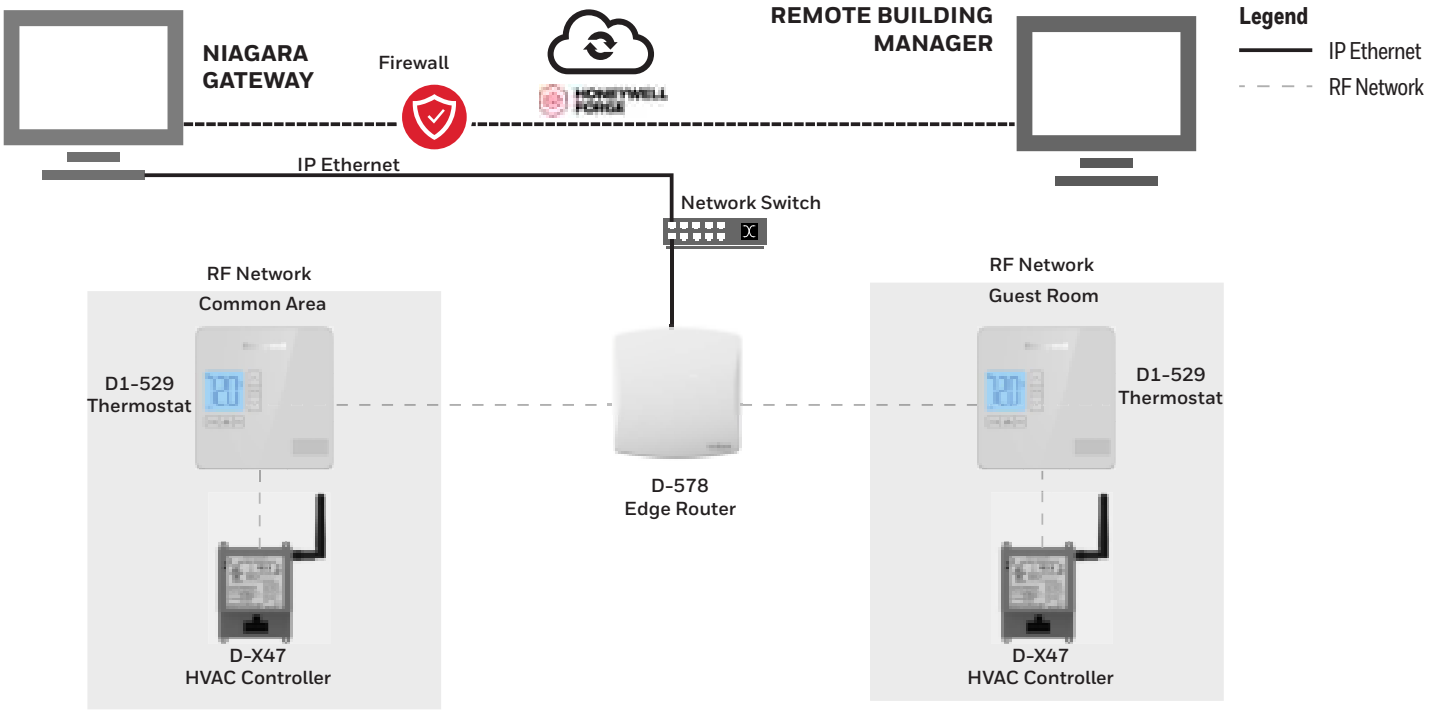

Fig. 3 System Architecture

INSTALLATION

Important Safety Information and Installation Precautions

Read the below instructions carefully for safety and installation.

Local codes and practices

Always install equipment in accordance with the National Electric Code and a in manner acceptable to the local authority having jurisdiction.

Electrostatic sensitivity

This product and its components may be susceptible to Electrostatic Discharge (ESD).

Use appropriate ESD grounding techniques while handling the product. When possible, always run the product by its non-electrical components.

High voltage safety test

Experienced electricians, at first contact, always assume that hazardous voltages may exist in any wiring system. A safety check using a known, reliable voltage measurement or detection device should be made immediately before starting work and when work resumes.

Lightning and high-voltage danger

Most electrical injuries involving low-voltage wiring result from sudden, unexpected high voltages on usually low-voltage wiring. Low-voltage wiring can carry hazardous high voltages under unsafe conditions. Never install or connect wiring or equipment during electrical storms. Improperly protected wiring can have a fatal lightning surge for many miles. All outdoor wiring must be equipped with adequately grounded and listed signal circuit protectors, which must comply with local, applicable codes. Never install wiring or equipment while standing in water.

Wiring and equipment separations

Install all the wiring and controllers to minimize the possibility of accidental contact with other potentially hazardous and disruptive power and lighting wiring. Never place 24 VAC or communications wiring near other bare power wires, lightning rods, antennas, transformers, or steam or hot water pipes. Never place the wire in any conduit, box, channel, duct, or other enclosure containing power or lighting circuits. Always provide adequate separation of communications and another electrical wiring according to code. Keep wiring and controllers at least six feet from large inductive loads (power distribution panels, lighting ballasts, motors, etc.). Failure to follow these guidelines can introduce electrical interference and cause the system to operate erratically.

Warning

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⚠ CAUTION

Disconnect the power supply before beginning installation to prevent electrical shock or equipment damage. All wiring must comply with local codes and ordinances.

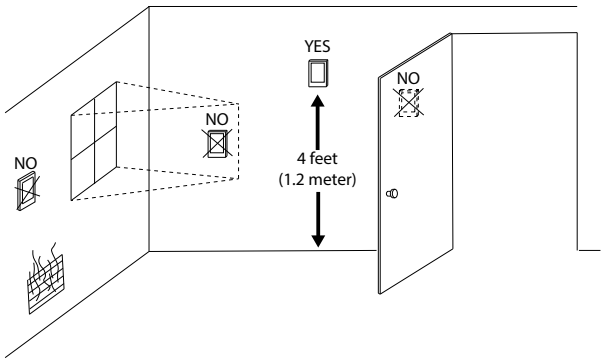
Before Installation

1. A unique network address or Room Identification (RoomID) must be assigned to each thermostat regardless of whether it is installed as a standalone application or as part of a wired (RS485) or wireless (RF) DeepMesh network in a centrally controlled Energy Management System (EMS) using the INNCOM direct dashboard. A rooms list document is typically provided by Honeywell that lists all rooms and the associated functionality. Refer to the property specific documentation for more information.
2. The D1-529 is configured so that it will not call for heat, cool, or low, medium, and high fan speeds to protect the HVAC equipment when it arrives with default settings from the factory. The installer will need to complete the Initialization steps after the RoomID has been set in the Parameter Menu.
3. It is assumed that if you have received your D1-529 thermostat and D-X47 Relay and you are ready to begin installation, Honeywell has determined through the sales process that the selected HVAC equipment is compatible with the D-X47 Relay. If you believe this assumption to be incorrect, or you have not validated that the D-X47 is compatible with the selected HVAC equipment, contact our technical support service center prior to installation.
4. Always research D-X47 Relay placement carefully before you pull cable. Consult with your system provider on the best placement and follow their guidance to mount it in a neutral location. The cost of poor thermostat placement is high, both in loss of

guest comfort and unnecessary energy costs. Follow these guidelines to determine the appropriate installation location for the thermostat:

- Place thermostats away from windows to avoid bathing the thermostat with solar radiation, which invalidates the unit's temperature sensitivity.
- Never place thermostats on a wall where an open bathroom or closet door will cover them. A covered thermostat will not register the correct room temperature
- Take care to place thermostats out of the direct line of air movement. A thermostat mounted on a wall directly across from HVAC discharge vents will be surrounded by air that quickly satisfies the thermostat's guest temperature setting, but not register the room's overall temperature.
- Avoid placing a thermostat on a wall near the fan coil. This causes a waterfall effect of heated or cooled air movement across the thermostat which triggers the HVAC's response to false room temperature readings.
- Beware of value engineering proposals during construction; such as optimizing room wiring to minimize cable runs between thermostats and the HVAC placement. Although this type of value engineering can save money, it often results in higher energy use and compromised guest comfort.

5. Make sure:
   - The thermostat is mounted on the wall with the bottom of the unit about 5' from the floor.
   - The unit is level
   - The manufacturer's installation instructions are followed.



6. Read instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
7. Check the ratings given in the instructions and on the product to make sure the product is suitable for your application.
8. It is recommended to keep the device at room temperature for at least 24 hours before applying power. This allows any condensation resulting from low shipping/storage temperatures to evaporate
9. After installation is complete, check product operation as provided in these instructions.

Restricting Access to Network

Prevent unauthorized access to the network that the thermostat uses. With any system, preventing physical access to the network and equipment reduces the risk of unauthorized interference. When using open protocols care should be taken to ensure that the physical network is protected from unauthorized access.

Location (D1-529 Thermostat)

Select a location about 1.5 m (5 ft.) above the floor with good air circulation at average temperature. Do not mount thermostat where it may be affected by

- Drafts or dead spots behind doors or in corners
- Hot or cold air from ducts
- Radiant heat from sun or appliances
- Concealed pipes or chimneys
- Unheated (un-cooled) areas behind the thermostat
- If RF equipped, do not install near other RF sources/transmitters.
- When the thermostat is equipped with PIR, consider 120° view angle, range characteristics, and mounting position for proper coverage.

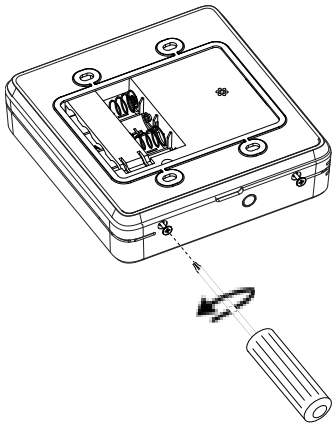
Location (D-X47 Relay)

The D-X47 Relay can be installed inside the NEMA enclosure or in a metal enclosure such as the FCU housing.

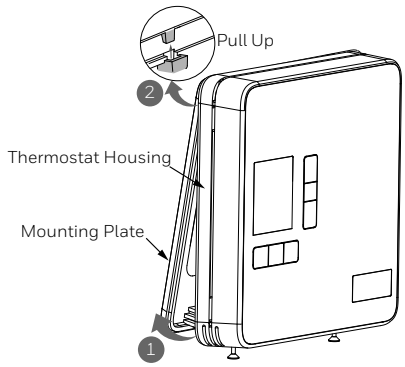
Mounting (D1-529 Thermostat)

INNCOM's DDC thermostats typically mount on a standard double-gang (4 x 4) junction box. If mounted on a single-gang box, the left side (display side) of the D1-529 Thermostat overlaps the wall area to the left of the junction box. The thermostat wallplate can also be mounted vertically on the wall.

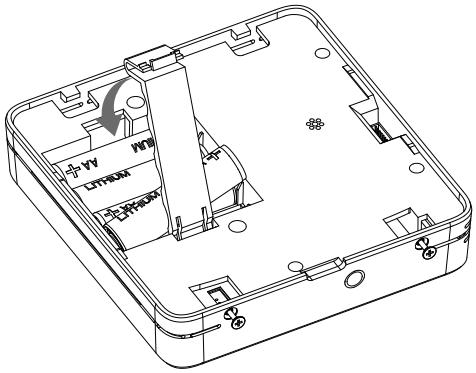
1. Loosen the two screws at the base of the D1-529 Thermostat by turning it counter clockwise.



2. Pull the bottom of the back-mounting plate slightly away from the Thermostat housing, then pull the Thermostat housing..

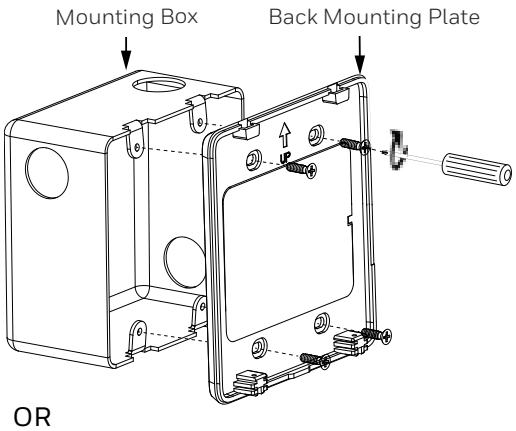


3. Insert the 4 AA alkaline batteries, matching the "+" terminals on the batteries to the "+" symbols in the battery compartment.



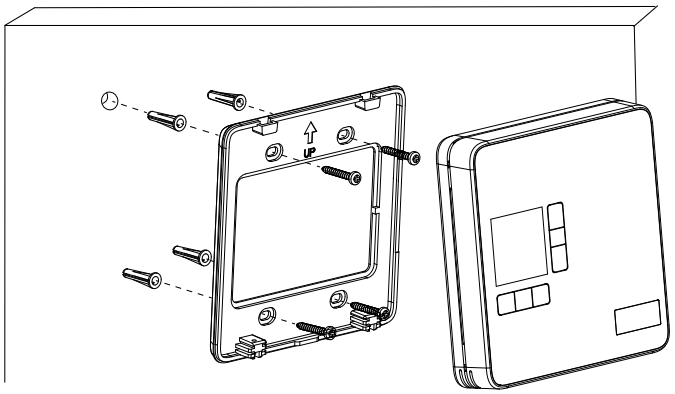
4. Position the back mounting plate within the mounting box.

a. Attach the mounting plate to the mounting box using the mounting screws provided. Ensure that the plate is mounted with the raised arrow pointing UP.

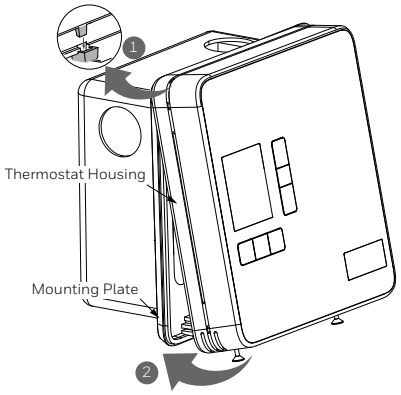


OR

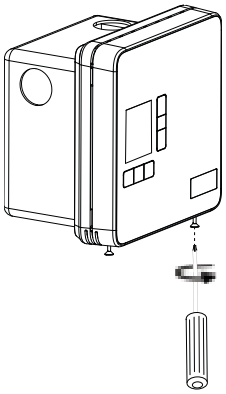
a. Position and level the wall plate along the wall and mark the drilling location using a pencil.
b. Remove the wall plate and drill two pilot holes on the wall, on the marks. For drywall, drill 3/16" (5 mm) holes. For firmer material such as plaster, drill 7/32" (6 mm) holes.
c. Gently tap anchors (provided in the kit) into the pilot holes until flush with the wall.
d. Attach the mounting plate to the wall using the mounting screws provided. Ensure that the plate is mounted with the raised arrow pointing UP.



5. Hook the tabs at the top rear of the D1-529 thermostat housing into the matching depressions at the top of the mounting plate and gently push the bottom of the housing toward the wall until it fits properly.



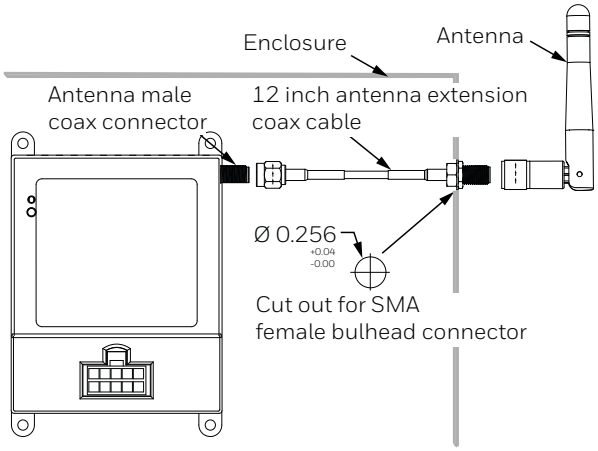
6. Tighten the two screws at the base of the D1-529 Thermostat by turning it clockwise.



