EPIC RS232 SERIES

Product Introduction:

The EP-RS232-ADV LED Controller is a highly professional and intelligent system to control common anode LED lighting or incadescent light bulbs via 2-way RS232 serial commands. The EP-RS232-ADV provides 4 high current channel to create light scenes. The controller can also operate in a standalone mode which includes pre-programmed light sequences. This LED controller is ideal used for flexible ThinGlow™ LED strips. The EP-RS232-ADV LED Controller also operate independantly or integrated into a whole-house control system.

Key Features

- 4 high current channels with independent control - The highest in the industry. RGB+White.
- Suitable for common anode RGB LED strips, LEDs and incandescent bulbs up to 100 Watts.
- Standalone mode with 8 preprogrammed light sequences.
- Wide-range effect speed adjust.
- Wide-range of external input acessories such iPad, relays, and wireless transmitter.
- Complete lists of color and scene serial commands to save programming time.
- Memory for last selected sequence.
- PC - interface sold seperately.
- Addressable. Multiple modules can be connected with independent control for each module.
- Small form factor (Al sending sizes).
- PWM of 480 Hz to deliver smooth dimming and a wide range of color spectrum of LED light fixtures.
- Override memory feature that allows last program to continue even in an event whereby the RS232 is disruppted for any reason.
- Reverse polarity protection.
- Work independantly or integrated into a whole-house control system.
- Proprietary power conditioning design to work with magnetic transformers.

Specifications

Power Requirement	External power supply - (power supply sold seperately)
Operating Voltage:	Input: 8-24V DC (Class 2)
	Output: 8-24V DC (depends on input)
Channel Current:	4.17Amp@12V DC Per Channel
	4.17Amp@24V DC Per Channel
UL Number:	E359996

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LED intensity control:	255 intensity levels/channel
Communication Interface:	Serial RS232 and serial TTL interface, 9600 baud, 8 data bits, 1 stop bit, no parity, no handshaking, and no flow control
Dimension:	4" x 6.75" x 1.75" in
Weight:	3.5 lbs

*Suitable for damp locations

Control & Indicators

Net ID:	DIP switches
Power:	Blue LED on logo, indicates when power is applied
RGB Speed:	Blue LED on logo, indicates color changing speed
R-G-B output:	RGB LED on board
White Output:	White LED on board

Enclosure

Black anodized aluminum with laser engraving
Logo - optical grade acrylic with LEDs

Connectors
Screw terminal up to 10Awg conductor diameter.

Reccommended Wiring

18 Awg up to 5 Amp total

*May use distribution board. See distribution page.

AMPERAGE

Color/Channel	12V	Wattage	24V	Wattage
Red	4.17Amp	51.04W	4.17Amp	100W
Green	4.17Amp	51.04W	4.17Amp	100W
Blue	4.17Amp	51.04W	4.17Amp	100W
White	4.17Amp	51.04W	4.17Amp	100W
Total	16.68Amp	204.16W	16.68Amp	400W

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Control Manual

Congratulations on your purchase of Epic's RS232-ADV LED Controller. Welcome to a more colorful world brought to you by AIT Technology.

BUTTON ACTIONS:

Button 1:

Button 1 is used to switch through color modes of the controller. With no RGB LEDchannels on, a quick press of button 1 quickly (less than 1/2 a second) will cycle through the solid colors. The color order is: red, green, blue, magenta, cyan, gold, and (RGB) white. Color cycling will start after the solid colors. Once color cycling starts, a quick press of button 1 will pause the color cycle and the color showing when paused will remain on. A quick press of button 1 will then start the color cycle again.

A long press of button 1 (more than 1/2 second) will result in the RGB channels fadingto off. This will work for solid colors as well as the color mode.

Button 2:

Button 2 is used for 2 purposes. If the controller is in color cycle mode, this will increase the speed of the color cycle. The color cycle has 10 selectable speeds. The default speed is 5. A quick press of button 2 while in color cycle mode will result in the speed increasing by 1. The logo will pulse the speed number you have selected. When the speed is on 10 and a quick press of button 2 is done, the speed will go to 1.! !

A long press (more than 1/2 second) of button 2, while in color cycle mode, will reset the speed to the default (5).

White LED Channel:

A short press (less than 1/2 second) of button 2, while not in color cycle mode, will increment the white LED channel by 10%. When the white LED channel has reached 100%, and a short press of button 2 is performed, the logo will pulse 1 time to indicate the white LED channel is at 100%.! !

