ETC

Sensor Power Control Modules

Sensor 120 V Series



Type(s)

Project

Date

Notes

GENERAL INFORMATION

Sensor power control modules are designed for use in all SR3 modular enclosures. Whether you need forward-phase or reverse-phase SCR dimming, relay control, or the flexible control of our ThruPower modules, Sensor has you covered.

Most modules provides two circuits of control for a wide range of applications. Advanced Features (AF) modules enable dimmer-specific feedback of load circuit data in SensorAF enclosures. All modules feature modular installation and removal, fully magnetic circuit breakers, and rock-solid construction.

APPLICATIONS

- Tungsten lighting
- Low voltage lighting
- Non-dim loads
- Moving lights, fog machines, and powered effects
- Electronic transformers
- Electronic LED power supplies
- 2-wire Fluorescent ballast
- 2-wire Fluorescent ballast with integrated battery backup
- 3-wire Fluorescent ballast
- 4-wire Fluorescent ballast (requires ETC Response 0-10 V Gateway)
- Quartz lighting
- Neon lighting
- Cold Cathode lighting

FEATURES

- High-density modular assembly
- Die-cast aluminum chassis
- Fully magnetic circuit breakers
- Temperature sensors

ADVANCED FEATURES (AF)*

- Built-in per-circuit voltage and current sensing
- Advanced Features error messages:
  - Load dropped below recorded value
  - Load increased over recorded value
  - Circuit breaker tripped
  - Dimmer module removed
  - Dimmer load absent

*Access to AF features require an AF-equipped Sensor enclsoure or pack

REGULATORY AND COMPLIANCE

- cULus Listed for use in Sensor Dimming Enclosure

SPECIFICATIONS

GENERAL
- Rated for continuous duty at 100% of rated load
- 1.2 kW, 1.8 kW, 2.4 kW, and 6 kW circuits

PHYSICAL
- Modular plug-in assemblies
- Cast aluminum chassis, finished with textured epoxy paint
- Keyed to prevent insertion in inappropriately rated enclosure positions

CIRCUIT BREAKERS
- Fully magnetic to eliminate nuisance tripping
- 20x inrush current rating
  - (PhaseAdept and ELV modules rated at 10x inrush)
- 125%, 10–100 seconds, must-trip rating
- Rated for 100% switching duty applications

SHORT CIRCUIT RATINGS
- 100,000 A 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
  - Power devices on PhaseAdept and ELV modules are not field-replaceable
- Two back-to-back SCRs per circuit (D20 and TR20 modules)
- Per-circuit LED indicators
- Mechanical held air gap relay
- Integral bonded heatsink
- Integral temperature sensor

FILTERING
- High quality toroidal filters (see module chart for rise times)

DIMMING
- Dimming of 2 and 4-wire fluorescent ballast is dependent on lamp ballast combination. 4-wire fluorescent control requires Response 0-10 V Gateway. Contact ETC.
- Phase dimming performance for LED lamps varies considerably depending on the manufacturer and model. Visit http://www.etcconnect.com/compatibility/ for details on a variety of specific lamps and information on how to send samples to ETC for testing.
- PhaseAdept (LED) modules provide forward- or reverse-phase dimming and are compatible with any ETC Unison DR, Unison DRd or Sensor enclosure, including legacy products
- ELV modules provide forward- or reverse-phase dimming and are compatible with Sensor+ and Sensor3 enclosures

SR3 DIMMER MODULE CHART

Model Number Key

Module Type - Identifies the function of the module: TR (ThruPower), D (Dimmer), R (Relay), CC (Constant), LED (PhaseAdept), ELV (Electronic Low Voltage)

NUMBER - Identifies the rated max current per circuit within the module; for example, a D20 module provides dimming for two 20A circuits

AF - Module provides advanced features (AF) feedback per circuit; requires Sensor rack with AF cards for full functionality

HR - High rise time module, includes AF functionality

F - Three-wire fluorescent ballast dimming module

FB - Two-wire fluorescent ballast dimming module with non-dimmed circuit for integral emergency lighting battery packs

AFM - Module body without electronics for rack slots without branch circuits; ensures proper air flow and rack cooling

ThruPower Modules

MODEL	CURRENT/WATTAGE/ RISE TIME	CIRCUITS	RACK SLOTS	EFFICIENCY	MAX BTU/ HR|WATTS/ CHANNEL	WT / SHIP WT	DIMENSIONS
TR20SAF	20 A / 2.4 kW / 350 µs	2	1	96.5%	290 BTU / 85 W	5.0 lb / 6.9 lb	38 mm x 300 mm x 172 mm
TR20AF	20 A / 2.4 kW / 500 µs	2	1	96.5%	290 BTU / 85 W	5.0 lb / 6.9 lb	38 mm x 300 mm x 172 mm

