

## IMMIX Pro Dimmer Cabinets (120V) Overview

Blue Ridge's IMMIX Pro Dimming Cabinets provide the industry's highest dimmer density with up to 120 - 2.4kW dimmers in one cabinet. The condensed design combined with full BACnet IP, BACnet ARCnet (156K), BACnet MS/TP, and DMX-512 integration provides the ultimate in advanced light level control.

IMMIX Pro Cabinets are available in 30, 60, and 120 dimmer capacities, ensuring ideal sizing for various applications including theatres, television studios, hotels, churches, and convention centers. Each Cabinet's System Control Module (SCM) provides the sophisticated control functions required for theatrical productions including dual DMX-512 control inputs.

Dimmers include dual channel 2.4KW and single channel 6KW modules with 350, 500, and 800 microseconds rise time options. Modules are available for control of incandescent, neon, cold cathode, non-dim, constant circuits, and dimmable fluorescent ballasts.

For architectural applications, Dimming Cabinets may be paired IMMIX Pro Remote and Master Stations. The IMMIX Pro system provides 24 presets in each of 16 independent areas with 128 dimmer channels.



## IMMIX Cabinet Specifications

### Construction

- Freestanding cabinet with welded steel frame, textured black powder-coat finish, and locking door concealing the dimmers.

### Dimensions

- LD300DC30-120 43.60"(1107mm)H x 16.50"(419mm)W x 11.60"(295mm)D (Figure 1)
- LD300DC60-120 and LD300DC120-120 80.20" (2037mm)H x 19.20"(488mm)W x 20.50"(521mm)D (Figure 2)

### Dimmer Mounting

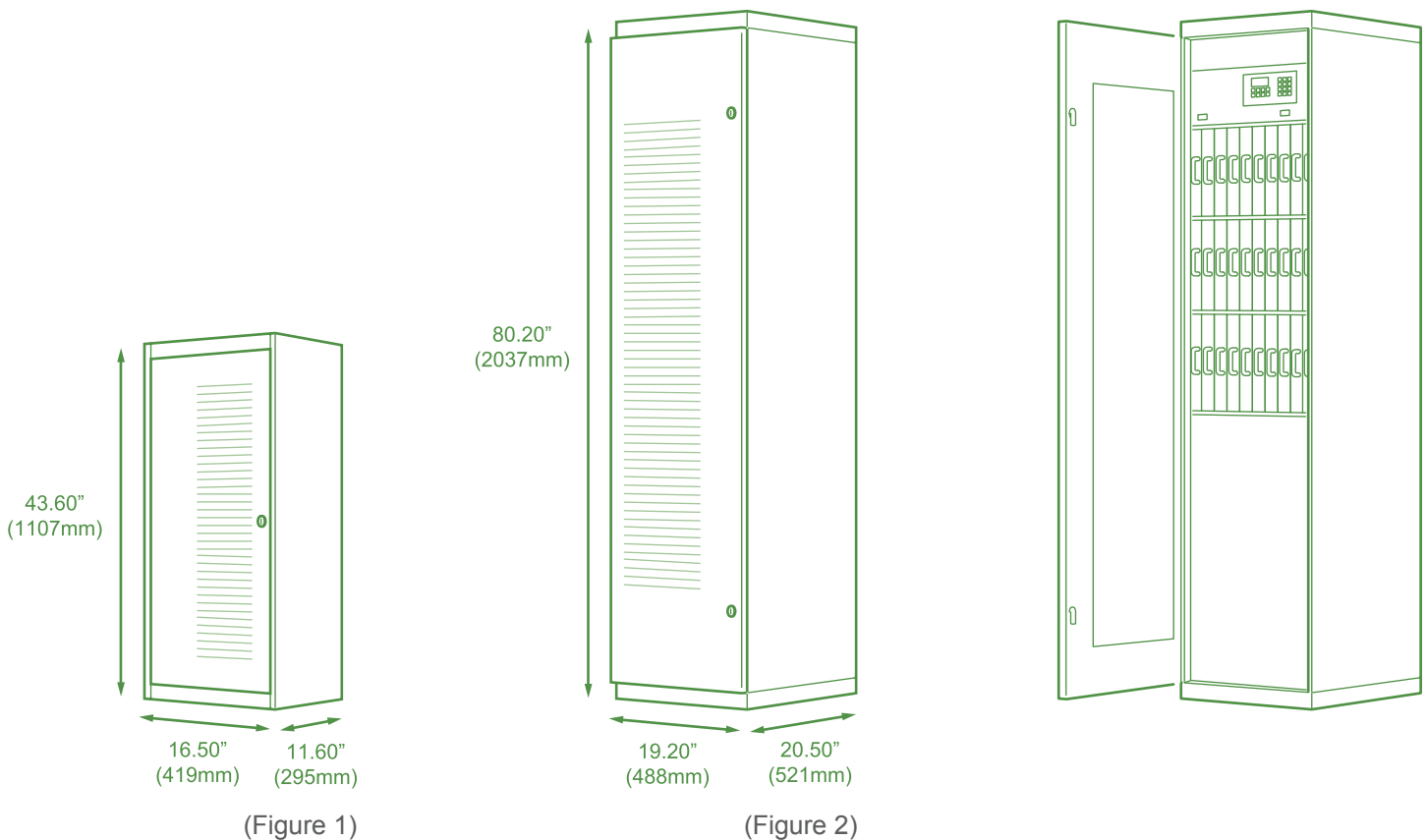
- Removable steel trays with dimmer alignment guides.

