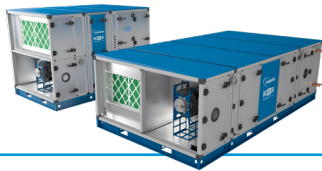# Boxer BPS Connect (CO) Control

Supply & Extract Ventilation Unit with Heat Recovery

Quick Control Setup Guide

1.0 INTRODUCTION

This guide provides basic set up procedure to allow control commissioning of Nuaire's Ecosmart Connect control software and should be read in conjunction with the relevant BPS EcoSmart Connect (CO) Control installation and maintenance manual, document number 671760 or 671828.

Before commissioning the unit, ensure that all equipment has been assembled in accordance with the installation procedures detailed in the unit installation and maintenance manual.

2.0 BASIC COMMISSIONING

The Ecosmart Connect system can only be commissioned by modifying the controller BACnet object values (in software). This can be done by connecting to the controller across the network using any BACnet compatible software.

If a BACnet compatible network is not available, an ESCO-LCD is required to commission the system. The ESCO-LCD can be permanently connected on the FC bus (with a separate power supply), or a special RJ11 connection cable (ESCO-LCD-3M) is supplied for connection directly to the controller (self-powered). All values will be retained by the controller once the LCD is disconnected.

2.1 Priority and writing of values

The ESCO-LCD can browse all devices and objects on the network. By default, it writes variables (BV, AV, MSV) at level 16 and outputs (BO, AO) at level 8. No BACnet device can write inputs (BI, AI). It is highly recommended that the write levels are left at the default settings of 16 for Adjust Priority and 8 for Override Priority.

It is not recommended to change or write to any of the outputs (BO/AO) directly as doing so may cause undesirable results and override the software permanently. If overridden ensure all values are relinquished correctly.

2.2 Relinquishing

The ESCO-LCD allows the relinquishing of values by selected an empty value for analogue values or the '---'value for discrete values. Setting an analogue value to "0" does not relinquish the command. The relinquish command will only apply to the priority level set in the settings.

2.3 Navigation of ESCO-LCD

To gain access to the controllers set points via the ESCO-LCD please select the network page in the top right hand corner of the controller shown below. Once access is gained select the correct unit by checking the MAC address. The mac address can be checked via the dip switches on the front of the connect control (e.g. if 4 and 1 are selected, the mac address equals 5).


Figure 1. ESCO-LCD Menu Screen

Settings · Network · Favourites · Target

Figure 2. ESCO-LCD Navigation Buttons

	Cancel – Quit and moves to the previous section
	Home – Shortcut to the configured Home Page
	Back – Moves to the previous page in the same section
	Forward – Moves to the next page in the same section
	Enter – Applies changes

Figure 3. ESCO-LCD Network Screen

MAC Address

TL-BRTRP-0	0	1
Nuaire BPS ESC	4	0909501
Nuaire BPS ESC	5	0909502

BACnet Device ID
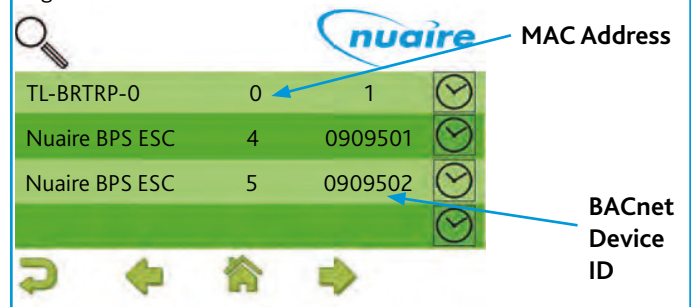
3.0 ENABLING THE UNIT

The unit can be enabled via multiple methods as listed below. For commissioning purposes the software enable can be utilised. Ensure the enable is removed after commissioning if enabling from another method after commissioning.

- Software switch (ENABLE) via local display or network.
- Switched live (230VAC) input.
- Volt free input contacts.
- Night Cooling / Summer free-cooling strategy.
- Scheduled via weekly calendar.
- Fan speed override.
- Room module PIR sensor.
- Room module 3-fan speed button.
- 0-10v signal via IN5 (if configured).

The software enable is located on page number 34 of the LCD browser or bacnet object ID number 10218.