Mounting (D-X47 Relay)

The D-X47 communicates via RF with the D1-529.

1. To mount the D-X47 Relay use the supplied four 6/32 ½" screws.
2. Connect the antenna directly to the antenna male coax connector on the D-X47
   OR
   To install the D-X47 in a metal enclosure such as the FCU housing use the 12 inch antenna coax extension cable to mount the antenna outside of the enclosure.



Wiring Connections (D-X47 Relay)

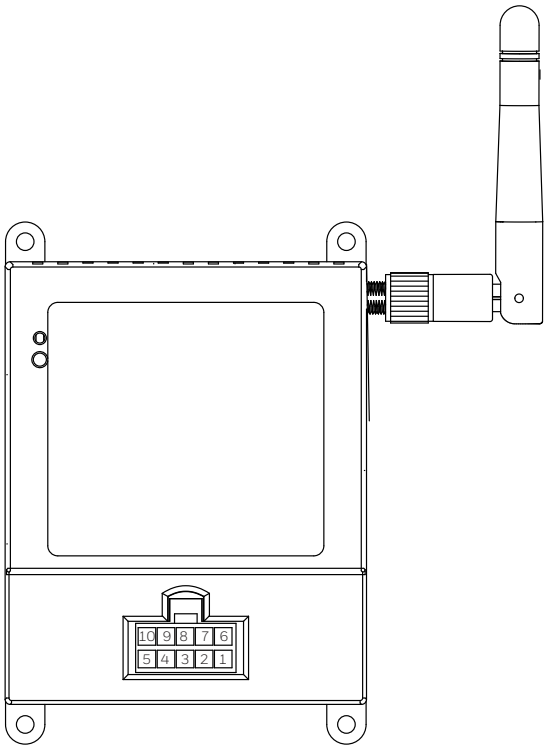
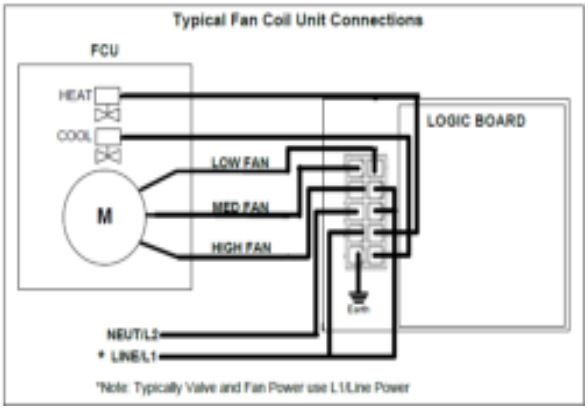


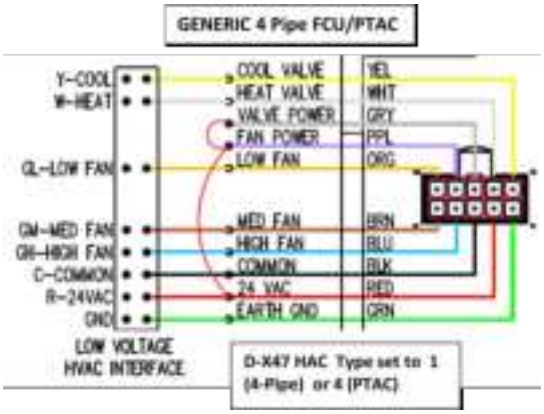
Table 14. D-X47 Pin Connections

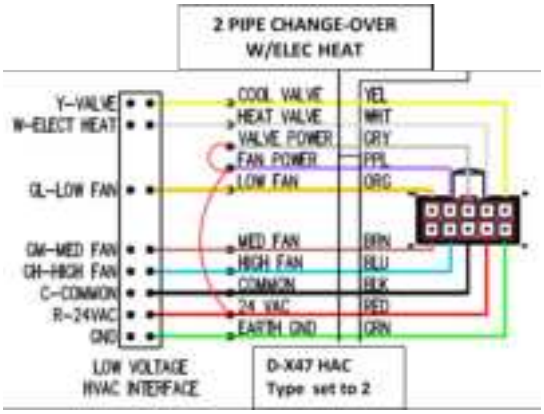
Pin Number	Connection
1	Gnd
2	24 VAC
3	Neutral
4	Hi Fan
5	Med Fan/W2
6	Low Fan
7	FCOM
8	VCOM

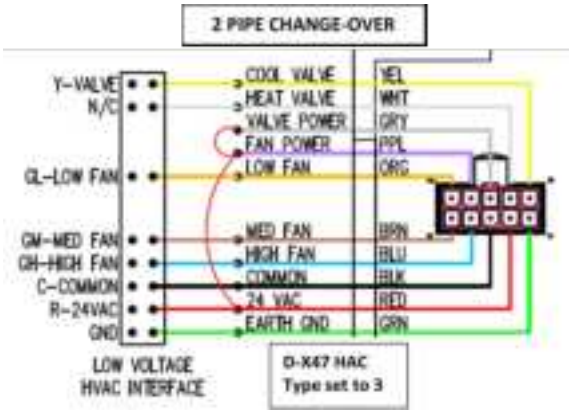
Table 14. D-X47 Pin Connections

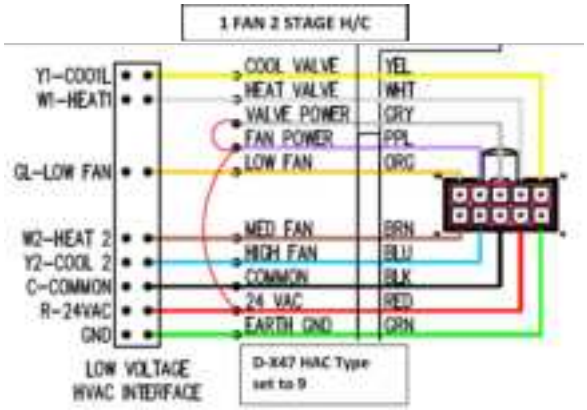
8	Heat/W Elect
10	Cool/Y Comp

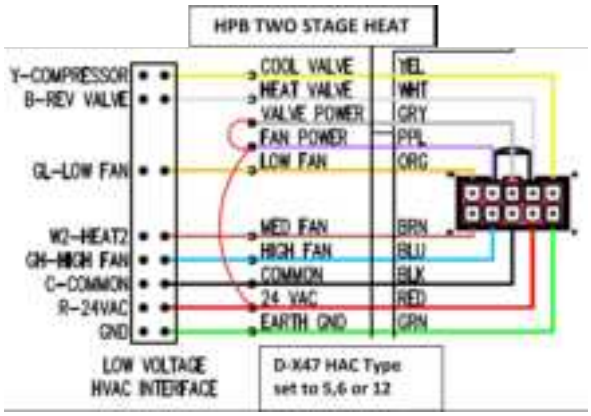


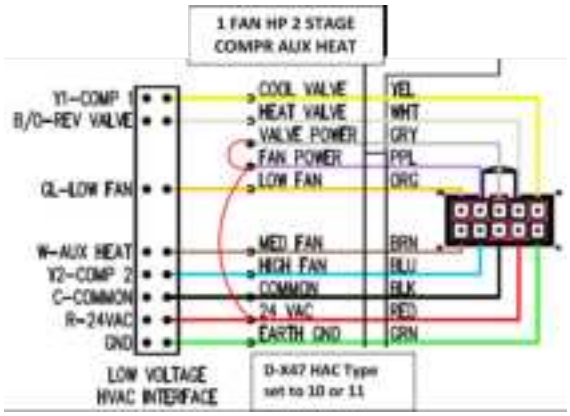


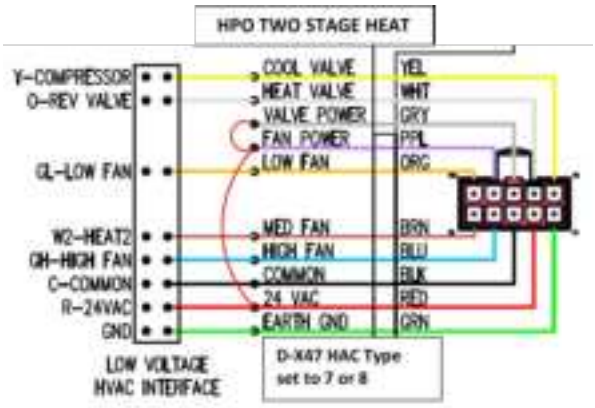



2 PIPE CHANGE-OVER
Y-VALVE
N/C
GL-LOW FAN
GM-MED FAN
GH-HIGH FAN
C-COMMON
R-24VAC
GND
COOL VALVE
HEAT VALVE
VALVE POWER
FAN POWER
LOW FAN
MED FAN
HIGH FAN
COMMON
24 VAC
EARTH GND
YEL
WHT
GRY
PPL
ORG
BRN
BLU
BLK
RED
GRN
LOW VOLTAGE HVAC INTERFACE
D-X47 HAC Type set to 3


1 FAN 2 STAGE H/C
Y1-COOL
W1-HEAT1
GL-LOW FAN
W2-HEAT 2
Y2-COOL 2
C-COMMON
R-24VAC
GND
COOL VALVE
HEAT VALVE
VALVE POWER
FAN POWER
LOW FAN
MED FAN
HIGH FAN
COMMON
24 VAC
EARTH GND
YEL
WHT
GRY
PPL
ORG
BRN
BLU
BLK
RED
GRN
LOW VOLTAGE HVAC INTERFACE
D-X47 HAC Type set to 9


HPB TWO STAGE HEAT
Y-COMPRESSOR
B-REV VALVE
GL-LOW FAN
W2-HEAT2
GH-HIGH FAN
C-COMMON
R-24VAC
GND
COOL VALVE
HEAT VALVE
VALVE POWER
FAN POWER
LOW FAN
MED FAN
HIGH FAN
COMMON
24 VAC
EARTH GND
YEL
WHT
GRY
PPL
ORG
BRN
BLU
BLK
RED
GRN
LOW VOLTAGE HVAC INTERFACE
D-X47 HAC Type set to 5,6 or 12


1 FAN HP 2 STAGE COMPR AUX HEAT
Y1-COMP 1
B/O-REV VALVE
GL-LOW FAN
W-AUX HEAT
Y2-COMP 2
C-COMMON
R-24VAC
GND
COOL VALVE
HEAT VALVE
VALVE POWER
FAN POWER
LOW FAN
MED FAN
HIGH FAN
COMMON
24 VAC
EARTH GND
YEL
WHT
GRY
PPL
ORG
BRN
BLU
BLK
RED
GRN
LOW VOLTAGE HVAC INTERFACE
D-X47 HAC Type set to 10 or 11


HPO TWO STAGE HEAT
Y-COMPRESSOR
O-REV VALVE
GL-LOW FAN
W2-HEAT2
GH-HIGH FAN
C-COMMON
R-24VAC
GND
COOL VALVE
HEAT VALVE
VALVE POWER
FAN POWER
LOW FAN
MED FAN
HIGH FAN
COMMON
24 VAC
EARTH GND
YEL
WHT
GRY
PPL
ORG
BRN
BLU
BLK
RED
GRN
LOW VOLTAGE HVAC INTERFACE
D-X47 HAC Type set to 7 or 8

GETTING STARTED

Home Screen - User Interface (D1-529)

The D1-529 thermostat user interface contains

1. LCD display
2. Power ON/OFF Button
3. Fan Button
4. Display Button
5. Up arrow Button
6. °F|°C Button
7. Down arrow Button
8. D1-529/D-X47 Communicating Dot
9. Occupancy Sensor

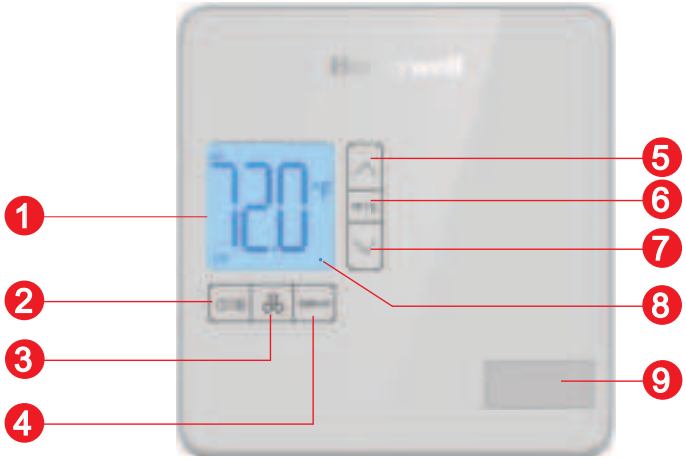


Fig. 4 D1-529 Thermostat User Interface

Table 15 D1-529 Thermostat User Interface

Parameter	Description
LCD display	Displays all the parameters
Power / Auto Button	To toggle to mode from OFF to AUTO mode.
Fan Button	Sets the fan to the desired speed.
Display Button	Toggles the LCD display between the selected target temperature, room temperature, and room humidity.
Up arrow Button	Increase temperature or displayed parameter value.
°F|°C Button	Toggles temperature readings between Fahrenheit and Celsius.
Down arrow Button	Decrease temperature or displayed parameter value

Table 15 D1-529 Thermostat User Interface

Parameter	Description
D1-529/D-X47 Communicating Dot	Will be present if the D1-529 and D-X47 are communicating with each other.
Occupancy Sensor	Detects motion

D1-529 LCD

The D1-529 thermostat device will show different parameter readings on the LCD display.

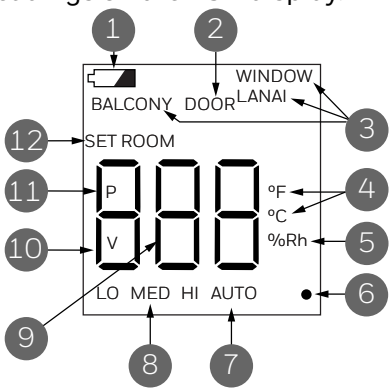


Fig. 5 D1-529 LCD details

The following table provides an overview of all the available segments of the D1-529 thermostat display with its parameter names and units.

Table 16 D1-529 LCD details

Sr No	Parameter Name
1	**Low Battery Indicator**: Displays when battery voltage < 4 Volts.
2	**Door**: Appears when the D-X47 partner reports that the room entry door is opened. Door will appear for an open door with a significant delay normally (up to 10 minutes). If you perform the service parameter Door Test (dor), Door icon will immediately appear when the door is open.
3	**Balcony, Window, Lanai**: Appears when room entry is being monitored.
4	**F or C**: Displays temperature in Farenheit (°F) or Celcius (°C).
5	**%Rh**: Appears when the Display button has been pressed to display measured room relative humidity
6	**D1-529/D-X47 Communicating Dot**: Will be present if the D1-529 and D-X47 are communicating with each other.

Table 16 D1-529 LCD details

Sr No	Parameter Name
7	**AUTO**: Displayed when the D-X47 partner is in HVAC AUTO mode.
8	**LO, MI, HI**: Displayed when fan button has been pressed to select a manual fan Speed.
9	**Value display section:** The 3 digits display various values depending on what has been selected. By default, measured Room temperature is displayed.
10	**V:** Indicates the value of a selected parameter is being displayed.
11	**P**: Indicates a parameter# is being displayed.
12	**SET**: Indicates the displayed temperature value is the desired Target temperature.