### Cooling

- Dimmers are fan cooled incorporating a door mounted electrostatic intake air filter and fan exhaust exiting the cabinet's top.

### Electrical

- Cabinet electronics include a DC power supply, dimmer control board, and active power phase 16 bit digital processor to control dimmers with an optically isolated (2500V RMS minimum) DMX512 input. Digital electronics do not require digital to analog de-multiplexing circuitry or analog ramping schemes. Each cabinet is factory wired for input power and dimmer control. Cabinets include load wire lugs for up to 6ga wire with optional 2ga wire lugs.



## IMMIX System Control Module (SCM) Specifications

### Functions

- Program 99 preset fade times (0-999 seconds)
- Configure all IMMIX functions

### Interface

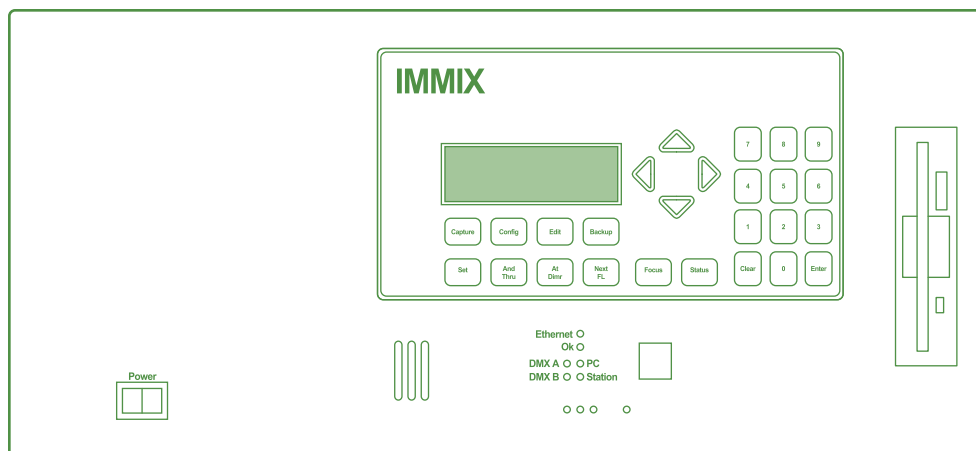
- LCD display
- 26 button membrane key pad
- RS232 or RS422 port for PC programing

### Connections

- 1 IMMIX Interface Module Port
- 1 IMMIX Master and Remote Station Port (32 station maximum)
- 1 IMMIX Dimmer Cabinet Port for additional cabinets (128 dimmer channel maximum)
- 2 DMX-512 Inputs
- 24 Analog Inputs (0-10V)
- 8 Switch Inputs
- 2 External Panic Inputs
- 8 Switched Outputs (+10V)

### Performance

- Independent dimmer output regulation over the incoming line voltage range
- Less than 16ms response to RMS variations and deformations in incoming line voltage
- Dimmer output maintained within +/- 1V
- Dimmers set to the same level to operate within +/-1V of each other
- Dimmer On/Off response within 1/10 second
- No inter-dimmer interaction



## IMMIX Dimmer Module Specifications

### Construction

- Steel housing with black powder coated finish, anodized extruded aluminum heat sink, ventilation slots, and handle. UL and C-UL Recognized.

