

For temperature control of SUB's

Dual channel heating/thermal controller for endotherm based reaction like cultivation in bioreactors in size 0,5 - 50 litre thermal mass. Such as the CellVessel SUBs or SUMs from www.cerell.com or CP-SUBs from prolifecell.com



Harmonia
product 2019

Design

Dual independent channel controller with build-in Apollon PLC. Harmonia can operate in a stand-alone setup, autonomous or chained with other Cronus components or PCS. Designed for electrical heating element operating at either 110 or 230 VAC. Elements can be heating rods or flexible blankets of same voltage as supply voltage. Power control with Solid-State-Relay (SSR) for unlimited lifetime.

In & Out electrical requirement – front panel mounted

- 1 x 110 - 230 VAC power inlet, IEC standard male with ground, fuse tray, red button breaker, max 10 amp
- 2 x 110 - 230 VAC controlled power outlet, IEC standard female with ground – one each channel, max 10 amp in total
- 2 x Pt100 sensor with 4 leg M12/RKF socket
- 1 x USB socket
- 1 x RJ45 socket

Harmonia in U2 Hephaestus Stainless Steel cabinet. Shown with thermal control device for 500 ml SUB and 3,2 liter Heating-Support-Foot (HSF). The far right further shown with Electrical-Heating-Blanket and HSF.

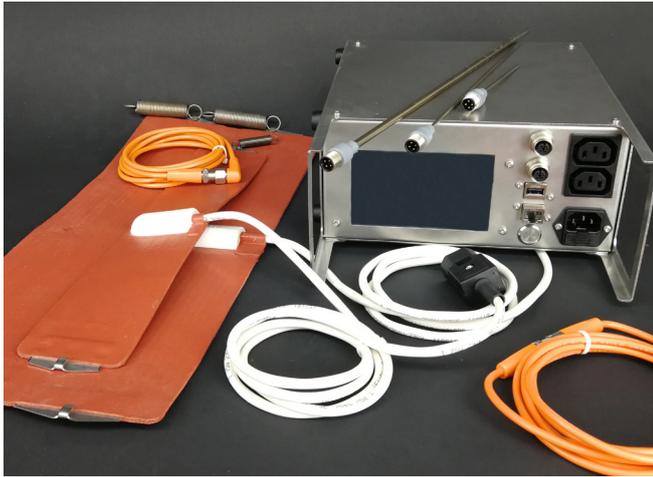


Harmonia 500 ml and 3200 ml



Harmonia blanket and HSF 3200

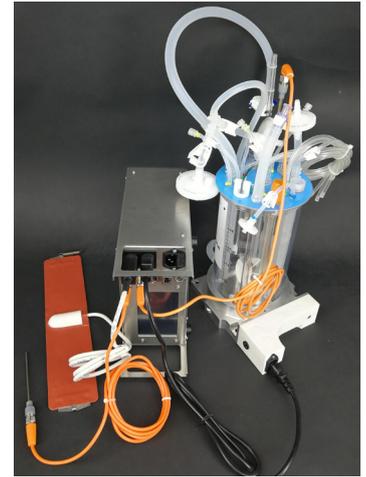
Supplied with two thermocouples of the size that fits your purpose.
Choose your preferred thermal control device for your process.



Harmonia two blankets



Harmonia stacked



Harmonia with CellVessel

Communication

- Internal 5" touch sensitive TFT display hooked on the Apollon PLC
- External connection to PC, PADs or smart-Phones via Wi-Fi for programming and info from the built-in webservice
- USB port for USB adapter with software upgrades / Wi-Fi connection
- RJ45 port for LAN, ModBus, OPC via IP/TCP and for firmware upgrades and data acquisition

Programming

Any of the 3 parameters of PID is fully accessible and free to program according to the thermal mass of your system.

Supplied with:

- 2 x Omega Pt100 sensors (one of the dimensions: OD2x100, OD2x150, OD3x200, OD3x250 mm with integrated M12 RKF connector)
- 2 x thermocouple cable with M12 RKF connector in each end
- No Electrical-Heating-Blanket or Heating-Support-Foot included - choose your desired extras

Extras to choose from

- Orange silicone heating blanket's to wrap around the CP-SUB (check out dimension, voltage, power rating, etc)
- Orange Electrical-Heating-Blanket for SUBs and SUFs and SUMs from CerCell
- Heating-Support-Foot for the 3200 ml size CellTank-34/35 CP-SUBs from ProlifeCell or SUB, SUM from CerCell
- Heating-Support-Foot for the small 500 ml P-SUB from PerfuseCell or 500 ml SUB, SUM from CerCell



Cronus-PCS

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the information
you need here**

cronus-pcs.com

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