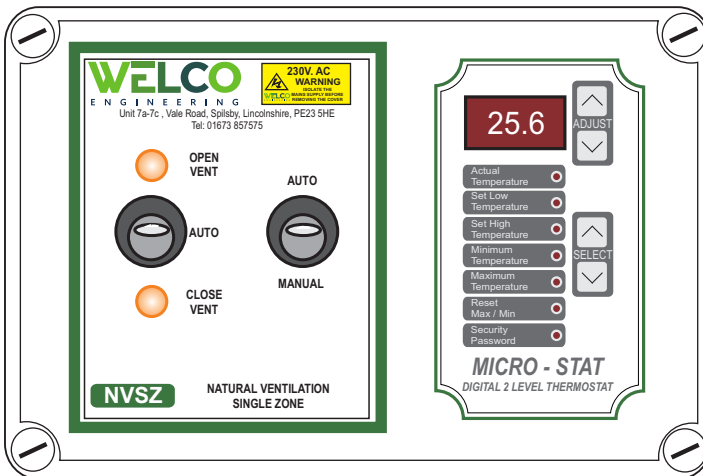


*Natural ventilation
Single Zone
Micro-Computer controller
NVSZ*

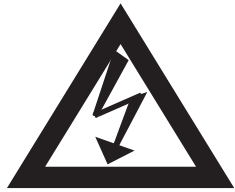
PLEASE READ IMPORTANT INFORMATION



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HEALTH AND SAFETY AT WORK



DANGER ELECTRIC SHOCK RISK

ELECTRIC DEVICES CAN CONSTITUTE A SAFETY HAZARD

It is the responsibility of the user to ensure that the installation and maintenance of the product are carried out in strict compliance with any relevant instructions, regulations, codes of practice or bylaws in force.

This equipment should only be installed and commissioned by appropriately qualified personnel who have read and fully understood this users manual.

If in doubt contact your supplier or Welco Engineering Ltd. for technical advice.

Every care has been taken to ensure that the contents of this instruction booklet are accurate at the time of printing, however no liability is accepted for any consequence of its use.

The manufacturers reserve the right to revise the product specification and other technical features resulting from improvement and continual development.

NVSZ (Natural Ventilation single Zone controller) specification

Supply Input	230v 50Hz. +10%. 1KVA
Parameter Settings.....	Front Panel Touch - Buttons
Temperature Range	0 - 40 C
Resolution	0.1 C
Output Contactor (high temperture)...	Single Pole Change Over
Heater/Boost 1 & 2 Relay Outputs.....	Single Pole Change Over
Relay Contact Rating	8A 30v d.c. / 230v a.c.
Sensor.....	"Welco" Type B.
Operational Modes (switch selected)	Auto or Manual

DESCRIPTION

The precision microcomputer based NVSZ natural ventilation single zone system designed and manufactured by Welco Engineering Ltd. Provides touch button control of independently adjustable, high and low temperature thermostatically activated output contactors that may operate a motorised ventilator to control the environment temperature over a range of 0-40°C.

To ensure well ventilated conditions above and below the desired set temperature, the NVSZ unit has a programmable continuously cycling motorised ventilator operation period.

The units memory also stores and displays the maximum and minimum temperature over an unlimited time until reset is applied.

To prevent unauthorised changes in parameter settings, a security password has to be used to make modifications.

The NVSZ has two contactors that provide 230v ac output supplies to drive the motorised ventilator in the direction required . I.e open or closed.

Auto or manual operation can be selected by operating the front panel switches.

NOTE that when the unit is in auto mode both swiches need to be in the auto position.

SETTING MOTORISED VENTILATOR OPENING AND CLOSING TEMPERATURE

To adjust the set high (ventilator open) and low (ventilator close) temperature, the NVSZ initially requires a security password number to be entered.

Your security password number for the NVSZ is 222 and should remain confidential to prevent unauthorised adjustments.

ENTERING SECURITY PASSWORD NUMBER

1 Select the security password parameter by operating the lower touch pads marked SELECT until the appropriate LED indicator is illuminated

2 Using the upper ADJUST touch pads, set the security password to 222

Having entered the correct password the Set Low (vent close) Temperature, and Set High(vent open) temperature parameters can now be determined.

ENTERING SET LOW (vent close) and HIGH (vent Open) TEMPERATURES

3 Select the Set Low temperature(vent close)parameter using the SELECT lower touch pads. Notethat the set low temperature LED is now illuminated.

4 Using the upperADJUST touch pads, set the Low temperature parameter value required.

NOTE THIS VALUE MUST BE LESS THAN THE SET HIGH TEMPERATURE (vent open) VALUE.

5 The Set High temperature (vent open) parameter is set using the same method but selecting the Set High temperature (vent open) parameter, again using the SELECT lower touch pads.

Typical set values for the Set High temperature (vent open) and Set Low temperature (vent close) parameters are 23.0 and 22.6°C respectively. Choosing such parameter values provides the system with a temperature “dead-band “ of 0.4°C.

MINIMUM AND MAXIMUM RECORDED TEMPERATURES

6 Using the SELECT touch pads, select the minimum temperature for a given period
Note that the adjacent LED is illuminated.

7 Again using the SELECT touch pads, select the maximum temperature for a given period.
Note that the adjacent LED is illuminated.

MINIMUM AND MAXIMUM RECORDED TEMPERATURES


8 To reset the Max/ Min recorded temperatures, use the lower SELECT touch pads to select the Reset Max/Min function. Press the upper touch pad and the memory will automatically reset. The unit then returns to record the environment ambient temperature Actual Temperature

ENTERING SAMPLE AND RUN TIMES

9 To prevent stale air build up the NVSZ system incorporates a continuously cycling sample and motor run times that are fully adjustable using the touch pads after first selecting the correct parameter and following the pre-entry of the SECURITY CODE 222.

ENTERING SAMPLE TIME

10 Ensure security code is 222 and when displayed, press lower SELECT touch pad which will produce the following example display :-




This indicates sample time (c) selected and a set time of 1 minute.

To adjust the sample time, display the condition shown and then increase or decrease the parameter time by pressing the upper or lower ADJUST touch pads until the desired time in minutes is selected. Note that the maximum sample time possible is 9 minutes.

ENTERING MOTOR RUN TIME

11 Again ensure security code is 222 and when displayed, press lower SELECT touch pad twice which will produce the following example display :-



This indicates sample time (D) selected and a set time of 15 seconds.

To adjust the motor run time, display the condition shown and then increase or decrease the parameter time by pressing the upper or lower ADJUST touch pad until the desired time in seconds is selected. NOTE that the maximum motor run time possible is 90 seconds.

INDICATION OF OUTPUT CONTACTOR STATUS

The STATUS of the two output contactors is indicated by flashing LED's. When either the high (vent open or low (vent close) temperature contactors provide a 230vac output drive signal to the ventilator drive motor. Corresponding Set High (open vent) Temperature or Set Low (vent Close) Temperature LED will flash and the relevant Open and Close indicator will be continuously illuminated.

SYSTEM OPERATION

