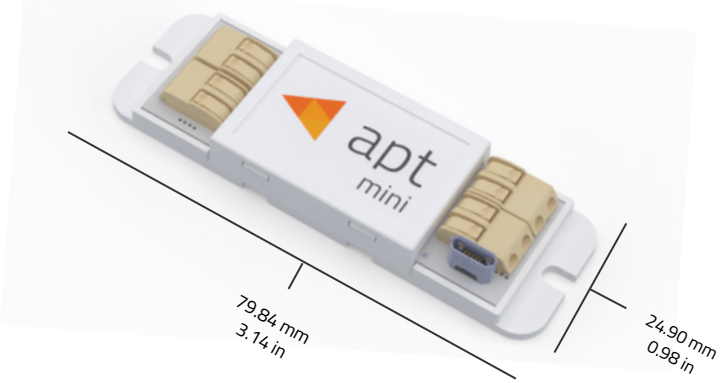
PRELIMINARY

APT-CC-Mini M1- Ultra Compact Form Factor LED Controller

Features

> Converts constant current driver into multi-channel constant current driver with up to 3 controlled output channels
> Correlated Color Temperature (CCT) can be calibrated precisely, independent of intensity
> Select tunable white modules to achieve desired spectra mix & lumen output within a calibrated linear or downlight system
> APT Programmer enables configuration changes including CCT range, CCT mapping and control mode selection
> Control Modes: 0-10V tunable white, dim-to-warm, programmable selectable white, DIP switch controlled selectable white



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APT Mini M1 Order Codes

Order Code*	Technology	Number of Channels	Control Mode
APT-CC-VDW-M1-xxxx	Dim-to-Warm	2	Intensity Level
APT-CC3-VS-M1-xxxxDWz	Dim-to-Warm	2 or 3	Intensity Level
APT-CC3-VS-M1-xxxxTWz	Tunable White	2 or 3	0-10V
APT-CC3-VS-M1-xxxxSWz	Selectable White	2 or 3	Programmable or DIP Switch

Note:
**xxxx – Firmware code provided by Arkalumen*
**z – Refers to the number of channels programmed (2 or 3)*

APT Mini M1 Electrical Specifications

Order Code*	Max Wattage [W]**	Max Input Voltage [V]	Max Channel Current [mA]	Max Total Current [mA]
APT-CC-VDW-M1-xxxx	100	55	4160	4160
APT-CC3-VS-M1-xxxxyyz	100	55	4160	4160

Note:
**yy – Refers to technology selected; DM (Dim-to-Warm), TW (Tunable White), or SW (Selectable White)*
***Max Wattage is typically limited to the LED module populated in the APT controller*

Mechanical Specifications

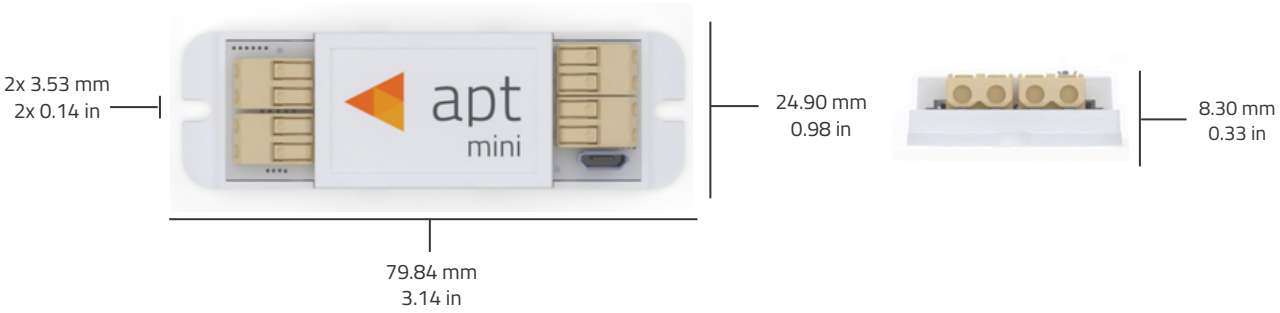

Figure 1 – Mechanical Drawing

Encasement Specifications	
Material	Plastic
RTI Elec	130°C

Operating Conditions

Temperature Limits	
Min Ambient Temperature, Ta	-40°C
Max Ambient Temperature, Ta	50°C

