



Type(s)

Project

Date

Notes

## GENERAL INFORMATION

The PhaseAdept Dimmer Module is a dual-density dimmer module for use in any ETC power enclosure without concern for the age of the equipment. The PhaseAdept Module provides forward- or reverse-phase angle dimming specifically designed for compatibility with non-magnetic LED luminaires and replacement lamps. Phase angle and min scale control are available electronically when used with CEM3, E-ACP, or P-ACP controllers and manually if used with legacy MPE, CEM, CEM+, S-ACP, CMd, or CMEd control processors.

### APPLICATIONS

- LED replacement lamps
- Electronic low-voltage transformers
- Electronic LED power supplies requiring forward or reverse phase control

### FEATURES

- High-performance dimming of LED loads compatible with any new or installed ETC Sensor or Unison rack
- Two dimmers per module
- High-density modular assembly
- Fully-rated circuit breakers
- Min scale controls
- Forward- or reverse-phase dimming of LED loads

### REGULATORY AND COMPLIANCE

- UL and cUL LISTED
- CE Compliant

### Module Variants

MODEL	PART NUMBER	INPUT VOLTAGE	LISTING
LED10	7050A1296	120 V	cULus
ELED6	7070A1426	220 V–240 V	CE
ELED6N	7070A1428	220 V–240 V	CE
ELED6R	7070A1427	220 V–240 V	CE
ALED5	7183A1210	277 V	cULus
HLED6D2	7070A1429	240 V Delta	-
LED10NJ	7050A1297	100 V	-
LED10RJ	7050A1298	100 V	-

## Compatible Power Enclosures

MODEL	PROCESSOR	INPUT VOLTAGE	LISTING
SR3(AF)	CEM3	120 V	cULus
ESR3(AF)	CEM3	230 V	CE
HSR3(AF)	CEM3	240 V	UL
SR3N(AF)	CEM3	100 V	-
SP3(AF)	CEM3	120 V	cULus
SR+(AF)	CEM+	120 V	cULus
ESR+(AF)	CEM+	230 V	CE
HSR+(AF)	CEM+	240 V	UL
HSRD2+(AF)	CEM+	240 V Delta	-
SR+N(AF)	CEM+	100 V	-
SP+(AF)	CEM+	120 V	cULus
SR(AF)	CEM, MPE	120 V	cULus
ESR(AF)	ECEM	230 V	CE
HSR(AF)	HCEM	240 V	UL
SRN(AF)	CEM, MPE	100 V	-
SP(AF)	CEM, MPE	120 V	UL
DRd-120	DRd Dimming Engine	120 V, 230 V	cULus, CE
DRd-277	DRd Dimming Engine	277 V	cULus
DR-120	CMEd, CMd	120 V, 230 V	cULus, CE
DR-277	CMEd, CMd	277 V	cULus

Note: PhaseAdept modules do not offer Advanced Features (AF), but are compatible for use with Sensor AF enclosures.

## SPECIFICATIONS

## FUNCTIONAL

PhaseAdept modules can be set to two different control modes: Rack mode and Local mode. The control mode is set with a dipswitch that is not accessible when the module is mounted in a dimmer rack (Image 1). Physical covers are in place to help prevent unintended use of the manual controls used in Local Mode.

**Rack Mode** - When the dipswitch is set towards the rear/backplane side of the module, the module is controlled by the dimmer rack control processor. This mode is supported by Sensor3, and Unison DRd racks. Please ensure that your control processor software is updated to the most recent version before installing PhaseAdept modules.

**Local Mode (default)** - When the dipswitch is set towards the front/label side of the module, the module is controlled by an internal dimming engine and manual controls for phase selection (Image 2) and min scale (Image 3). This mode allows PhaseAdept modules to run in any ETC dimmer rack in the field.

- **Phase Selection** - two dipswitches allow for each output circuit to be either forward or reverse (default) phase. The top and bottom circuit breakers are tied to the left and right dipswitches, respectively. Setting the switch upwards will set the circuit to forward-phase dimming, setting the switch downwards will set the circuit to reverse-phase.
- **Min Scale** - two dials allow for each output to be set to a different min scale value to provide a dimming curve specific to the requirements of the dimmed load. A legend for using the min scale controls is included on the module label (Image 3)
- **Micro USB** - there is a micro USB connection (Image 4) next to the min scale controls which supports module firmware updates. Modules do not need to be installed in a dimmer rack in order to be updated