D-X47 LED and Terminal

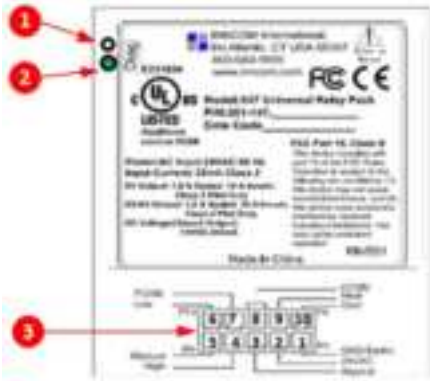


Fig. 6 D-X47 LED and Terminal

The following table provides an overview of the D-X47 Relay.

Table 17 D-X47 LED and Terminal

Sr No	Specification
1	Bind Switch
2	Green Diagnostic LED
3	10-pin 24 VAC HVAC Unit connections

D1-529 Configuration Parameters

The D1-529 has several parameters that can be used to configure, test and troubleshoot the D1-529 and D-X47. The below table lists the available parameters in the D1-529.

Table 18 D1-529 Configuration Parameters

Parameter	Function
rId	Room ID
rCP	Room Copy
HAC	HVAC Type
FAn	Fan Speed
tt	Target Temperature
dLt	Unoccupied Delta
Uot	Unoccupied Time
UrS	Unrented Setback
Urt	Unrented time
PAn	PAN
rF	RF Channel
rbd	Bind Remote Device
Pn6	Ping RF or S5 devices
Ctr	Contractor Mode
LEn	Limited Energy Management
PIr	PIR Motion Test
dor	Door Sensor Test
UIn	Window Sensor Test
rH	Relative Humidity Test
SEr	Adjust partner inputs, reset.
LoC	Local D1-529 parameters
rUn	Adjust inputs, reset, reebot
EEr	Access NVRAM of partner D-X47
Gr.A	Advance HVAC EMS config
Adr	Teach Address
Io	Teach I/O Map

INITIAL CONFIGURATION

This section describes the initial installation and configuration of new D1-529 and D-X47 devices. If the system is already configured and you need to replace the previously configured D1-529 and/or D-X47, refer Replacing D1-529 And D-X47.

NOTE:
To install and configure the D1-529 / D-X47 with the required Room ID, PAN ID and RF or to test the in-room functionality, you do not need a PC or Honeywell JACE controller running Niagara Service, Niagara Workbench, Honeywell Remote Building Manager (RBM) or an installed and configured D-578 Edge Router.

NOTE:
To control or view the operation of the D-X47 in a room from RBM, you must have the Niagara service running on a PC or Honeywell JACE controller and the D-578 installed and configured from Niagara Workbench EasyOnBoard feature.

NOTE:
Refer to Honeywell document INNCOM Direct Gateway Configuration Guide - 31-00708 and INNCOM Direct Dashboard User Guide 31-00707 for details of using Niagara Workbench and installing and using Honeywell Remote Building Manager (RBM).

Prerequisites:

- The D1-529 and D-X47 devices have been installed and powered up.
- The recessed bind button on the D-X47 is accessible.

The initial configuration sequence is:

1. Set the Room ID
2. Connect the D1-529 with D-X47
3. Room Copy

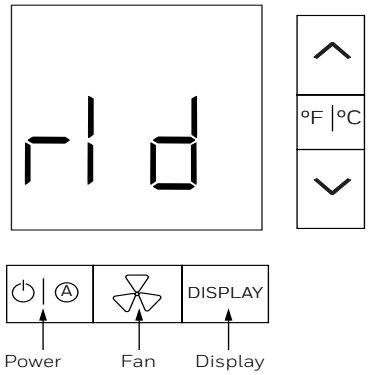
NOTE:
Copy the configuration from the D-X47 that has already been fully configured and proceed from Deploy the Property Key.
Or else, continue with Setup HVAC Type.

4. Setup HVAC Type
5. Setup Fan Speed
6. Deploy the Property Key

NOTE:
Prior to completing Initialization Mode, or pushing the thermostat configuration from INCOMM Direct Dashboard, the thermostat is configured with factory defaults to disable any call for heat, cool, or low, medium and high fan speeds to protect the HVAC equipment.

Set the Room ID

The thermostat will enter Initialization Mode and display **rId** the first time it is turned on.



1. Press the **DISPLAY** button.
   The default 5 digit Room ID value (00001) will scroll across the screen from highest to lowest (left most to right most value).

NOTE:
The default Room ID is comprised of three fields: highest digit, middle two digits, and lowest two digits.

Scrolling will stop at the highest digit first. The default value 0 and HI will be displayed.

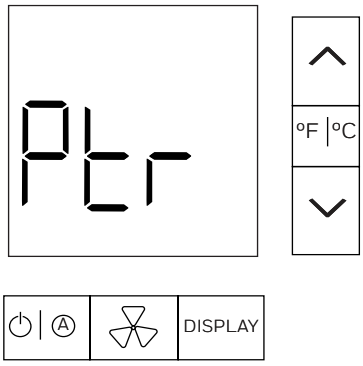
2. Press the **UP/DOWN** arrow button to set the value (range is 0-6).
3. Press **POWER** to continue.
   The next 2 digits of the Room ID will displayed. 00 and MED will appear.
4. Press the **UP/DOWN** arrow button to set the value (range is 0-99).
5. Press **POWER** to continue.
   The last 2 digits of the Room ID will be displayed. 01 and LOW will appear.
6. Press the **UP/DOWN** arrow button to set the value (range is 0-99).

NOTE:
Press the **POWER** button to cycle between the HI, LOW and MED values.

7. Press **DISPLAY** to store the value, when the desired Room ID is defined.
   The D1-529 will beep and the new Room ID number scrolls across the display. Once the scrolling is completed, **Ptr** (Partner) will appear.

Connect the D1-529 with D-X47

Ptr (Partner) will appear after room id is setup.

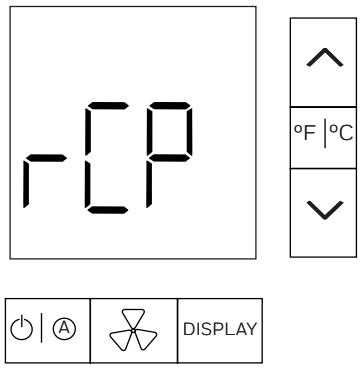


1. Press the **DISPLAY** button, 0 will appear.
2. Press the **DISPLAY** button again **bnd** will start to blink on the D1-529 display.
3. Press the **Bind** button using a small point (e.g., the end of a straightened paper clip), on the D-X47 to send a reverse bind request.
   If the D1-529 receives the bind request from the D-X47, it will beep and the D-X47 will reset. The green Diag LED on the D-X47 will blink rapidly for several seconds. The D1-529 will ping the D-X47 and will display **Ctd** (connected) and beep if it gets a reply.
4. Press the **DISPLAY** button to show **rCP**.

Room Copy

If you are configuring the first D1-529/D-X47 that has a different HVAC type, or you don't want to use the room copy feature, press the **UP** arrow button to skip **rCP** and Setup HVAC Type.

To copy the configuration from the D-X47 that has already been fully configured:

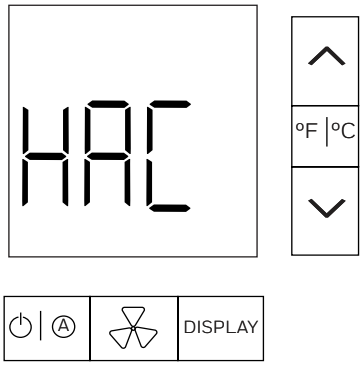


1. Press the **DISPLAY** button.
   The currently set Room ID in the D1-529/D-X47 minus 1 will scroll across the display, then display 0 _ _ and the HI symbol. For example if you had set the Room ID to 00107, 00106 will scroll on the display.
2. Press **DISPLAY** to copy the configuration and proceed with step 5.
   OR
3. Define a different "copy from" Room ID, using the process defined in the "Set the Room ID" section (steps 2-7) to define the copy from Room ID.
4. Press the **DISPLAY** button when the desired "copy from" Room ID is defined to start copying the configuration from the D-X47 in the "copy from" room.
5. **CPy** will begin flashing on the D1-529 display. The D-X47 will begin pinging the "copy from" D-X47 using the Room ID defined to verify it is communicating.

   - If no reply is received from the configured D-X47 after 60 seconds, the D1-529 will beep and display **E11** as error code for 5 seconds, then display **0 _ _** and the **HI** symbol to define the "copy from Room ID" again.
     Verify you have defined the correct "copy from" Room ID and the D-X47 in the copy from room is installed, powered, and configured correctly, especially its Room ID. Then try the room copy again.
   - If a reply is received to the Ping, the D-X47 will first read the firmware version of the "copy from" D-X47 and begin copying. **CPy** will continue to flash.
     The D1-529 will display "V" to indicate a mismatch in the firmware versions of the two D-X47s and will continue copying.
     When the copy is complete, the D-X47 will reset, and the D1-529 will beep indicating the copy is complete and reset.
     The new D-X47 should now be configured with the same settings as from the configured D-X47 and you should be able to begin using it. Go to the Room Configuration Complete section.
   - If the room copy was interrupted and could not complete, the D1-529 will display an **E12** error code for 5 seconds, then display **0 _ _** and the **HI** symbol, to define the 'copy from Room ID' again. Retry the Room Copy process. Go to the Room Configuration Complete section.
     This is mostly caused due to poor RF communication between two D-X47s. Try repeating the Room Copy again. For more information refer to Troubleshooting.

Setup HVAC Type

After the room id is set, **HAC** will appear to set the desired HVAC control type for the D-X47.



1. Press the **DISPLAY** button to enter the HVAC Type menu.
   V and **0** will be displayed.
2. Press the **UP/DOWN** arrow button to set the desired HVAC type, select one of the following options from the table below:

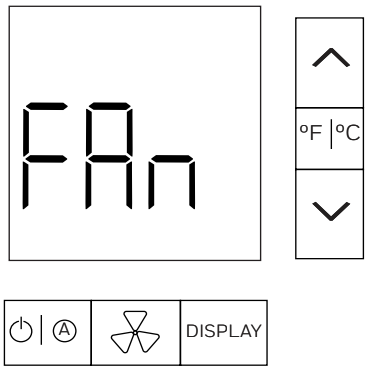
Table 19 Setup HVAC Type

Sr No	HVAC Type
1	FCU-4
2	FCU-2 w/ elec
3	FCU-2 w/o elec
4	PTAC
5	HP-B W2 assist
6	HP-B W2 replace
7	HP-O W2 assist
8	HP-O W2 replace
9	Y1/2 W1/2 G AHU
10	2nd stage Heat Pump B –AHU
11	2nd stage Heat Pump O -AHU
12	PTAC + W1

3. Press **DISPLAY** to set the value.
   The D1-529 beeps to confirm the value has been set.
4. The display will change to **FAn** indicating you need to select the available Fan speeds and an **OUTSIDE** symbol will blink on the D1-529 display indicating it has changes that need to be stored. Proceed with Setup Fan Speed.

Setup Fan Speed

FAn appears on the D1-529 to set the desired fan speed after the HVAC type is set.



1. Press the **DISPLAY** button.
   V 0 will be displayed.
2. Press the **UP/DOWN** arrow button to set the fan speed by selecting a value 1, 2 or 3:

Table 20 Fan Speed

Value	Function
1	Low speed (single speed)
2	Low / High
3	Low /Medium / High

Based on the HVAC type selection from the HAC menu, you will be limited to which of the 3 Fan values can be selected.

Value 1, 2 or 3 (Low, Low/High, Low/Med/High) will be available when using:

1 - FCU-4
2 - FCU-2 with elec heat
3 - FCU-2 without elec heat

Value 1, or 2 (Low, Low/High) will be available when using:

4-PTAC
5-HP-B W2 assist
6-HP-B W2 replace
7-HP-O W2 assist
8-HP-O W2 replace

Value 1 (Low) will be the only option when using:

9-Y1/2W1/2 G AHU
10- 2nd Stage Heat Pump B-AHU
11- 2nd Stage Heat Pump O-AHU

For example, if you have selected HVAC Type 1 FCU-4, Fan speed options 1-Low, 2 -Low/High and 3 – Low/Med/High will be available.

3. Press **DISPLAY** button to store the setting, the D1-529 beeps to confirm it is set.
   The **OUTSIDE** symbol will start blinking on the D1-529 display, indicating that the changes made need to be saved.
4. Press the **F/C** button.
   Str (store) appears on the display indicating that the changes made need to be stored.
5. Press **DISPLAY** button to store the changes.
   D1-529 will reset (the display will go blank then turn back on) and the D1-529 will send a reset to the D-X47 (the green DIAG LED will rapidly blink).

Deploy the Property Key

The Unique Property Key for the hotel must be deployed to the D-X47 and D1-529 in all rooms.

Why the Property Key is Required:

If there is a nearby hotel which is also using INNCOM's RF network and RF devices, there is a possibility that interference and crosstalk can occur between the INNCOM RF devices in both hotels. To prevent this a unique automatically generated, hotel specific property key is assigned to the D-X47 and D1-529. Any RF messages sent between the D1-529, D-X47 and D-578 Edge Router in one hotel contain this unique property key and will be ignored/rejected in any other nearby INNCOM installations.

Configuration at the D-578 Edge Router:

1. Install and power the D-578 Edge Router.
2. Activate Property Key Deployment mode on the D-578.
   This will cause the D-578 to broadcast a unique property key. Any D-X47 that is not using the new property key will automatically switch to it. The D-X47 will then transfer the key to its D1-529 partner.

To Deploy the Property Key to the D-X47/D1-529:

> **NOTE:**
> A brief summary of the D-578 installation is provided here. For full details refer to the INNCOM D-578 Edge Router Installation Instructions 31-00720.

1. Start the Niagara service on the INNCOM server PC (or Niagara JACE box if using that) if not running.
2. Install and power the D-578 Edge Router and connect it to the assigned port on the network switch defined by the hotel.
   The D-578 can be powered from an external 12 VDC power supply connected to the 12 VDC jack on the D-578, or powered via PoE (power over ethernet) if the network switch supports PoE.

The D-578 has 2 communication channels.

- A wired UDP Port 23211 network connection that connects the D-578 to the Niagara Gateway/Niagara service running on the INNCOM PC installed at the hotel.
- A wireless ZigBee RF network that connects the D-X47 "Room Gateway" in each room to the D-578.

By default, the D-578 expects to obtain its IP Address automatically from a DHCP server installed on the hotels network.
The yellow D4 LED will blink rapidly, when the D-578 is connected to Niagara.

3. Press the **Blue bind** button 6 times to place the D-578 into Key Distribution Mode.

The D3 Red LED on the D-578 will start to blink rapidly indicating it is in key distribution mode.

The D578 will begin to broadcast its unique property key. Any D-X47 that receives this broadcast will immediately adopt and start using the new key, as well as send the key to its D1-529 partner.

> **NOTE:**
> The D-578 will remain in Key Distribution mode for 10 hours. You can manually exit out of Key Distribution mode by again pressing the Blue Bind button 6 times (press-press-press-press-press-press). The D3 Red LED will stop blinking.

