New basic Controller E5CS-V

The E5CS-V is a new addition to the Omron temperature controller range, offering simple settings for standard requirements via dip-switch and more advanced functionality through the simple to follow menu structure.

The E5CS-V has been designed as a replacement for the very popular E5CS. Standard settings are made in the same way via dipswitches, this means that customers who are used to settings up the current model will be able to change onto the new model without problem.

Changes to specifications

Input options: The E5CS-V has both thermocouple and PT100 input options in a single unit, this means that the number of standard part numbers is halved, removing any confusion over the part number required.

Case colour: The standard colour will be black, but beige will be available to order

Autotune function: The E5CS-V has full Autotune functionality now tuning all three control terms, the previous version only tuned the Proportional band as standard.

Improved IP rating: The IP rating of the E5CS-V is IP66 making more suited to harsher environments than the old model
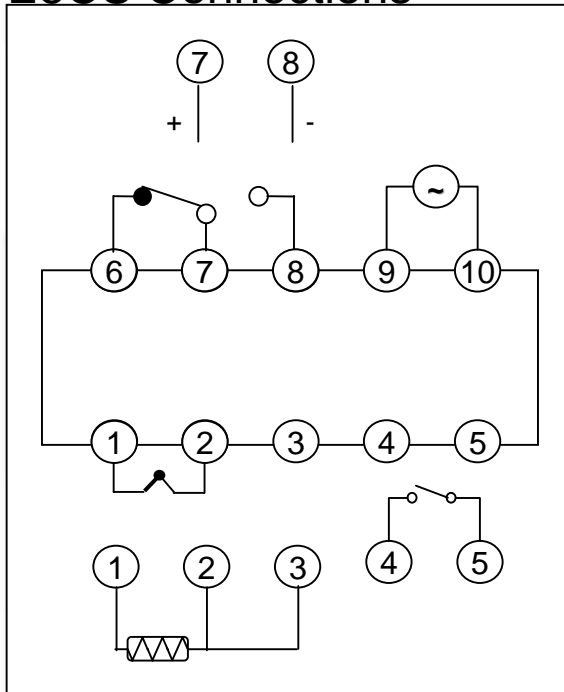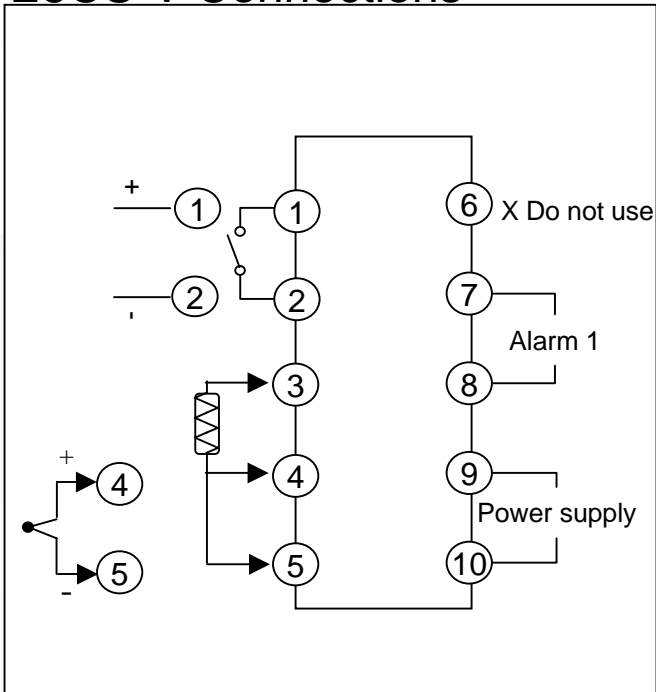
78mm

100mm
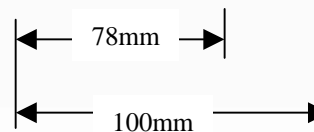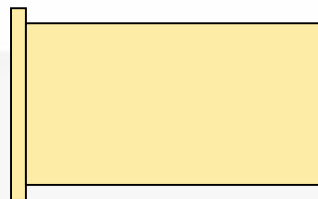
Differences between connections

•The position of the terminals has moved
•The main control output is now SPST contact instead of change over
(the contact can be made normally open or normally closed)
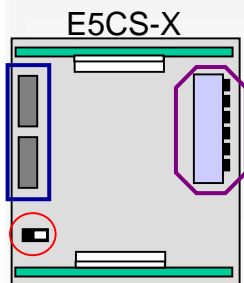•Some terminal numbers have changed.
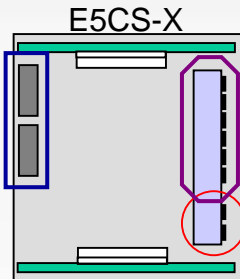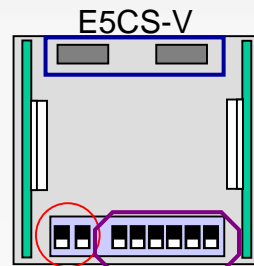
E5CS Connections

E5CS-V Connections

6 X Do not use

Alarm 1

Power supply

Dip switch position and selection

E5CS-X

First version available in the UK contained a separate switch for key protection.

