

» SR - 800N

Extended Area Blackbody ControlMaster

CI Systems' advanced architecture ControlMaster SR-800N sets a new standard for accuracy and uniformity in extended area blackbodies. Temperature measurement and calibration are both performed in the radiation head itself and then transferred digitally to the controller. The result is a more accurate, stable and flexible system that provides reliable NIST-traceable results.

Temperature control is achieved using removable sensors that can easily be replaced by the user in just minutes.

Our factory-supplied replacement sensors provide an effective and efficient method for recalibrating the system, for an additional 12 months of service.

Alternatively, customers may recalibrate the blackbody with our optional CK-800R calibration kit.



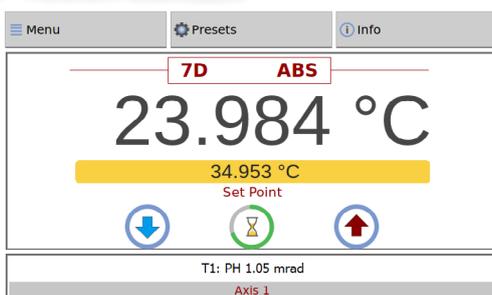
» FEATURES

- ▶ Superior accuracy
- ▶ mK resolution
- ▶ High uniformity
- ▶ Wide range of temperatures
- ▶ Capable of operating at a wide range of ambient temperatures
- ▶ High resolution color display
- ▶ Built-in tests to shorten maintenance time
- ▶ L2" to 40" standard emitters. Other dimensions are available upon request
- ▶ Low acoustical noise

» IMPROVED EASE OF USE

- ▶ Calibrated radiation heads independent of the controller
- ▶ Quick and convenient annual calibration by removable sensor replacement
- ▶ Configurable resolution and stability window
- ▶ Ability to control up to four motorized devices
- ▶ Ethernet and RS232 communication ports, USB Communication by Serial Adaptor
- ▶ Large color LCD display
- ▶ Touch screen user interface
- ▶ Nitrogen inlet for inert atmosphere on all LT models
- ▶ Compact and portable controller
- ▶ Dual head option
- ▶ 19" rack mount kit included
- ▶ LINUX operating system

» TOUCH SCREEN



Intuitive touch screens for controlling the temperature and up to four motorized devices

» CERTIFICATIONS

- ▶ NIST-traceable calibration
- ▶ Certified to MIL-T-28800D, CE, and FCC



» SPECIFICATIONS

MODEL: SR-800N	2D / 2A	4D / 4A	7D / 7A	8D / 8A	12D / 12A	14D / 14A	20D / 20A	40D / 40A
Aperture	2" diameter	4"x4"	7"x7"	8"x8"	12"x12"	14"x14"	20"x20"	40"x40"
Absolute Temperature Range, °C	0 to 125	0 to 125	5 to 90	0 to 100	10 to 80	10 to 80	10 to 80	10 to 80
Differential Temperature Range, °C	-25 to +100	-25 to +100	-20 to +65	-25 to +75	-15 to +55	-15 to +55	-15 to +55	-15 to +55
Set Point & Readout Resolution, °C	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Uniformity 1, °C	± 0.005	± 0.010	± 0.010	± 0.010	± 0.010	± 0.015	± 0.015	± 0.030
Temperature accuracy 2 :	Absolute, °C	0.015 @ ΔT < 0 , 0.007 @ 0 < T < 50 , 0.015 @ ΔT > 50						
	Differential, °C	0.008 @ ΔT ±25 , 0.015 @ ΔT ±25						
Stability °C	± 0.003 @ ΔT < ±10							
Emissivity	0.97 ± 0.02							
Settling time 3 , Sec / °C	30							
Slew rate, Sec / °C	0.50	0.33	0.22	0.17	0.14	0.10	0.10	0.10
Power consumption, W	200	200	250	1000	1200	2400	4500	6000
Head size mm (HxDxW)	Ø 65x95	161x190x201	224x225x265	280x170x335	357x230x415	410x170x480	570x170x640	1280x1600x760
Head weight, kg	1	5	10	15	25	36	65	450
Controller dimensions ,mm	342x310x133 (3U)					450x600x175 (4U)		
Controller weight, kg	10	10	10	10	10	20	25	60
Head Operating Ambient temp, °C	-20 to +70							

» OPTIONS

MODEL: SR-800N		2D / 2A	4D / 4A	7D / 7A	8D / 8A	12D / 12A	14D / 14A	20D / 20A	
ET - Extended Temp.	Absolute Temperature Range, °C	0 to 175	0 to 175	0 to 175	0 to 125		5 to 150	5 to 150	
	Differential Temperature Range, °C	-25 to +150	-25 to +150	-25 to +150	-25 to +100		-20 to +125	-20 to +125	
LT- Low Temperature 4	Absolute temp. range	---	-40 to +150	-40 to +150	-40 to +150	-40 to +150	---	---	
	Differential temp. range	---	-65 to +125	-65 to +125	-65 to +125	-65 to +125	---	---	
WTR - Wide Temp. Range	Absolute Temperature Range, °C	---	-25 to +150	-20 to +150	-20 to +150	-20 to +150	-20 to +150	---	
	Differential Temperature Range, °C	---	-50 to +125	-45 to +125	-40 to +125	-40 to +125	-40 to +125	---	
HE - High Emissivity 5	Emissivity	0.99 ± 0.01							
Environmental Chamber	CH-STD	Chamber temp.	-30 to +70						
		Abs. temp. range	-40 to +80						
	CH-ET	Chamber temp.	-40 to +80						
		Abs. temp. range	-40 to +150						
	CH-LT6	Chamber temp.	---	-40 to +80	-40 to +80	-40 to +80	-40 to +80	---	---
Abs. temp. range		---	-40 to +150	-40 to +150	-40 to +150	-40 to +150	---	---	
Differential Accuracy °C		0.015 @ -20 < Tamb. < 80 , 0.030 @ Tamb. < -20							
Stability, °C		0.005 @ ΔT < 10 , 0.010 @ ΔT > 10							
Dual Blackbody Head Option	Absolute Temperature Range, °C	0 to +100	0 to +100	0 to 90	---	---	---	---	
	Differential Temperature Range, °C	-25 to +75	-25 to +75	-25 to +55	---	---	---	---	

» GENERAL SPECIFICATIONS

Storage temperature, °C	-20 to +70
Operating Voltage, °C	95 to 240 VAC. 50/60 Hz
Operating Temperature, °C	0 to 50

Notes:

- Uniformity values are for a ±1°C step from ambient temp @ 80% of the central area. For other temperatures multiply ΔT.
 - Accuracy is referenced to a NIST calibrated CI-Systems master sensor.
 - Setting time is to 0.01°C from the required value.
 - Includes refrigerator (power consumption: 3500 W)
 - GPIB Optional
- Differential temperature range is limited upon to absolute temperature range
 - All values are valid at 22°C and in a non-condensing environment.
 - Total system uncertainty: 0.02°C @ ΔT < ±25°C, 0.03°C @ ΔT > ±25°C
 - Typical yearly drift is 0.02°C
 - Specifications are subject to change without notice