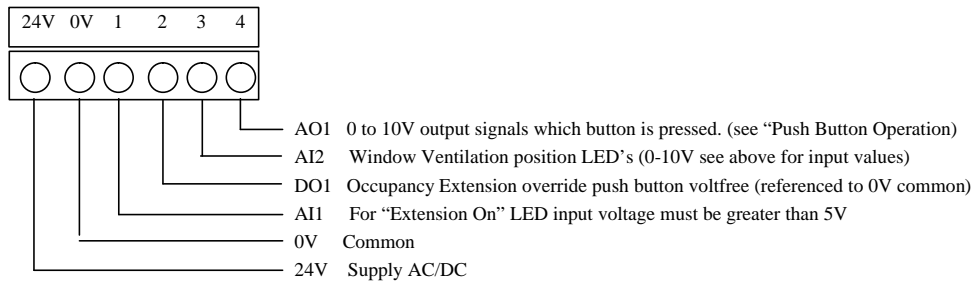


## WVC USER INTERFACE FOR WINDOW VENTILATION CONTROLLER



### Terminal layout



### Description

This Ventilation user interface is designed to provide indication and positional control of window vents. The product is flush mounted and incorporates a manual override selection of the automatic positioning if required by the occupants. The manual selection function enables the user to open or close the ventilation to a selected position. Pressing the Auto button will reset the operation to the dictates of the BMS. An additional push button is provided to allow the user to request an extension to the occupancy period and when selected an LED is illuminated to indicate the system is running on timed extension.



**Measurement Devices for Control Systems**

**TITAN Products Ltd.**  
Unit 7 Southside, Bredbury Park Industrial Estate  
Stockport SK6 2SP. England.  
Tel: - +44 (0)161 406 6480, Fax: - +44 (0)161 494 8309  
Email:- admin@titanproducts.com  
Website: - www.titanproducts.com  
© Copyright Titan Products Ltd. 2006

### **Input / output interface to the BMS**

Two analogue inputs are provided, the first (Terminal 1) is used for an input signal to indicate “extension on” LED and the second input on (Terminal 3) is used for the input signal voltages required for the ventilation position indicator LEDs.

One analogue output AO1 (Terminal 4) is provided to signal back to the controller/BMS the operation of the three ventilation push buttons.

One volt free digital output D01 (Terminal 2) is also provided to signal the “Occupancy Extension” push button.

### **Push Button Operation. (CLOSE/AUTO/OPEN)**

AO1 on terminal 4 (0 to 10V analogue output) provides a voltage signal to reflect the operation of the “Close, Auto, Open” push buttons as shown below.

<b>Button pressed</b>	<b>Output</b>
Close (press and hold)	2V for duration of button press (LED's indicate selection)
Open (press and hold)	8V for duration of button press (LED's indicate selection)
Auto	5V for duration of button press but not less than 3 seconds, (during this period the Close and Open buttons if pressed will be ignored and no action will be taken on the analogue output if these buttons are pressed)
No buttons	0V normal condition

The minimum 3 second signal duration on the Auto (button pressed) is to ensure that the remote controller/BMS as sufficient time to scan the signal and take appropriate action. In the case of the Open and Close buttons the user would press and hold and view the effect on the LEDs before releasing the respective button.

On receiving an override signal from the Ventilation user interface buttons the BMS will start to open or close the ventilation louvers by increasing or decreasing a 0 to 10V output signal. This signal is also fed back into the interface via AI2 0 to 10V analogue input (Terminal 3) and, at the threshold values shown below, will switch on the respective LEDs.

### **Input Voltage (AI2 on Terminal 3) for LED position indicators.**

0	All off
1 >< 3	LED 1 on
3 >< 5	LEDs 1 & 2 on
5 >< 7	LEDs 1 to 3 on
7 >< 9	LEDs 1 to 4 on
Over 9V	LEDs 1 to 5 on

The switch off point for each LED is fixed at 0.5V below the switch on point for the respective LED.

### **Occupancy Extension Operation (DO1 terminal 2 and 0V)**

D01 digital volt free output (terminal 2) is used for Occupancy Extension signal. The user must press and hold the Extension push button until a +5V signal is received back from the BMS on terminal 1 (AI1) which is indicated when the Extension LED is On.

When the BMS receives the Occupancy Extension signal from DO1 (terminal 2 referenced to 0V) the BMS will output a 5V to 10V DC signal back to the ventilation controller interface input AI1 (Terminal 1) and the interface will detect when this input signal is greater than 5V and switch on the LED to indicate the system is in “OCCUPANCY EXTENSION”.

### **Part Numbers**

WVC/W	White flush mounted
WVC/BSS	Grey with Brushed Stainless Steel surround
WVC/PC	Grey with Polished Chrome surround.

Dimensions 145mm wide x 85mm high x 10mm deep