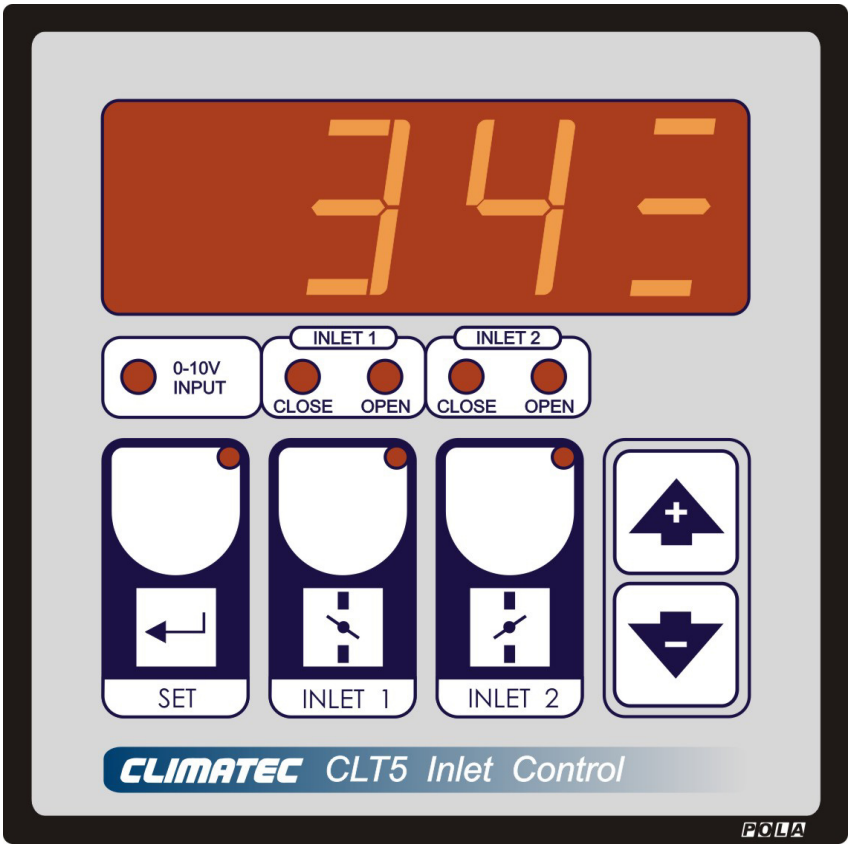
CLIMATEC

Dual Staged Inlet Control

CLT5

Version 4.0

HANDBOOK



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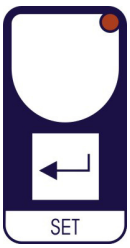
MAIN SETTINGS *(RUN MODE)*

If ***tYPE***=*0:*



Press **SET**.
Display will change to show the set inlet percentage for step 0.
Press **+** or **-** to adjust.

Press **SET** again.
Display will change to show the set inlet percentage for step 1.
Press **+** or **-** to adjust.

This operation is repeated for the number of steps in use (value of ***n.POS*** *(see* ***COSt*** *settings)).*

(If ***tYPE*** = 1 or 2 pressing the set button will only cause the display to show the current input level (see ***VIEWING***))

If ***tYPE*** =1:

Press **INLET 1**.
Display will change to show the set inlet percentage for step 0.
Press **+** or **-** to adjust.

Press **INLET 1** again.
Display will change to show the set inlet percentage for step 1.
Press **+** or **-** to adjust.

(This operation is repeated for the number of steps in use (value of ***n.PO.1(2)*** *(see* ***COSt*** *settings)).*

If ***tYPE*** =2 & ***nnS*** =1: (if ***nnS*** = 0 these settings will not be shown)

Press **INLET 1**.
Display will change to show the set minimum inlet percentage.
Press **+** or **-** to adjust.

Press **INLET 1** again.
Display will change to show the set maximum inlet percentage.
Press **+** or **-** to adjust.

(When ***tYPE*** =0 (see ***COSt*** settings) pressing the **INLET 1** button will only cause the display to show the current inlet position)

Pressing **INLET 2** will display the same settings as described above for **INLET 1**.