IMAGE 1

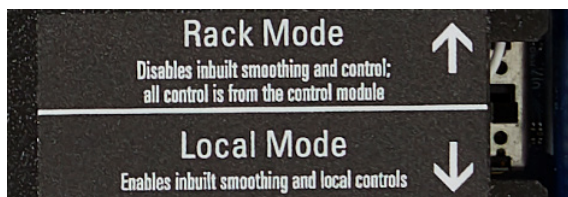


IMAGE 2



## SPECIFICATIONS

## GENERAL

- Dual-density, plug in modules, for use in any Sensor or Unison power enclosure
- Provides forward- or reverse-phase angle dimming for LEDs and electronic low-voltage transformers
- UL and cUL Listed for continuous duty at 100% of rated load

## PHYSICAL

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

## CIRCUIT BREAKERS

- Fully magnetic to eliminate nuisance tripping
- 10x inrush current rating
- 125%, 10-120 seconds, must-trip rating
- Rated for 100% switching duty applications

## ELECTRICAL

- Modules available for dimmer racks with the following mains feeds:
  - 100 V - dual 10 A
  - 120 V - dual 10 A
  - 230 V - dual 6 A
  - 240 V - dual 6 A
  - 240 V Delta - dual, 6 A total load
  - 277 V - dual 5 A
- 1 W minimum load
- Not suitable for use with magnetic (inductive) loads
- Maximum supported incandescent load - 1000 W (must be set to forward-phase mode before energizing circuit)

## POWER DEVICE

- Sealed, patented assembly
- Per-circuit LED indicators
- Integral bonded heatsink
- Integral temperature sensor

## FILTERING

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

## LOW VOLTAGE DIMMING

- PhaseAdept modules provide forward- or reverse-phase dimming and are compatible with any ETC dimmer rack
- Phase dimming performance for LED lamps varies considerably depending on the manufacturer and model.
- Visit [etccconnect.com/compatibility](http://etccconnect.com/compatibility) for details on a variety of specific lamps and information on how to send samples to ETC for testing.

IMAGE 3

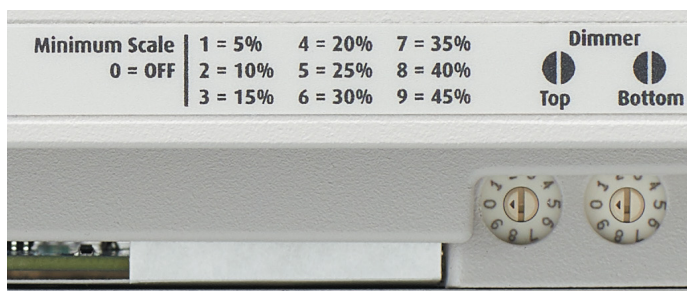


IMAGE 4



PHASEADEPT DIMMER MODULE CHART

Model Number Key

**Module Type (LED)** - Identifies the function of the module as primarily for LED fixtures and replacement lamps and Identifies the supported mains voltage of the module: LED - 120 V; ALED - 277 V; ELED - 230 V; HLED6D2 - 240 V Delta; LEDJ - 100 V. Modules support mains feeds within +/- 10% of these voltages.

**NUMBER** - Identifies the rated max current per circuit within the module; for example, an ELED6 module provides dimming for two 6 A circuits. **HLED6D2 module outputs share a circuit breaker and support a total load of 6 A between them.**

**R** - Module provides per-circuit RCD circuit breaker protection; requires Neutral Disconnect Sensor rack

**N** - Module is compatible with Neutral Disconnect Sensor racks but does not provide RCD protection

PhaseAdept 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	1.1 kg / 1.5 kg	38x300x127 mm
ALED5	5 A / 1.4 kW	2	1	98.59%	62 BTU / 18 W	1.1 kg / 1.5 kg	38x300x127 mm
ELED6	6 A / 1.4 kW	2	1	98.59%	62 BTU / 18 W	1.1 kg / 1.5 kg	38x300x127 mm
ELED6N	6 A / 1.4 kW	2	1	98.59%	62 BTU / 18 W	1.1 kg / 1.5 kg	38x300x127 mm
ELED6R	6 A / 1.4 kW	2	1	98.59%	62 BTU / 18 W	1.1 kg / 1.5 kg	38x300x127 mm
HLED6D2	6 A / 1.4 kW	1	1	98.59%	62 BTU / 18 W	1.1 kg / 1.5 kg	38x300x127 mm
LED10NJ	10 A / 1 kW	2	1	96.23%	163 BTU / 48 W	1.1 kg / 1.5 kg	38x300x127 mm
LED10RJ	10 A / 1 kW	2	1	96.23%	163 BTU / 48 W	1.1 kg / 1.5 kg	38x300x127 mm

Note: When installing PhaseAdept modules in Unison DR enclosures installed before 2000, a new signal distro board is also required. DR6 enclosures require part 7083B5604, DR12 enclosures require part 7083B5603.

