DCS 100E Controller

DCS Single Output Controller

Product Highlights

- This DCS Series Controller provides Lighting Control Flexibility in a slim 112 mm x 124 mm x 23 mm package.
- Seamless switching from continuous-on to gated on/off and strobe overdrive; 3 independently configurable trigger inputs.
- 1 output, 3 channels - designed to drive multi-channel RGB / segment lights, as well as single higher current draw lights.

General Specifications

Controller Style	Discrete Control System (External, Detachable)
User Interface	Software GUI, Web Browser
Operating Modes	Pulse (Overdrive Strobe), Gated Continuous, Continuous
Light Head Connection	Via B-coded 5-pin Male M12 with Embedded EEPROM on Light Head Cable (C1)
Input Supply Requirements	24V DC Nominal, 4.5A Recommended 21V Min - 30V Max; Power Inputs Reverse-Polarity Protected
Output Channels	Number of Outputs: 1 Number of Channels per Output: 3
Output Power	Continuous: 90W Max Total, 30W per Channel* Pulsed: 540W Peak Total, 180W Peak per Channel*
Output Current	Continuous: 4.5A Max Total, 1.5A per Channel* Pulsed: 15A Max Total, 5A per Channel*

Output Voltage	Continuous: Vin - 1V, Channel Independent Pulsed: 36V Max*, Channel Independent
Trigger Signal	5V Min - 30V Max, <=5mA
Trigger Protection	Opto-Isolated Inputs, 30V Max
Trigger Delay	20µs + 10µs LED rise-time
Trigger Frequency Limit	2KHz
Pulse Width Range	30µs - 65ms
Programmable Pulse Delay	1µs - 10ms
Duty Cycle Range	Typical <1% for high current overdrive, up to 15% Dependent on the limitations of the connected light.
Dimming Range	0% - 100%, 1mA Increments via Software Settings
Status Indicator LEDs	Green: Power Yellow: Trigger Status Red: Error
Communication	10/100 Ethernet Standard TCP-IP, UDP, HTTP .NET Library Compatible w/ C#, F# and VB C++ Library (DLL)
Operating System Software Support	GUI: Windows 7+ (requires .NET Framework 4.5+) Libraries: .NET Framework 4.0+, C++ on Windows 7+ x86 and x86-64, Linux x86-64
Operating Temperature Range	0°C to +40 °C
Storage Temperature Range	-25°C to +85 °C
IP Rating	Not Rated
Dimensions	4.86" x 0.89" x 4.41" (123.3mm x 22.5mm x 111.2mm)
Weight	0.612lb (278g)
Mounting	DIN Rail
Case Material	Polyamide
Warranty	5 Years
Compliance	CE, RoHS

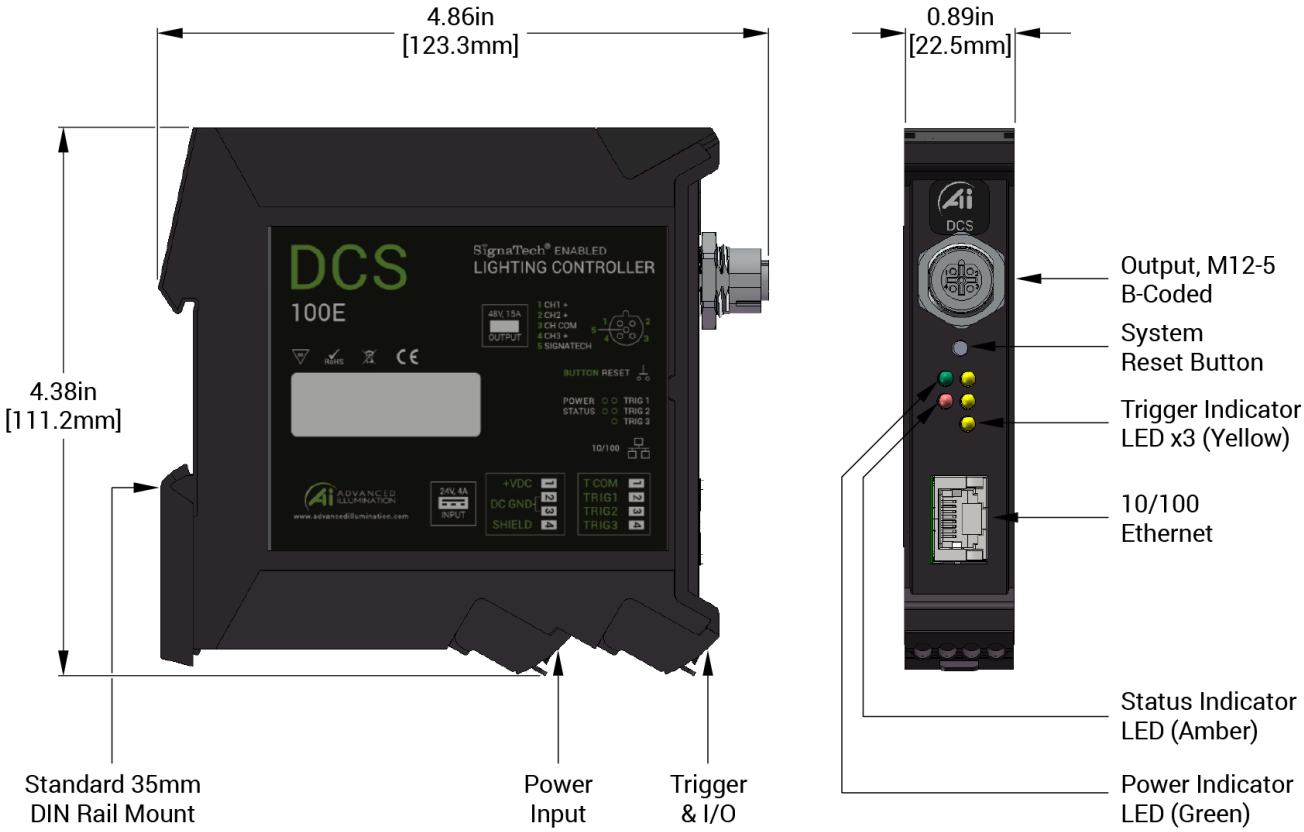
*Values shown are based on controller component limitations. Actual limitations will vary depending on the limits set for the connected light head. These limits are determined using Advanced Illumination's proprietary SignaTechTM (Signature Technology) in order to ensure safe peak performance.