These settings will only be available if ***n.InL*** =2 (see ***COSt*** settings). If the **INLET 2** button when ***n.Inl*** =1 the display will change to indicate no operation:

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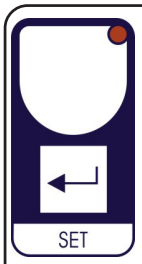
VIEWING



Press **SET.**

Display will show the current input level:

The tables below list some of the input levels that may be seen depending upon the ***tYPE*** setting (see ***COSt*** settings):

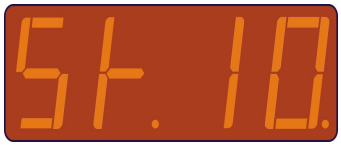
tYPE =0 (see ***COSt*** settings):

Display	Input Level	Display	Input Level
St. 0	Step 0		
St. 1	Step 1	St. 7	Step7
St. 2	Step 2	St. 8	Step 8
St. 3	Step 3	St. 9	Step 9
St. 4	Step 4	St.10	Step 10
St. 5	Step 5	St.11	Step 11
St. 6	Step 6	St.12	Step 12

Input Condition
Example showing step 1 input
*(**tYPE**=0)*

tYPE =1 (see ***COSt*** settings):

Display	Input 1 Level	Input 2 Level
St.00	Step 0	Step 1
St.01	Step 0	Step 1
St.11	Step 1	Step 1
St.12	Step 1	Step 2
St.22	Step 2	Step 2
St.33	Step 3	Step 3
St.44	Step 4	Step 4
St.55	Step 5	Step 5
St.66	Step 6	Step 6



Input Condition
Example showing step 1 for input 1 & Step 0 for input 2
*(**tYPE**=1)*

When **tYPE** =2 (see ***COSt*** settings) the display will show the percentage of the 0-10 volt input:

Input Condition
Example showing 24% input
*(**tYPE**=2)*

When in this mode the 0-10v Input indicator will be lit:

Press **INLET 1.**
INLET 1 button indicator will illuminate and the display will change to show the current position of inlet 1.

Inlet Position
Example showing 40%

Press **INLET 2.**
INLET 2 button indicator will illuminate and the display will change to show the current position of inlet 2.

Inlet Position
Example showing 40%

If **INLET 2** is disabled (***n.inL*** =1 (see ***COSt*** settings)) and **INLET 2** is pressed the display will change to indicate no operation:

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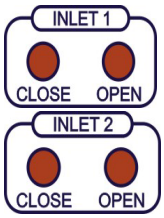
VIEWING (contd.)



These lamps illuminate to show the current state of the inlet control.

When **CLOSE** is lit this indicates that the controller is closing the inlet.
When **OPEN** is lit this indicates that the controller is opening the inlet.

INLET 1 POTENTIOMETER CALIBRATION PROCEDURE

Press and hold **INLET 1.**
Display will change to show the start of the calibration procedure:

Continue to hold **INLET 1** until the display changes to read the potentiometer readout:

Release **INLET 1**.
The controller will drive the inlet fully closed (ensure that the auto-manual switch is in the auto position).

When the inlets are in the fully closed position and the potentiometer readout has stopped moving press **INLET 1**.
The controller will drive the inlet fully open.

When the inlets are in the fully open position and the potentiometer readout has stopped moving press **INLET 1**.

The calibration procedure is complete.
The display will change to show the current inlet position.

INLET 2 POTENTIOMETER CALIBRATION PROCEDURE

Press and hold **INLET 2.**
Display will change to show the start of the calibration procedure:

Continue to hold **INLET 2** until the display changes to read the potentiometer readout:

Release **INLET 2**.
The controller will drive the inlet fully closed (ensure that the auto-manual switch is in the auto position).

When the inlets are in the fully closed position and the potentiometer readout has stopped moving press **INLET 2**.
The controller will drive the inlet fully open.

When the inlets are in the fully open position and the potentiometer readout has stopped moving press **INLET 2**.

The calibration procedure is complete.
The display will change to show the current inlet position.

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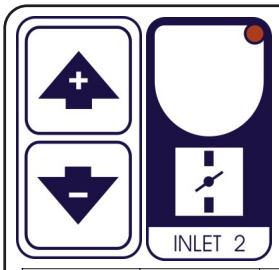
COSt SETTINGS



To enter ***COSt*** settings press and hold the **+** & **-** keys until ***COSt*** is displayed.

Press **INLET 2** to scroll through the settings, using the **+** & **-** keys to adjust the setting values as required.

Setting	Default Value	Your Value	Description	Notes
tYPE	**0**		Control Type	***1**
n.InL	**2**		Number of inlet geardrives	***2**
n.PO.1	**6**		Number of input steps - Inlets 1 & 2 (tYPE=0) or Inlet 1 (tYPE = 1)	***3**
n.PO.2	**6**		Number of input steps - Inlet 2 (tYPE = 1)	***4**
Pc.nb	**4**		% Neutral Band	
CtrL	**0**		Type of Voltage input	***5**
nnS	**0**		Display minimum and maximum position settings	***6**
P.CL.1	**0**		Resistance of Inlet 1 potentiometer in Close position	
P.OP.1	**1000**		Resistance of Inlet 1 potentiometer in Open position	
P.CL.2	**0**		Resistance of Inlet 2 potentiometer in Close position	
P.OP.2	**1000**		Resistance of Inlet 2 potentiometer in Open position	