Room Configuration Complete

The initial installation and configuration of the D1-529's and D-X47's in the rooms is complete. If desired, you can log into the Honeywell Remote Building Manager (RBM) site for your installation and see the rooms online. Room 106 is online in the below example.

> **NOTE:**
> Refer to Honeywell document INNCOM Direct Dashboard User Guide 31-00707 for more details.

ADVANCED CONFIGURATION

The D1-529 has a Service Parameter mode with several parameters that can be used to configure, test and troubleshoot the D1-529 and D-X47.

NOTE:
These are advanced features and should only be performed by an experienced user.

To enter/access the D1-529 Service Parameter Mode:

1. Press and hold °F|°C for 4 seconds to enter into service mode.
   OR
   Press and hold °F|°C press and release the **POWER** button, press and release the **DISPLAY** button, then release the F/C button.
   This will allow 60 seconds to initiate using a service parameter before the display will time out back to Set temperature.

Entry into the service mode is confirmed when the LCD display shows "**rld**".

2. Press the **UP/DOWN** arrow button to select the desired service parameter item. The below table lists the available service mode parameters.

Table 21. Service Parameter

Paramater	Function
rId	Room ID
rCP	Room Copy
HAC	HVAC Type
FAn	Fan Speed
tt	Target Temperature
dLt	Unoccupied Delta
Uot	Unoccupied Time
UrS	Unrented Setback
Urt	Unrented time
PAn	PAN
rF	RF Channel
rbd	Bind Remote Device
Pn6	Ping RF or S5 devices
Ctr	Contractor Mode
LEn	Limited Energy Management
PIr	PIR Motion Test

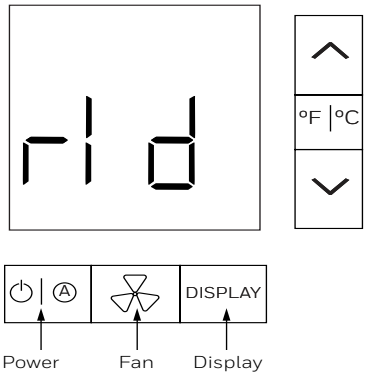
Table 21. Service Parameter

Paramater	Function
dor	Door Sensor Test
UIn	Window Sensor Test
rH	Relative Humidity Test
SEr	Adjust partner inputs, reset.
LoC	Local D1-529 parameters
rUn	Adjust inputs, reset, reebot
EEr	Access NVRAM of partner D-X47
Gr.A	Advance HVAC EMS config
Adr	Teach Address
Io	Teach I/O Map

Set the Room ID

The Room ID is normally set when the D1-529 is initialized during installation. The Room ID can be set/changed anytime using the rid parameter.

1. Press and hold °F|°C for 4 seconds to enter into service mode.
2. Press the **UP/DOWN** arrow button and select **rid** parameter.



3. Press the **DISPLAY** button.
   The default 5 digit Room ID value (00001) will scroll across the screen from highest to lowest (left to right most value).

NOTE:
The default Room ID is comprised of three fields: highest digit, middle two digits, and lowest two digits.

Scrolling will stop at the highest digit first. The default value 0 and HI will be displayed.

4. Press the **UP/DOWN** arrow button to set the value (range is 0-6).

5. Press **POWER** to continue.
   The next 2 digits of the Room ID will displayed. 00 and MED will appear.
6. Press the **UP/DOWN** arrow button to set the value (range is 0-99).
7. Press **POWER** to continue.
   The last 2 digits of the Room ID will be displayed. 01 and LOW will appear.
8. Press the **UP/DOWN** arrow button to set the value (range is 0-99).

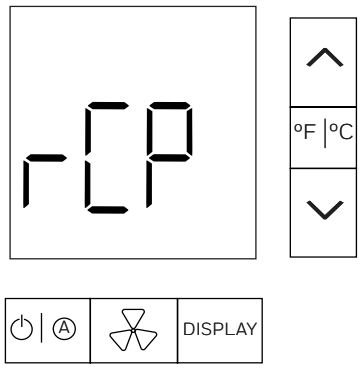
> **NOTE:**
> Press the **POWER** button to cycle between the HI, LOW and MED values.

9. Press **DISPLAY** to store the value, when the desired Room ID is defined.
   The D1-529 will beep and the new Room ID number scrolls across the display.

Room Copy

Use rCP to copy a configuration from D-X47 that is configured. This is normally done during initial installation, but can be done at any time.

1. Press and hold °F/°C for 4 seconds to enter into service mode.
2. Press the **UP/DOWN** arrow button and select **rCP** parameter.



3. Press the **DISPLAY** button.
   The currently set Room ID in the D1-529/D-X47 minus 1 will scroll across the display. For example if you had set the Room ID to 00107, 00106 would scroll on the display.
4. Press **DISPLAY** to copy the configuration and proceed with step 7.
   OR
5. Define a different “copy from” Room ID, using the process defined in the “Set the Room ID” section (steps 2-7) to define the copy from Room ID.
6. Press the **DISPLAY** button when the desired “copy from” Room ID is defined to start copying the configuration from the D-X47 in the “copy from” room.
7. **CPy** will begin flashing on the D1-529 display.
   The D-X47 will begin pinging the “copy from” D-X47 using the Room ID defined to verify it is communicating.
   - If no reply is received from the configured D-X47 after 60 seconds, the D1-529 will beep and display **E11** as error code for 5 seconds, indicating it never received a reply to the pings. Verify you have defined the correct “copy from” Room ID and the D-X47 in the copy from room is installed, powered, and configured correctly, especially its Room ID. Then try the room copy again by pressing the DISPLAY button.
   - If a reply is received to the Ping, the D-X47 will first read the firmware version of the “copy from” D-X47 and begin copying. **CPy** will continue to flash.
     The D1-529 will display "V" to indicate a mismatch in the firmware versions of the two D-X47s and will continue copying.
     When the copy is complete, the D-X47 will reset, and the D1-529 will beep indicating the copy is complete and reset.
     The new D-X47 should now be configured with the same settings as from the configured D-X47 and you should be able to begin using it.

> **NOTE:**
> There will be no option to select the HAC (HVAC) or Fan (Fan Speed) configuration after room copy is performed.

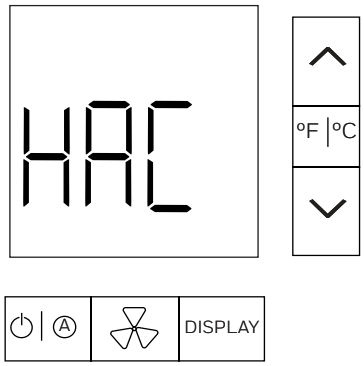
- If the room copy was interrupted and could not complete, the D1-529 will display an **E12** error code for 5 seconds, then display **0 _ _** and the **HI** symbol, to define the 'copy from Room ID' again. Retry the Room Copy process.
  This is mostly caused due to poor RF communication between two D-X47s. Try repeating the Room Copy again. For more information refer to Troubleshooting.

Setup HVAC Type

The HVAC control type is normally set when the D1-529 is initialized during installation. The HVAC control type can be set/changed anytime using the **HAC** parameter.

1. Press and hold °F/°C for 4 seconds to enter into service mode.

2. Press the **UP/DOWN** arrow button and select **HAC** parameter.



3. Press the **DISPLAY** button to enter the HVAC Type menu.
   V and currently selected HVAC type will be displayed.
4. Press the **UP/DOWN** arrow button to choose one of the following options from the table below:

Table 22 Setup HVAC Type

Sr No	HVAC Type
1	FCU-4
2	FCU-2 w/elec
3	FCU-2 w/o elec
4	PTAC
5	HP-B W2 assist
6	HP-B W2 replace
7	HP-O W2 assist
8	HP-O W2 replace
9	Y1/2 W1/2 G AHU
10	2nd stage Heat Pump B –AHU
11	2nd stage Heat Pump O -AHU
12	PTAC + W1

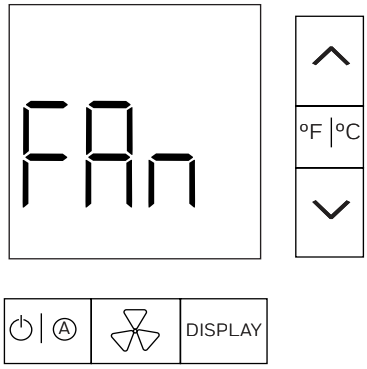
5. Press **DISPLAY** to set the value. The D1-529 beeps to confirm the value has been set. The D1-529 will display **OUTSIDE** icon indicating it has changes that need to be stored.

NOTE:
The HAC menu will also automatically change to the FAn menu. If you have changed the HAC HVAC type, a different combination of available fan speeds may be required.

Setup Fan Speed

The Fan speed is normally set when the D1-529 is initialized during installation. The Fan speed can be set/changed anytime using the **FAn** parameter.

1. Press and hold °F °C for 4 seconds to enter into service mode
2. Press the **UP/DOWN** arrow button and select **FAn** parameter.



3. Press the **DISPLAY** button.
   V 0 will be displayed.
4. Press the **UP/DOWN** arrow button to set the fan speed by selecting a value 1, 2 or 3:

Table 23 Fan Speed

Value	Function
1	Low speed (single speed)
2	Low / High
3	Low /Medium / High

Based on the HVAC type selection from the HAC menu, you will be limited to which of the 3 Fan values can be selected.

Value 1, 2 or 3 (Low, Low/High, Low/Med/High) will be available when using:

1 - FCU-4
2 - FCU-2 with elec heat
3 - FCU-2 without elec heat

Value 1, or 2 (Low, Low/High) will be available when using:

4-PTAC
5-HP-B W2 assist
6-HP-B W2 replace
7-HP-O W2 assist
8-HP-O W2 replace

Value 1 (Low) will be the only option when using:

9-Y1/2W1/2 G AHU
10- 2nd Stage Heat Pump B-AHU
11- 2nd Stage Heat Pump O-AHU

For example, if you have selected HVAC Type 1 FCU-4, Fan speed options 1-Low, 2 -Low/High and 3 – Low/Med/High will be available.

5. Press **DISPLAY** to store the setting, the D1-529 beeps to confirm it is set.
   The **OUTSIDE** symbol will start blinking on the D1-529 display, indicating that the changes made need to be saved/committed.
6. Press the **F/C** button.
   Str (store) appears on the display indicating that the changes made need to be stored.
7. Press **DISPLAY** to store the changes.
   D1-529 will reset (the display will go blank then turn back on) and the D1-529 will send a reset to the D-X47 (the green DIAG LED will rapidly blink).

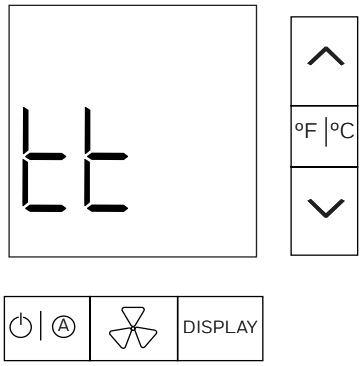
Tune Energy Savings

The **tt**, **dLt**, **Uot**, **UrS** and **Urt** parameters allow you to select 3 different levels of energy savings, Normal, Aggressive or Minimal.

tt (Selectable target temperature range)

Room temperature is maintained between the lower and upper values. The value of tt selects Normal, Aggressive or Minimal energy savings.

1. Press and hold °F/°C for 4 seconds to enter into service mode.
2. Press the **UP/DOWN** arrow button and select **tt** parameter.



3. Press the **DISPLAY** button.
   V and the current selected tt will be displayed.
   1 - Normal is the default value.
4. Press the **UP/DOWN** arrow button to select the desired **tt** value 1,2 or 3 per the table.

Table 24 Selectable target temperature range

Parameter		1	2	3
		Normal	Narrow	Wide
ttt (Target Temperature)	Not in VIP mode	65-80 °F (18-26 °C)	68-76 °F (20-21 °C)	62-85 °F (16-29 °C)
	In VIP mode	62-85 °F (16-29 °C)	65-80 °F (18-26 °C)	60-85 °F (15-29 °C)

For example, if you want to use the Aggressive values, set the **tt** value to 2.

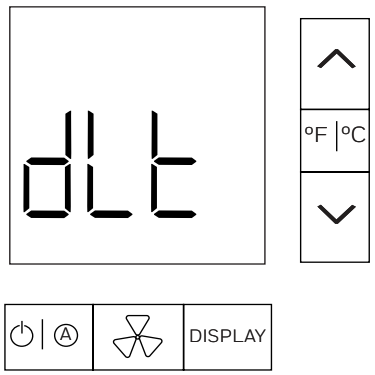
5. Press the **DISPLAY** button to save the value.
   tt will display and the D1-529 will beep and OUTSIDE will start to blink on the display indicating that the value needs to be stored.
6. Press the **F/C** button to save the **tt** value. **Str** will appear.
7. Press the **DISPLAY** button to save the change.
   The D1-529 will reset.

dLt (UnOccupied Delta)

If the room is un-occupied, the D-X47 will use a Normal, Aggressive or Minimal temperature control band to save energy defined in the **dLt** parameter.

- If the room is fully unoccupied, the DeltaUnOccupied values will be used.
- If the room had just been rented but has not become occupied yet, the DeltaJustRented values will be used.
- If the room is occupied, but the room entry door was opened and closed and the D-X47 is timing down the unoccupied timeout scanning for motion the DeltaMotionScan values will be used.

1. Press and hold °F/°C for 4 seconds to enter into service mode.
2. Press the **UP/DOWN** arrow button and select **dLt** parameter.



3. Press the **DISPLAY** button.
   V and the current selected **dLt** value will be displayed. 1 - Normal is the default value.
4. Press the **UP/DOWN** arrow button to select the desired **dLt** value 1,2 or 3 as per the below table.

Table 25 dLt (UnOccupied Delta range)

Parameter		1	2	3
		Normal	Aggressive	Minimal
dLt (Unoccupied Delta)	DeltaUnoccupied	40 °F	60 °F	20 °F
	DeltaJustRented	20 °F	30 °F	10 °F
	DeltaMotionScan	10 °F	15 °F	0 °F

For example, if you wanted to use the Minimal **dLt** setting, set the **dLt** value to 3.

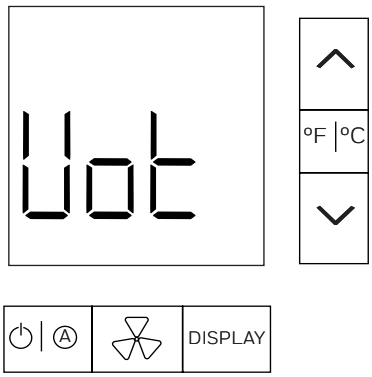
5. Press the **DISPLAY** button to save the value.
   dLt will display and the D1-529 will beep and OUTSIDE will start to blink on the display (if is not already blinking) indicating that the value needs to be stored.
6. Press the **F/C** button to save the **dLt** value.
   Str will appear.
7. Press the **DISPLAY** button to save the change.
   The D1-529 will reset.

Uot (Unoccupied Time)

The **Uot** unoccupied time parameter provides 2 groupings of 3 different unoccupied timeouts to save energy.

- If the D-X47 is actively receiving room entry door position from wired switch connected to an input on the D-X47 or a wireless battery powered S551.RF switch monitor, the D-X47 uses the 10/2, 5/2 or 30 /10 minutes un-occupied timeout defined in table XX.
  For example, if Uot is set to value 2 and the room enter door opens and closes and no motion is detected, the room will go unoccupied after 5 minutes if the room is Rented or 2 minutes if the room is not rented.
- If room entry door position is not being monitored and only the D1-529 motion sensor is being used for motion only occupancy control logic, the D-X47 uses the 2.5/24.5, 1.5/12.5 or 8.5 /33.5 hour bright/dark motion only timeout defined in table.