A long press (more than 1/2 second) of button 2, while not in color cycle mode, will fade the white LED channel to off if it is on. If a long press of button 2 is performed while the white LED channel is off, the white LED channel will fade up to 100%..

Serial Commands

Serial Format:

The serial format is 9600 baud, 8 bits, no parity, 1 stop bit, and no flow control. The default baud rate is 9600, but you can change it to 2400 by pressing both buttons while powering up the controller. The same procedure switches it back to When the baud rate changes, the blue LED will flash 2 times when switching to 2400, and 9 times when switching to 9600.

Color Commands:

The color commands are in 3 parts, address, color, and level. The command 'xredyyy<CR>' is the command for setting the red level. x represents the address of the unit, red represents the color, and y represents the desired LED level from 0 to 100. For example if you wanted to set the red level to 63% on a controller with the address of 4, you would send the command, '4red63<CR>'. The '<CR>' represents a carriage return. This command is valid for red, green, blue, and white.

All White Mode:

The controller may be set up with white LED's on all 4 channels. The channels are labeled on the board and share the color channels, White 1 with White, White 2 with Blue, White 3 with Green, and White 4 with Red. You can control the white channels by using the optional white commands. The command is the address, followed by wht followed by the channel, followed by a level. For example, if you wanted to set White 3 to level 40% on a controller with the address of 7, you would send the command '7wht340<CR>'.

Firmware 2.7 will return "White 3 40%", while firmware 2.9 will return "#grn40".

Preset Color Commands:

The preset color commands are for preset solid colors. To activate a solid color, the command is the address, followed by

the color. For example, if you wanted to set the color pink on a controller with the address of 2, you would send the command, '2pink<CR>'. The '<CR>' represents a carriage return. The following list are the valid colors and their commands.

Color:	Command:	Color:	Command:
Red	allred	Orange	orange
Green	allgreen	Blue	allblue
Magenta	magenta	Cyan	cyan
Gold	gold	RGB White	rgbwhite
Light Blue	ltblue	Light Green	ltgreen
Violet	violet	Pink	pink
RGB Warm White	rgbww		

All LED's Off:

The command for turning all LED's off is 2 parts, the address and the alloff command. For example, if you wanted to turn all LED's off on a controller with the address of 5, you would send the command, '5alloff<CR>'.

Global Off:

This command will turn off all LED's on all controllers connected, regardless of it's address. The command is, 'globaloff<CR>'.

RGB Off: (firmware 2.9 only)

This command will turn off R, G, and B channels and leave the white channel as is. For example, if you wanted to turn off all RGB channels on a controller with the address of 2, you would send the command, '2rgboff<CR>'.

Color Cycle:

The command for starting a controller into color cycle mode is the address, followed by 'cycle'. For example, if you wanted to start a color cycle mode on a controller with the address of 3, you would send the command, '3cycle<CR>'.

Color Modes:

The command for starting a controller into a color mode is the address, followed by the mode. For example, if you wanted to start the color mode ocean on a controller with the address of 3, you would send the command, '3ocean<CR>'. The following list is the available modes, their commands, and the colors in them.

Mode:	Command:	Colors:
Sunset	sunset	Orange, Gold, and RGB White
Calm Ocean	ocean	Blue, Light Blue, and Light Green
Morning Sky	sky	Light Blue and RGB White
Valentine	val	Red, Pink, and White
Easter	est	Pink, Gold, and Cyan
Christmas	xmas	Red and Green!
Autumn	atm	Orange and Violet
Royal	royal	Pink and Violet!
Rainbow	rainbow	All - slow
Cool Party	party	All - Medium
Techno	techno	All - Fast

Color Cycle Pause:

To pause a color cycle on a controller, send the address followed by 'pause'. Forexample, if you wanted to pause a color cycle on a controller with the address of 6, you would send the command, '6pause<CR>'.

Rate:

If you want to change the rate or speed of the color cycle, you would send the address, then a value from 0 to 255. The fastest change rate is 0 and the slowest would be 255. For example, if you wanted to set the rate to 2 on a controller with the address of 7, you would send the command, '7rate2<CR>. The default rate is preset to 4.

Stay:
This command selects how long, in seconds, the color cycle stays on a solid color before cycling to the next one. You send the address of the controller, then the 'stay' command, the the number of seconds you desire. For example, if you wanted to set the stay value to 5 seconds on a controller with the address of 1, you would send the command, '1stay5<CR>. The default stay value is preset to 0 seconds.