1)** ***tYPE=0 Control is based upon a single set of step inputs (DIP switch 1 must be set to ON)
tYPE=1 Control is based upon 2 independant step inputs (DIP switch 1 must be set to ON)
tYPE=2 Control is based upon a 0-10volt or 10-0volt input (see ***CtrL***) (DIP switch 1 must be set to OFF)

***2)** When this is set to 1 pressing the **INLET 2** button in *run mode* will cause the display to indicate no operation (no.oP)

3)** When ***tYPE=0 this setting can be set to a maximum of 12 steps
When ***tYPE=1*** this setting can be set to a maximum of 6 steps
When ***tYPE=2*** this setting has no effect

4)** When ***tYPE=0 this setting has no effect
When ***tYPE=1*** this setting can be set to a maximum of 6 steps
When ***tYPE=2*** this setting has no effect

5)** ***CtrL=0 voltage input is 0-10 volts
CtrL=1 voltage input is 10-0 volts

6)** ***nnS=0 prevents the minimum and maximum inlet position settings to be shown for each inlet
nnS=1 allows the minimum and maximum inlet position settings to be shown for each inlet
(This setting only has effect when ***tYPE=2***)

To return to ***Run Mode*** press **INLET 1**.

PRESET PROGRAMS

At ***boot*** this processor is pre-programmed with the following (variable) settings.
To return to these settings at any time:
Power off the processor. Press and hold the **INLET 2** button and switch on the power: ***boot*** will be displayed, release the **INLET 2** button.

PO. 0 = 0, ***PO. 1*** = 5, ***PO. 2*** = 10, ***PO. 3*** = 15, ***PO. 4*** = 30, ***PO. 5*** = 60, ***PO. 6*** = 100

The default ***COSt settings*** values are shown in the ***COSt settings*** table (“default value” column)

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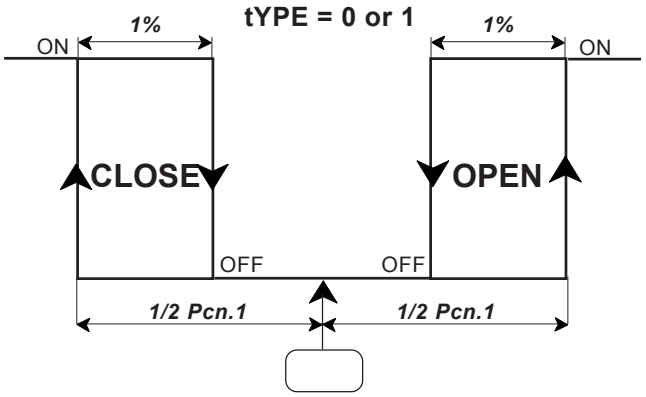
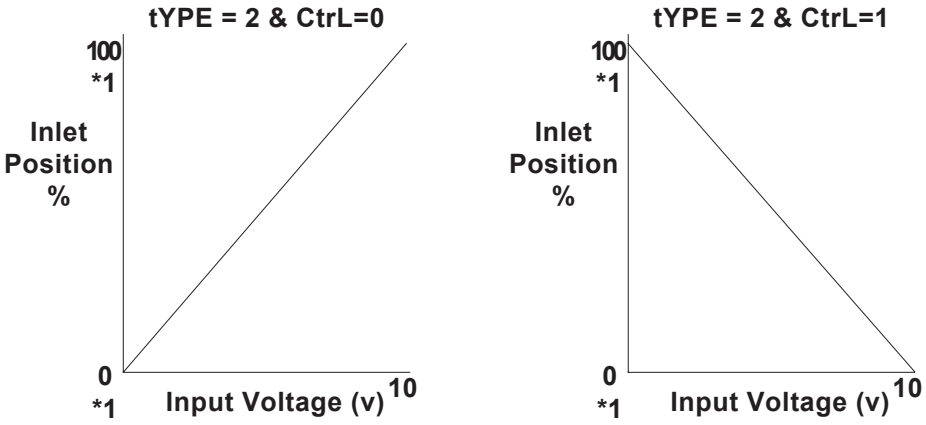
OPERATING DIAGRAMS





