APT-CC-VX MODULES

Features

- APT-CC controllers add advanced control features to constant current (CC) drivers
- Integrated between the driver and LED light engines, the DC modules are powered directly from the driver
- Controlling 1 or 2 output channels, Correlated Color Temperature (CCT) control can be calibrated precisely, independent of intensity
- APT Programmer enables in-factory and in-field changes to control settings and addresses
- Interface options for CCT, intensity or channel control include: DMX, 0-10V, IR, and custom options
- DALI Interface option coming soon (to be released Q1 2018)
- Wireless add-on modules coming soon integrable with Zigbee, Casambi and custom systems (to be released Q1 2018)

Product Code

The product code indicates the hardware and firmware versions of the controller.

APT-CC-V*x*-wwww	**V*x*** - Hardware version (ie. VA, VB) ***wwww*** - Arkalumen internal code; not needed for ordering

Hardware Version	Functionality
VA	DMX/0-10V Switchable COM port
VB	DALI COM Port (to be released Q1 2018)

Specifications

Power Characteristics

Input		
DC IN Current, Max.	3,200	mA
DC IN Voltage, Range	12 – 60	V
DIM P/G Current, Max.	25	mA
DIM P/G Voltage, Max.	10	V
COM A/B Current, Max.	25	mA
COM A/B Voltage, Max.	10	V

Output		
OUT Current, Max.	3,200	mA
OUT Voltage Range	12 – 60	V
OUT Current Per Channel, Max.	3200	mA
OUT Voltage Per Channel, Max.	60	V
Max. Power	100	W

Operating Conditions

Environmental	
Ambient Temperature, Range	-20 – 50 °C
Case Temperature, Max.	105 °C
Material	Plastic

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Ordering Information

Please specify the desired product code and configuration code when ordering.

Product Code: **APT-CC-V*x*-*wwww***	Ensure to specify the hardware version (ie. VA, VB). The internal code (wwww) will be provided by Arkalumen and does not need to be specified.
Configuration Code: ***nnnn*-CH*mmm*-*pppp*-H*xxx*-L*yyy*-*zzz***	Ensure to specify the selected configuration options (nnnn-CHmmm-pppp-Hxxx-Lyyy-zzzz). See configuration code table on Page 3 for a summary and the nomenclature of the configuration options.

Nomenclature

Input Control Options

Abbreviation		Description
DMX	DMX512A Control Input	DMX512 wired communication via COM port with up to 512 addresses (APT-CC-VA only) 0-10V Dim disabled if DMX enabled
DALI	DALI Control Input	DALI wired communication via COM port (APT-CC-VB only)
CCTD	0-10V CCT Control	CCT control using a 0–10V dimmer connected to the COM port (APT-CC-VA only) DMX disabled if 0-10V enabled
IR	Infrared Remote	Control via Infrared signals through programmed communication protocols including options by Lutron, Leviton, and Honeywell
DH	Daylight Harvest	Power management based on set level of light required Dims on detected light and specified level of sensitivity
CH	Base Channel	Base channel of the controller when using DMX or DALI

Controller Output Options

Abbreviation		Description
IN	Intensity	Intensity control of the output light via feedback to the constant-current driver. Feedback is provided by wiring the APT-CC DIM port to the driver's 0-10V port (Refer to Figures 1, 2 and 3 for wiring instructions).
CT	Color Tuning	Color mixing of light by adjusting the intensity ratio between two LED channels
H	High	Used to denote the maximum current in the controller firmware
L	Low	Used to denote the minimum current in the controller firmware

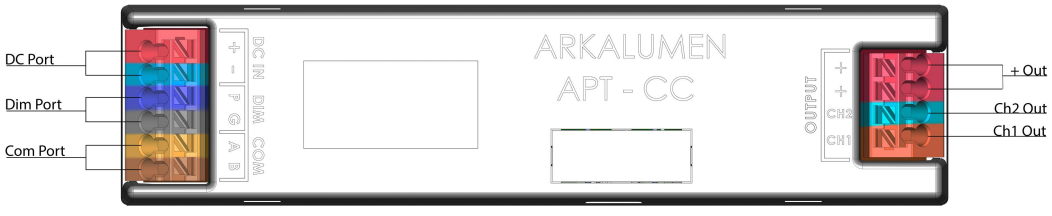

Figure 1 - APT-CC-VX Ports

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Configuration Code

The configuration code indicates value of key parameters within the controller as configured in factory.