Ramp:
This command selects the default ramp rate when LED's change brightness levels. The fastest rate is 0 and goes up to 255. To change the ramp value, you would send the address, then 'ramp', then the ramp value. For example, if you wanted to change the ramp rate to 6 on a controller with the address of 2, you would send the command,'2ramp6<CR>'. The default ramp value is preset to 4.

Bright: (firmware 2.7)
This command brightens the red, green, and blue LED's on a controller. To use the bright feature, you would send the address, and then 'bright'. For example, if you wanted to brighten the RGB LED's on a controller with the address of 7, you would send the command, '7bright<CR>'. LED's will be brightened separately, and once any color reaches 100%, it will remain at 100% with each additional bright command.

Bright: (firmware 2.9)
This command brightens the red, green, and blue LED's on a controller. To use the bright feature, you would send the address, and then 'bright'. For example, if you wanted to brighten the RGB LED's on a controller with the address of 7, you would send the command, '7brt<CR>'. LED's will be brightened separately, and once any color reaches 100%, it will remain at 100% with each additional bright command.

Dim:
This command Dims the red, green, and blue LED's on a controller. To use the dim feature, you would send the address, and then 'dim'. For example, if you wanted to dim the RGB LED's on a controller with the address of 4, you would send the command, 4dim<CR>'. LED's will be dimmed separately, and once any color reaches 0%, it will remain at 0% with each additional dim command.

R,G, and B Bright and Dim commands: (firmware 2.9 only)
You can brighten R, G, and B channels 2.5% by sending the commands, "btr", "btg", and "btb" respectively. You can also dim the R, G, and B channels by sending the commands, "dmr", "dmg", and "dmb". They also have the address prefix in the command as well. So if you working with a controller with the address of 1 and you wanted to dim the red channel and brighten the blue channel, you would send the commands, "1dmr" and "1btb".

Status Command:
You can query the status of a controller by sending the command "status" (firmware 2.7) or "stat" (firmware 2.9). This command will return the levels of all channels and the ramp rate.

DIP Switch Settings:
The DIP Switches are for enabling different options that are available on the Epic controller. The individual switches are for different options as well as setting the controllers address.

Switches 1-3 are used to set the controllers address. Each switch represents a value, and the sum of all the value is the address. Switch 1 represents 1, Switch 2 represents 2, and Switch 3 represents 4. So if you had Switches 1 & 3 on, the address would be 5. The controllers default address is 0, and that is by having no switches on.

Switch 7 is used to enable Jandy or pool mode. If this switch is down, the controller will respond to the Jandy relay adapter with the following modes - Off, White, Blue, Cyan, Green, Red, Pink, Gold, and Color Cycle.

Switch 8 is used to select the logo LED option. If this switch is on, the logo will light up and pulse with certain button presses. If the options off, it will remain unlighted.!

Address Query:
You can send the command "address" and the controller will return the address that it is set to. If you firmware is 2.9, the command is "addr".

Help:

You can send the command “help” and the controller will give you some instructions about basic operation in a small paragraph via the serial connection.

For Control 4 Drivers or any 3rd party control system drivers please contact us directly.

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Safety Warning: Do not open box, Rs232 controller has no serviceable parts inside. Disconnect electrical power before installing or serviceing this equipment. This product is to be installed by a qualified person only.

Warranty

AIT warrants its products to be free from defects in material and workmanship. The exclusive remedy for this warranty is AIT factory replacement of any part or parts of such product which shall within 12 months after delivery to the pirchaser be returned to AITfactory with all transportation charges prepaid and which AIT determines to its satisfaction to be defective. This warranty shall not extend to defects in assembly by other than AIT or to any article which has been repaired or altered by other than AIT or or to any article which AIT determined has been subjected to improper use. AIT assumesno responsibility for the design characteristics od any unit or its operation in any circuit or assembly. This warranty is in lieu of all other warranties, express or implied; all other liabilities or obligations on the part of AIT, including consequential damages, are hereby expressly excluded.