*1 minimum and maximum positions conditioned by P.___ and P.___

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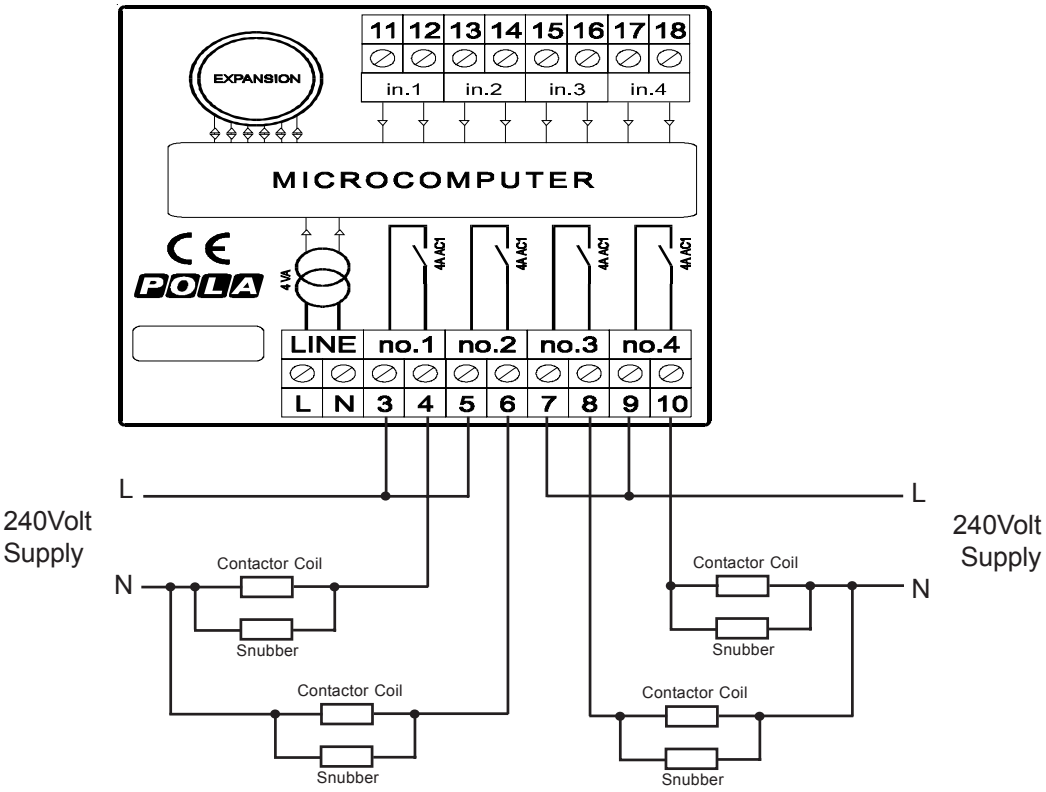
SNUBBER DIAGRAM

If operating 240 volt relays or contactors, you must:

a) Ensure that common feed (terminals 3, 5, 7 & 9) is supplied via a 4 amp fuse.
b) A snubber network (supplied as an extra) is connected across the coil of the contactor.



IF IN DOUBT PLEASE CALL CLIMATEC SYSTEMS FIRST.

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INSTALLATION

For correct installation, follow the instructions below very carefully.
It is recommended to install the controller properly so that it complies with current regulations, and also to use a max 4Amp.F fuse to prevent the relay output contacts from getting damaged and ensure they stay in perfect running order (terminals 3-4... 9-10 of the **HP** module connector).

How to connect the potentiometers and Input contacts

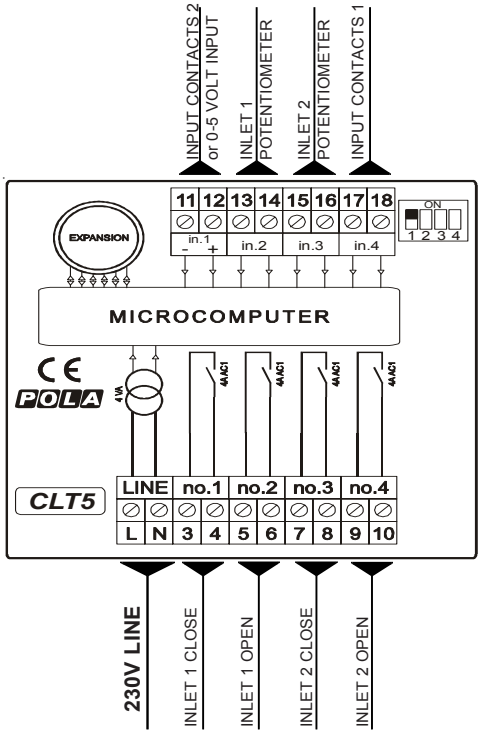
Connect the potentiometer provided as shown in the diagram below: connect the 1 Kohm potentiometer (max 10Kohm) applied to the flap motor.
For remote connections use a standard 0.5-square millimetre two-pole wire for each potentiometer, taking great care over the connections, by insulating and sealing any joins carefully.

How to connect the line

Connect line on terminals **L-N**; protect supply with adequate fuse.

How to connect the contacts

Connect terminals **3-4...9-10** on the terminal block (contacts up to 4AMP.AC1) to the inlet power pack as shown in the diagram below.