1. Press and hold °F|°C for 4 seconds to enter into service mode.
2. Press the **UP/DOWN** arrow button and select **Uot** parameter.



3. Press the **DISPLAY** button.
   V and the current selected **Uot** value will be displayed. 1 - Normal is the default value.
4. Press the **UP/DOWN** arrow button to select the desired **Uot** value 1,2 or 3 as per the below table.

Table 26 Uot (Unoccupied Time) range

Parameter			1	2	3
Uot (Unoccupied Time)			**Normal**	**Aggressive**	**Minimal**
	Door Switch and Motion	Rented	10 min	5 min	30 min
		Unrented	2 min	2 min	10 min
	Motion Sensor only	Hours Bright	2.5 hrs	1.5 hrs	8.5 hrs
		Hours Dark	24.5 hrs	12.5 hrs	33.5 hrs

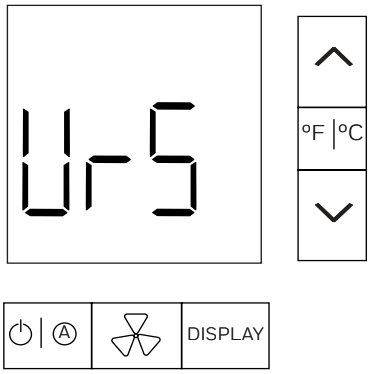
5. Press the **DISPLAY** button to save the value.
   Uot will display and the D1-529 will beep and OUTSIDE will start to blink on the display (if is not already blinking) indicating that the value needs to be stored.
6. Press the **F/C** button and **Str** will appear.
7. Press the **DISPLAY** button to save the change.
   The D1-529 will reset.

UrS (Unrented Setback)

The UrS unrented Setback parameter allows the selection of Normal, Aggressive or Minimal savings based on different temperature control bands that become active when the room is unoccupied and unrented.

1. Press and hold °F|°C for 4 seconds to enter into service mode.

2. Press the **UP/DOWN** arrow button and select **UrS** parameter.



3. Press the **DISPLAY** button.
   V and the current selected **UrS** value will be displayed. 1 - Normal is the default value.
4. Press the **UP/DOWN** arrow button to select the desired **UrS** value 1,2 or 3 as per the below table

Table 27 UrS (Unrented Setback range)

Parameter		1	2	3
		Normal	Aggressive	Minimal
UrS (Unoccupied Delta)	Lower	62 °F	60 °F	65 °F
	Upper	80 °F	85 °F	75 °F

5. Press the **DISPLAY** button to save the value.
   UrS will display and the D1-529 will beep and OUTSIDE will start to blink on the display indicating that the value needs to be stored.
6. Press the **F/C** button and **Str** will appear.
7. Press the **DISPLAY** button to save the change.
   The D1-529 will reset.

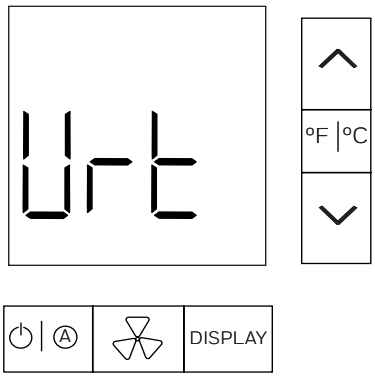
Urt (Unrented Time after Unoccupied)

This setting only applies if no PMS is installed at the hotel to rent and unrent rooms. With no PMS, all rooms would normally always be Rented and thus no unrented temperature setback (i.e., a wider temperature control band when unrented) could be used to save energy.

Urt allows the selection of Normal, Aggressive or Minimal savings based on making the room go unrented after the room has been unoccupied for a certain time period.

1. Press and hold °F|°C for 4 seconds to enter into service mode.

2. Press the **UP/DOWN** arrow button and select **Urt** parameter.



3. Press the **DISPLAY** button.
   V and the current selected **Urt** value will be displayed. 1 - Normal is the default value.
4. Press the **UP/DOWN** arrow button to select the desired **Urt** value 1,2 or 3 as per the below table

Table 28 Urt (Unrented Time after Unoccupied range)

Parameter	1	2	3
	Normal	Aggressive	Minimal
Urt (Unrented Timeout)	8 hrs	4 hrs	16.7 hrs

5. Press the **DISPLAY** button to save the value.
   Urt will display and the D1-529 will beep and OUTSIDE will start to blink on the display indicating that the value needs to be stored.
6. Press the **F/C** button and **Str** will appear.
7. Press the **DISPLAY** button to save the change.
   The D1-529 will reset.

Pan ID (PAn)

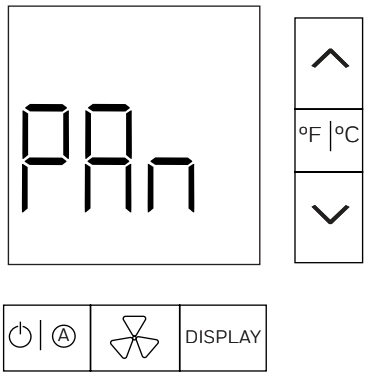
The PAN ID in combination with the RF Channel is used to control what D-578 Edge Router a particular room communicates through. The PAN ID can be set to any value 0 to 255. The default PAN ID value is 1.

At any INNCOM Direct installation, one D-578 Edge Router will be installed using PAN ID 1 by default, and all D1-529 and D-X47 devices will also be set to PAN ID 1 by default.

The PAN ID should typically not require changing. If it needs to be changed, you need to change it on the D1-529 first, then when you Bind the D-X47 from the D1-529 the changed PAN ID would get copied to the D-X47.

1. Press and hold °F|°C for 4 seconds to enter into service mode.

2. Press the **UP/DOWN** arrow button and select **PAn** parameter.



3. Press the **DISPLAY** button.
   V and the current selected PAN ID value will be displayed. PAN ID 1 is the default value.
4. Press the **UP/DOWN** arrow button to select the desired PAN ID.
5. Press the **DISPLAY** button to store the new PAN ID value.
   The D1-529 will beep and will display PAn. OUTSIDE will NOT begin to blink on the display indicating the change needs to be stored like other parameters require.
6. Press the **F/C** button to exit service mode.

RF Channel (rF)

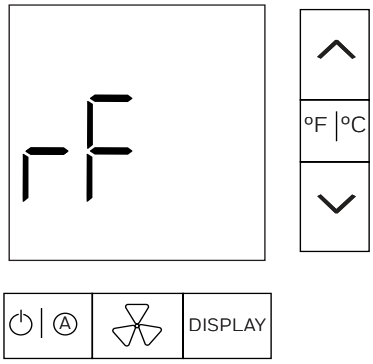
The RF Channel in combination with the PAN ID is used to control what a D-578 Edge Router a particular room communicates through. The RF channel can be set to any value 11 to 26. The default RF channel value is 20. Each RF channel uses a distinct frequency band.

At any INNCOM Direct installation, 1 D-578 Edge Router will be installed using RF channel 20 by default, and all D1-529 and D-X47 devices will also be set to RF Channel 20 by default.

The RF Channel should typically not require changing. If it does require to be changed, you need to change it on the D1-529 first, then when you Bind the D-X47 from the D1-529 the changed RF Channel would get copied to the D-X47.

One reason that would require using a different RF Channel is if it is determined there are other RF transmitters installed at the hotel that use the same or close to the INNCOM default RF Channel 20 frequency band. It may be required to use a different RF Channel for the installed D1-529/D-X47 devices.

1. Press and hold °F|°C for 4 seconds to enter into service mode.
2. Press the **UP/DOWN** arrow button and select **rF** parameter.

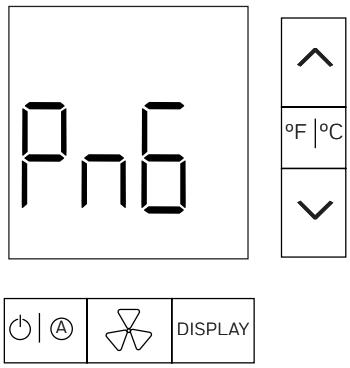


3. Press the **DISPLAY** button.
   V and the current selected RF Channel value will be displayed. RF Channel 20 is the default value.
4. Press the **UP/DOWN** arrow button to select the desired RF channel.
5. Press the **DISPLAY** button to store the new RF Channel value.
   rF will display and the D1-529 will beep that the value needs to be stored.

Ping Device (Pn6)

Use Pn6 to ping another device.

1. Press and hold °F|°C for 4 seconds to enter into service mode.
2. Press the **UP/DOWN** arrow button and select **Pn6** parameter.



3. Press the **DISPLAY** button.
   0 will be displayed.
4. Press the **UP/DOWN** arrow button to select the desired P5 address of the device you want to ping. After 4 seconds, the D1-529 will begin to send 4 commands, one after the other, to read the following from the device and display the read values.

410D - Read Device Type
410E - Read Major Version
410F - Read Minor Version
4145 - Read AGC Level. This will typically be 0.

Each time a reply is received from the read command, the D1-529 will beep. You need not to care about the values that appear. What is important is that you see the reply values appearing and the D1-529 beeping. This indicates the device getting pinged is replying.

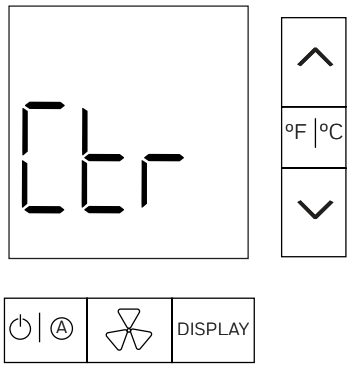
If the Address you defined in step 4 remains and you never hear the D1-529 beep, the D1-529 is not getting any replies the a device with the defined Address.

5. Press the **F/C** button to stop and return to Pn6.
6. Press **F/C** again to exit service mode.

Contractor Mode (Ctr)

Contractor mode configures the D-X47 to lock the upper and lower target temperature to 69-75 °F, disable motion only checkout and disables the unoccupied timeout.

1. Press and hold °F|°C for 4 seconds to enter into service mode.
2. Press the **UP/DOWN** arrow button and select **Ctr** parameter.



3. Press the **DISPLAY** button.
   oFF will appear on the display by default.

To enable Contractor Mode:

a. Press the **UP** arrow button to display on,
b. Press **DISPLAY** button.
   A message will be sent to the D-X47 partner to configure it into contractor mode. The D1-529 will beep, Ctr will appear on the display and OUTSIDE will start blinking on the display indicating that the change needs to be stored.
c. Press the **F/C** button.
   Str (store) will be displayed.
d. Press **DISPLAY** to store the change.
   The D1-529 and D-X47 will Reset.
   When the D1-529 starts up, it will display a **P** indicating it is in Contractor mode.

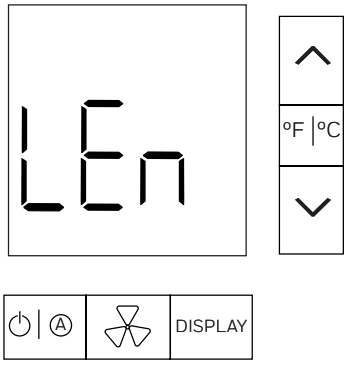
To Disable Contractor Mode:

a. Press the **UP/DOWN** arrow button if **on** is displayed, to change to oFF.
b. Press **DISPLAY** button.
   A message will be sent to the D-X47 partner to disable Contractor Mode. The D1-529 will beep, Ctr will appear on the display and OUTSIDE will start blinking on the display indicating that the change needs to be stored.
c. Press the **F/C** button.
   Str (store) will be displayed.
d. Press **DISPLAY** to store the change.
   The D1-529 and D-X47 will Reset. Contractor Mode is now disabled.

Limited Energy Management Mode LEn

LEM can be enabled in the D-X47 when an important or discriminating guest is checked into a room. A room placed in LEM mode uses expanded target temperature control bands (allows guests to select higher/lower than normal room target temperatures) and does not use larger temperature control bands when the room becomes unoccupied, or the room window or balcony door is open.

1. Press and hold °F|°C for 4 seconds to enter into service mode.
2. Press the **UP/DOWN** arrow button and select **LEn** parameter.



3. Press the **DISPLAY** button.
   on will appear on the display by default.
4. Press the **UP/DOWN** arrow button to select between **on** or **oFF**.

To enable LEM mode:

1. Select **on** and press **DISPLAY** button.
   The D1-529 will send a message to the D-X47 to enable LEM mode. If this was acknowledged the D1-529 will beep, - - - will appear, then LEn will appear again. LEM mode is enabled and will remain enabled for 72 hours. After 72 hours LEM mode will automatically be disabled. If the room gets unrented during this time, LEM mode will be disabled.

To enable LEM mode (without entering service mode):

LEM can also quickly be enabled without entering service mode by performing the following on the D1-529:

1. Press and hold the **DISPLAY** button.

2. Press and release the **POWER** button
3. Press and release the **UP** arrow button
4. Release the **DISPLAY** button.
   LEn will quickly appear in the display indicating LEM mode is active.

To disable LEM mode:

1. Select **oFF** and press **DISPLAY**.
   The D1-529 will send a message to the D-X47 to disable LEM mode. If this was acknowledged the D1-529 will beep, - - - will appear, then **nor** (normal) will appear. LEM mode is now disabled.

To disable LEM mode (without entering service mode):

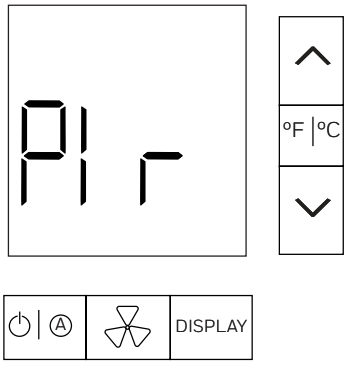
LEM can also quickly be disabled without entering service mode by performing the following button press sequence on the D1-529:

1. Press and hold the **DISPLAY** button.
2. Press and release the **POWER** button.
3. Press and release the **DOWN** arrow button
4. Release the **DISPLAY** button.
   nor (normal) will quickly appear in the display indicating LEM mode is disabled.

PIR Motion Sensor Test (Plr)

Use Plr to test the built in motion sensor in the D1-529.

1. Press and hold °F|°C for 4 seconds to enter into service mode.
2. Press the **UP/DOWN** arrow button and select **Plr** parameter.



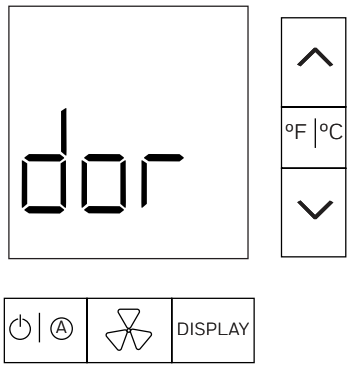
3. Press the **DISPLAY** button to start the test.
   V --- will appear on the display.
4. Walk around the room and if your motion is detected by the D1-529 motion sensor, the D1-529 will beep and display **Plr**. As long as you move around to different locations the D1-529 will beep continuously and display Plr.
   When the motion stops, the beeping will stop and the display will change back to V ---.
   The Plr test will timeout after 60 seconds.

Door Test (dor)

Use dor to test the reporting of room entry door position (if entry door monitoring is required/installed).

