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LENNOX V0CTRL95P-3 Mini Split BACnet Gateway

Specifications

- **Function:** Input Supply Power
- **BACnet Connection:** 24VAC
- **I/O:** 25% ~ 90%
- **Operating Temperature Range:** 10-1/2 in. X 10 in. X 2-3/8 in. (26 cm X 25 cm X 6 cm)

Product Usage Instructions

Network Setting

Connect the device to a network port using an Ethernet interface (Eth0). The factory-set device address is 192.168.1.8.

Security

- **Default Admin User Name:** admin
- **Default Admin Password:** 123456

System Connections

- The BACnet gateway can monitor and control up to 320 VRB & VPB VRF systems with up to 960 VRF outdoor units and 2560 VRF indoor units.
- Ensure proper connection based on the BACnet address, which identifies the BACnet gateway bus, unit type, and unit’s address.

Setup Instructions

1. Directly connect a PC network port to the gateway Ethernet connection.

2. Configure the PC network port with the proper settings.
3. Open a web browser and enter the IP address 192.168.1.8.
4. You will be prompted to enter the default admin name and password.
5. Once connected, follow the on-screen instructions to set up the Gateway on your BACnet network.

Equipment List

Package 1 of 1 consists of:

- 1 – BACnet gateway
- 1 – DIN rail
- 1 – Instruction and Application Guide

General Safety

- The Lennox VRF, Mini-VRF, and Mini-Split BACnet Gateway allows connection of those systems to a building management system (BMS) using BACnet protocols.
- Setup can be accomplished through the use of a web browser and a PC with a network port.
- **WARNING:** Improper installation, adjustment, alteration, service, or maintenance can cause property damage, personal injury, or loss of life.
- Installation and service must be performed by a licensed professional HVAC installer or equivalent, a service agency, or the gas supplier.
- **WARNING:** Do not operate the device with wet hands.
- **CAUTION:** Before attempting to perform any service or maintenance, turn the electrical power to the unit OFF at the disconnect switch.
- **CAUTION:** Do not install the device in areas where heavy oil, vapor, or gases containing sulfur may exist, or the controller may be damaged.
- **CAUTION:** Clean device using a clean, damp cloth. Do not spray cleanser on or around the device.
- **IMPORTANT:** These instructions are intended as a general guide and do not supersede local codes in any way.
- Consult the authorities having jurisdiction before installation. Read all of the information in this manual before operating this equipment.

Network Setting

- There is an Ethernet interface in the device (Eth0). The factory-set device address is 192.168.1.8.

Security

- **Default Admin User Name:** admin
- **Default Admin Password:** 123456

Specifications

Function	Description
Input Supply Power	24VAC
BACnet Connection	BACnet/IP
I/O	4-port 485 interface
Operating Temperature Range	32°F ~ 104°F (0°C ~ 40°C)
Operating Humidity Range (Rh)	25% ~ 90%
Dimensions	10-1/2 in. X 10 in. X 2-3/8 in. (26 cm X 25 cm X 6 c m)
DIN Mounted	

- The V0CTRL95P-3 Lennox BACnet gateway can monitor and control up to 320 VRB & VPB VRF sys-tems with up to 960 VRF outdoor units and 2560 VRF indoor units.
- See Appendix A. All Lennox VRF P3 outdoor and indoor units can be connected to the V0CTRL95P-3 Lennox BACnet gateway. See the LVM and BACnet Gateway installation man-ual (507897) for instructions for detailed connection information.