IMPORTANT
DIP Switch 1
For **tYPE**=0 or 1 set to **ON**
For **tYPE**=2 set to **OFF**

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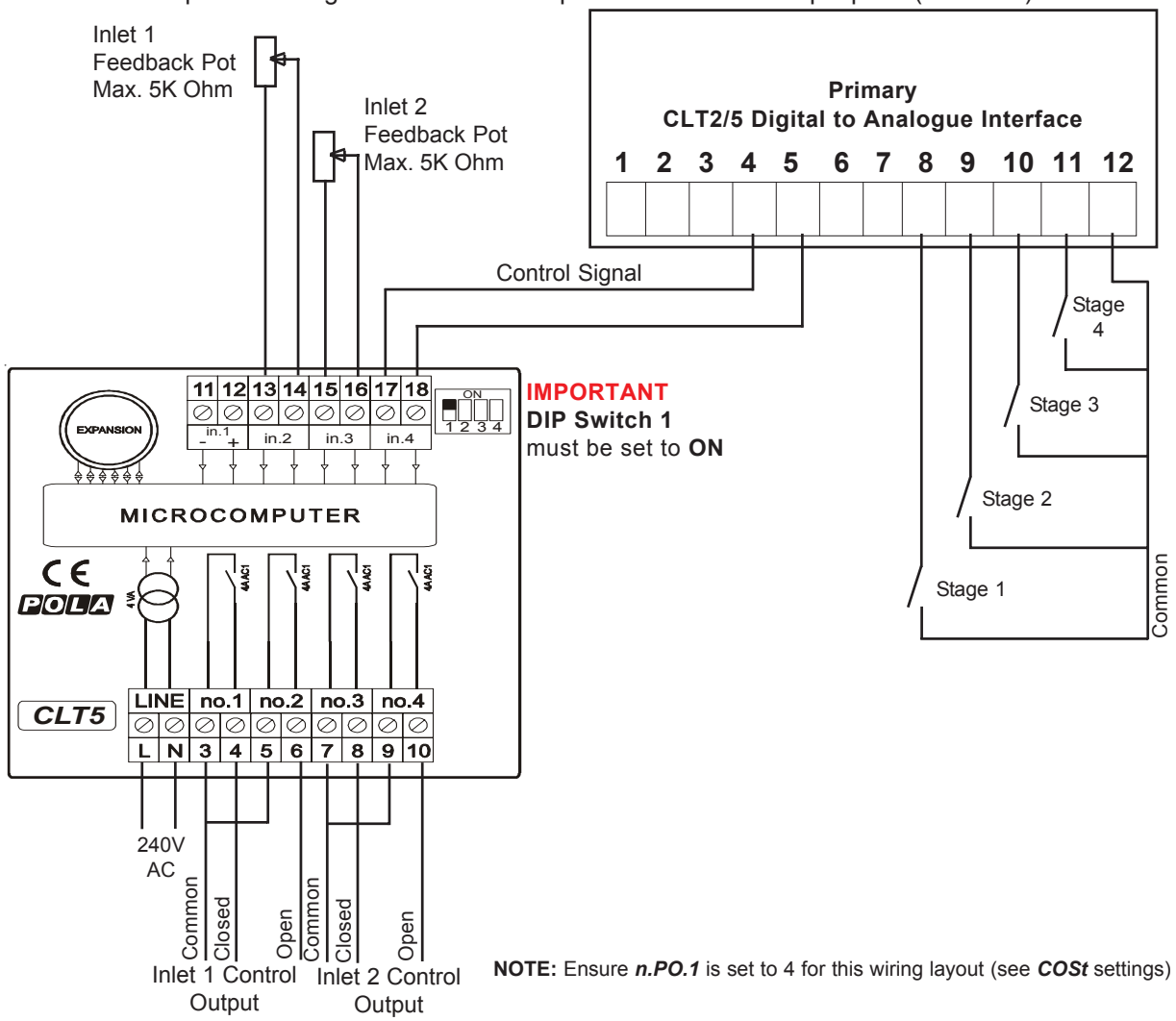
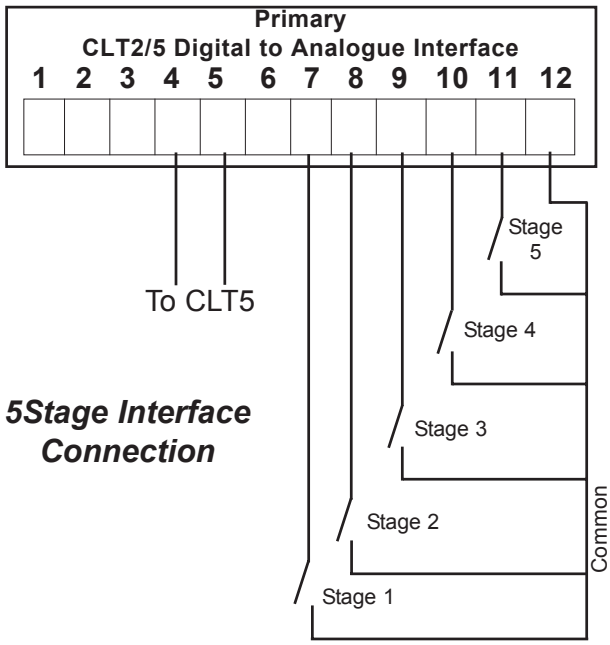
tYPE 0 Connection Diagram

