

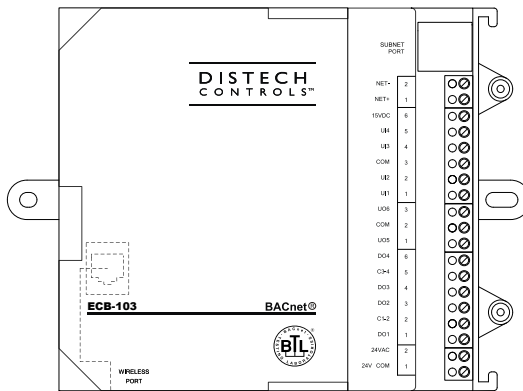


Meets Standards:
C22.2 no 113 and UL 1812



INSTALLATION, OPERATIONS & MAINTENANCE MANUAL

BACnet® kit for Aldes Light Commercial HRV/ERV



FOR MODELS:
H/E650 • H/E1100 • H/E1800

TO BE COMPLETED BY CONTRACTOR AFTER INSTALLATION

Installer: Leave this manual for the owner

Model

Installing Contractor

Telephone / Contact

Serial Number

Installation Date

TABLE OF CONTENTS

I. INTRODUCTION	2
II. WHAT'S INCLUDED	2
III. WIRING BACNET TO THE UNIT	2
High/Low Speed Modes	2
0-10V Mode (Analog)	3
IV. BACNET POINTS LIST	3
V. WARRANTY	7
How to File a Warranty Claim	7

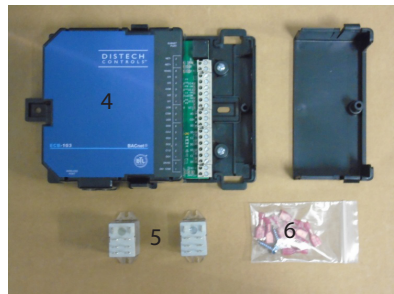
I. INTRODUCTION

BACnet® is a popular communications protocol for building automation and control. This BACnet interface kit (#611235) provides several inputs and outputs to enable two-way communication between a centralized controller and an Aldes Light Commercial HRV or ERV. BACnet is a registered trademark of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE).

II. WHAT'S INCLUDED

Verify that all parts have been included with the shipment. If any parts are missing, notify your distributor as soon as possible.

1. Controller installation guide
2. BACnet Controller Wiring Plan
3. 10K Temperature Sensor
4. BACnet MS/TP controller
5. Relay (R1, R2)
6. Quick Connect for Relays

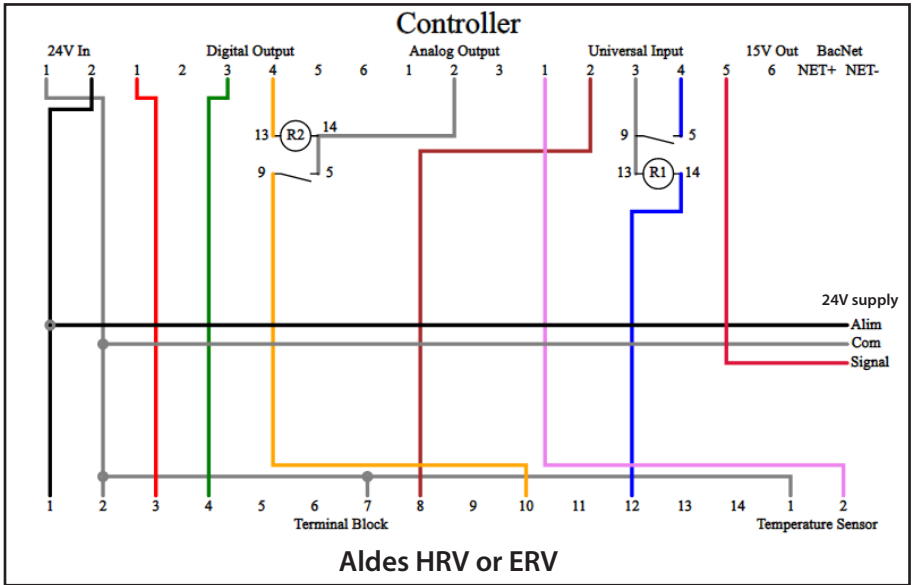


III. WIRING BACNET TO THE UNIT

There are two different wiring configurations depending if you are using your unit on discrete speed values (high and low speeds) or continuous speed values (0-10V mode).