System Connections

The BACnet address is a four-digit number that identifies the BACnet gateway bus (port), the type of unit (indoor unit or outdoor unit), and the unit’s address. Device ID = XXXX

X	**X**		**X**	**X**
BACnet Bus (Port) Number		Unit Type	Unit Address	
(0-3)	0	Indoor Unit	(Indoor Unit 0-63) (Outdoor Unit 0-31)	
	1	Outdoor Unit		

- **Example** – 0001 indicates BACnet device number 0, indoor unit type, and indoor unit number 01.
- Direct connect with PC from PC network port to the gateway Ethernet connection – Configure PC network port with the proper settings and use a web browser to connect – enter the IP address 192.168.1.8 and you will be prompted to enter name/password.
- Once connected, you will see the options for setting up the Gateway to reside on your bacnet network.
- Once connected, you will see the options for setting up the Gateway to reside on your bacnet network.
- **User name** = admin
- **User Password** = 123456

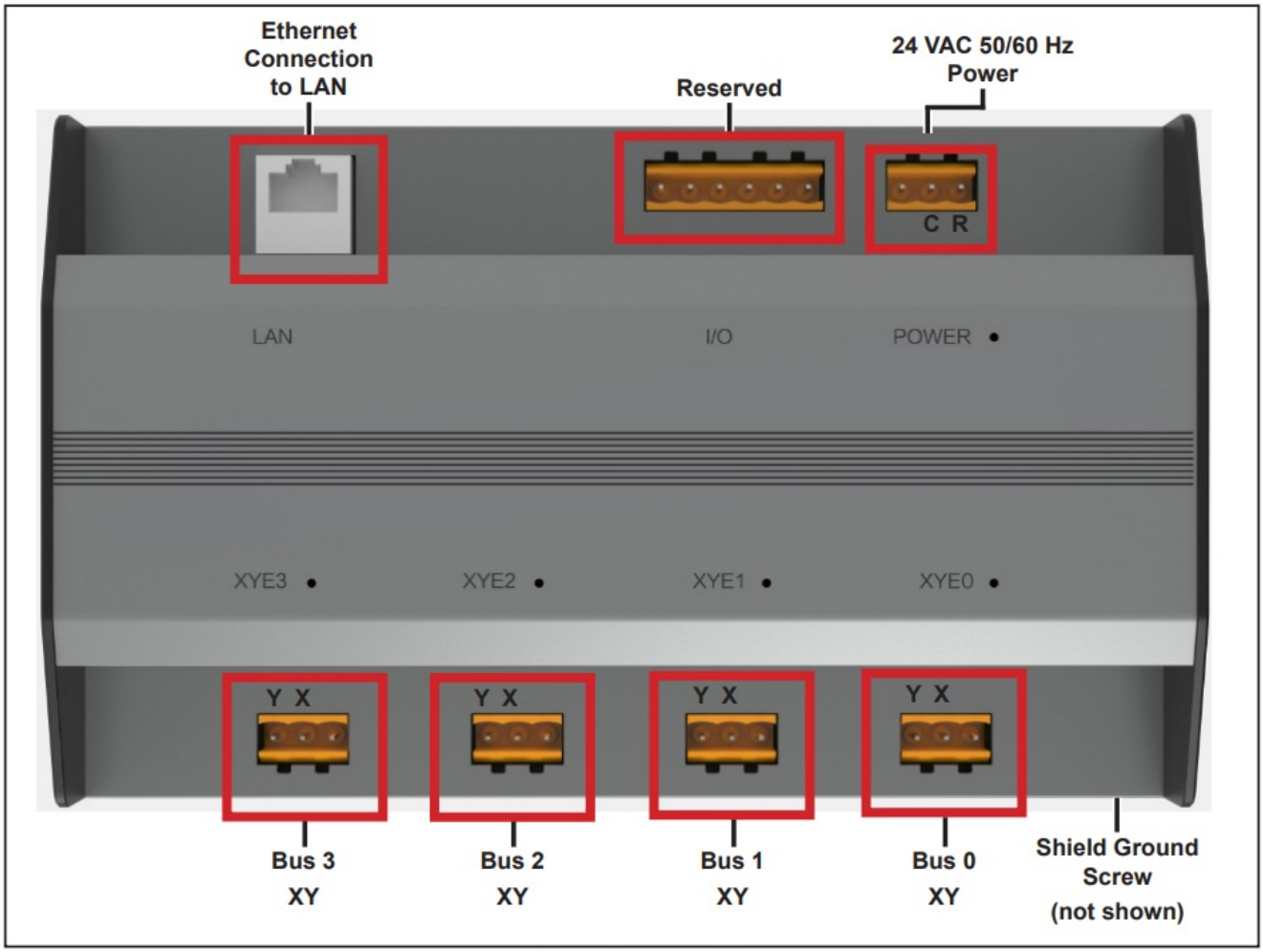


Figure 1. VRF BACnet Gateway Connection Points

Object Type	**Abbreviation**
Analog Input	AI
Analog Output	AO
Analog Value	AV
Binary Input	BI
Binary Output	BO
Binary Value	BV
Multi-state Input	MI
Multi-state Output	MO
Multi-state Value	MV

BACnet Object Points List

Indoor Units Points List

Object ID	Object Name	Value	R/W	Description
BV 1	On/Off Setting	“0-OFF 1-ON”	R/W	Indoor unit ON/OFF setting
MV 1	Mode Setting	“1-OFF 2-Fan 3-Cooling 4-Heating 5-Auto 6-Dry”	R/W	Indoor unit mode setting
MV 2	Fan Speed Setting	“1/2-Low 3/4-Medium 5/6/7-High 8-Auto 9-OFF”	R/W	Indoor unit fan speed setting
AV 1	Temperature Setting	62~86F(17~30C)	R/W	Indoor unit set point for cooling, heating, and dry mode