Example for: Two geardrive control output with one set of step inputs. (tYPE = 0)



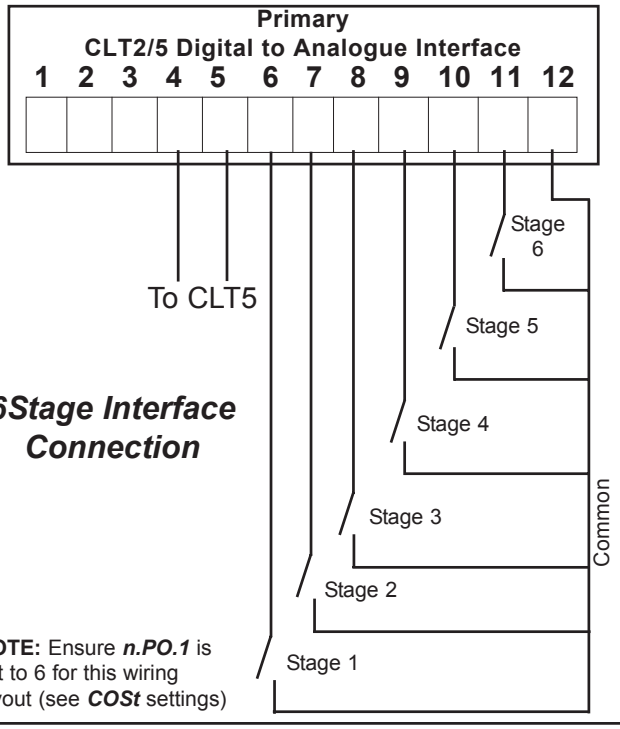
IMPORTANT
DIP Switch 1
must be set to **ON**

NOTE: Ensure ***n.PO.1*** is set to 4 for this wiring layout (see ***COSt*** settings)



5Stage Interface Connection

NOTE: Ensure ***n.PO.1*** is set to 5 for this wiring layout (see ***COSt*** settings)



6Stage Interface Connection

NOTE: Ensure ***n.PO.1*** is set to 6 for this wiring layout (see ***COSt*** settings)

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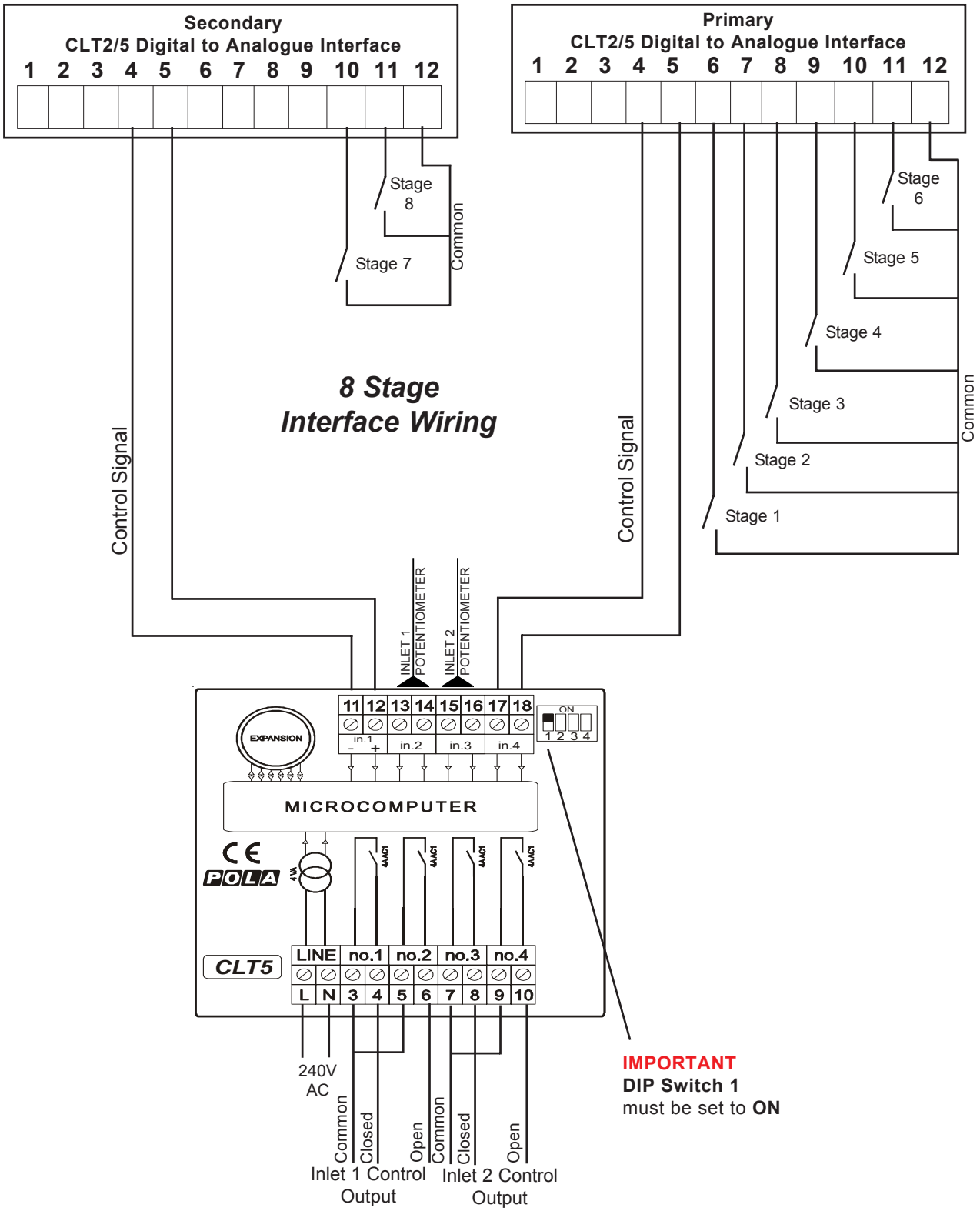
tYPE 0 - Connection Diagram