Hardware Version	Configuration Code	Component Description
VA/VB	***nnnn*-CH*mmm*-*pppp*-H*xxx*-L*yyy*-*zzzz***	***nnnn*-** COM port functionality **CH*mmm*-** Digital channel (when applicable) ***pppp*-** Output control feature **H*xxx*-** Maximum current threshold (when applicable) [1] **L*yyy*-** Minimum current threshold (when applicable) [1] ***zzzz***- Additional input and sensors enable

[1]:Maximum current specified in increments of 10mA

Code	Description	Option	Configuration Trait
nnnn	***nnnn*** Denotes the interfacing system. The number represents the number of channels occupied by the controller on a given bus control system (DMX or DALI).	**DMX*1***	DMX wired communication via COM port using 1 DMX address
		DMX2	DMX wired communication via COM port using 2 DMX addresses
		CCTD	CCT control using a 0–10V dimmer connected to the COM port
		DAL1	Dali wired communication via COM port using 1 DALI address
		DAL2	Dali wired communication via COM port using 2 DALI addresses
CH*mmm*	**mmm** Denotes the base channel of the controller on the digital bus control system (DMX or DALI). The maximum possible address is determined by the communication standard used.	**CH000**	No controller address; No address is used with CCTD
		CH001	Lowest base channel address option
		CH###	Base channel specified between 1 and 512
		CH512	Highest base channel address option
pppp	**pppp** Denotes the output control features enabled on the controller where IN represents intensity control and CT represents color tuning control.	**IN00**	Intensity control enabled, CCT control disabled
		00CT	Intensity control disabled, CCT control enabled
		INCT	Intensity and CCT control enabled
H*xxx*	**xxx** Denotes the maximum current as configured in the controller's firmware in 10mA increments (60mA – 3200mA).	**0000**	Intensity control disabled
		H###	Maximum current specified between 60 and 3,200mA
		H320	Maximum current of 3,200mA (Default)
L*yyy*	**yyy** Denotes the minimum current as configured in the controller's firmware in 10mA increments (60mA – 3200mA).	**0000**	Intensity control disabled
		L006	Minimum current of 60mA (Default)
		L###	Minimum current specified between 60 and 3,200mA
zzzz	**zzzz** Denotes other input methods that are enabled on the controller. Infrared remote input (IR) and daylight harvesting (DH) are available on the controller.	**0000**	No additional input methods enabled
		IR00	Infrared remote enabled
		00DH	Daylight harvesting enabled
		IRDH	Infrared and daylight harvesting enabled

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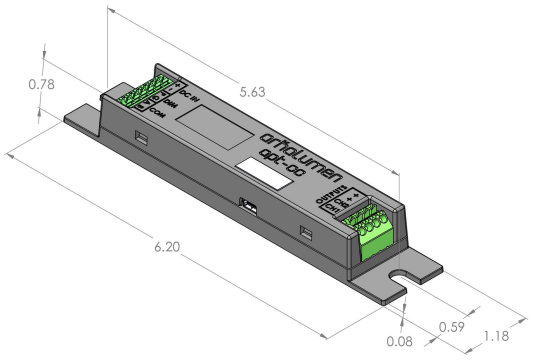
Mechanical Drawing

