LEAFLET for Dardanus

Dual channel heating blanket based manual controller for **endotherm** based reaction like cultivation in bioreactors in size 0-50 litre. Such as CellVessel from www.cercell.com

Product, model name	Dardanus
Purpose	Heating
Cabinet size, mm	186 x 119 x 79
Power supply	230 VAC, 5 amp
Weight, kilo	1.5

Design
Heat-Control-Unit includes two parallel and identical regulating channels in the same box. Sensor input for each of the two channel is Pt-100. ELCO temperature regulator, controller with PI algorithm action and numerous user adjustable features.

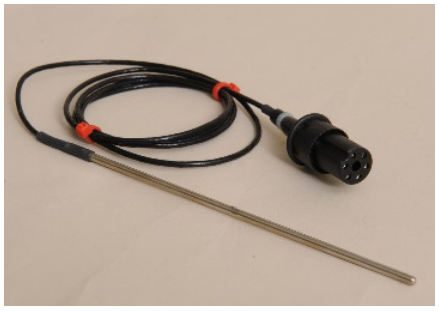
General features
The unit are designed for individual heating element control of two independent platforms. Connection to 230 VAC only, with standard IEC socket-plug power cables into 2 amp fused and switched IEC Power Inlet Module in IP54 and coated aluminium enclosure.

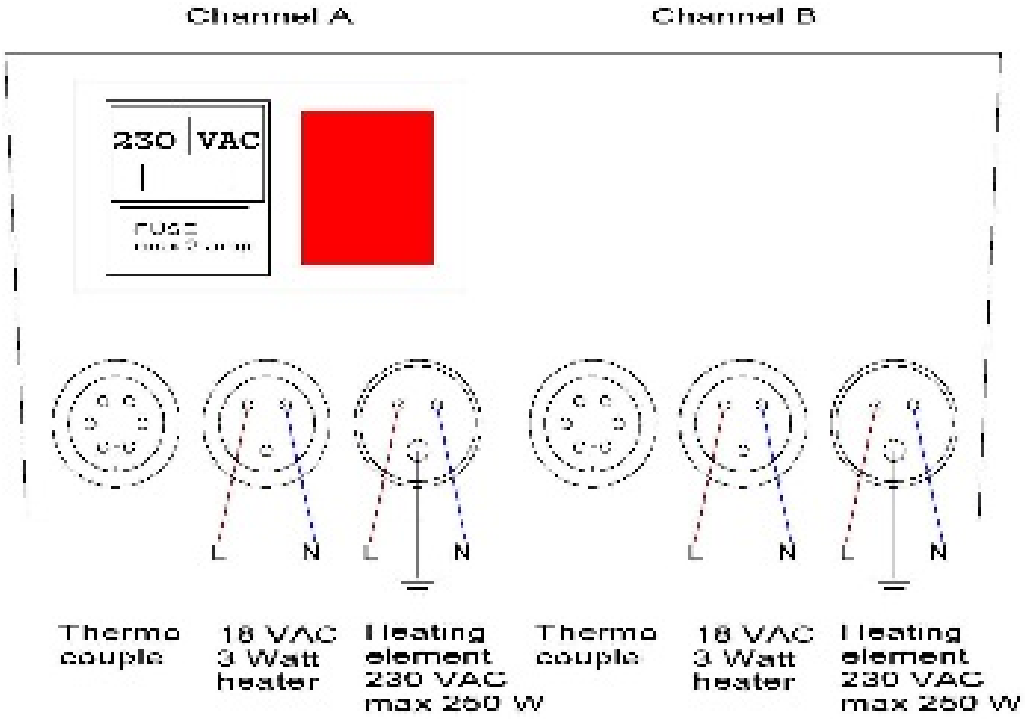
The Heat-Control-Unit facilitates on each of two channel:

- Power breaker
- One Pt100 sensor input
- One 230 VAC outlet rated at 230 watt for platform heating
- One 18 VAC constant power outlet for one 3 Watt 80x120 mm heating element for OD 50 mm sterile filter heating for 30°C gradient to the environment

Any 3-wire type of Pt100 sensor may be used. Possible Silicone patch 40x13 mm with self-adhesive foil attached to PET porous non-woven patch. According to DIN EN 60751. Or a standard metal shielded sensor like shown below OD3 x 150 mm.

Cronus-PCS





ELCO controller

Advanced controller able to operate within ±0.1°C of accuracy. Units equipped with the ELCO ELK38 regulator is supplied pre-programmed.

At initial system start-up the controller will perform the first auto-tune function in order to measure the thermal mass and response of the system. For optimum accuracy the media (no cells) temperature should be less than 50% of the set point temperature at start up. So if the set point is 36°C the media temperature should be lower than 17.9°C. Allow the system to perform the auto-tuning function on >50% media volume. Collected data is stored to increase accuracy at the following run.

At every system start-up the controller will perform the auto-tune function if the temp diff is larger than 50%.

Your programming is limited to main set-point (see 2.1 in the ELCO manual). In general it is recommended to set the main set-point app 0.5-1°C lower than the final target set point and half a day later increase the main set-point to final temperature.

Cronus-PCS