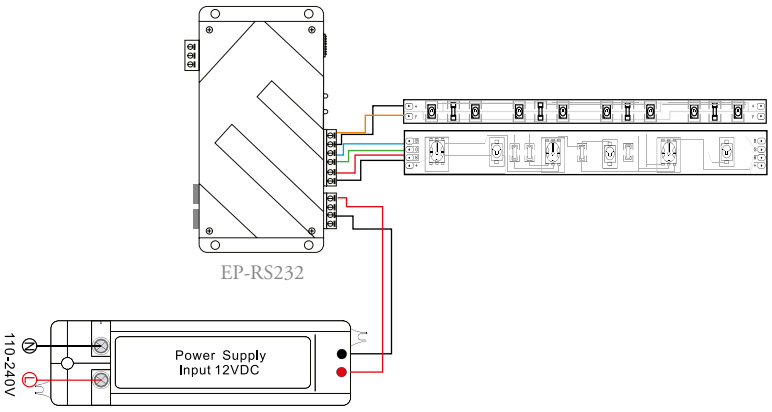
Note: Carefully check the control for shipping damage. Report any damage to the carrier immediately. Do not attempt to operate the drive if visible damage is evident to either the circuit or to the electronic components.

EP-RS232-ADV

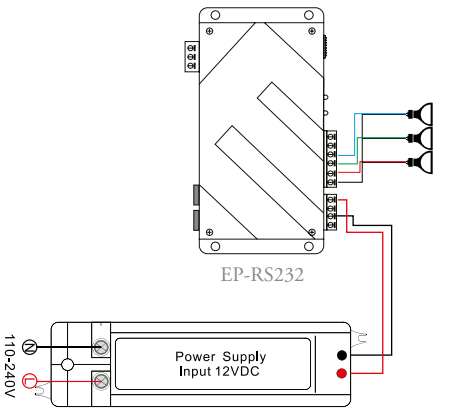
OVERVIEW

WIRING OPTION

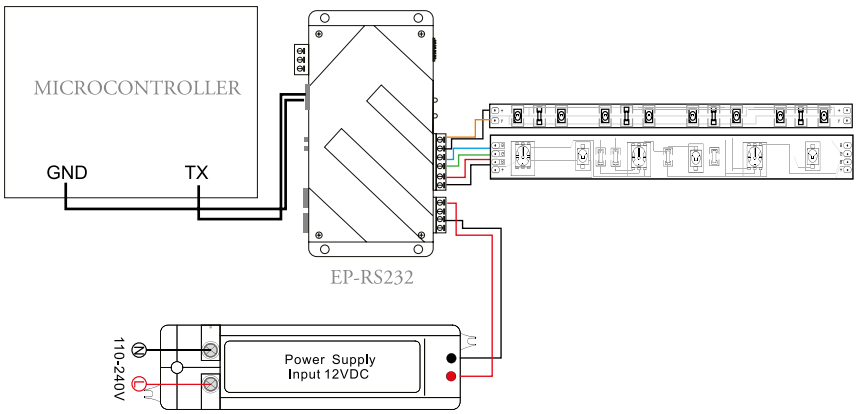
COMMON ANODE LED STRIP CONNECTION



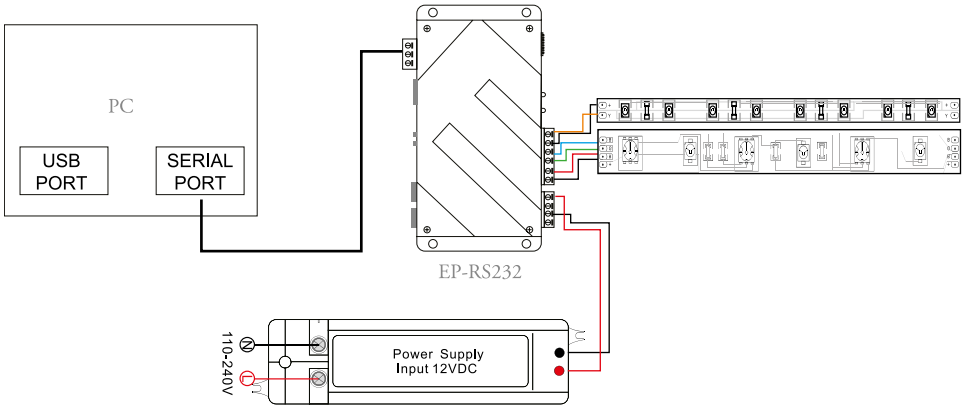
INCANDESCENT (12V / 24V DC) LIGHT BULB CONNECTION