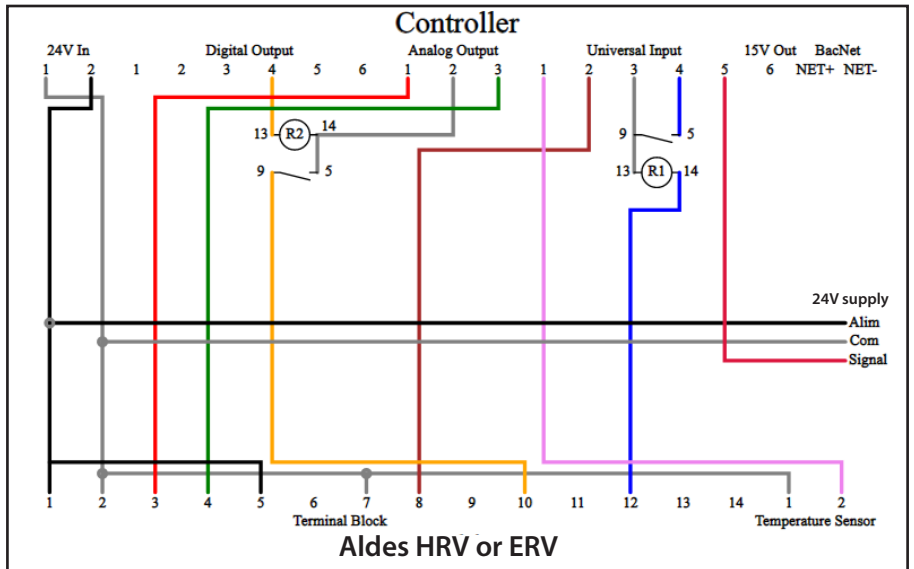
High and low speed modes

If you want your unit to run in Slave Mode or Reduced Speed Mode (discrete ranges of speed), you will need to wire your BACnet interface the following way:



0-10V mode (analog)

If you want your unit to operate in the 0-10V Mode (continuous speed values), you will need to wire your BACnet interface the following way:



IV. BACNET POINTS LIST

The following tables describe all of the available BACnet points that can be accessed by the BACnet controller.

Bacnet Point List							
Object	Name	Description	Type	Format	Default value	Writable	
Hardware Input 1	S11 OutsideAirTempBeforeCore	S11 OutsideAirTempBeforeCore	RTD & Thermistors	Unit: degrees-Celsius		Read Only	
Hardware Input 2	FanInterlock	FanInterlock	Digital	Boolean (TRUE;FALSE)		Read Only	
Hardware Input 3	SupplyDamperOutput	SupplyDamperOutput	Digital	Boolean (TRUE;FALSE)		Read Only	
Hardware Input 4	ExternalAnalogInput	Can be use for CO2, Rh or pressure sensor	Linear	Unit: percent		Read Only	
Hardware Output 1	Exchange	Off=Recirculation On=Exchange	Digital	Boolean (TRUE;FALSE)		Writable	
Hardware Output 2	HighSpeed	Off=LowSpeed On=HighSpeed	Digital	Boolean (TRUE;FALSE)		Writable	
Hardware Output 3	UnitStart	Off=Unit off On=Unit run	Digital	Boolean (TRUE;FALSE)		Writable	
Hardware Output 5	SupplyVariableSpeed-Signal	SupplyVariableSpeed-Signal	Analog 0 - 10 V	Unit: percent		Writable	
Hardware Output 6	ExhaustVariableSpeed-Signal	ExhaustVariableSpeed-Signal	Analog 0 - 10 V	Unit: percent		Writable	
Analog Value 5	BacnetSupplySpeed-Control	BacnetSupplySpeed-Control	Analog Value	Unit: percent	0	Writable	
Analog Value 6	BacnetExhaustSpeed-Control	BacnetExhaustSpeed-Control	Analog Value	Unit: percent	0	Writable	
Analog Value 9	S11 OutsideAirTempBeforeCore_C	Supply air temperature before core in Celcius	Analog Value	Unit: degrees-Celsius		Writable	

Bacnet Point List						
Object	Name	Description	Type	Format	Default value	Writable
Analog Value 10	S11OutsideAirTempBeforeCore_F	Supply air temperature before core in Fahrenheit	Analog Value	Unit: degrees-Fahrenheit		Writable
Analog Value 30	AutoModeSetPoint	SetPoint for automatic speed control	Analog Value	Unit: percent	0	Writable
Analog Value 31	AutoModePIDProportionalBand	Proportional band for automatic PID speed control	Analog Value		10	Writable
Analog Value 32	AutoModePIDIntegralTime	Integral time for automatic PID speed control	Analog Value		1000	Writable
Analog Value 33	AutoMode2SpeedDeadBand	Dead band for automatic 2 speed control	Analog Value	Unit: percent	5	Writable
Binary Value 1	GeneralStartBacnet	Start command	Binary Value	Boolean (TRUE;FALSE)	0	Writable
Binary Value 7	BacnetForcedRecirculation	Recirculation command	Binary Value	Boolean (TRUE;FALSE)	1	Writable
Binary Value 8	BacnetHighSpeed	High speed command	Binary Value	Boolean (TRUE;FALSE)	0	Writable
Binary Value 31	AutoModeReverseAction	Reverse action for automatic speed control; Off=Speed up when sensor up, On=Speed up when sensor down	Binary Value	Boolean (TRUE;FALSE)	0	Writable