Dim-to-Warm - Wiring Diagrams

APT-CC-VDW-M1-xxxx

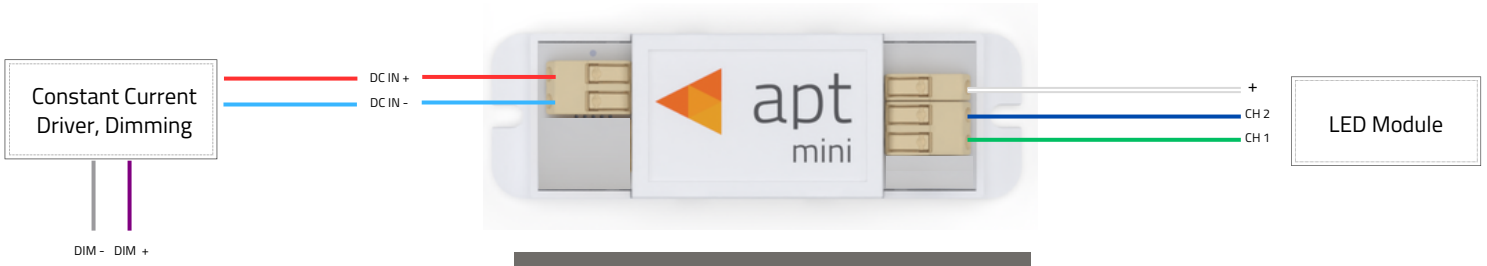

Figure 2 – APT-CC-VDW-M1-xxxx Wiring Diagram

APT-CC3-VS-M1-xxxxDW2

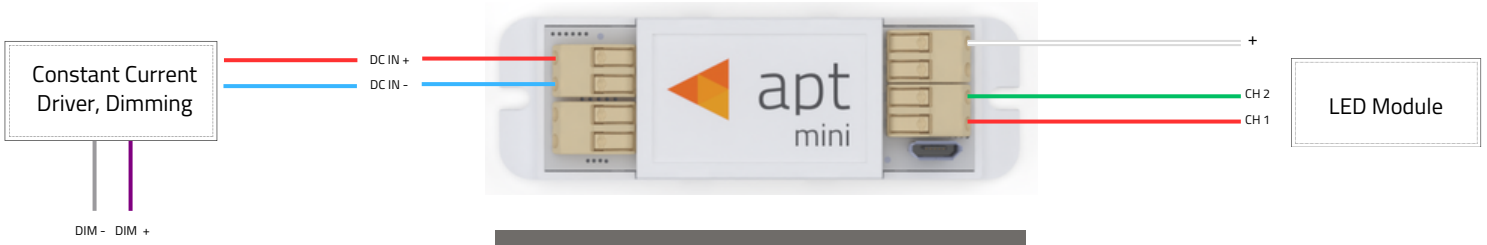

Figure 3– APT-CC3-VS-M1-xxxxDW2 Wiring Diagram

Note: The output CCT range can be set using the APT Programmer

APT-CC3-VS-M1-xxxxDW3

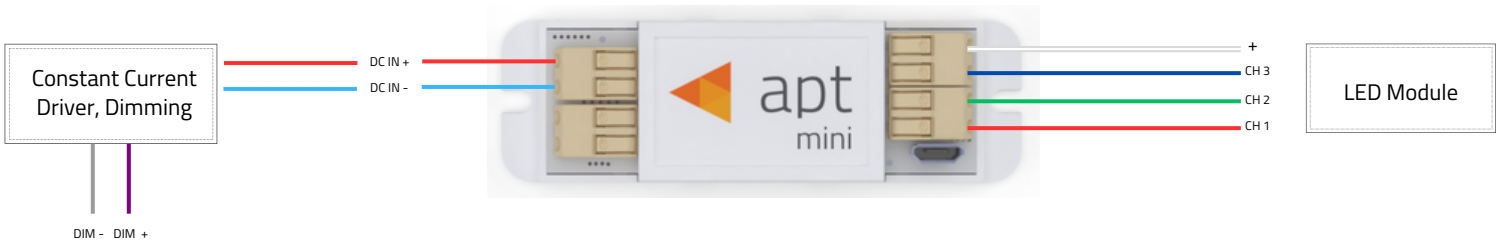

Figure 4 – APT-CC3-VS-M1-xxxxDW3 Wiring Diagram

Note: The output CCT range can be set using the APT Programmer

Tunable White - Wiring Diagrams

APT-CC3-VS-M1-xxxxTW2

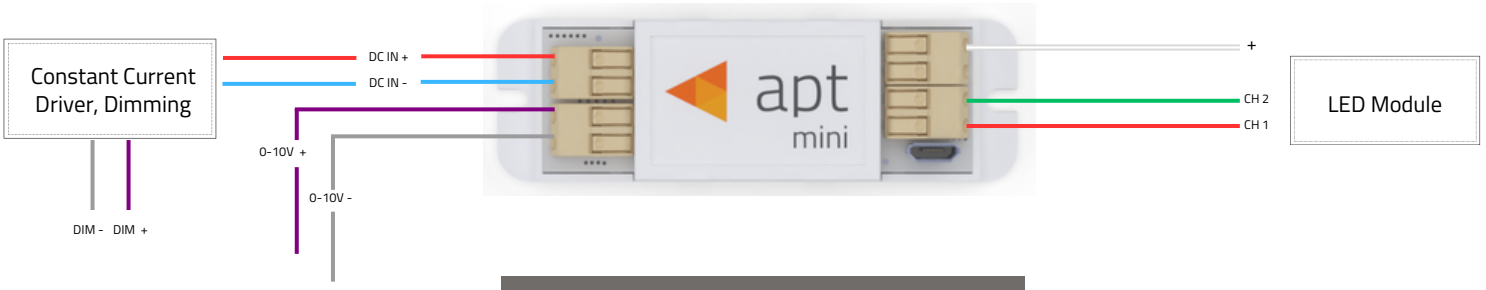

Figure 5 – APT-CC3-VS-M1-xxxxTW2 Wiring Diagram

APT-CC3-VS-M1-xxxxTW3

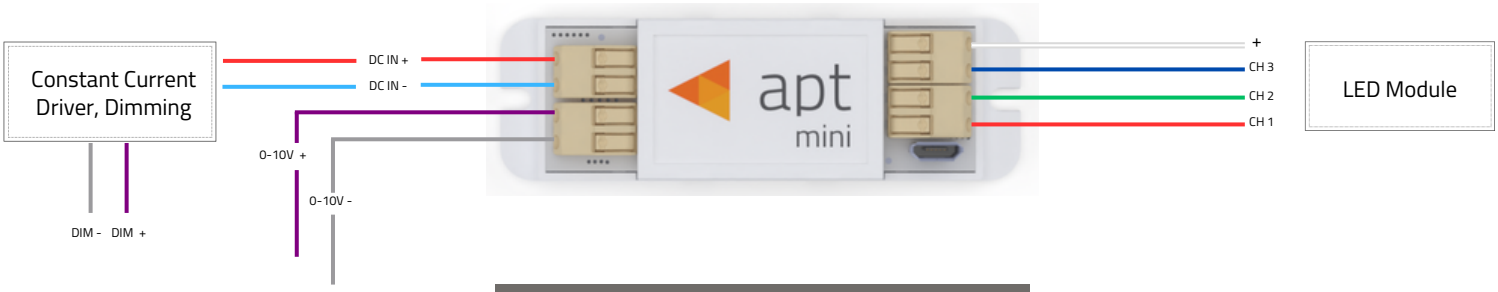

Figure 6 – APT-CC3-VS-M1-xxxxTW3 Wiring Diagram

Electrical Specifications

Port	Voltage [V]		Current [mA]	
	Min	Max	Min	Max
0-10V (Sink)*	0	10	-	6

**Specification indicates port output ranges only, to be used exclusively with sinking 0-10V dimmers*

Selectable White - Wiring Diagrams

APT-CC3-VS-M1-xxxxSW2

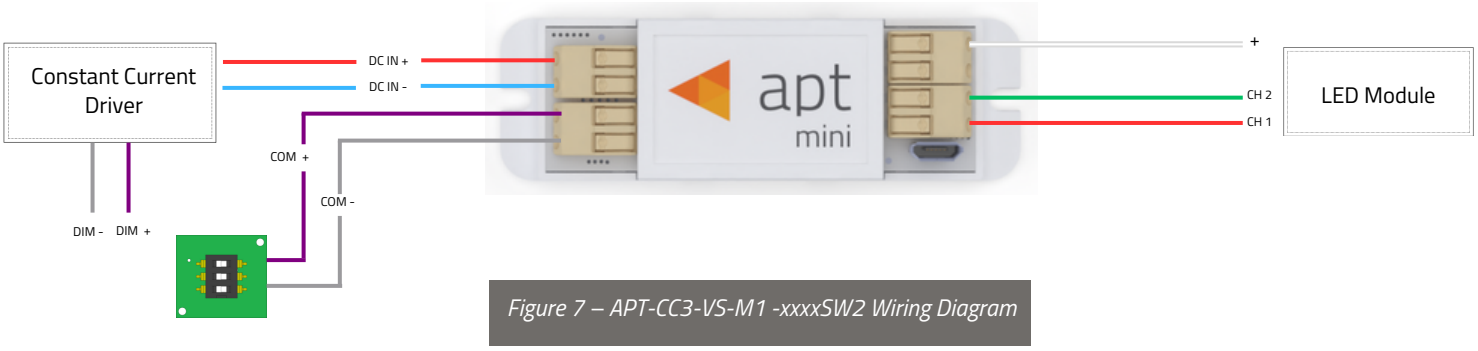

Figure 7 – APT-CC3-VS-M1 -xxxxSW2 Wiring Diagram

Note: When programming the controller to Selectable White, DIP switch connection is not required

APT-CC3-VS-M1-xxxxSW3

Figure 8 – APT-CC3-VS-M1-xxxxSW3 Wiring Diagram

Note: When programming the controller to Selectable White, DIP switch connection is not required

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APT Programmer