E5CS-X

Revised model incorporated the key protection and factory switch into the main dip switches.

E5CS-V

New model E5CS-V the switches have moved to top and bottom and also incorporate the factory and key protection switches.

The operation of the dipswitches are shown below, the only change in number 5, which now becomes the input type selector (Thermocouple or PT100), replacing the sensor standard (DIN or JIS)
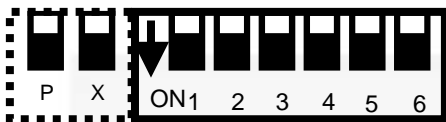
P X ON 1 2 3 4 5 6

The 'P' switch enables the key protect when turned on.
The 'X' switch is a factory setting switch and should not be changed, changes made in this level will effect the controller performance.

E5CS DIP switch settings			
Switch	Function	OFF	ON
1	Control mode	ON/OFF	PID action
2	Proportional time	20 seconds	2 Seconds
3	Control output	Reverse	Direct
4	Input shift	Setting disabled	Setting enabled
5	Sensor standard	DIN	JIS
6	Scale indication	°C	°F

P X ON 1 2 3 4 5 6

The 'P' switch enables the key protect when turned on.
The 'X' switch is a factory setting switch and should not be changed, changes made in this level will effect the controller performance.

| E5CSV DIP switch settings			
Switch	Function	OFF	ON
1	Control mode	ON/OFF	PID action
2	Proportional time	20 seconds	2 Seconds
3	Control output	Reverse	Direct
4	Input shift	Setting disabled	Setting enabled
5	Input selector	Thermocouple	Platinum resistance thermometer
6	Scale indication	°C	°F

Advanced Industrial Automation

Inside the E5CS (see page3), is located the input selector switch, this is used for choosing the input sensor being used. In the old and current model the unit type determined what the numbers represented.

Old and current model E5CS-☐1TC ☐☐☐
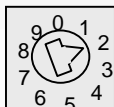
	K (CA) Chromel-Alumel thermocouple						J (IC) Iron-constantan thermocouple				
selector	0	1	2	3	4	5	6	6	7	8	9
Scale indication	ºC	ºC	ºC/ ºF	ºC/ ºF	ºC/ ºF	ºC/ ºF	ºF	ºC	ºC	ºC/ ºF	ºC/ ºF
Standard scale	0 to 200	0 to 300	0 to 400	0 to 500	0 to 600	0 to 999	0 to 999	0 to 200	0 to 300	0 to 400	0 to 500

Old and current model E5CS-☐1PX ☐☐☐
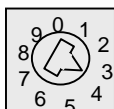
	Platinum resistance thermometer (PT100)									
selector	0	1	2	3	4	5	6	7	8	9
Scale indication	ºC	ºC	ºC/ ºF	ºC/ ºF	ºC/ ºF	ºC/ ºF	ºF	ºC	ºC	Not used
Standard scale	0 to 200	0 to 300	0 to 400	0 to 500	0 to 600	0 to 999	0 to 999	0 to 200	0 to 300	

In the new models E5CS-V, all the sensors are now within one unit so the numbers vary depending on the position of Dip-switch 5.

Selector switch 5 set to OFF (default thermocouple)				Selector switch 5 set to ON (Platinum resistance thermometer)			
Input	Setting	Sensing range ºC	Sensing range ºF	Input	Setting	Sensing range ºC	Sensing range ºF
K	0	-99 to 1,300	-99 to 1,999	PT100	0	-99 to 850	-99 to 1,500
	1	0.0 to 199.9	0.0 to 199.9		1	0.0 to 199.9	0.0 to 199.9
J	2	-99 to 850	-99 to 1,500		2	-99 to 99	-99 to 99
	3	0.0 to 199.9	0.0 to 199.9		3	0 to 200	0 to 200
L	4	-99 to 850	-99 to 1,500		4	0 to 400	0 to 400
T	5	-99 to 400	-99 to 700	JPT100	5	-99 to 850	-99 to 1,500
	6	0.0 to 199.9	0.0 to 199.9		6	0.0 to 199.9	0.0 to 199.9
U	7	-99 to 400	-99 to 700		7	-99 to 99	-99 to 99
N	8	0 to 200	-99 to 1,999		8	0 to 200	0 to 200
R	9	0 to 1,700	0 to 1,999		9	0 to 400	0 to 400