NOTE:
The D-X47 and the D1-529 must be powered, bound to the D1-529 and must have its P5 Door server enabled for the door test to work. There must be either a wired door switch connected to a low voltage input of the D-X47 or an S541.RF wireless battery powered door position sensor installed that has been bound.

1. Press and hold °F|°C for 4 seconds to enter into service mode.
2. Press the **UP/DOWN** arrow button and select **dor** parameter.



3. Press the **DISPLAY** button start the door test.
   V --- will appear on the display.
4. Open the door and the D1-529 will show door at the top of the display, dor and also beep.
5. Close the door and the beeping stops and the display will return to **V ---**.
   The door test will timeout after 60 seconds.

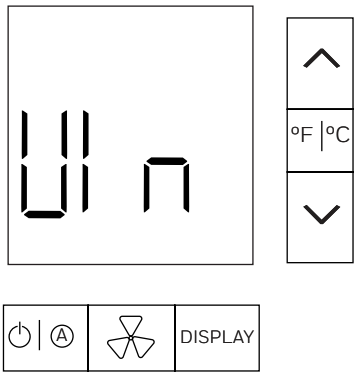
Window Test (Uln)

Use Uln to test the reporting of Window or Balcony position reporting.

NOTE:
There must be either a wired window/balcony switch connected to a low voltage input of the D-X47 or an S541.RF wireless battery powered door position sensor installed that has been bound. Refer to the section in the Io (I/O Map) service parameter section for steps to Bind the S541.RF using the D1-529 so that it reports Window/Balcony position.

1. Press and hold °F|°C for 4 seconds to enter into service mode.

2. Press the **UP/DOWN** arrow button and select **Uln** parameter.

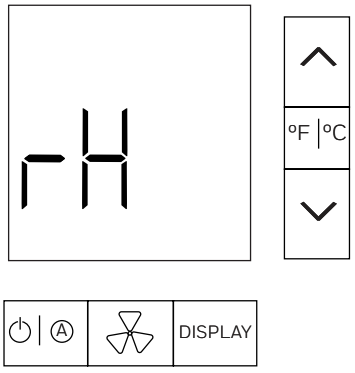


3. Press the **DISPLAY** button start the test.
   V --- will appear on the display.
4. Open the window/balcony door and the D1-529 will display the Balcony, Window, Lanai icons, display **bAL** and start beeping. Close the window/balcony and the beeping stops and the display will return to **V ---**. The windows test will timeout after 60 seconds.

Measured Room Humidity (rH)

Displays the humidity value detected by the built-in humidity sensor in the D1-529.

1. Press and hold °F °C for 4 seconds to enter into service mode.
2. Press the **UP/DOWN** arrow button and select **rH** parameter.



3. Press the **DISPLAY** button start the humidity reporting. V XX %RH will appear on the display, where XX is the measured humidity.
   The humidity test will timeout after 60 seconds.

Service Parameter SEr

This menu is used to make the D1-529 send a 0x00191000X00YY execute run parameter XX with value YY command to the D-X47 partner.

XX is the parameter and YY is the value.

Parameter	Value	Function
0	0	Reset the device
1	N/A	Boot IOMAP 1.
2	N/A	Boot IOMAP 2.
3	N/A	Boot IOMAP 3.
4	0...255	Boot IOMAP. The active IOMap will be set
5	0...999	Incremental reconfiguration. The operation performed will depend on the selected value.
255	N/A	

The most commonly used is Par 0 send Reset or Par 255 send factory reboot to the D-X47. Only use Par 1-5 if instructed to do so by INNCOM, as the D-X47 may not have these internal I/O Maps.

Parameter 0 Reset is the same as power cycling the D-X47. It does not reset any configurations in the D-X47. If you are getting abnormal behavior from the D-X47 you could try resetting it.

Parameter 255 factory reboots the D-X47. Factory booting the D-X47 reverts it back to Room ID 00001, resets any HVAC and fan speed settings to factory defaults, and erases the property key required to communicate with the D578 Edge Router. You will need to re-bind the D-X47 and D1-529. Go to the Replacing the D-X47 and start from step 2.

1. Press and hold °F °C for 4 seconds to enter into service mode.
2. Press the **UP/DOWN** arrow button and select **SEr** parameter.
3. Press the DISPLAY button.
   P and **0** will appear.

To reset the D-X47 partner:

a. Press the **POWER** button.
   V and 0 will appear. If the value is not 0 change it to 0 using **UP/DOWN** arrow button.
b. Press the **DISPLAY** button to execute and make the D1-529 send a 420 reset to the D-X47. If in front of the D-X47, you would see its DIAG LED rapidly blink as it Resets.

To factory Re-Boot the D-X47 partner:

a. Press the **UP/DOWN** arrow button to change the displayed value to 255.
b. Press the **POWER** button to display V and 0. If the value is not 0 change it to 0 using **UP/DOWN** arrow button.
c. Press the **DISPLAY** button to execute and make the D1-529 send a reboot to the D-X47. If in front of the D-X47, you would see its DIAG LED rapidly blink as it reboots.

Local D1-529 Settings (LoC)

The Loc (local) service menu provides access to local D1-529 settings. You will not have to access and use this menu. Only use if directed by an INNCOM technician.

Parameter	Function
0	Not used
1	Not used
2	Not used
3	PAN ID
4	Set radio transmission power
5	RF channel
6	Set D1-529 Local address
7	P5 Channel
8	Set HVAC Partner address

Parameter 3 is the current PAN ID used by the D1-529 and by default should always be 1. The only time this would need to be changed is if an additional D-578 edge router must be installed at the hotel. INNCOM customer service will contact you if this is required.

Parameter 4 is the current radio transmit power and is locked at 20 dB and cannot be changed.

Parameter 5 is the RF Channel used by the D1-529 and its D-X47 partner and by default is set to 20 and should not need to be changed. The only time it would need to be changed is if it is discovered that there are other RF transmitters at the hotel using the same frequency range as RF channel 20. INNCOM customer service will indicate if a different RF channel is required.

Parameter 6 is the default device address used by the D1-529 and is 13 and this should not need to be changed.

Parameter 7 is the P5 Channel should always be set to 1.

Parameter 8 is the address of the D-X47 partner and should always be 14 unless told otherwise.

To change any of these Parameters:

1. Press and hold F/C for 4 seconds to enter into service mode.
2. Press the **UP/DOWN** arrow button and select **Loc** parameter.
3. Press the **DISPLAY** button.
   P and 0 will appear.
4. Press the **UP/DOWN** arrow button to select the desired parameter number from the above table.
5. Press the **POWER** button to view the current value.
6. Press the **UP/DOWN** arrow button to change to the desired value.
7. Press **DISPLAY** button to store the change. The D1-529 will beep.
8. Press the **F/C** button 3 times to exit service parameter mode.

Run Menu Parameters rUn

The D1-529 has Run parameters that let you reset or reboot the D1-529 and perform a range of inroom tests. The PIR, Door, Window tests can also be performed as individual tests.

Parameter	Function
1	Reset
2	WAN Communication Test
3	Broadcast stored D1-529 PAN ID and Network ID
4	Boot the D1-529
6	Display Firmware version
11	Run PIR sensor test
12	Run Door test
13	Run Window test
14	Remote PIR test
16	Delegate bind
23	Temperature Sensor Test
24	Humidity Sensor Test
25	Light Level Sensor Test
26	Display Raw battery level
255	Reboot Factory

Parameter 1 Reset: Reset the D1-529

Parameter 2 WAN Test: Allows you to execute a communication test where a message is sent from the D1-529 through its D-578 edge router to Niagara and back to the room to the D1-529 and scroll the Room ID value indicating the particular room is online. As of 4/2024 this test is not supported, but may be added in the future.

Parameter 3 Broadcast the PAN ID and Network ID into the room. Makes the D1-529 send a This is a legacy feature brought over from the previous E529 battery thermostat and is not used currently for the D1-529.

Parameter 4: Boots the D1-529 back to factory default settings room ID 00001, PAN 1, RF Channel 20.

Parameter 6: Display firmware version. Displays the 4 digit version of firmware loaded into the D1-529. Bl followed by the 4 digits (separated by ---) will scroll across the display.

Parameter 11: PIR test. Same as the Pir test executed from the main menu.

Parameter 12: door test. Same as the dor test executed from the main menu.

Parameter 13: window/balcony test. Same as the Uln window/balcony test executed from the main menu.

Parameter 14: Remote PIR Test. Does not process motion events from the built-in D1-529 motion sensor, but watches for any 0x000351 motion active or 0x000350 motion stopped messages sent from another INNCOM device in the room that has a motion sensor connected.

Parameter 16: Delegate Bind. Makes the D1-529 send a 0x00113 Open Bind Window command to a device that doesn't have a user interface that would normally be used to open its bind window. This is used for binding RF locks to a non-thermostat lock proxy device such as the PC502.4G. RF locks are not supported for INNCOM Direct and the D1-529/D-X47. However, in the future the D1-529 may replace the existing E529.4G which is used occasionally to do the lock binding.

1. Press and hold  for 4 seconds to enter into service mode.
2. Press the **UP/DOWN** arrow button and select **Adr** parameter.
3. Press **DISPLAY** button.
4. Press the **UP/DOWN** arrow button to define the lock address Address (65-Timelox,67-SAflok,69-Salto)
5. Press the **F/C** button to exit back the main Adr menu.
6. Go back to the **rUn** parameter,
7. Press **DISPLAY** button and P 1 will appear.
8. Press the **UP** arrow button until P 16 (Delegate Bind) is selected.
9. Press the **POWER** button to view the value. V and 0 will be displayed. Change the displayed value to the Address of the device that you want to open the Bind Window. For example if it is a PC502.4G with address 227, set the value to 227.
10. Press the **DISPLAY** button to make the D1-529 send a 0x000113 Open Bind window command to the defined device address.
    The device start a 2 blink every second blink pattern, indicating it has opened its 2 minute bind window.
11. Initiate the Bind of the Lock.

Parameter 23 Temperature Sensor Test. Displays the raw measured temperature from the D1-529 internal temperature sensor.

Parameter 24 Humidity Sensor Test. Displays the raw measured humidity from the D1-529 internal humidity sensor.

Parameter 25 Light Level Sensor Test. Displays the raw 0-255 light level reading from the D1-529 light sensor.

Parameter 26 Display Raw Battery Level. Displays the raw measured value of the 4 AA batteries scaled 0-255. 255 would be 4 new 1.5 volt AA batteries (6.0 volts, 100%). If value was 238 that would 5.6 volts, or 93%.

Parameter 255 ReBoot the D1-529

Accessing/Using the rUn menu:

1. Press and hold  for 4 seconds to enter into service mode.
2. Press the **UP/DOWN** arrow button and select **rUn** parameter.
3. Press the **DISPLAY** button.
   P and 1 will appear.
4. Press the **UP/DOWN** arrow button to select the desired parameter value for the particular rUn menu test.
5. Press the **DISPLAY** button to initiate.
6. Press the **F/C** button 2 times, to exit out of the rUn menu.

EEr – Read and Display NVRAM of D-X47

This can be used to display the values of the "cached" and "non-cached" NVRAM of the D-X47. This for advanced users such as INNCOM Application Engineering or customer service and this will not be covered in this document.

6r.A - CBL32 Registry Group 9 Thermo/HVAC Editor

The 6r.A (Registry Group 9Access) service parameter allows you to read and write CBL32 Registry 9:X in the D-X47 partner.

⚠ WARNING

This feature should ONLY be used by an experienced user. Changing CBL32 Registry values incorrectly in the D-X47 can disable features and end up rendering the D-X47 unusable.

1. Press and hold °F/°C for 4 seconds to enter into service mode.
2. Press the **DOWN** arrow button to select **6r.A** parameter.
3. Press the **DISPLAY** button.
   V and 9 will appear, indicating Registry Group 9 is selected.

NOTE:

You are supposed to be able to view / edit both 9:X and 7:X:Y Registry's in the D-X47. But as of 4/2024 there is only support for 9:1. You can select 9 or 7 using the Up/Down arrow button, but ONLY 9 is currently supported, so don't select 7.

4. With 9 selected, press the **DISPLAY** button and SET and 0 will appear.
5. Press the **UP/DOWN** arrow button to select the desired 9:X Key.
   For example, if you want to view 9:1 Occupancy, change the displayed value to 1.
6. Press **DISPLAY** when the desired 9:X key selected.
   The D1-529 will send a 0x0018C090X0000 Read Registry 9:X:0:0 Offset 0 command to verify the selected 9:X registry actually exists in the D-X47. If a reply is received, the D1-529 will beep and display **SET P 0**.
   If NO reply is received (meaning the selected 9:X registry does not exist in the D-X47), the D1-529 will display **nUL**.
   If the selected 9:X does exist and SET P 0 is displayed.
7. Press the **UP/DOWN** arrow button to select the desired 9:X:0 registry Offset then press the **POWER** button to read the value. If a reply is received the D1-529 will beep and display V XX , where XX is the value in decimal of the read registry offset.
   For example, you want to read 9:1:0:8 Min_GuestOccupancyTimeout. Set the value to 8 and press the POWER button. The D1-529 would send a 0x0018C09010008 Read command to the D-X47. If the reply is received and it is 10 (10 minutes) for example, V 10 will be displayed.
8. Press the **UP/DOWN** arrow button if you want to change the value to select the desired value.
9. Press **DISPLAY** button.
   The D1-529 will send a 0x0018D09XXYYZZ write Registry command to the D-X47 to write the selected value. IF the write was acknowledged, the D1-529 will beep, and reset back to displaying 6r.A.

This is actually a known issue. The D1-529 should just remain displaying V XX, the value you just wrote. But, it resets back to

Address Parameter (Adr)

Use the Adr parameter to set the address of a target device while at the same time Bind the target device's radio (if applicable) to the D1-529's current RF Room ID, PAN ID and RF Channel.

NOTE:

Note: The D1-529, in addition to being the partner to the D-X47 in an INNCOM Direct installation, can also be used for other applications, such as a battery powered generic commissioning tool to Bind and Test other INNCOM devices.

1. Press and hold °F/°C for 4 seconds to enter into service mode.
2. Press the **UP/DOWN** arrow button and select **Adr** parameter.
3. Press **DISPLAY** button to view the value.
   0 will appear by default.
4. Change value to the Address the target should adopt.
   For INNCOM Direct you will be binding the D-X47 to address 14, so select address 14. If binding an RF Saflok lock, use address 67. (If binding a Salto or Timelox/Vingcard RF lock, refer to the rUn parameter 16 >Delegate Bind section

If configuring an address in a D-X47, CBL32 PC502.4G,CBL32 D454, CBL32 X4, RF Saflok lock or similar device that does not have front facing buttons, controls or user interface, do nothing else on the D1-529.

These devices use a "Reverse Bind" where you initiate configuration from the target device by pressing a button on the target or use an "Enable" card (Saflok RF Lock) to make the device send a Bind Request.

1. Press the Bind switch on the target D-X47 or other device or for a Saflok RF lock use the RF enable/bind card, to make the target send a 0x00110 Bind Request.
   Upon seeing the Bind Request from the device, the D1-529 will broadcast an RF Teach/Bind and P5 0x00112 Layer-X Bind command containing the defined Address and RF parameters. Any device with a radio will directly process the RF Teach command. Any S5-bus device connected to an existing RF device will process the P5 0x00112 Layer-X Bind command once it has been "media gateway'ed" from RF onto the S5-bus.
   If the target received the command, it should adopt the defined settings and address and RESET. On

startup, the target device should broadcast a "0x00031" Sound Buzzer VFI. If the D1-529 receives this it will beep as feedback that the bind was successful.