Example for: Two geardrive control output with one set of step inputs. (tYPE = 0)



NOTE: Ensure ***n.PO.1*** is set to 8 for this wiring layout (see ***COSt*** settings)

For other connection diagrams for this type of control, please contact Climatec Systems Ltd.

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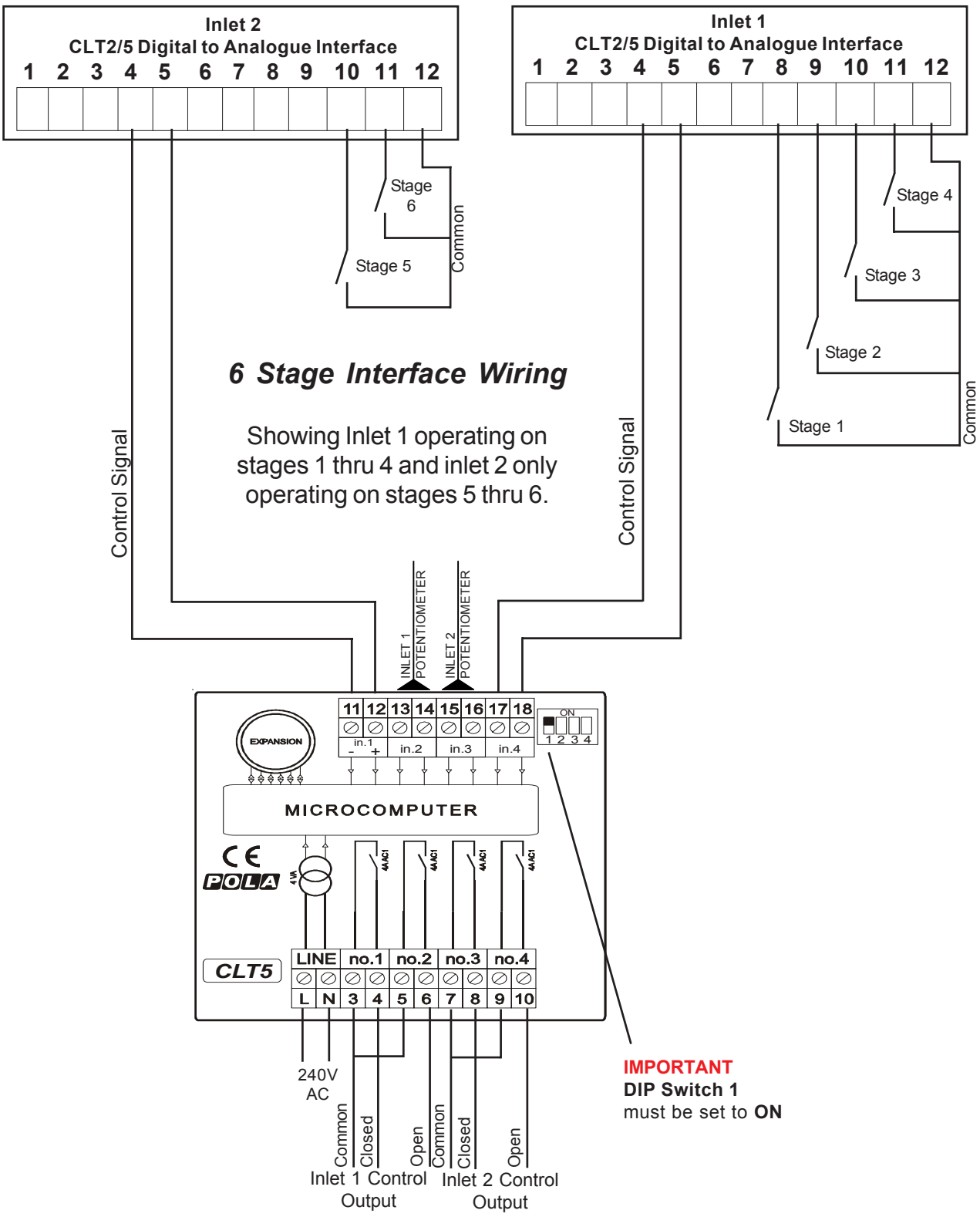
tYPE 1 - Connection Diagram