Dimmer Modules

MODEL	CURRENT/WATTAGE/ RISE TIME	CIRCUITS	RACK SLOTS	EFFICIENCY	MAX BTU/ HR|WATTS/ CHANNEL	WT / SHIP WT	DIMENSIONS
D15	15 A / 1.8k W / 350 µs	2	1	96.9%	380 BTU / 112 W	5.0 lb / 6.9 lb	38 mm x 300 mm x 127 mm
D15E	15 A / 1.8 kW / 500 µs	2	1	96.1%	474 BTU / 140 W	5.5 lb / 6.9 lb	38 mm x 300 mm x 127 mm
D15AF	15 A / 1.8 kW / 500 µs	2	1	96.1%	474 BTU / 140 W	5.0 lb / 6.9 lb	38 mm x 300 mm x 127 mm
D20	20 A / 2.4 kW / 350 µs	2	1	96.8%	522 BTU / 154 W	5.0 lb / 6.9 lb	38 mm x 300 mm x 127 mm
D20E	20 A / 2.4 kW / 500 µs	2	1	95.0%	810 BTU / 238 W	5.5 lb / 6.9 lb	38 mm x 300 mm x 127 mm
D20AF	20 A / 2.4 kW / 500 µs	2	1	95.0%	810 BTU / 238 W	5.0 lb / 6.9 lb	38 mm x 300 mm x 127 mm
D20HR	20 A / 2.4 kW / 1000 µs	1	1	89.2%	259 BTU / 883 W	5.7 lb / 7.6 lb	38 mm x 300 mm x 127 mm
D20DHR	20 A / 2.4 kW / 1000 µs	2	1	95.8%	688 BTU / 200 W	5.5 lb / 6.9 lb	38 mm x 300 mm x 127 mm
D50AF	50 A / 6 kW / 500 µs	1	1	91.0%	808 BTU / 237 W	5.5 lb / 6.9l b	38 mm x 300 mm x 127 mm
D50HR	50 A / 6 kW / 800 µs	1	2	91.0%	1853 BTU / 543 W	7.7 lb / 9.6 lb	76 mm x 300 mm x 127 mm

Relay Modules

MODEL	CURRENT/WATTAGE	CIRCUITS	RACK SLOTS	EFFICIENCY	MAX BTU/ HR|WATTS/ CHANNEL	WT / SHIP WT	DIMENSIONS
R15AF	15 A / 1.8 kW	2	1	>99.0%	<10 BTU / <4 W	2.6 lb / 3.5 lb	38 mm x 300 mm x 127 mm
R20AF	20 A / 2.4 kW	2	1	>99.0%	<10 BTU / <4 W	2.6 lb / 3.5 lb	38 mm x 300 mm x 127 mm

Sensor Power Control Modules*

Sensor 120 V Series

Constant Modules

MODEL	CURRENT/WATTAGE	CIRCUITS	RACK SLOTS	EFFICIENCY	MAX BTU/ HR|WATTS/ CHANNEL	WT / SHIP WT	DIMENSIONS
CC15	15 A / 1.8 kW	2	1	>99.0%	<10 BTU / <4 W	2.6 lb / 3.5 lb	38 mm x 300 mm x 127 mm
CC20	20 A / 2.4 kW	2	1	>99.0%	<10 BTU / <4 W	2.6 lb / 3.5 lb	38 mm x 300 mm x 127 mm

Low Voltage Line Dimming Modules

MODEL	CURRENT/WATTAGE	CIRCUITS	RACK SLOTS	EFFICIENCY	MAX BTU/ HR|WATTS/ CHANNEL	WT / SHIP WT	DIMENSIONS
LED10	10 A / 1.2 kW	2	1	96.23%	163 BTU / 48 W	2.4 lb / 3.3 lb	38 mm x 300 mm x 172 mm
ELV10-S	10 A / 1.2 kW	2	1	96.50%	119 BTU / 35 W	2.4 lb / 3.3 lb	38 mm x 300 mm x 127 mm
ELV10AF	10 A / 1.2 kW	2	1	96.50%	119 BTU / 35 W	2.4 lb / 3.3 lb	38 mm x 300 mm x 127 mm

Note: LED10 and ELV10 modules do not support use with magnetic transformers.

Fluorescent Dimming Modules

MODEL	CURRENT/WATTAGE	CIRCUITS	RACK SLOTS	EFFICIENCY	MAX BTU/ HR|WATTS/ CHANNEL	WT / SHIP WT	DIMENSIONS
D15F	15 A / 1.8 kW	1	1	>99.0%	<10 BTU / <4 W	2.4 lb / 3.3 lb	38 mm x 300 mm x 127 mm
D20F	20 A / 2.4 kW	1	1	>99.0%	<10 BTU / <4 W	2.4 lb / 3.3 lb	38 mm x 300 mm x 127 mm
D15FB	15 A / 1.8 kW	1	1	>99.0%	<10 BTU / <4 W	2.4 lb / 3.3 lb	38 mm x 300 mm x 127 mm
D20FB	20 A / 2.4 kW	1	1	>99.0%	<10 BTU / <4 W	2.4 lb / 3.3 lb	38 mm x 300 mm x 127 mm

Air Flow Modules

MODEL	CURRENT/WATTAGE	CIRCUITS	RACK SLOTS	EFFICIENCY	MAX BTU/ HR|WATTS/ CHANNEL	WT / SHIP WT	DIMENSIONS
AFM	-	0	1	-	-	1.5 lb / 2.4 lb	38 mm x 300 mm x 127 mm

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