Arkalumen's APT controllers are customizable using our APT Programmer, which allows users to easily configure the controller for your applications. To configure, you will need an APT controller, an APT Programmer hardware unit and the latest version of the APT Programmer user interface.

APT Programmer Hardware:
To request an APT Programmer hardware unit, please contact support@arkalumen.com and a unit can be sent to you.

APT Programmer Software:
To download the latest APT Programmer user interface, please request a download link via the Arkalumen website www.arkalumen.com/apt-programmer/. You will be prompted to add in your information and a link will be sent to you via email with the latest version of the software. If you do not receive the email, please ensure to check your spam folder.

Programable Features

Order Code	Technology	Number of Channels	LED Module Selection	CCT Range	CCT Level	Linear or Logarithmic Mapping	0-10V Trim Adjust	DIP Switch Usage
APT-CC3-VS-M1-xxxxDWz	Dim-to-Warm	2 or 3	✓	✓		✓		
APT-CC3-VS-M1-xxxxTWz	Tunable White	2 or 3	✓	✓		✓	✓	
APT-CC3-VS-M1-xxxxSWz	Selectable White	2 or 3	✓		✓			✓

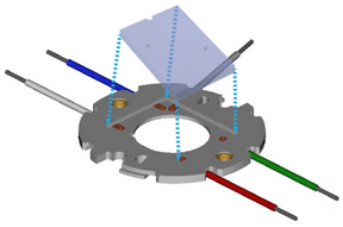
Arkalumen Accessories

Compatible LoDA Holders

Arkalumen Part Number	Compatibility
ARK-BW-TWA	APT-CC-VDW-M1-xxxx APT-CC3-VS-M1-xxxxyyz

How to Align LoDA to Bender+Wirth COB Holder

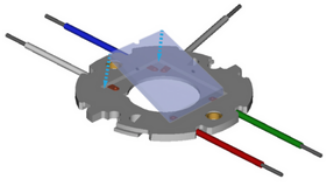
Step 1



Insert LoDA into the COB holder at a 45° angle