If configuring a CBL32 Evora or Modeva, CBL8 S217.RF or L208.RF, or any CBL8 S5 bus device, these get configured with a "Forward Bind" where you initiate the bind/configuration from the D1-529:

1. Prepare the target device:
   - For any CBL32 device that uses a forward bind, place the target device into "Ready to Teach" mode by pressing a button on the target 2 times quickly (Tap-Tap), then press the button for 4-7 seconds. This depends on the target device however and its software revision. Refer to applicable commissioning documentation if in doubt. The button LED's on the device should begin to blink once/minute.
   - For an CBL8 S217.RF, L208.RF or other CBL8 RF device, press a button on the device 3 times (tap-tap-tap) to put the device into "Ready to Teach mode. There will be no visible feedback.
   - For S5-bus connected , non-RF CBL8 devices, they do not need to be placed into a "Ready to Teach" mode.
2. Press **DISPLAY** button on the D1-529 The D1-529 will send an RF Bind/Teach and a 0x0004B P5 Address Teach command.
   If the target device received the RF Bind/ Address Teach command:
   - For any CBL32 device, the button LEDs will begin to flash 2 times/second.
   - For a CBL8 S217.RF, L208.RF or other CBL8 RF device or S5-bus connected, non-RF CBL8 devices the button LEDs will begin to blink rapidly.
3. Accept the Bind/Teach on the target:
   - For any CBL32 device, press a button on the device 2 times quickly (Tap-Tap), then press the button for 4-7 seconds to accept the Bind. The CBL32 device should RESET and broadcast a "0x00031" Sound Buzzer VFI. If the D1-529 receives this it will beep as feedback that the bind was successful.
   - For a CBL8 S217.RF, L208.RF or other CBL8 RF device or S5-bus connected, non-RF CBL8 devices press any button on the device to accept the bind/configuration. The device should RESET, but will not provide any audible feedback.

IO Map Parameter (Io)

Use the Io parameter to activate an IO Map in a target while at the same time Bind the target device's radio (if applicable) to the D1-529's current RF Room ID, PAN ID and RF Channel.

Enter Service Parameter Mode if not already there.

IMPORTANT:
First go to the Adr parameter and press DISPLAY to view the current Adr parameter value. If a non-zero value is currently stored in the Adr parameter, the RF Bind command sent to configure an I/O map will also set the defined address into the target. Change the displayed Adr value to 0 and press F/C button if you do not want an address defined in the Bind command that gets sent.

If you want to set an address and I/O map at the same time, change the Adr parameter value to the desired address and press F/C button.

NOTE:
You will typically never do this because most I/O Maps set an address. Setting an address and I/O Map at the same time is typically ONLY done when binding a micro-CBL RF K594/K595 motion sensor or S541.RF configured for balcony door where you have several of these devices installed in the same room and you want to give each a unique address.

1. Press and hold °F/°C for 4 seconds to enter into service mode.
2. Press the **UP/DOWN** arrow button and select **Io** parameter
3. Press **DISPLAY** to view the value.
   0 will appear by default.
4. Change to the desired I/O Map the target should adopt.

If configuring an I/O map in a D-X47, CBL32 PC502.4G, CBL32 D454, CBL32 X47, S541.RF, K594/K595.RF or similar device that does not have front facing buttons, controls or user interface, do nothing else on the D1-529.

A "Reverse Bind" is used for these devices where you initiate configuration from the target device by pressing a button to make the device send a Bind Request.

1. Press the Bind switch on the target device, to make the target send a 0x00110 Bind Request.
   Upon seeing the Bind Request the D1-529 will broadcast an RF Teach/Bind and P5 0x00112 Layer-X Bind command containing the defined I/O Map and RF parameters. Any device with a radio will directly process the RF Teach command. Any S5-bus device connected to an existing RF device will process the P5 0x00112 Layer-X Bind command once it has been "media gateway'ed" from RF onto the S5-bus.

If the target received the command, it should adopt the defined settings and I/O Map and RESET. On startup, the target device should broadcast a "0x00031" Sound Buzzer VFI. If the D1-529 receives this it will beep as feedback that the bind was successful.

If configuring a a CBL32 Evora or Modeva , CBL8 S217.RF or L208.RF, or any CBL8 S5 bus device, these get configured with a "Forward Bind" where you initiate the bind/configuration from the D1-529:

1. Prepare the target device:
   - For any CBL32 device that uses a forward bind, place the target device into "Ready to Teach" mode by pressing a button on the target 2 times quickly (Tap-Tap), then press the button for 4-7 seconds. This depends on the target device however and its software revision. Refer to applicable commissioning documentation if in doubt. The button LED's on the device should begin to blink once/minute.
   - For an CBL8 S217.RF, L208.RF or other CBL8 RF device, press a button on the device 3 times (tap-tap-tap) to put the device into "Ready to Teach mode. There will be no visible feedback.
   - For S5-bus connected\, non-RF CBL8 devices, they do not need to be placed into a "Ready to Teach" mode.
2. Press **DISPLAY** button on the D1-529. The D1-529 will send an RF Bind/Teach and a 0x00104 P5 I/O Map Teach command.
   If the target device received the RF Bind/ I/O Map Teach command:
   - For any CBL32 device, the button LEDs will begin to flash 2 times/second
   - For a CBL8 S217.RF, L208.RF or other CBL8 RF device or S5-bus connected non-RF CBL8 devices the button LEDs will begin to blink rapidly.
3. Accept the Bind/Teach on the target:
   - For any CBL32 device , press a button on the device 2 times quickly (Tap-Tap), then press the button for 4-7 seconds to accept the Bind. The CBL32 device should RESET and broadcast a "0x00031" Sound Buzzer VFI. If the D1-529 receives this it will beep as feedback that the bind was successful.
   - For a CBL8 S217.RF, L208.RF or other CBL8 RF device or S5-bus connected, non-RF CBL8 devices press any button on the device to accept the bind/configuration. The device should RESET, but will not provide any audible feedback.

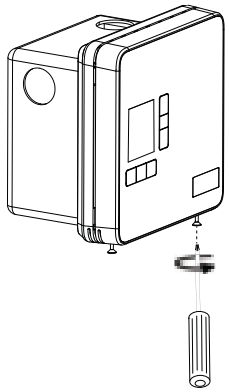
REPLACING D1-529 AND D-X47

This section provides information for replacing a D1-529, and DX47 that were previously installed and working but require replacement.

Replacing the D1-529

NOTE:
You will need access to the D-X47 partner to press its Bind button.

1. Remove the 2 screws that affix the D1-529 to the mounting plate, lift upward and pull the D1-529 off the mounting plate.



2. Insert the 4 AA batteries into the new/replacement D1-529 and replace the D1-529 onto the mounting plate and install the 2 screws.
3. If replacing with an existing, already initialized and configured D1-529 (i.e., from another room or from spare which have previously been configured and it is displaying Set and a temperature value), reboot the D1-529 to initial factory state:
   a. Press the **F/C** button for 4 seconds.
      The display will change to rid indicating service mode is entered.
   b. Press the **UP/DOWN** arrow button and select **rUn** service parameter.
   c. Press **DISPLAY** button.
      P and 1 will be displayed.
   d. Press the **Down** arrow button until 255 is displayed.
   e. Press **DISPLAY** button to initiate the reboot. It will take a short time for the D1-529 to start up after the re-boot. rld will appear on the display.

Now with either a new D1-529 or the one you just factory booted, rld should be displayed on the D1-529.

4. Press the **DISPLAY** button.
   The default 5 digit Room ID value (00001) will scroll across the screen from highest to lowest (left most to right most value).

NOTE:

Note that the five-digit number is comprised of three fields: highest digit, middle two digits, lowest two digits.

Scrolling will stop at the highest digit first. The default value 0 with HI will be displayed.

5. Press the **UP/DOWN** arrow button to set the value (range is 0-6).
6. Press **POWER** to continue.
   The next 2 digits of the Room ID will displayed. 00 and MED will appear.
7. Press the **UP/DOWN** arrow button to set the value (range is 0-99).
8. Press **POWER** to continue.
   The last 2 digits of the Room ID will be displayed. 01 and LOW will appear.
9. Press the **UP/DOWN** arrow button to set the value (range is 0-99).

NOTE:

Press the **POWER** button to cycle between the HI, LOW and MED values.

10. Press **DISPLAY** to store the value, when the desired Room ID is defined.
    The D1-529 will beep and the new Room ID number scrolls across the display.Once the scrolling is completed, **Ptr** (Partner) will appear.
11. Press the **DISPLAY** button. 0 will appear.
12. Press the **DISPLAY** button again **bnd** will start to blink on the D1-529 display.
13. Press the Bind button using a small point (e.g., the end of a straightened paper clip), on the D-X47 to send a reverse bind request.

NOTE:

If you don't initiate the reverse bind from the D-X47 within 60 seconds, Err will appear on the D1-529. You will have to press the **DISPLAY** button again to initiate the D1-529 for a Bind request from the D-X47.

If the D1-529 receives the bind request from the D-X47, it will beep and the D-X47 will reset. The green Diag LED on the D-X47 will blink rapidly for several seconds. The D1-529 will ping the D-X47 and beep if it gets a reply.

14. The D-X47 will reset the new D1-529 after it has powered up, and you should see the D1-529 reset and hear it beep 1 time.
    The new D1-529 should now be ready to use to control the D-X47. No action is required to teach the D1-529 the property specific security key. It will be automatically transferred to the D1-529 from the D-X47.

Replacing the D-X47

1. Remove power and any other wiring connections to the D-X47 getting replaced.
2. Install and power the new/replacement of the D-X47.

NOTE:

The D1-529 partner must be installed and powered in the room.

3. Remove the cover of the D-578 Edge Router.
4. Press the **Blue bind** button 6 times (press-press-press-press-press-press) to place it into key deployment mode.
   The red D3 LED will begin to blink rapidly.

NOTE:

The D-578 Edge Router will remain in key deployment mode for 10 hours, but you can exit the D-578 Edge Router out of key deployment mode after configuring the new D-X47 by pressing the Blue bind button switch 6 times again.

5. Press and hold °F/°C for 4 seconds on the existing D1-529 to enter into service mode.
6. Press the **UP/DOWN** arrow button and select **Adr** service parameter.
7. Press **DISPLAY** button.
   A number (typically 0) will appear.
8. Press the **UP** arrow button and select 14 (the address to teach the D-X47), then do nothing else on the D1-529.
9. Press the Bind switch on the D-X47 to initiate a reverse bind with the D1-529.
   The following sequence should happen:
   - The D-X47 will send a bind request to the D1-529 and the D1-529 will send a bind offer back to the D-X47.
   - If the D-X47 received the bind offer, it should RESET. On startup it will send a message to the D1-529 to make it beep as indication that the 2 are bound. Now the D-X47 is using the same Room ID and RF Channel as the D1-529 and they can communicate with each other.
   - The D-X47 will get assigned the property key from the D-578 Edge router when it is started after the RESET. This is why you had to first place the D578 into key deployment mode.
   - The D-X47 reboots the D1-529. The D1-529 display will go blank for a short time, **rld** will appear on the D1-529 since it is now in initialization mode.
10. .Perform the Initial Configuration of the D1-529.
11. Press the Blue bind button switch on the D-578 Edge router 6 times (press-press-press-press-press-press) to exit the out of key deployment mode.

TROUBLESHOOTING

Cannot bind the D1-529 and D-X47 during initial installation or while replacing a D1-529/D-X47

When you press the Bind button on the D-X47, the display on the D1-529 continues to blink bnd. You never hear a beep from the D1-529 and the D-X47 never resets.

Why are you trying to Bind the D1-529 and D-X47? Is this during initial installation with un-initialized devices and you just defined the Room ID in the D1-529, or are you trying to replace an already installed D-X47 with a new one?

If Doing the Initial Installation:

- Is the D-X47 actually powered? Is the Green DIAG LED blinking?
- Does the D1-529 have fresh batteries? Is the Low Battery symbol appearing on the upper left on the D1-529 display? If so replace with new batteries and try binding again.
- Did you actually press the recessed D-X47 Bind button? Make sure the paper clip or other tool being used to press the recessed D-X47 bind button is long enough.
- Is the Antenna correctly and fully connected to the Antenna connector on the D-X47? Make sure the antenna is fully connected to the D-X47 antenna connector. Was the antenna extension coax cable used to place the antenna outside of the HVAC unit enclosure and are all of the connections tight?
- Is the D-X47 mounted inside of a metal HVAC enclosure that could be shielding the RF signals between the D1-529 and D-X47? Was the antenna extension coax cable used to place the antenna outside of the HVAC unit enclosure? If not, use the antenna extension coax cable to place the antenna outside of the metal enclosure.
- Is the D-X47 simply too far away from the D1-529? The D1-529 is battery powered, so as a test, just move the D1-529 closer to the D-X47 and see if you can then Bind the D1-529 and D-X47. If you can now bind, you need to determine why moving the D1-529 closer to the D-X47 worked. Is the D-X47 mounted in a metal enclosure and you need to use the external antenna? Do the 4 AA batteries in the D1-529 need to be replaced?
- Has the D1-529 display changed to show Err ? If you don't bind the D1-529 and D-X47 with 60 seconds of placing the D1-529 into Reverse Bind mode (ie its blinking bnd), the D1-529 will display Err and stop watching for a bind request from the D-X47. Press the DISPLAY button again on the D1-529 to get bnd blinking again on the D1-529, then go to the D-X47 and press its Bind button again.

Trying to Replace the D-X47:

- Did you go to the D1-529 Adr parameter, press DISPLAY, set the value to 14, THEN press the recessed Bind button on the D-X47 to initiate the bind? When replacing an existing D-X47, you need to first get the new D-X47 set to the same Room ID, PAN ID and RF Channel as the D1-529. Refer to the "Replacing a D1-529 or D-X47" section of this document.
- Is the replacement D-X47 actually powered? Is the Green DIAG LED blinking?
- Did you actually press the recessed D-X47 Bind button? Make sure the paper clip or other tool being used to press the recessed D-X47 bind button is long enough.
- Is the Antenna correctly and fully connected to the Antenna connector on the new D-X47? Make sure the antenna is fully connected to the D-X47 antenna connector. Was the antenna extension coax cable used to place the antenna outside of the HVAC unit enclosure and are all of the connections tight?
- Is the D-X47 mounted inside of a metal HVAC enclosure that could be shielding the RF signals between the D1-529 and D-X47? Was the antenna extension coax cable used to place the antenna outside of the HVAC unit enclosure? If not, use the antenna extension coax cable to place the antenna outside of the metal enclosure.
- Is the D-X47 simply too far away from the D1-529? The D1-529 is battery powered , so as a test, just move the D1-529 closer to the D-X47 and see if you can then Bind the D1-529 and D-X47. If you can now bind, you need to determine why moving the D1-529 closer to the D-X47 worked. Is the D-X47 mounted in a metal enclosure and you need to use the external antenna? Do the 4 AA batteries in the D1-529 need to be replaced?
- Has the D1-529 display changed to show Err ? If you don't bind the D1-529 and D-X47 with 60 seconds of placing the D1-529 into Reverse Bind mode (i.e., its blinking bnd), the D1-529 will display Err and stop watching for a bind request from the D-X47. Press the DISPLAY button again on the D1-529 to get bnd blinking again on the D1-529, then go to the D-X47 and press its Bind button again.

