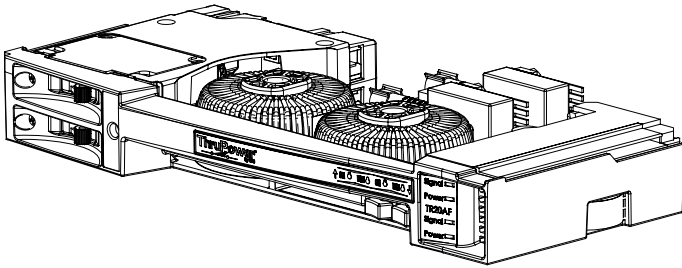
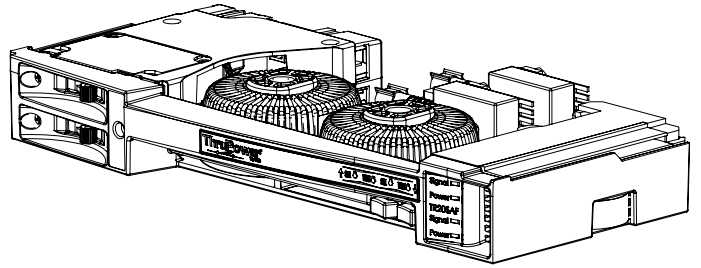


100V 120V

Sensor3™ Series



TR20AF



TR20SAF

GENERAL INFORMATION

High reliability dimming now combines with remote activated mechanical relays and ThruPower bypass to create the foundation of a completely flexible power system design for your future lighting needs. Sensor3 all-in-one ThruPower modules allows free mixing of dimming, switching, or manual bypass on a circuit by circuit basis without replacing the hardware in your Sensor power system. A local override completely bypasses the control system to guarantee that the unsuspecting board operator does not dim your intelligent lighting source. In bypass mode, the integral relay will eliminate the choke and SSR power cube thereby providing clean power to critical power supplies and lighting devices.

The ThruPower module supports circuit-specific setup and load feedback that can be accessed remotely with any ACN control system.

APPLICATIONS

- Where load type is not likely to be known at time of installation
- Where production environment load types are likely to change frequently
- Where your moving lights, LED, scroller, or power supplies warranty depends on constant power
- Low voltage lighting
- Quartz lighting
- Neon lighting
- Cold cathode lighting
- 2-wire fluorescent ballast
- Tungsten

FEATURES

- Mechanically latching relays
- On/off relay activation through the control system.
- Manual ThruPower override provides foolproof full AC voltage through from the breaker to the fixture
- Voltage, current, and temperature sensors in all operation modes
- Hydraulic-magnetic circuit breakers with fuse backup
- ThruPower modules are dual density
- Dual back-to-back SCRs for each circuit
- 350µS or 500µS risetime toroidal filters
- High-density modular assembly
- Die-cast aluminum chassis

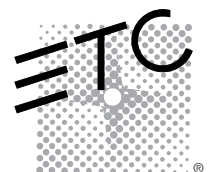
ORDERING INFORMATION

ThruPower Modules

MODEL	DESCRIPTION
TR20SAF	Dual 20A Dimmer with bypass 350µS, Advanced Features
TR20AF	Dual 20A Dimmer with bypass 500µS, Advanced Features

Compatible Systems

MODEL	DESCRIPTION
SENSOR3 INSTALLATION RACKS (OPTIONALLY WITH AF)	
SR3-6	Sensor3 6 module rack
SR3-12	Sensor3 12 module rack
SR3-24	Sensor3 24 module rack
SR3-48	Sensor3 48 module rack
SENSOR3 TOURING RACKS	
SP3-4820	Sensor3 24 module Touring Rack (48-20A dimmers)
SP3-9620	Sensor3 48 module Touring Rack (96-20A dimmers)
SENSOR3 PORTABLE PACKS	
SP3-1220	Sensor3 6 module Portable Pack (12-20A dimmers)
SP32420	Sensor3 12 module Portable Pack (24-20A dimmers)



SPECIFICATIONS

GENERAL

- Rated for continuous duty at 100% of rated load
- 2.4kW
- UL and cUL approved

PHYSICAL

- Modular plug-in assemblies
- Cast aluminum chassis, finished with textured epoxy paint
- 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

RATINGS

- 100,000A Short Circuit Current Rating (SCCR)
- Modules withstand hot-patching of cold loads up to full rating

POWER DEVICE

- Sealed, patented assembly
- Field replaceable with screwdriver
- Two back-to-back SCRs per circuit
- One control LED and one output LED per circuit
- Mechanical held air gap relay
- Local "on" switch-complete bypass of dimming and relay control
- Integral bonded heatsink
- Integral temperature sensor
- Built-in voltage and current sensors

FILTERING

- High quality toroidal filters choice of 350 or 500 μ S risetime*
- *Risetime measured at full load, at worst case firing angle (90 degrees), from 10-90% of output wave form

DIMMER RANGE

- Incandescent, low voltage dimming range 100-0%
- Dimming range of 2 and 4-wire fluorescent ballast is dependent on lamp ballast combination. 4-wire fluorescent control by others. Contact ETC for range verification
- Sizing of Neon transformer used in dimming applications should be 1.5x greater than size used in non-dimming application

SPECIFICATIONS

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

**All AF modules support ETC's Advanced Features (AF) dimmer specific load reporting features when used in AF-equipped racks or pack

PHYSICAL

Module Dimensions

MODEL	HEIGHT		WIDTH		DEPTH	
	inches	mm	inches	mm	inches	mm
TR20AF/TR20SAF	1.50	38.	11.8	300	5	127

Module Weights

MODEL	WEIGHT		SHIPPING WEIGHT	
	lbs	kgs	lbs	kgs
TR20AF/TR20SAF	5	2.3	6.9	3.1

Maximum BTU Production per Module

MODEL	BTUS	WATTS	EFFICIENCY
TR20SAF	290	85	96.5%
TR20AF	290	85	96.5%

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	D15/20AF	D50AF	D100AF
Single cycle peak surge current	625A	1200A	2300A
Half cycle peak surge current	1620A	4150A	22,000A
Transient over voltage	600V	600V	600V



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Sensor® products protected by one or more of the following U.S. Patent Numbers 5,323,088, 5,352,088, 7,233,112, 7,019,469, 6,849,943, and 6,002,563; European Number 0603333; German 69203609.