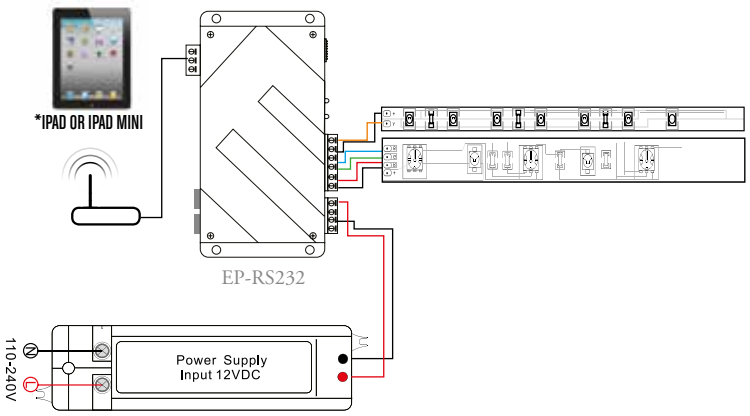
CONTROLLER CONNECTION TO A MICROCONTROLLER (SERIAL TTL INTERFACE)



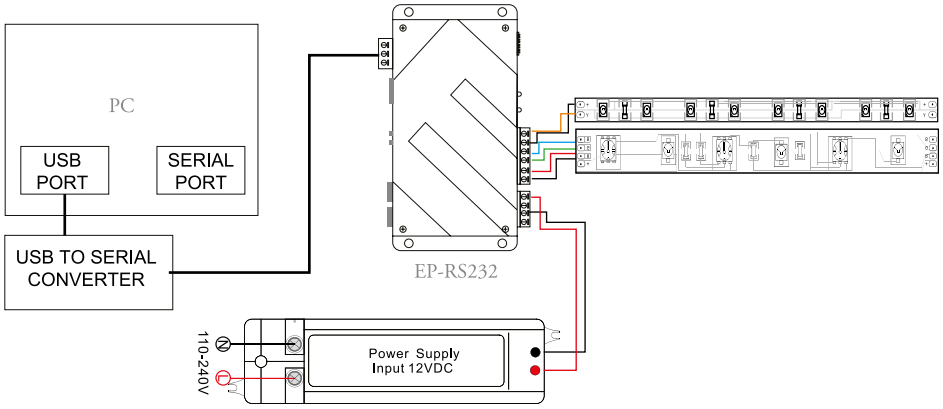
CONTROLLER CONNECTION TO A COMPUTER SERIAL PORT