### Installation

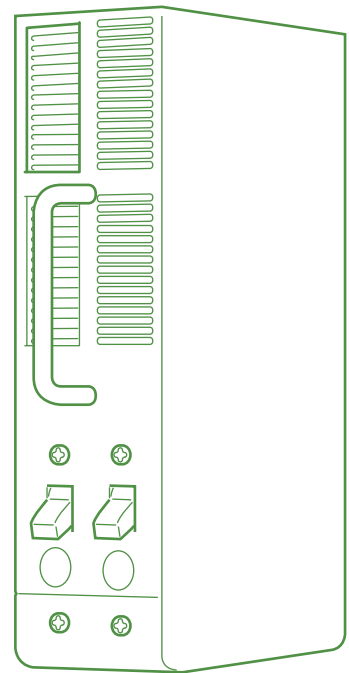
- Plug-in design with floating connectors to align with the mating dimmer rack receptacles
- Dimmer modules of the same rating interchangeable without tools

### Dimmer Operation

- Ambient temperature range of 32-104°F (0-40°C)
- Line voltage range from 90 to 140 volts
- 95% dimmer efficiency
- Overload Protection : Integral, fully magnetic, switch duty rated circuit breaker
- Temperature Sensing : Monitor the module's internal temperature and de-energize the module if overheated.
- Filtering : Toroidal choke to limit the current rise time to the minimum setting (350, 500, or 800 microseconds) as measured from 10% to 90% of the output waveform at maximum load. Filtering limits interference with audio systems, reduces lamp filament noise, and eliminates the introduction of RF on the AC line.

### Module Options

- Standard Module : Controls incandescent, neon, cold cathode, and low-voltage lamp sources.
- Fluorescent Module : Interfaces with (forward phase or 0-10V DC) controlled dimmable electronic fluorescent ballasts to control fluorescent lamps over the ballast's dimming range. Each module controls one 2400 watt fluorescent circuit and includes a 20A/1P circuit breaker and a relay to turn the circuit off when the control level is at '0'.
- Circuit breaker Module: Two 20A/1P (10,000AIC) circuit breakers for constant circuits.
- Non-dim Module : Two 20 amp circuits with primary circuit breakers and switched air-gap relays.
- Sensing Module : Dimmers to sense and reports load variance from a recorded value, DC output on dimmer, SSR failure, circuit breaker tripped, dimmer over-temp, or no load. Sensing modules include LED indicators that track the dimmer's load output level.



## IMMIX Dimming Interface Module (LD300DIM) Specifications

### General Features

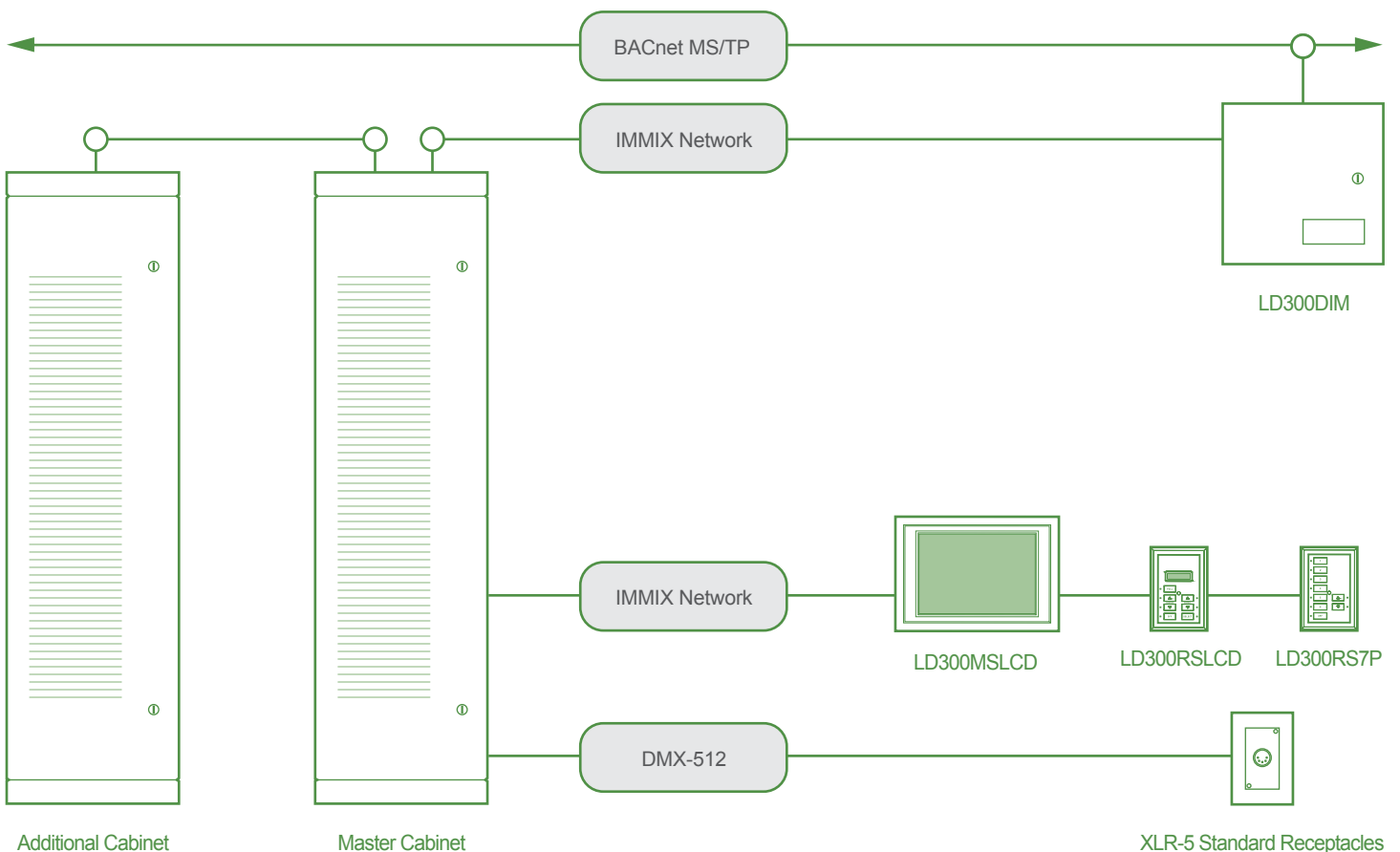
- Microprocessor is 32-bit Motorola Power PC microprocessor with cache memory, Fast Ethernet controller, high performance 32-bit communication co-processor
- Memory is 16 MByte non-volatile battery-backed SDRAM, 8 MByte Flash memory, 32-bit memory bus (Battery shelf life is 10 years with 720 hours of continuous operation)
- Battery-backed real-time clock
- BACnet Communication to Building Automation System is 10/100Base-T Ethernet RJ-45 port for BACnet/IP
- LED Status indicators for Ethernet port communication, and low battery status
- Seven segment status display for running, error, and power status
- Rotary dip switches for intuitive network addressing of modules
- Built-in surge and transient protection circuitry for power and communications