Enable

LCD Browser Page	BACnet Object	Description	Object Type	Object ID	Default Value	Units
34	Enable	Software enable switch	MSV	10218	On	(1)Off (2)On

3.1 Setting the Minimum and Maximum Airflows

To set the minimum and maximum fan speeds configure the following set points:

- Extract fan minimum speed located on page number 10 of the LCD browser or object ID 10268.

- Extract fan maximum speed located on page number 9 of the LCD browser or object ID 10270.

- Supply fan minimum speed is located on page number 15 of the LCD browser or object ID 10314.

- Supply fan maximum speed is located on page number 15 of the LCD browser or object ID 10312.

Fan Commissioning

LCD Browser Page	BACnet Object	Description	Object Type	Object ID	Default Value	Units
9	Extract Fan Max	Individual Fan Maximum Speed Setting	AV	10268	100	%
10	Extract Fan Min	Individual Fan Minimum Speed Setting	AV	10270	20	%
15	Supply Fan Max	Individual Fan Maximum Speed Setting	AV	10312	100	%
15	Supply Fan Min	Individual Fan Minimum Speed Setting	AV	10314	20	%

To simulate the maximum speed and check air volumes the fan boost will have to be enabled. The fan boost is located on page number 34, object 10240. Please ensure this is disabled after commissioning.

Fan Boost

34	Fan Boost	Software Enabled Fan Boost	MSV	10240	Off	(1)Off (2)On

3.2 Setting Trickle Operation

Enabling the trickle set point will run the fan at minimum speed when there is no enable signal present. To enable trickle configure the following set point.

- Trickle mode is located on page number 37 if the LCD browser or BACnet object ID 10250.

Trickle Mode

37	Trickle Mode	Enable Trickle Mode	MSV	10250	Off	(1)Off (2)On

3.3 Setting the Run-on Timer

Once the enable is removed the unit will run on for the time set by the run on set point.

- Run-on set point is located on page number 9 of the LCD browser or BACnet object ID 10267.

Run-on Enable

9	Run-on Enable	Run-on TImer Value	AV	10267	0	Seconds

3.4 Setting the Inlet / Outlet Dampers

If inlet or outlet dampers are fitted to the unit as ancillary items, ensure the following set points are configured:

- The Inlet outlet damper fitted is located on page number 44 of the LCD browser or object ID 17660.

- The Inlet outlet damper delay is located on page number 12 of the LCD browser or object ID 10279.

Inlet / Outlet Dampers

44	IO Damper Fitted	Selects Whether IO Dampers Are Fitted On Alarm Circuit 2	MSV	17669	No	(1)Off (2) On
12	IO Damper Delay	Delay Between Starting Fan Relay And Fan Output	AV	10279	0	Seconds

3.5 Setting Temperature Control

There are two methods of temperature control available with Ecosmart Connect controls:

- Temp Control Mode is located on page number 35 if the LCD browser or BACnet object ID 10245.

Temperature Control

35	Temp Control Mode	Temperature Control Mode	MSV	10245	Supply Temp	(1)Supply Temp (2)Room Temp

If there is a heater battery or a cooling coil fitted to the unit ensure the following set points are configured as a minimal requirement to suit the unit type and site requirements:

- The heating type is located on page number 31 of the LCD browser or object ID 10206.

- The cooling type Is located on page number 30 of the LCD browser or object ID 10203.

- Software set point Is located on page number 14 of the LCD browser or object ID 10309.

- Set point operation is located on page number 33 of the LCD browser or object ID 10214 (if there are no room sensors installed it is recommended that this is set to software only).

31	Heating Type	Set type of heating fitted.	MSV	10206	As per Build	(1)None (2)LPHW (3)Electric (4)3rd-Party
30	Cooling Type	Set type of cooling fitted.	MSV	10203	None	(1)None (2)Chilled (3)3rd-Party
14	Software Setpoint	Software Setpoint	AV	10309	22	°C
33	SetPoint Op	Setpoint Operation	MSV	10214	Software Only	(1)Last Changed (2)Software Only (3)Last Changed with Timeout

4.0 AFTER SALES ENQUIRIES

For technical assistance or further product information, including spare parts and replacement components, please contact the After Sales Department.

Telephone 02920 858 400

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