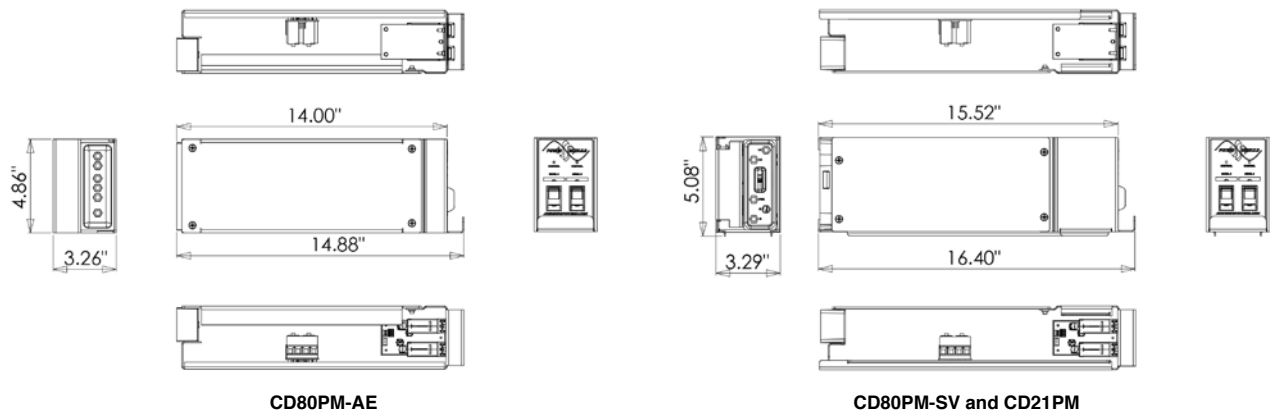


# Non-Dim Power Modules



CD80 Non-Dim Power Modules allow existing CD80 and C21 dimmer rack owners to convert existing dimmer circuits to switched power circuits on the fly. These “plug & play” modules are a fast direct conversion for users requiring DMX non-dim control of devices/loads requiring pure sinusoidal AC power. Interchangeable constant and filler modules allow for increased flexibility and versatility.

- DMX non-dim control of devices/loads requiring pure sinusoidal AC power.
- Designed for use with Johnson Systems CD-3000 and CD-2000 Control Systems.
- Available for CD80A, CD80AE, CD80SV (Supervisor) and C21 applications.
- All models feature dual 20 Amp magnetic circuit breakers with a UL 489 rating.
- 277VAC rated 50 Amp tungsten "air-gap" relays.
- Blue control LED indication of relay status activation/closure.
- Dual 20 Amp constant power modules also available.
- Up to 10 year warranty available!
- ETL compliant.



**JOHNSON SYSTEMS INC.**

"PROFESSIONAL LIGHT CONTROL PRODUCTS"

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# NON-DIM POWER MODULE CHARACTERISTICS

## Environment

Temperature Range: 23°F (-5°C) to 104°F (40°C) ambient.  
Humidity Range: 0% to 90% non-condensing.

## Load Type

Dual 120V single phase 50/60 Hz circuits for AC Loads Only.  
Rated for 20A General Purpose and 20A Tungsten.

## Switch Type

"Air-gap" power relay rated 1 million operations minimum  
at 50 Amps 240VAC.

## Isolation

4,000 Volts minimum per circuit.

## Physical

AE Models 14.00" x 4.86" x 3.26" (36 cm x 12 cm x 8 cm) handle excluded  
SV Models 15.52" x 5.08" x 3.29" (39 cm x 13 cm x 8 cm) handle excluded.  
C21 Models 15.52" x 5.08" x 3.29" (39 cm x 13 cm x 8 cm) handle excluded.

## Weight

Power Modules = 3.76 lbs. - 3.94 lbs. (1.71 Kg - 1.79Kg).

Constant Modules = 3.50 lbs. (1.59 Kg).

Filler Modules = 3 lbs. (1.35 Kg).

## Material

18-gauge steel CRS.

## Finish

Hammer texture black powder coat.