Example for: Two geardrive control output with two independant sets of step inputs. (tYPE = 1)



IMPORTANT
DIP Switch 1
must be set to **ON**

NOTE: Ensure ***n.PO.1*** is set to 4 and ***n.PO.2*** is set to 2 for this wiring layout (see ***COSt*** settings)

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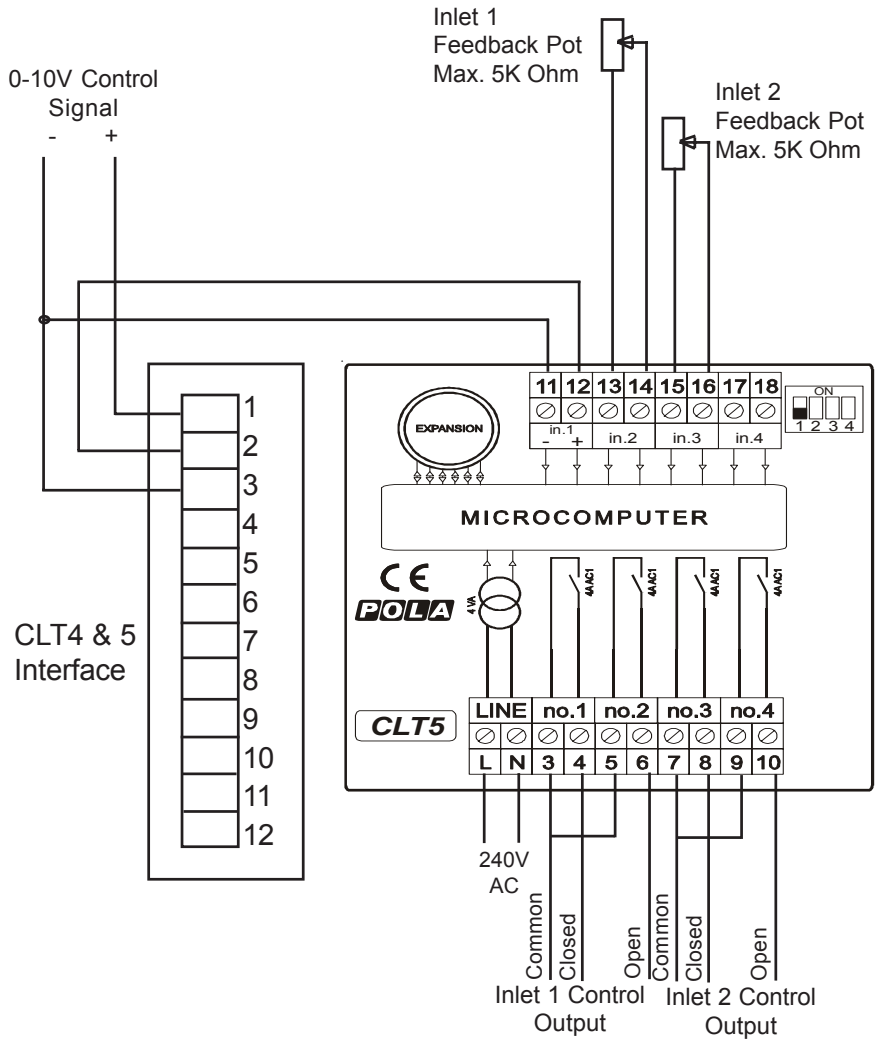
tYPE 2 Connection Diagram

Example for: Two geardrive control output with one 0-10 volt control input. (tYPE = 2)



IMPORTANT
DIP Switch 1
must be set to **OFF**

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