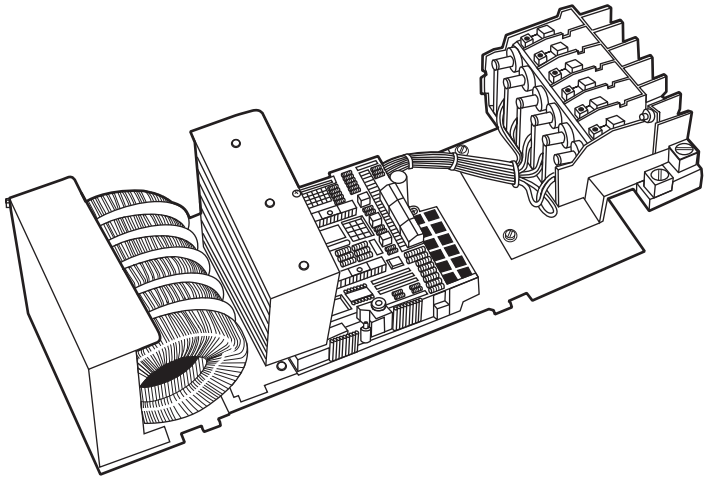
Synergy®
LIGHTING CONTROLS

| Catalog Number | |
|---|---|
| Notes | Type |

**Lighting Control System**

**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
- 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** | **Dimmers** | **Circuit breaker voltage** |
| **SYPMB** | **6D** Six dimmers per module | **B1** Six 20A CB, 120V<br>**B2** Four 20A CB, 277V<br>**B3** Six 15A CB, 120V<br>**B4** Four 15A CB, 277V<br>**B5** Four 20A CB, 120V 64 K AIC |

# **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.

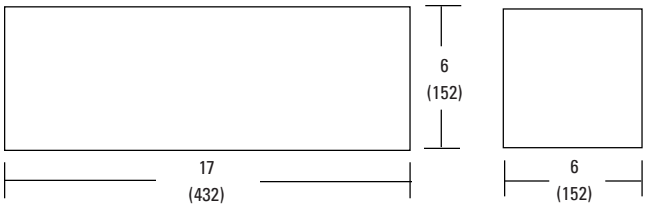
**ELECTRICAL**

- 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.
- Thermal magnetic input circuit breakers: Six 120V 10,000 AIC breakers, four 277V 14,000 AIC breakers, or four 120V 64,000 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.
- 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], fluorescent (Advance Mark 10®, Lutron HiLume® and ECO10®).

## DIMENSIONS

All dimensions are inches (millimeters).

Shipping weight = 22 lbs. (10 kg)

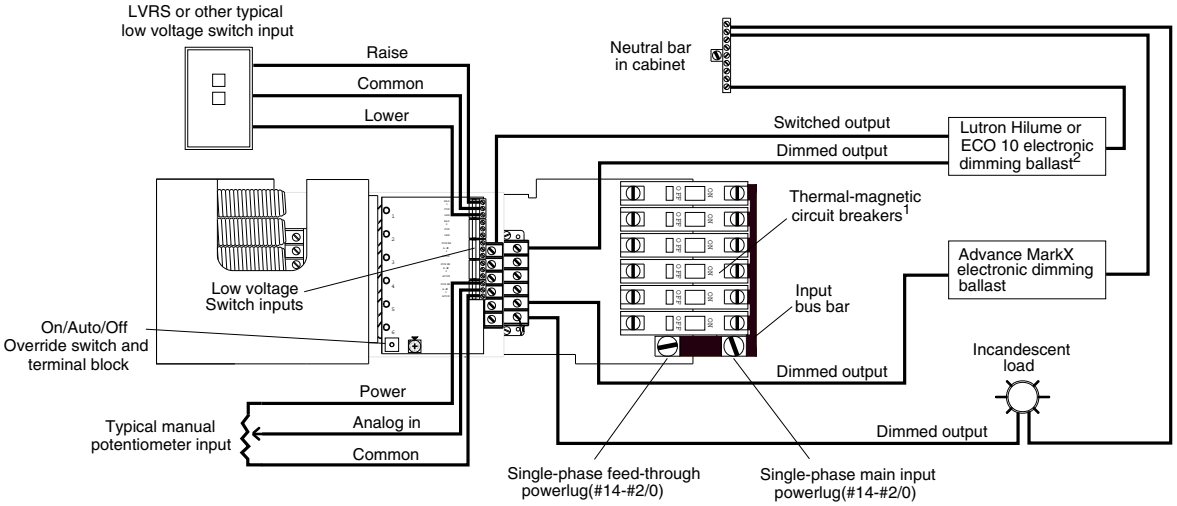



NOTES:

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.

## FUNCTIONAL




NOTES:

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

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

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An AcuityBrands Company

**Sheet #: SYPMB 6D**



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