AV 2	Dual Point (Cooling) Setting	62~86F(17~30C)	R/W	Indoor unit auto mode cooling setpoint setting

AV 3	Dual Point (Heating) Setting	62~86F(17~30C)	R/W	Indoor unit auto mode heating setpoint setting
AV 4	Cool Temperature Limit Setting	62~86F(17~30C)	R/W	Indoor unit low limit of cooling, auto cooling, and dry setpoint
AV 5	Heat Temperature Limit Setting	62~86F(17~30C)	R/W	Indoor unit up limit of heating and auto heating setpoint
MV 3	Mode Limit Setting	“0-Unlock 1-Locked in cooling mode 2-Locked in heating mode”	R/W	Indoor unit mode lock/ unlock setting
MV 5	Fan Lock/Unlock Setting	“1/2-Locked in low speed 3/4-Locked in medium speed 5/6/7-Locked in high speed 8-Unlock”	R/W	Indoor unit fan speed lock/unlock setting
BV 4	Remote Control Lock Setting	“0-Unlock 1-Wireless control locked”	R/W	Wireless controller lock/ unlock setting

BV 5	Controller Lock Setting	“0-Unlock 1-Wired control locked”	R/W	Wired controller lock/ unlock setting
AI 1	Room Temperature	Actual value	R	Indoor unit room temperature sensor value
BI 2	Alarm Indication	“0-No malfunction code 1-Malfunction code”	R	If there is an error code for the indoor unit
AI 9	EXV Opening	Actual value	R	Indoor unit EEV opening
AI 10	Software Version	Actual value	R	Indoor unit software version

AI 11	Indoor type	“1-(V33B)Four-way cassette 2-(VWMB)Wall mounted 3-(VMDB)Medium static pressure duct 5-(VVCB)Vertical air handler 6-(VHIB)High static pressure duct 7-(V22B)Compact four-way cassette 8-(VCFB)Ceiling/Floor 11-(VOSB)Dedicated outside air duct 14-(VOWA)One way cassette 21-AHU control kit”	R	Indoor unit series name
AI 12	Indoor Capacity	“8-7Kbtu/h 10-9Kbtu/h 12-12Kbtu/h 17-15Kbtu/h 20-18Kbtu/h 25-24Kbtu/h 32-30Kbtu/h 40-36Kbtu/h 50-48Kbtu/h 60-54Kbtu/h 65-60Kbtu/h 80-72Kbtu/h 100-96Kbtu/h”	R	Indoor unit capacity