Figure 9

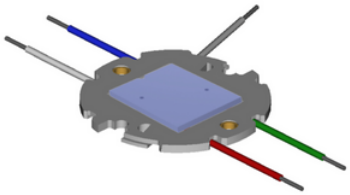
Step 2



Once LoDA is aligned with the bottom of the COB holder, push down into a flush position

Figure 10

Step 3



LoDA properly inserted into COB Holder

Figure 11

Note: Ensure the notch on LoDA is inserted in between the white & blue wires on the Bender+Wirth holder

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Ecosystem Accessories

Approved Drivers

Arkalumen ORB Systems are compatible with a wide range of isolated Class 2 constant current output drivers.
Please contact Arkalumen to confirm the compatibility of your selection.

Warnings

1. Do not connect/disconnect input or output wiring while powered
2. Do not connect APT Programmer while APT controller is powered by DC power source
3. Follow ESD protection procedures while handling input or output wiring, and programming port
4. Do not attach an AC input to the APT controller; DC input only
5. Use only with a driver providing an isolated DC output (ie. the output has no earth or protective ground reference)
6. Read and respect all voltage, current and power limits outlined in the electrical specifications section of the hardware version being used
7. Carefully follow and check all wiring diagrams in this document for the correct hardware version being used

Contact Us

For any further support please contact Arkalumen at support@arkalumen.com or toll free at 1.877.865.5533