Part Number Key

Model	—	Controller	Connection Type
DCS	—	XXX	X
DCS	—	100	E

Example light part number for DCS lighting controller: AL295-150WHIC1

Mechanical Specs

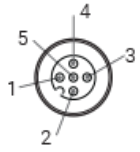


The DCS-100E controller is only compatible with lights employing a "C1" connector.

Cable Specifications:

B-Coded
PVC Jacket
Foil Shield + Drain Wire
5.7mm (0.225") outer diameter

Optional M12 Pinout



male
5-position

Electrical Specs

Standard Wiring Information

Pin	Channel	Wire Color	Type
1	Channel 1 (+)	Brown	Power
2	Channel 2 (+)	White	Input
3	Channel (-)	Blue	Power
4	Channel 3 (+)	Black	Input
5[1]	SignaTech®	Gray	Input

[1] Do NOT connect anything to pin 5 – damage to internal electronics may occur if pin 5 is used for anything other than SignaTech® protection.

- Trigger Inputs are bi-directional opto-isolated.
- Common may be tied to +V or GROUND depending on whether sinking or sourcing is to be used.
- All inputs are TTL-compliant, and are rated to +30VDC.
- Inputs are clamped and protected against overvoltage.

Power Input

Pin	Function	Notes
1	24V DC	4.5A recommended minimum for best performance
2	DC GND	
3	DC GND	
4	SHIELD	Optional: Tied to chassis copper for ESD/EMI protection. Tie to earth ground if needed.

External Trigger Input

Pin	Function	Notes
1	COMMON	Connect to common ground of supply voltage based on sinking/sourcing requirements. All triggers share common.
2	TRIGGER 1	5-30VDC tolerant
3	TRIGGER 2	--
4	TRIGGER 3	--

Change Notice

PCN No: 164

Date Issued: 01/20/22

Notice Type: Housing Component Substitution

Product Type: DCS-100E and DCS-103E

Change Notification Summary

In an effort to ensure continued production of our DCS-100E and DCS-103E controllers, Advanced illumination (Ai) will be substituting housing components currently unavailable due to supply disruptions. This will result in differences in appearance only. This change will not affect the setup or operation of either controller.

This is likely a temporary condition - as soon as the original components become available, Ai will immediately revert back.

Please contact your Ai Sales Representative if you have any questions.

PCN 164

PCN No: 154

Date Issued: 09/19/18

Notice Type: Product Revision Change

Product Type: DCS-100E and DCS-103E

Change Notification Summary

In an effort to improve our products, Advanced illumination (Ai) will update the wire connection layout and PCBs on the DCS-100E and DCS-103E controllers. Customers may still buy the current revision of these models until March 4th of 2019. After that time, orders for these products will be converted to their respective DCS-100E and DCS-103E REV A versions.

This revision change will simplify the connector layout by relocating the input power terminal from the top of the controller to the former reserved position at its base, allowing for both trigger and power to be oriented on one side of the controller. The top connection terminal will be removed as a result.

Additionally, the voltage regulators on the controller PCB have been upgraded to improve brightness stability at slow strobing frequencies; this upgrade should have no effect on any other controller functionality.

Please contact your Ai Sales Representative if you have any questions.

PCN 154

Warranty Information

Every Advanced illumination, Inc. (Ai) product is thoroughly inspected and tested before leaving the factory. Products are warranted to be free of defects in workmanship and materials for a period of FIVE YEARS from the original date of purchase. Should a defect develop during this period, customers may return the complete product, freight prepaid, to one of Ai's distributors or to the Ai factory. All product warranty returns require a Return Merchandise Authorization (RMA) number which is obtained from Customer Service. The RMA number must be clearly marked on the outside of the package. Ai will inspect the unit, and if a defect is found will, at our option, repair or replace the product without charge. Ai disclaims liability for any implied warranties, including implied warranties of "merchantability" and "fitness for a specific purpose." For products under warranty that have since been discontinued, Ai will make an effort to replace with equivalent parts; for circumstances that do not allow for equivalent replacement, Ai reserves the right to repair or replace these products with an updated version. Ai cannot be held responsible for the unauthorized or inappropriate use of its products. Any unauthorized repair or modifications will result in a voided warranty.
No Liability for Consequential Damages: In no event shall Ai be liable for any consequential, special, incidental, or indirect damages of any kind arising from the sale or use of the products.

Electromagnetic Compatibility

This product was tested and complies with the regulatory requirements and limits for electromagnetic compatibility (EMC) as stated in the product specifications. These requirements and limits are designed to provide reasonable protection against harmful interference only when the product is operated in its intended industrial electromagnetic environment. To minimize the potential for electromagnetic interference or unacceptable performance degradation, install and use this product in strict accordance with the instructions in the product documentation.

Customer Service

For information on existing orders, or to make an order adjustment, contact us Monday through Friday 8:00 am to 5:00 pm ET or send an email to orders@advancedillumination.com.

Company Information

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