Outdoor Units Points List

Object ID	Object Name	Value	R/W	Description
MI 1	Mode Status	“1-OFF 2-Reserved 3-Cooling 4-Heating 5-Cooling test 6-Mix Cooling 7-Mix Heating 8-Heating test”	R	Outdoor unit operation mode status.
BI 1	On/Off Status	“0-OFF 1-ON”	R	Outdoor unit ON/OFF status
AI 1	Ambient Temperature	Actual value	R	Outdoor unit ambient temperature
AI 2	Compressor 1 Freq.	Actual value	R	Outdoor unit main compressor frequency(Hz)
AI 3	Compressor 2 Freq.	Actual value	R	Outdoor unit sub-compressor frequency(Hz)
AI 4	Compressor 1 Discharge Temp.	Actual value	R	Outdoor unit main compressor discharge temperature

AI 5	Compressor 2 Discharge Temp.	Actual value	R	Outdoor unit sub-compressor discharge temperature
AI 6	High Pressure	Actual value	R	Outdoor unit discharge pressure (psi)
AI 7	Low Pressure	Actual value	R	Outdoor unit suction pressure (psi)
AI 9	Fan 1 Speed	Actual value	R	Outdoor unit Fan-1 speed step, not the actual RPM
AI 10	Fan 2 Speed	Actual value	R	Outdoor unit Fan-2 speed step, not the actual RPM
BI 2	Alarm Indication	“0-No malfunction code 1-Malfunciton code”	R	If there is an error code for the outdoor unit.
AI 11	T3	Actual temperature	R	Outdoor left condenser temperature
AI 12	T3B	Actual temperature	R	Outdoor right condenser temperature

BI 4	SV2	“0-OFF 1-ON”	R	Outdoor SV2(Solenoid valve) status
BI 6	SV4	“0-OFF 1-ON”	R	Outdoor SV4(Solenoid valve) status

BI 11	ST1	“0-Not energized 1-Energized”	R	Outdoor ST1(Reverse valve) status
BI 12	ST2	“0-Not energized 1-Energized”	R	Outdoor ST2(Reverse valve) status
AI 13	Version	Actual value	R	Outdoor unit main PCB software version
AI 14	Outdoor type	“0-Mini VRF 1-VRF”	R	Outdoor unit type
AI 15	Outdoor horses	Actual value	R	Outdoor unit capacity (Ton)
AI 16	Exv1 opening	Actual value	R	Outdoor EEVA opening (pulse)
AI 17	Exv2 opening	Actual value	R	Outdoor EEVB opening (pulse)

BV 1	Emergency Stop	“0-None 1-Energy stop command”	W	Emergency stop command

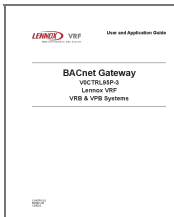
Technical Support

- **18004LENNOX**
- **18004536669**
- **technicalsupport@lennoxind.com**
- **LennoxCommercial.com**
- **Download the VRF and Mini-Split app from the Apple App Store or the Google Play Store.**

FAQ

- **Q: Can I clean the device with any type of cleanser?**
  - **A:** No, clean the device using a clean, damp cloth. Do not spray cleanser on or around the device.
- **Q: How many VRF systems can the BACnet gateway monitor and control?**
  - **A:** The BACnet gateway can monitor and control up to 320 VRB & VPB VRF systems with up to 960 VRF outdoor units and 2560 VRF indoor units.
- **Q: What is the default admin password for the device?**
  - **A:** The default admin password is 123456.

Documents / Resources

	LENNOX V0CTRL95P-3 Mini Split BACnet Gateway [pdf] User Guide V0CTRL95P-3, V0CTRL95P-3 Mini Split BACnet Gateway, V0CTRL95P-3, Mini Split BACnet Gateway, Split BACnet Gateway, BACnet Gateway

References

- User Manual

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