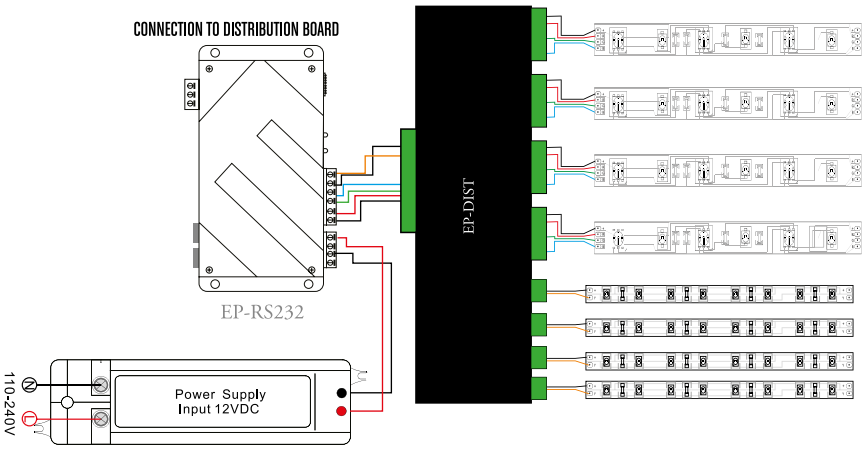
CONNECTION TO IPAD / IPAD



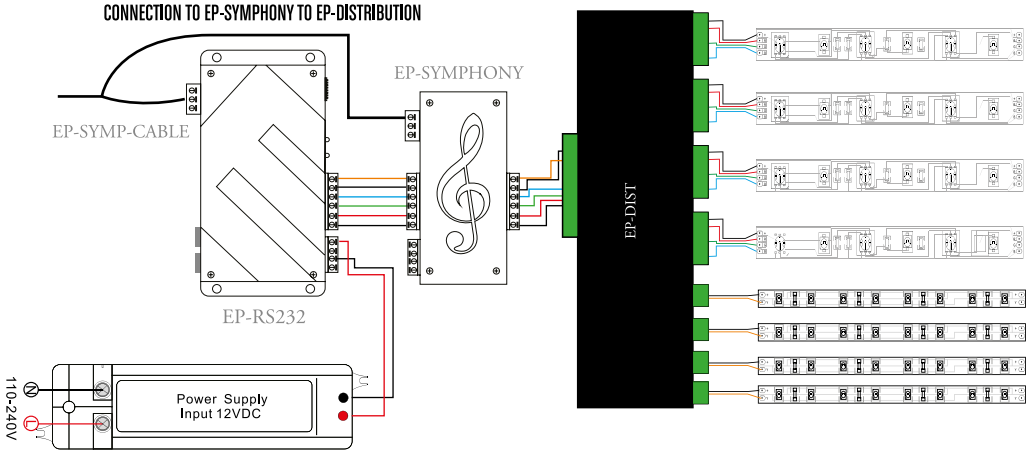
CONTROLLER CONNECTION TO A COMPUTER USB PORT



