

# » SR - 800N SE

## Spherical Aperture- Extended Area Blackbody ControlMaster

CI Systems' advanced architecture ControlMaster SR-800N-SE 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 transferred digitally to the controller. The result is a more accurate, stable, flexible and compact system that provides reliable NIST-traceable results.

The SR-800N-SE may be operated as a standalone unit, or integrated into a larger test system.

The spherical dome emitter enables the calibration of imagers with a very wide field of view. The customization of head geometry allows a broad range of optical apertures and fields of view.

Temperature control is achieved using removable sensors that can easily be replaced by the user in just minutes. Replacing the sensors with factory-supplied sensors is a simple procedure that recalibrates the system for another full year. Users who prefer to perform the calibrations themselves may do so with our CK-800R calibration kit.



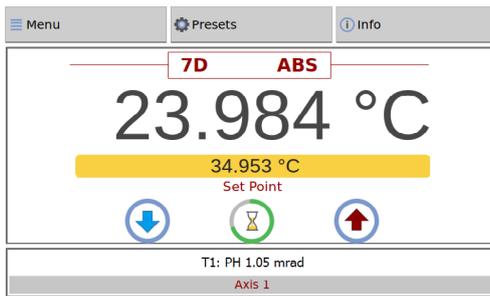
### » SUPERIOR PERFORMANCE

- ▶ Wide field of view coverage
- ▶ Superior accuracy
- ▶ mK resolution
- ▶ High uniformity
- ▶ Wide range of temperatures
- ▶ High resolution color display
- ▶ Built-in MRTD testing for added efficiency
- ▶ Built-in tests to shorten maintenance time
- ▶ 4" to 12" standard emitters (other sizes upon request)
- ▶ Low acoustical noise

### » IMPROVED EASE OF USE

- ▶ Calibrated radiation heads independent of the controller
- ▶ Removable sensor replacement for quick annual calibration
- ▶ 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
- ▶ Compact and portable controller
- ▶ 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-SE	4A	7A	12A
Emitter Aperture Diameter, inch	4"	7"	12"
Sagital Depth, mm	5.2	16.4	51.8
Sphere Radius, mm	250	250	250
Absolute Temperature Range, °C	5 to 85	5 to 85	5 to 85
Set Point & Readout Resolution, °C	0.001	0.001	0.001
Uniformity, °C	±0.01	±0.01	±0.01
Absolute Temperature Accuracy, °C	0.007 @ 0<T<50, 0.015 @ 0>T>50	0.007 @ 0<T<50, 0.015 @ 0>T>50	0.007 @ 0<T<50, 0.015 @ 0>T>50
Stability, °C	± 0.003 @ ΔT< ±10	± 0.003 @ ΔT< ±10	± 0.003 @ ΔT< ±10
Emissivity	0.97± 0.02	0.97± 0.02	0.97± 0.02
Settling Time , sec	30	30	30
Slew Rate (maximum), °C/sec	0.22	0.22	0.22
Power Consumption, w	800	1000	1200
Head Size, mm (HxDxW)	161x190x201	338x140x196	357x230x415
Head Weight, kg	5	12	25
Controller dimensions (mm)	342x310x133 mm, 3U height		
Controller weight, kg	10		
Storage Temperature, °C	-20 to 70		
Operating Voltage	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 over 80% of the central area. For other temperatures multiply by ΔT
  - Accuracy is referenced to a NIST calibrated CI-Systems master sensor.
  - Settling time is to 0.01°C from the value
  - Sagital Depth are based on 250mm sphere radius. Other radii are available upon request.
- 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

