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 provide 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
- 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
- Mechanically 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 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. PhaseAdept modules are not for use with magnetic (inductive) or resistive loads.
- ELV modules provide forward- or reverse-phase dimming and are compatible with Sensor+ and Sensor3 enclosures. ELV modules are not for use with magnetic (inductive) or resistive loads.

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 20 A 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

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/1.8 k 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%	883 BTU/259 W	5.7 lb/7.6 lb	38 mm x 300 mm x 127 mm
D20DHR	20 A/2.4 kW/800 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/6.9 lb	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
R20	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

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

DIMMER MODULE CHART (CONTINUED)

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.

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

Corporate Headquarters ▪ Middleton, WI USA
Global Offices ▪ London, UK ▪ Rome, IT ▪ Holzkirchen, DE ▪ Paris, FR ▪ Hong Kong ▪ Dubai, UAE
New York, NY ▪ Orlando, FL ▪ Los Angeles, CA ▪ Austin, TX ▪ Squamish, BC ▪ Victor, NY
©2026 ETC. All Rights Reserved. All product information and specifications subject to change. Rev F 2026-02
*Trademark and patent info: etcconnect.com/IP ▪ Third-party license agreement info: etcconnect.com/licenses

etcconnect.com