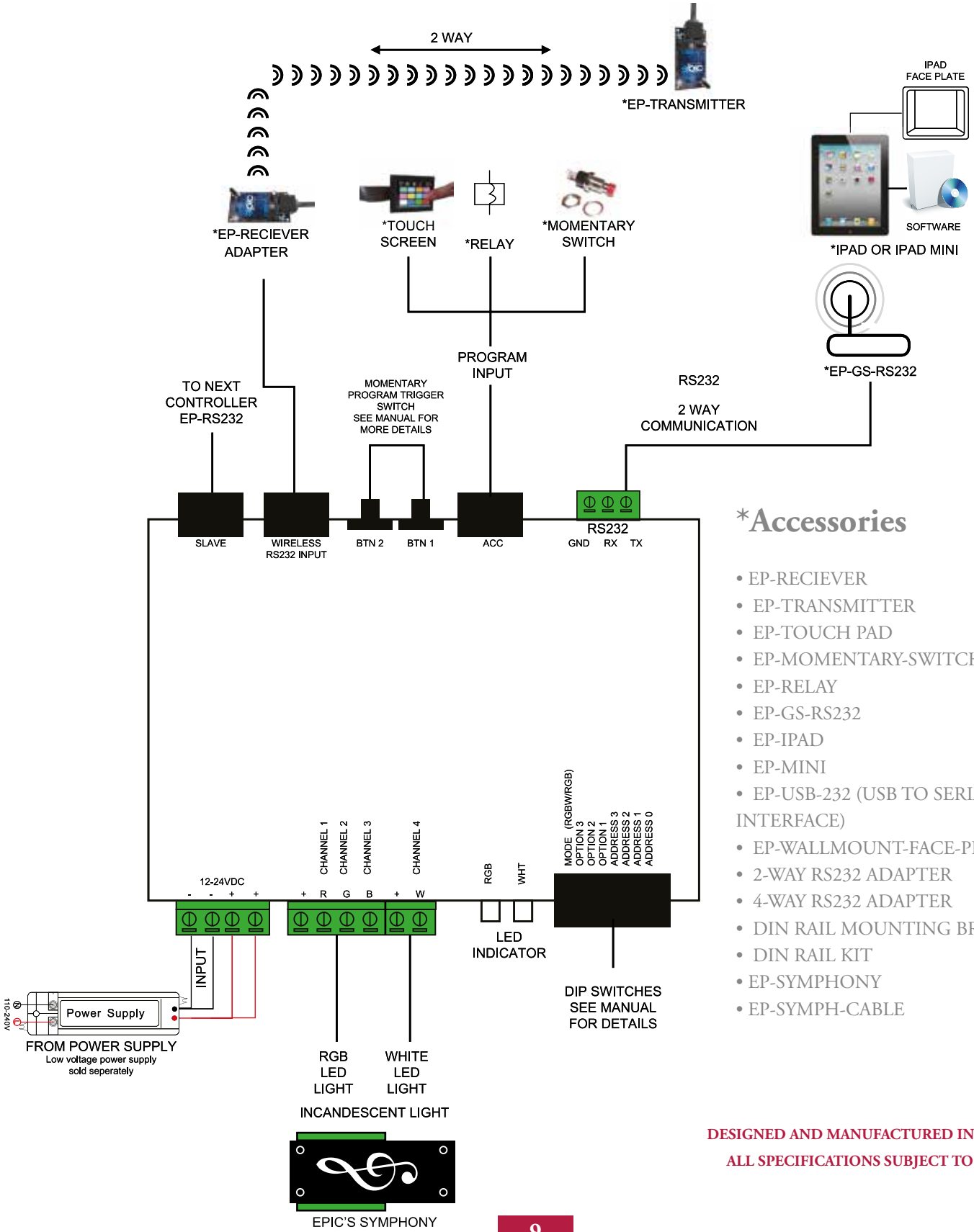
CONNECTION TO DISTRIBUTION BOARD



CONNECTION TO EP-SYMPHONY TO EP-DISTRIBUTION



EP-RS232-ADV
OVERVIEW

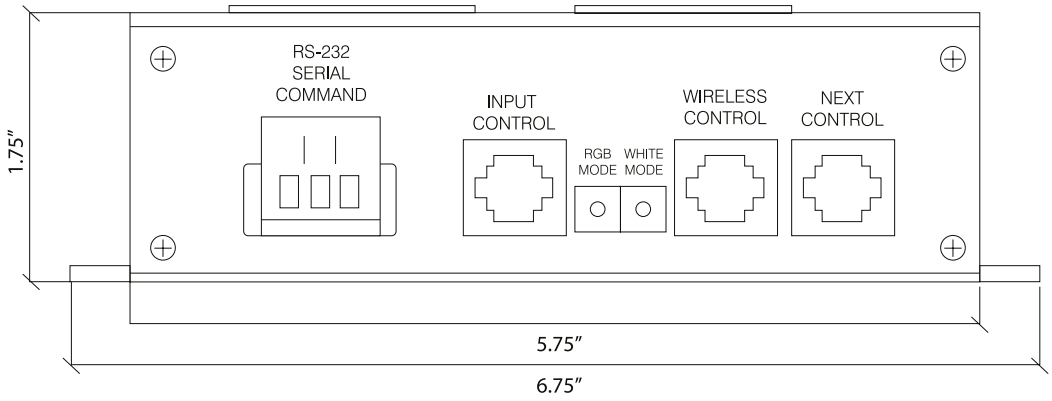


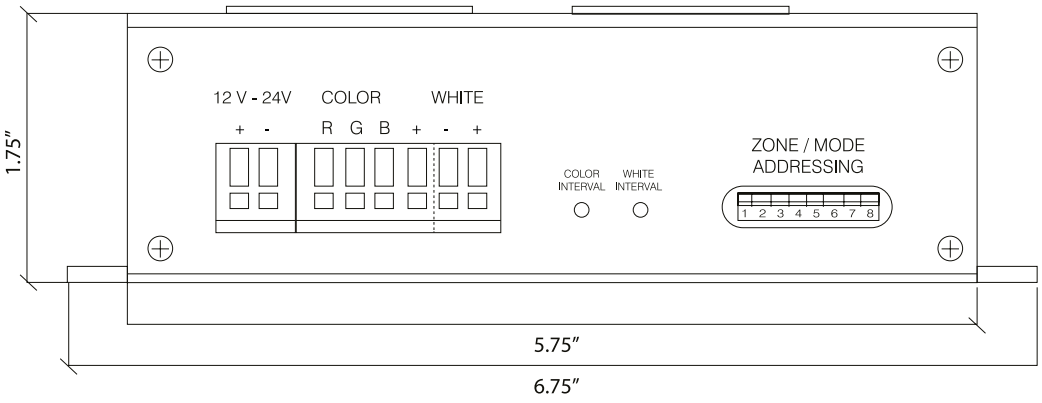
*Accessories

- EP-RECIEVER
- EP-TRANSMITTER
- EP-TOUCH PAD
- EP-MOMENTARY-SWITCH
- EP-RELAY
- EP-GS-RS232
- EP-IPAD
- EP-MINI
- EP-USB-232 (USB TO SERIAL INTERFACE)
- EP-WALLMOUNT-FACE-PLATE
- 2-WAY RS232 ADAPTER
- 4-WAY RS232 ADAPTER
- DIN RAIL MOUNTING BRACKET
- DIN RAIL KIT
- EP-SYMPHONY
- EP-SYMPH-CABLE

