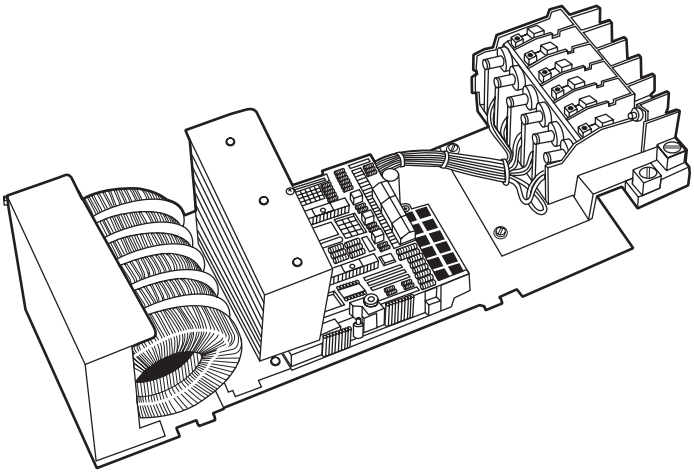
Synergy®
LIGHTING CONTROLS

Catalog Number	
Notes	Type

Lighting Control System

Linc Voltage Dimming Power Module

SYPMB 6D



FEATURES

The Synergy dimmer module is used with the Synergy enclosure to provide dimming and switching capability for a wide variety of loads. Modules contain toroidal filters, thyristor switching elements, integral air-gap relay for each dimmer, circuit breakers, analog and low-voltage switch inputs and on-board digital processor control circuit. Power modules are interchangeable within the enclosure and are field-installed.

- Six universal dimmers per module
  Compatible load types:
  - Incandescent
  - Magnetic low voltage
  - Electronic low voltage[1]
  - Advanced Mark10® fluorescent
  - Lutron Hi-Lume® fluorescent
  - Lutron ECO10® fluorescent
  - Neon
  - Cold Cathode
- Dimmed and switched output per dimmer
- Precise digital performance
- Adjustable High/Low trims
- Square-law dimming curve
- Heavy-duty toroidal chokes
- Thermal magnetic circuit breakers
- 120V or 277V
- Air-gap relays
- Over-temperature cut-out
- Remote override input accepts contact closure to force *FULL-ON* operation for essential lighting applications
- Selectable soft-start for all loads
- Analog filter and advanced digital processing techniques enable consistent, reliable dimming perfromance in a wide variety of power environments
- UL Listed to US and Canadian safety standards

ORDERING INFORMATION

Example: **SYPMB 6DB1**

Choose the boldface catalog nomenclature that best suits your needs and write it on the appropriate line. Order accessories as separate catalog number.

SYPMB **6D**

Series

SYPMB

Dimmers

6D Six dimmers per module

Circuit breaker voltage

B1 Six 20A CB, 120V 10 KAIC
B2 Four 20A CB, 277V 14 KAIC
B3 Six 15A CB, 120V10 KAIC
B4 Four 15A CB, 277V14 KAIC
B5 Four 20A CB, 120V 65 K AIC

NOTES:

1 Normal power factor magnetic transformers. Electronic low voltage transformers must be dimmable and compatible with forward phase out dimmers with series inductive filtering. Low voltage transformers should be protected by a line-side fuse when used with dimmers.

2 Installer must coordinate lamp/ballast configuration.

SYPMB 6D Dimming Power Module

SPECIFICATIONS

MECHANICAL

- Chassis: all components mounted to steel back plane, keys into enclosure via tab and slot, secures with provided screws.
- Electronic control assembly and power devices are individually field-replaceable without removing module.

ENVIRONMENTAL

- Operation and Storage temperature: 32-104^{0}F (0-40^{0}C).
- Humidity: 10-90% non-condensing.