### Power requirements

- 120 Vac  $\pm$  10%, 50 to 60 Hz, 24 VA, or 24 Vdc  $\pm$  10%, 10W

### Certifications

- Conforms to the BACnet Building Controller (B-BC) Standard Device as defined in BACnet 135-2001 Annex L
- UL916 (Canadian Std C22.2 No. 205-M1983), CE, FCC Part 15 - Subpart B - Class A, BTL - BACnet Listed Device / BMA - BACnet Manufacturer



## IMMIX Dimmer Cabinets

Part Number	Description
LD300DC30-120	IMMIX Pro Dimmer Cabinet 30 Dimmers Installed
LD300DC60-120	IMMIX Pro Dimmer Cabinet 60 Dimmers Installed
LD300DC120-120	IMMIX Pro Dimmer Cabinet 120 Dimmers Installed

## IMMIX Single Width Dimmer Modules

Part Number	Description
LD300SMD23-120	IMMIX Pro Dimmer Module dual channel 2.4KW w/350 $\mu$ s chokes
LD300SMD23S-120	IMMIX Pro Dimmer Module dual channel 2.4KW w/350 $\mu$ s chokes and sensing
LD300SMD25-120	IMMIX Pro Dimmer Module dual channel 2.4KW w/500 $\mu$ s chokes
LD300SMD25S-120	IMMIX Pro Dimmer Module dual channel 2.4KW w/500 $\mu$ s chokes and sensing
LD300SMS28-120	IMMIX Pro Dimmer Module single channel 2.4KW w/800 $\mu$ s choke
LD300SMS28S-120	IMMIX Pro Dimmer Module single channel 2.4KW w/800 $\mu$ s choke and sensing
LD300SMS63-120	IMMIX Pro Dimmer Module single channel 6.0KW w/350 $\mu$ s choke (no output circuit breakers)
LD300SMDCB-120	IMMIX Pro Dimmer Module dual channel 20A constant circuit breaker
LD300SMSFL-120	IMMIX Pro Dimmer Module single channel 2.4KW fluorescent for phase control dimmable ballasts (2 or 3 wire)
LD300SMDDC-120	IMMIX Pro Dimmer Module dual channel 2.4KW fluorescent for dimmable ballasts with 0-10VDC
LD300SMDND-120	IMMIX Pro Dimmer Module dual channel 20A non-dim

## IMMIX Double Width Dimmer Modules

Part Number	Description
LD300DMS65-120	IMMIX Pro Dimmer Module single channel 6.0KW w/500 $\mu$ s choke and 4 – 20A branch circuit breakers
LD300DMS65S-120	IMMIX Pro Dimmer Module single channel 6.0KW w/500 $\mu$ s choke, sensing, and 4 – 20A/1P branch circuit breakers

## IMMIX Dimmer Cabinet Accessories

Part Number	Description
LD300DIM	IMMIX Pro Interface Module configured for BACnet (specify protocol when ordering)
LD300SMF	IMMIX Pro Dimmer filler module