DESIGNED AND MANUFACTURED IN THE USA

ALL SPECIFICATIONS SUBJECT TO CHANGE


RS-232
SERIAL
COMMAND
INPUT
CONTROL
RGB
MODE
WHITE
MODE
WIRELESS
CONTROL
NEXT
CONTROL
1.75″
5.75″
6.75″


12 V - 24V
+ -
COLOR
R G B
WHITE
+ - +
COLOR
INTERVAL
WHITE
INTERVAL
ZONE / MODE
ADDRESSING
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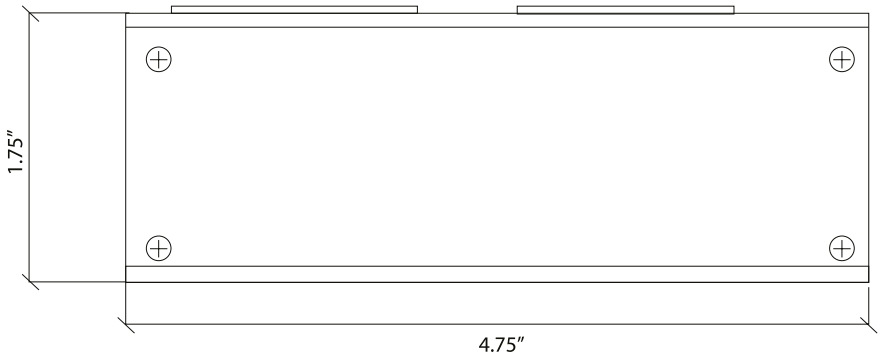
1.75″
5.75″
6.75″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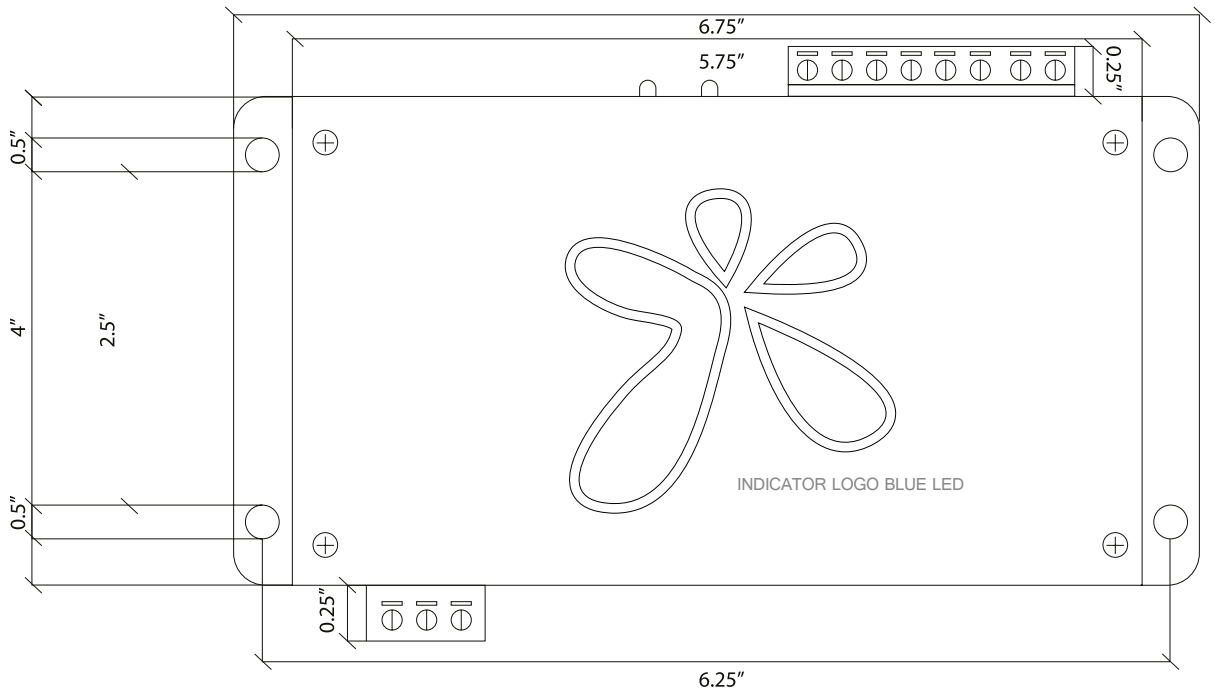
6.75″
5.75″
0.25″
0.5″
4″
2.5″
0.5″
INDICATOR LOGO BLUE LED
0.25″
6.25″