APT-CC-VX



Dimensions

Dimensions (inches)	
Length	6.20
Width	1.18
Height	0.78

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Wiring Diagrams

APT-CC-VA

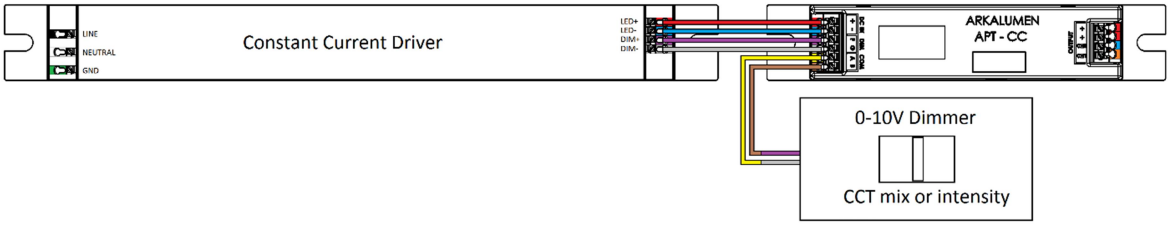

Figure 2 - APT-CC-VA Single 0-10V Dimmer Configuration

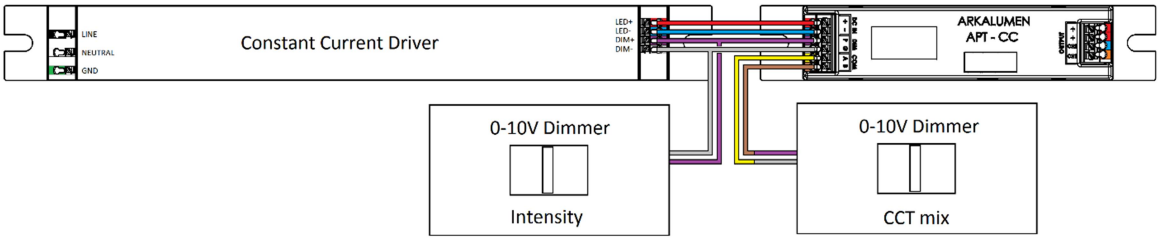

Figure 3 - APT-CC-VA Dual 0-10V Dimmer Configuration

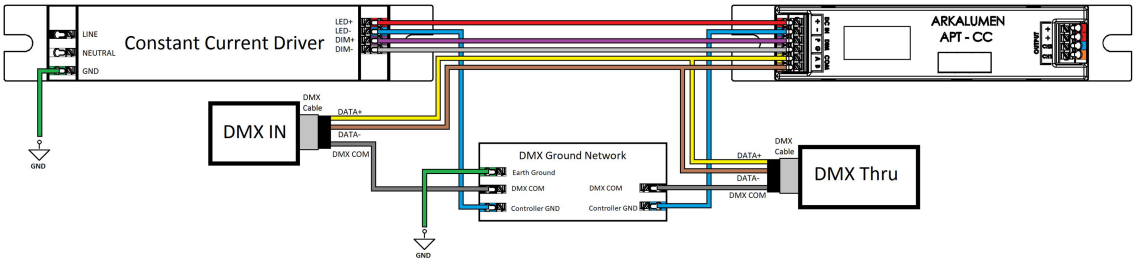

Figure 4 - APT-CC-VA DMX Configuration

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APT Ecosystem Components

Add-ons are available for APT-CC controllers for enhanced functionality.

Optional Add-ons for APT-CC Controllers

Add-on	Description
DMX Ground Network	Add-on component for DMX installations to mitigate DMX grounding issues (Refer to Figure 3 for wiring instructions)
DIP Switch	External removable add-on connected to the USB port allowing in-field setting controller parameters, such as base address
Motion Sense	Detection of movement within a set period of time using an external motion sensor If no movement detected in that period, dims output to specified level of intensity Connects to the APT CC via the COM port in 0-10V mode
Wireless Modules	Add-on modules providing wireless control capability coming soon (to be released Q1 2018)

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