# SPECIFICATIONS

## 1.0 POWER MODULES – GENERAL

- 1.1 Power Modules are designed for operation with Johnson Systems CD-3000 or CD-2000 control systems. No warranty or product return is available if these products are used, even temporarily, with any OEM controls as they are incompatible. The inferior drive signals in certain controls may damage this equipment. CD80 Power Modules controlled by Johnson Systems CD-3000 or CD-2000 control systems are warranted for two (2) years from ship date and shall be eligible for optional extended warranty up to ten (10) years.
- 1.2 Power Modules shall be capable of switching two independent general purpose lighting loads including LED and tungsten up to 20 Amps. Each relay shall be protected by a premium 20 Amp magnetic circuit breaker with a UL 489 rating. Full rated operation shall be permitted without compromising product life expectancy.
- 1.3 Power Modules shall use only premium quality PCB mounted "air-gap" relays rated for operation at 277VAC with 50 Amp tungsten loads. Relay or contactors of lesser rating shall not be considered acceptable. Relay PCB shall have a minimum track thickness of three (3) ounce copper and capable of continuous operation at 200% breaker rating. Relay PCB terminal blocks shall be capable of accepting up to 6 AWG stranded copper wire and be rated at a minimum 52 Amps.
- 1.4 Power Modules shall be capable of switching on/off with DMX512 control data when used with Johnson Systems CD-2000 or CD-3000 control systems. Turn-on threshold shall be fixed at 50% PWM duty cycle control with a 10% hysteresis to minimize the potential for false trigger.
- 1.5 Power Module relays shall be manually switchable permitting power "pass through" and operation as constant power modules where desired.
- 1.6 Power Module face panels shall contain two blue LED indicators (one per circuit). These independent LED's shall illuminate when their corresponding relay contact is "closed" permitting "live circuit" indication.

- 1.7 Power and Constant Modules feature flush faced, premium dual 20 Amp magnetic breakers with a UL 489 rating. Breakers shall display a highly visible blue trip indication when open and flush finish when closed. Breakers shall be of the "anti-trip" design to protect against unauthorized disconnect. Breakers containing "finger-tip" trip handles shall not be considered acceptable.
- 1.8 All models feature and integral face panel handle permitting ease of module removal/insertion.

## 2.0 CONTROL PCB

- 2.1 The Control PCB shall accept pulse width modulation (PWM) control from the output of a Johnson Systems CD-2000 or CD-3000 control system and provide relay activation/closure at a 50% PWM duty cycle with a 10% hysteresis. Each circuit shall contain a blue LED indicator for active control trigger. Each LED shall illuminate when relay close is active and extinguish when relay is open.
- 2.2 The Control PCB shall draw power parasitically via the PWM control source without affecting the PWM control signal amplitude or duty-cycle thus permitting reliable operation in racks not containing AC neutral to each individual module location. Power requirements shall be minute and in compliance with the International Energy Agency's "One Watt Initiative" standby power requirement. Please refer to U.S. Executive Order #13221. Processor standby power shall not exceed 1 Watt.
- 2.3 All printed circuit boards (PCB's) shall be FR4/G10 with a UL 94V-0 Flame Class Rating.
- 2.4 CD80 Power Modules are ETL compliant and adhere to UL and CSA electrical safety standards.

Specifications subject to change without notice.



Model	Description
CD80PM-AE	Dual 20 Amp Non-Dim Power Module for early generation CD80 and CD80 Advanced Electronics (AE).
CD80CM-AE	Dual 20 Amp Constant Power Module for early generation CD80 and CD80 Advanced Electronics (AE).
CD80FM-AE	Filler Module for early generation CD80 and CD80 Advanced Electronics (AE).

CD80PM-SV	Dual 20 Amp Non-Dim Power Module for CD80 Supervisor (SV).
CD80CM-SV	Dual 20 Amp Constant Power Module for CD80 Supervisor (SV).
CD80FM-SV	Filler Module for CD80 Supervisor (SV).

C21PM	Dual 20 Amp Non-Dim Relay Power Module For C21.
C21CM	Dual 20 Amp Constant Power Module For C21.
C21FM	Filler Module For C21.



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