



**GENERAL INFORMATION**

Sensor® Dual-Density High Risetime modules feature 800µsec voltage risetime at full two dimmer per module density. D20DHR modules dim accoustically sensitive loads without sacrificing dimmer density or efficiency.

**APPLICATIONS** Professional sound stages

- Television production studios
- Concert Halls

**FEATURES**

- D20DHR modules are dual density
- Voltage, current, and temperature sensors in each dimmer
- 100k AIC rating
- 800µS risetime toroidal filters
- Die-cast aluminum chassis
- Tool-free installation and removal
- Dual back-to-back SCRs for each circuit
- Fully magnetic circuit breakers
  - 100% duty cycle at full rating
  - Breakers will not derate over product life cycle
- UL and cUL Listed

**ORDERING INFORMATION**

**Sensor AF Dimmer Modules**

Model#	Description
D20DHR	Dual 20A Dimmer Module – 800uS – Advanced Features

**Compatible Systems**

Model#	Description
<b>Sensor+ Installation Racks</b>	
SR6+	Sensor+ 6 module rack
SR12+	Sensor+ 12 module rack
SR24+	Sensor+ 24 module rack
SR48+	Sensor+ 48 module rack
SR6AF+	Sensor+ 6 module Advanced Features rack
SR12AF+	Sensor+ 12 module Advanced Features rack
SR24AF+	Sensor+ 24 module Advanced Features rack
SR48AF+	Sensor+ 48 module Advanced Features rack
SRAFN+	Sensor+ GFCI racks
<b>Sensor+ Touring Racks</b>	
SP4820+	Sensor+ 24 module Touring Rack (48- 20A dimmers)
SP7220+	Sensor+ 36 module Touring Rack (72- 20A dimmers)
SP9620+	Sensor+ 48 module Touring Rack (96- 20A dimmers)

## Advanced Features (AF) Series

### SPECIFICATIONS

- DIMMER MODULES** Dimmers are UL and cUL listed for continuous duty at 100% of rated load  
D20DHR – 2.4kW  
Dimmer modules are plug-in, and may be replaced without tools  
Cast aluminum chassis, finished with textured epoxy paint  
Includes circuit breaker(s), toroidal filter(s), SCR modules, power and control connectors  
Keyed to prevent insertion in inappropriately rated rack positions
- CIRCUIT BREAKERS** Fully magnetic to eliminate nuisance tripping  
20x inrush current rating  
125%, 10-120 seconds, must- trip rating  
Rated for 100% switching duty applications at full load
- SCR ASSEMBLY** Sealed, patented assembly  
Field replaceable with screwdriver  
Two back-to-back SCRs per circuit  
One Control and Output LED per circuit  
4000V isolation between control and power components  
Integral bonded heatsink  
Integral temperature sensor  
Built-in voltage and current sensors
- CHOKES** High quality 800µS, risetime\* toroidal filters
- ELECTRICAL RATINGS** 100k AIC rating  
Hot-patching: dimmers shall withstand hot-patching of cold incandescent loads up to the dimmer's full rating, without tripping
- ADVANCED FEATURES** Advanced Features error messages:  
Load dropped below recorded value  
Load increased over recorded value  
DC on dimmer output  
SCR failed on/off  
Circuit breaker tripped  
Dimmer module removed  
Dimmer load absent

\*Risetime measured at full load, at worst case firing angle (about 50%), from 10-90% of output wave form

### PHYSICAL

#### Module Weights

Model#	Weight		Shipping Weight	
	lbs	kgs	lbs	kgs
D20DHR	5.0	2.3	6.9	3.1

#### Efficiency per D20DHR dual dimmer module at full load (100%)

Load	BTUs	Loss (Watts)	Efficiency
2400W	688	200W	95.8%

#### Efficiency per D20DHR dual dimmer module based on connected load

Load	BTUs	Loss (Watts)	Efficiency
1725W	378	102W	96.8%
1150W	189	56W	97.6%
575W	62	19W	98.4%

These values should be provided to a qualified HVAC design engineer, along with dimmer quantities, types and dimmer room dimensions, to calculate dimmer room air handling requirements.

Dimmer room HVAC systems must at all times maintain the specified ambient temperature **at the dimmer rack**. Dimming systems operating within 10°F of the upper or lower temperature limits must strictly follow installation and operation guidelines to operate reliably.

#### SCR Rating

Module	20AF
Single cycle peak surge current	625A
Half cycle peak surge current	1620A
Transient over voltage	600V



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