D1-529 thermostat is not controlling the D-X47 locally in a room

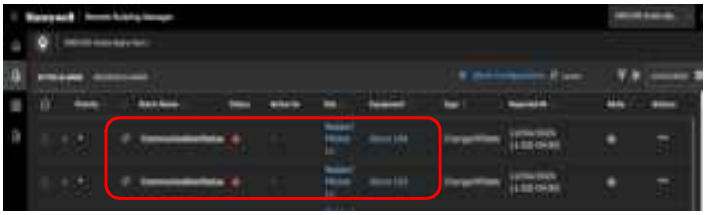
Locally at the D1-529 the guest tries to raise or lower target temperature, change the A/C mode, or cycle through the fan speeds and get no response or the incorrect response from the D-X47 HVAC controller.

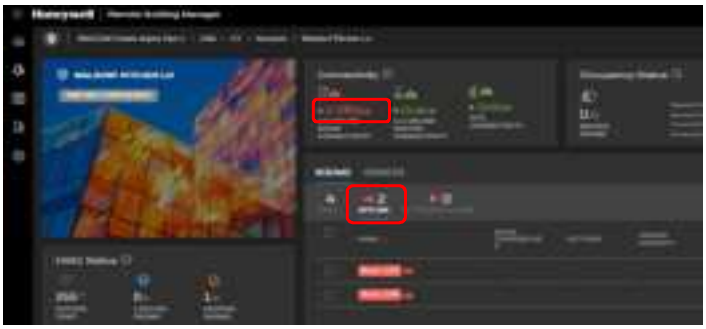
Possible Reasons:

1. The D1-529 battery thermostat is not communicating with its D-X47 HVAC controller partner in the room.

If you don't have access to the room, but do have access to the Niagara RBM (Remote Building Manager) website for the hotel, is there an Offline Communication status alarm for the room? Or is the room showing offline on the Rooms Summary Tab?

Rooms 103 and 104 are showing this in the below images.





If the room is Offline in RBM, that means Niagara is not seeing any information about the room from the D-X47 HVAC controller/Room Gateway installed in the room. You will need to visit the room and verify the D-X47 is powered and installed and configured correctly, or determine if it has an issue and replace if necessary.

If you have access to the room, look at the display on the D1-529 for a dot in the lower right corner. If the D-X47 is powered and set to the same Room ID, PAN ID, RF Channel as the D1-529 and the D1-529 and D-X47 are communicating, there should be a dot in the lower right corner of the D1-529.

If this Dot is present, the D1-529 and D-X47 are communicating.

For further verification in-room, you can Ping the D-X47 from the D1-529

a. Enter Service Mode on the D1-529 and go to the Pn6 (Ping) menu.
b. With Pn6 on the display, press the DISPLAY button. 0 will be displayed
c. Press the **Up or Down** arrow button to set the displayed value to 14, the address of the D-X47. Do nothing else.
d. After 4 seconds, the D1-529 will begin to send 4 commands, one after the other, over and over, to read the from the D-X47 and display the read values. Each time a reply is received from each read command, the D1-529 will beep. If you are seeing the 4 different values appear and hear the D1-529 beeping, the D1-529 and D-X47 are communicating and are bound correctly

If you see the communication dot on the D1-529 and can ping the D-X47 from the D1-529, the D1-529 and D-X47 are communicating. So if the room HVAC unit does not seem to be controlled by the D1-529/D-X47, it could be one of the following:

a. Was the D-X47 configured with the correct HVAC Type and Fan Speeds when it was initially installed? Or, was the D-X47 replaced recently and never had its HVAC Type and Fan Speeds set? You can try to re-do the initial configuration steps in the INITIAL CONFIGURATION section of this document and see if that resolves the issue.
b. Is the D-X47 10 pin HVAC harness correctly connected to the room HVAC unit? You can refer to the typical 24VAC HVAC type connections in this document or refer to any specific as-built drawings.

2. Do the batteries in the D1-529 need to be replaced? If the battery level in the D1-529 gets too low, it will not communicate reliably with the D-X47 partner.

If you have access to the room, look at the D1-529. Is its display ON and showing values, or is it blank? If its OFF/blank, either the 4 AA batteries are dead and need replaced, or they are not inserted correctly. Replace the batteries or make sure they are inserted correctly.

If the Display is on and showing information, is the Low Battery symbol on in the upper left corner? If it is, replace with new, fresh AA batteries and now see if the D1-529 and D-X47 will communicate.

3. Has the D1-529 or D-X47 been replaced recently and was it configured with the hotel specific property key?

If either the D1-529 or D-X47 was recently replaced, did you go to the D-578 Edge Router and place it into Property Key Distribution mode before or after you replaced the D1-529 or D-X47 to allow them to obtain and start using the property key?

Refer to the "Replacing D1-529 And D-X47" section for details.

Changes done via RBM, does not appear in the room D1-529 Thermostat

For example, you change the Room Temperature Setpoint, or Fan Speed or A/C Mode for the room in RBM, but you do not see these changes immediately update on the D1-529 in the room.

1. When you make a change from RBM, the change gets immediately sent to the D-X47 controller in the room and the D-X47 outputs controlling the room HVAC unit will change immediately. But, that change is not immediately sent to the D1-529. To conserve battery

life in the D1-529, the D1-529 goes into a low power mode and "wakes up" every 10 minutes and requests any updates from its D-X47 partner, so you will not immediately see the D1-529 update its display when you make a change from RBM.
When you make a change locally at the D1-529, i.e., change the target temperature set point for example, the D1-529 immediately wakes up and forwards the change to its D-X47 partner, and the D-X47 reports the change to RBM and you should see this update for the room in RBM within a few seconds.

2. The D1-529 is not correctly bound to the D-X47 in the room, or is having trouble communicating the D-X47. Since the D1-529 is battery powered, you can't interrogate it or send it a command from RBM to see if its powered and communicating. The only option is to visit the room and troubleshoot.

- Is there a dot in the lower right corner of the D1-529 display?
- If this dot is not present, the D1-529 and D-X47 are not communicating. Enter Service Mode on the D1-529 and verify the Room ID, PAN ID and RF Channel in the D1-529 are correct (and the same as what the D-X47 should be using). If these settings are not correct, find out why and correct. Was the D1-529 recently replaced and not configured correctly? Refer to the "Replacing a D1-529 or D-X47" section in this document for the steps to correctly replace a D1-529.
- Is the Low Battery icon being displayed in the upper left corner of the D1-529? A low battery could affect the ability of the D1-529 and D-X47 to communicate properly. If so, replace the 4 AA batteries in the D1-529 and see if the D1-529 now updates correctly.

You cannot control the D1-529 or D-X47 from RBM

If All rooms:

1. Verify the Niagara Service is running on the INNCOM server PC (initial INNCOM Direct installations) or on the Niagara JACE hardware (future versions of INNCOM Direct). Start the Niagara service if it is not running and see if this brings the rooms online. If not sure how to check this, contact INNCOM customer service.

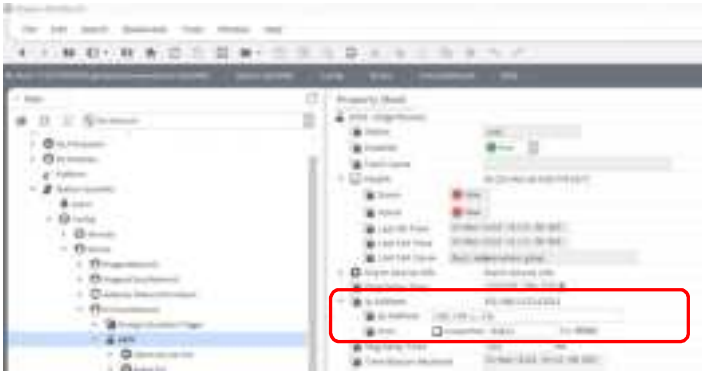
2. Verify your property site is online in Honeywell RBM and that the D-578 Edge Router is connected and communicating. Verify the PC you are using has an Internet connection. Log into the Honeywell RBM, select your hotel/property and verify the Site and D-578 Edge router indicate Online in the "Connectivity" section. If not sure how to open or log into Honeywell RBM contact INNCOM customer service.

If the site is Online but the D-578 edge Router is Offline, this means the Niagara service is running on the INNCOM server PC or JACE box and is connected to Honeywell Forge, but the D-578 Edge Router is not communicating with Niagara.

1. Verify the D-578 is powered and connected to the required network switch port. The D-578 can be powered by 12 VDC connected to the 12 VDC power jack on the D-578, or powered via the network cable connecting the D-578 to a PoE (power over ethernet) capable network switch port. When the D-578 is powered and connected to Niagara, you should see the Yellow D4 LED rapidly blinking indicating it has connected Niagara.

If it is blinking 4 times every 2 seconds, its powered but has not connected to the Niagara service. Check the following:

- Is the D-578 correctly connected to the network switch port? Is the network cable connected between the D-578 network jack and the required switch port
- By default, the D-578 is configured for DHCP to automatically obtain its IP address from the hotels DHCP server. Is this DHCP server enabled on the network being used?
- If the hotel does not have a DHCP server on its network, contact INNCOM customer service. INNCOM can provide a free to use DHCP client.
- Can you Ping the D-578's IP address with a DOS Ping command. You can obtain what is supposed to be the D-578's IP address from Niagara Workbench from Station > Config > INNCOMNetwork > Edge Router Name (AE50 in this example), and open the properties sheet to view the details.
- It is 193.168.1.131 in the below example. Contact INNCOM customer service if you are not sure how to check this.



- If neither D3 or D4 LEDs are ever on or blinking, the D-578 is either non-functional or does not have power. Investigate the power source or replace the D-578.

If the site is Online and the D-578 is Online, but no rooms are communicating, was the D-578 replaced or Factory booted?

If the D-578 gets replaced with a new D-578 or you were directed to factory re-boot the D-578 by INNCOM customer service, when the D-578 starts up it will be using its default factory Global security key.

All of the installed D1-529/D-X47's will still be using the property specific security key that was assigned to them from the previous D-578. Therefore, you must go to the new D-578, remove the cover and place it into key deployment mode by pressing the blue Bind button 6 times (press-press-press-press-press-press). The D3 Red LED will being to rapidly blink indicating it is in key deployment mode.

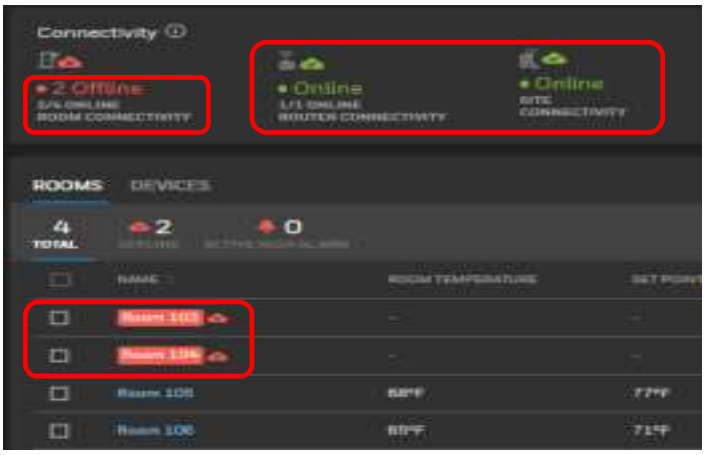
The D-578 will begin to broadcast its new site specific property key to all of the D-X47's. Each D-X47 will immediately begin to use the new key when it receives it from the D-578 and should start communicating. If looking at RBM on the Summary Dashboard, you should begin to see the rooms come back online as the D-X47's report in using the new key.

It will take another few minutes before you can use the D1-529 to make changes to control the D-X47 and see the change appear for the room(s) in RBM. The D-X47 must send the new key to the D1-529 before the D1-529 and D-X47 will communicate with each other.

The D-578 will remain in key deployment mode for 10 hours then turn off key deployment mode. The D3 Red LED will stop blinking.

If just 1 or a few rooms are offline:

If some rooms are online and controllable from RBM and other rooms are not, that means the Niagara service is running on the Inncom server (or JACE controller) so the Site should indicate Online and the D-578 Edge Router is powered and running and should be Online.



For the room(s) that are not communicating, this could be because:

- The D-X47 in the room(s) is not powered.
- The D-X47 will typically be powered from 24VAC from the connected HVAC unit. Does the HVAC unit in the room(s) have power, or has something happened to the wiring connections to the 10 Pin harness connected to the D-X47(s). Visit the room and check.
- If looking at the D-X47, is its Green DIAG led blinking, indicating it has power.
- The D-X47(s) was recently replaced in the room(s) and was not correctly installed or configured.
- Verify the steps in the "Replacing D1-529 And D-X47" section of this document were done correctly. In particular, if you replaced the D-X47, the new D-X47 must receive its property specific key from the D578 edge router in order to communicate through the D578 Edge Router to RBM, and you have to initiate that at the D578 by pressing the bind button 6 times.
- When the D-X47 was replaced, was the antenna correctly connected back to the D-X47.
- The Site specific security key was changed recently and the D-X47(s) in the offline room(s) have never been updated with the new key.
- If the D-X47(s) was offline when the property specific key was changed, you will need to place the D-578 edge router into key distribution mode again and make sure these D-X47s are powered so that they will accept and start using the new security key.

RESETTING AND REBOOTING THE D1-529 AND D-X47

To Reset the D1-529:

1. Press and hold °F/°C for 4 seconds to enter into service mode.
2. Press the **Down** arrow button to go to the rUn menu.
3. Press DISPLAY button.
   P and 1 will be displayed. If the displayed value is not 1, change it to 1using the **UP/DOWN** arrow button.
4. Press **DISPLAY** button to initiate the reset of the D1-529. The display will briefly show all of the LCD characters as the D1-529 resets.

To reboot the D1-529:

1. Press and hold °F/°C for 4 seconds to enter into service mode.
2. Press the **Down** arrow button to go to the rUn menu
3. Press **DISPLAY** button.
   P and 1 will be displayed.
4. Press the **Down** arrow button 2 times to change the displayed value to 255
5. Press **DISPLAY** button to initiate the reboot of the D1-529. The display will go blank for several seconds as the D1-529 reboots. **rId** will appear indicating the D1-529 has been factory booted.
   You will need to pair the D1-529 with its D-X47 partner.

To reset the D-X47:

1. Press and hold °F/°C for 4 seconds to enter into service mode.
2. Press the **Down** arrow button to go to the rUn menu.
3. Press **DISPLAY** button.
   P 0 will appear. Of is a different P value appears,
4. Press the **UP/DOWN** arrow button to change the displayed value to 0 .
5. Press the **POWER** button.
   V and 0 will appear. If the displayed value is not 0, change it to 0 using the Up/Down arrow button.
6. Press the **DISPLAY** button to execute. The D1-529 will beep and send a reset to the D-X47. The D-X47 green DIAG led will blink rapidly.

If required to reboot the D-X47:

1. Press and hold °F/°C for 4 seconds to enter into service mode.
2. Press the **Down** arrow button to go to the SEr menu.
3. Press DISPLAY button.
   P 0 will appear.
4. Press **Down** arrow button 2 times to select P 255.
5. Press the **POWER** button.
   V and 0 will appear. If the displayed value is not 0, change it to 0 using the Up/Down arrow button.
6. Press DISPLAY to execute.
   The D1-529 will beep and send a reboot to the D-X47. The D-X47 green DIAG led will blink rapidly.

Rebooting the D-X47 defaults it to Room ID 00001 and erased any previous configurations. You will need to pair the D1-529 again.

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