Bacnet Point List						
Object	Name	Description	Type	Format	Default value	Writable
<i>Multi State Value 3</i>	<i>UnitStatus</i>	<i>1=Off, 2=Fault, 3=Exchange, 4=ExchangeHigh, 5=ExchangeAnalog, 6=Defrost, 7=Recirculation, 8=RecircHigh, 9=RecircAnalog</i>	<i>Multi State Value</i>	<i>Enum: UnitStatus</i>		<i>Writable</i>
<i>Multi State Value 21</i>	<i>VariablesSpeedControlSource</i>	<i>select the blowers speed control; 1=external analog, 2=Bacnet</i>	<i>Multi State Value</i>	<i>Enum: SpeedControl</i>	<i>2</i>	<i>Writable</i>
<i>Multi State Value 24</i>	<i>VariablesSpeedControlType</i>	<i>Speed mode of the unit; 1=2 speeds, 2=Analogic</i>	<i>Multi State Value</i>	<i>Enum: SpeedType</i>	<i>1</i>	<i>Writable</i>
Enumeration:						
<i>UnitStatus</i>	<i>1=Off, 2=Fault, 3=Exchange, 4=ExchangeHigh, 5=ExchangeAnalog, 6=Defrost, 7=Recirculation, 8=RecircHigh, 9=RecircAnalog</i>					
<i>SpeedControl</i>	<i>1=external analog, 2=Bacnet</i>					
<i>SpeedType*</i>	<i>1=Two speeds, 2=Analog</i>					
<i>* Units manufactured before August 2019 only support SpeedType=1 (Two speeds).</i>						

IV. WARRANTY

The warranty period for BACnet interface and its components starts upon the date of purchase.

BACNET COMPONENTS
Limited 2-year

The Seller warrants to the Purchaser that any equipment manufactured by it and bearing its name plate, to be free from defects in material and workmanship, under proper and normal use and service as follows: If, at any time within the warranty of the product (see individual specifications), the Purchaser notifies the Seller that, in his opinion, the equipment is defective, and returns the equipment to the Seller's originating factory prepaid, and the Seller's inspection finds the equipment to be defective in material or workmanship, the Seller will promptly correct it by either, at their option, repairing any defective part or material or replacing it free of charge and return shipped lowest cost transportation prepaid (if Purchaser requests premium transportation, Purchaser will be billed for difference in transportation costs). If inspection by the Seller does not disclose any defect in material or workmanship, the Seller's regular charges will apply. This warranty shall be effective only if use and maintenance is in accordance with our instructions and written notice of a defect is given to the Seller within such period.

This warranty is exclusive and is in lieu of any other warranties, oral or implied, specifically, without limitation, there is no warranty of merchantability or fitness for any purpose. The liability of the Seller is limited to the repair or replacement of materials or parts as set forth.

Limitation of Liability: The Seller shall not be liable for any claim or consequential or special loss or damage arising or alleged to have arisen from any delay in delivery or malfunction or failure of the equipment. The Seller's liability for any other loss or damage arising out of or connected with the manufacture or use of the equipment sold, including damage due to negligence, shall not in any event exceed the price of the equipment supplied by Seller.

How to File a Warranty Claim

Before removing a defective product, contact Aldes for technical assistance.

If a part is proved defective, it will be replaced with another part or repaired according to the company's assessment.

Before returning a defective product for repair, contact Aldes customer service to obtain a Return Materials Authorization (RMA). Send the defective part postage paid to the address below based on your residence. It will be returned to you postage paid.

Technical Assistance

*Canada call 1-800-262-0916
Monday-Friday, 8 a.m. to 5 p.m. Eastern Time
USA call 1-800-255-7749
Monday-Friday, 8 a.m. to 5 p.m. Eastern Time*



American ALDES Ventilation Corporation
4521 19th St. Ct. E.
Suite 104
Bradenton, FL 34203
1-800-255-7749
www.aldes.us

Aldes Canada
100 Rue Carter
Saint-Leonard d'Aston, QC J0C 1M0
1-800-262-0916
www.aldes.ca