



Controller for Rosemount-Designed Baths

Model 7900

- All the features of the Hart 2100 Controller
- Installs easily
- Two independent over-temperature cutout circuits

Hart's bath controllers have long been recognized as the finest in the world. They're the most popular retrofit controller in the industry, and now they're available for Rosemount baths. The Model 7900 Controller installs easily and can replace the Rosemount Model 915 for all Rosemount bath models.

This controller uses the same circuitry as Hart's 2100 Controller to achieve long-lasting stabilities of $\pm 0.001^\circ\text{C}$ or better. Special noise-rejection techniques allow the 7900 to measure the very tiny resistance changes required for this level of stability. AC bridges are used within the controller to cancel thermal EMFs. Custom high-precision resistors contribute to short- and long-term stability and advanced filtering techniques force out troublesome line noise.

The Model 7900 includes a special circuit that monitors the controller's microprocessor and automatically resets it if its operations are interrupted. Two separate

cutout systems are also included for keeping your bath's temperature within its normal range.

A software cutout uses an adjustable high-temperature limit that can be easily accessed through the front panel and set to match the requirements of your bath fluid. Should the control sensor measure a temperature beyond this upper limit, heating is shut down. If the bath's temperature falls below its normal operating range, the heaters are turned on and the LN_2 cooling shut off. A second, independent hardware cutout monitors the bath's temperature with a thermocouple and shuts down all heating and LN_2 cooling if the bath's temperature rises above its range.

These cutout features, combined with the superior reliability and long-term stability performance of the 7900, allow you to run your system for as long as you like between shut-downs—365 days a year, if you wish. Your bath can be ready for you to

take measurements the minute you walk into your lab each day.

Specifications

Temperature Control Range	-100°C to 550°C
Optional Ranges	None
Stability	± 0.003 (± 0.001 typical)
Stabilization Time	30 minutes
Display Accuracy	$\pm 1^\circ\text{C}$
Cooling Control	LN_2 – automatic
Heating Control	2-position, firmware or user controlled
Firmware High-Temp Cutout	Yes, volatile, programmable (independent of the controller)
Hardware High-Temp Cutout	Thermocouple controlled
Memory	Non-volatile; 8 programmable set-points, each with ramp and soak features
Programmable Soak Time	1 to 500 minutes
Control Sensor	100-ohm PRT; $\alpha = 0.00385$
Interface	RS-232 and IEEE standard
Software	Interface- <i>it</i>
Operating Temperature	5°C to 50°C
Operating Voltage	115 VAC ($\pm 10\%$), 60 Hz
CE Mark	Contact Hart
Current Rating	20 amps max.
Dimensions	12.25" W x 4.5" H x 11" D
Weight	9 pounds (4 kg)
Installation	Freestanding or rack mounted with optional hardware

Ordering Information

7900-B	Controller, Rosemount-Designed Baths, bottom stirred (includes control probe and thermocouple cutout)
7900-T	Controller, Rosemount-Designed Baths, top stirred (includes control probe and thermocouple cutout)
2079	Rack-Mount Kit



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