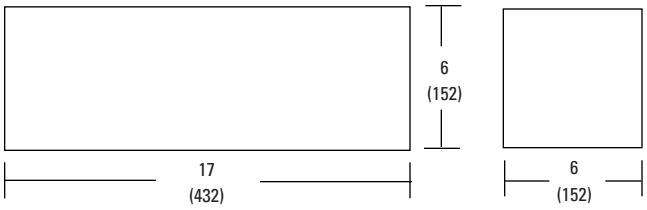
ELECTRICAL

- Module rating: 10 KVA (83.5A) at 120V, 17.5 KVA (64A) at 277V.
- Dimmers: Six dimmers per module, 2 KVA each at 120V, 3.5 KVA each at 277V.
- Each circuit (dimmer) requires a minimum load of 50VA. (This does not apply to un-used dimmers)
- Thermal magnetic input circuit breakers: Six 120V 10,000 AIC breakers, four 277V 14,000 AIC breakers, or four 120V 65,000 AIC breakers per module.
- Load relays: SPST, N.O. maintained air-gap in series with dimmer, enclosed silver cadmium-oxide contacts, 16A 277VAC ballast.
- Over-temperature sensor: thermal cut-out integral to anodized extruded aluminum heat sink assembly.
- Toroidal Filtering: 350 µsec current rise time measured from 10-90% of the load current waveform at a 90^0 conduction angle and dimmer at 50% of rated capacity.
- Efficiency: dimmer output voltage is greater than 96% of input voltage at the maximum intensity setting; maximum heat loss is 16 BTU/hour per ampere of phase-controlled current.
- Low voltage inputs: two switch inputs per module, accept momentary or maintained contacts; three analog inputs per module, accept 0-10V or 0-24V three wire signals. All inputs have removable terminal blocks that accept up to #16 AWG wires. 24VDC accessory power, 2.5A per cabinet, 500mA total per SYPM 6D.
- Override: one PC board mounted *ON/AUTO/OFF* switch per module, overrides all six dimmers/relays. Remote override terminals provided for remote activation of *ON/AUTO/OFF* switching.
- Load wire connection: board-mounted compression screw terminal blocks, #10 AWG or two #12 AWG maximum. Two terminals per dimmer - one dimmed and one non-dimmed.
- Input and feed-through lug capacity: 2/0 maximum.
- Lamp compatibility: incandescent, low-voltage[1], neon[1], cold-cathode[1], fluores-

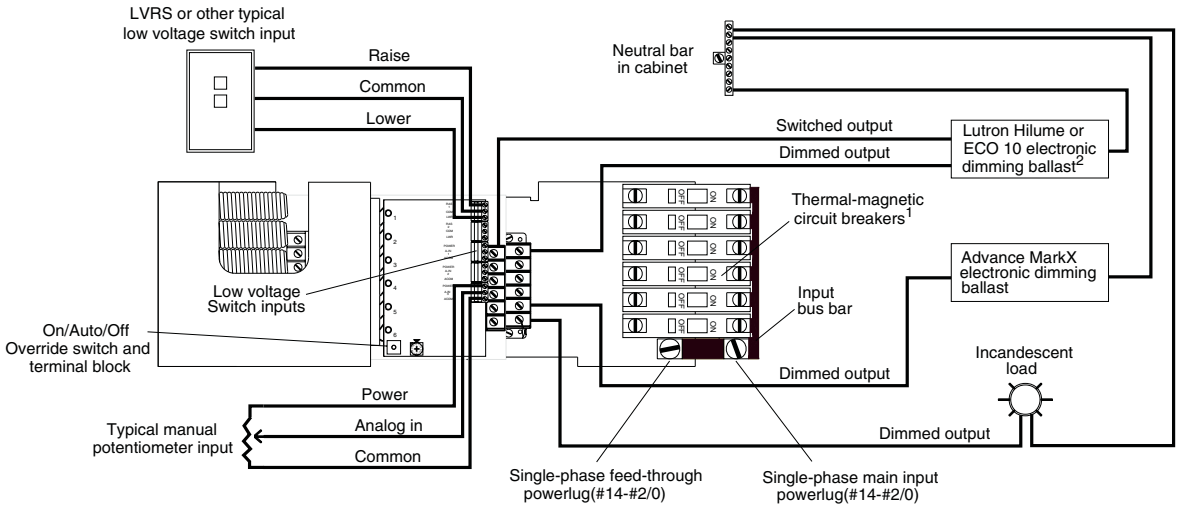
DIMENSIONS

All dimensions are inches (millimeters).

Shipping weight = 22 lbs. (10 kg)



FUNCTIONAL



NOTES:

1 On 4 breaker modules breaker #3 feeds dimmers 3 & 4 and breaker #4 feeds dimmers 5 & 6.

2 Minimum three (3) Lutron ballasts per dimmer required for proper operation.

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An AcuityBrands Company

Sheet #: SYPMB 6D

Synergy Lighting Controls
One Lithonia Way, Conyers, GA 30012
Phone: 800-533-2719
www.synergylightingcontrols.com