Product Highlights

- Continuous and strobe operation in one package and built into the power cable
- Active Overdrive Technology™ ensures maximum pulsed power regardless of pulse width
- Optional M12 Connector allows plug and play operation - no adapters required
- Seamless switching between strobe and continuous modes with no adapters or changes in wiring required
- ICS 3S version is identical, but with the default being off

Mechanical Specifications

Standard

Washdown Option
ICS 3 & ICS 3S Inline Controllers

Electrical Specifications

<table>
<thead>
<tr>
<th>Input Voltage Range</th>
<th>24V norm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Input Current</td>
<td>1.5A DC</td>
</tr>
<tr>
<td>Output Power</td>
<td>Continuous; 35W; 1.5A Strobe; 5x Overdrive typical</td>
</tr>
<tr>
<td>Modes</td>
<td>Pulsed, Continuous, Gated Continuous</td>
</tr>
<tr>
<td>User Interface</td>
<td>5 tinned wire leads; OR optional 5-pin Male M12 cordset</td>
</tr>
<tr>
<td>Trigger</td>
<td>Single PNP - active HIGH trigger input, TTL compatible</td>
</tr>
<tr>
<td>IP Rating</td>
<td>IP50</td>
</tr>
<tr>
<td>Lumen Maintenance</td>
<td>L70 = 50,000 hours</td>
</tr>
<tr>
<td>Max Frequency</td>
<td>10kHz User must limit duty cycle to &lt;15% beyond 1kHz</td>
</tr>
<tr>
<td>Trigger Latency</td>
<td>60 usec typical</td>
</tr>
<tr>
<td>Maximum Ambient Operating Temperature</td>
<td>90 deg F</td>
</tr>
<tr>
<td>Maximum Operating Temperature (case)</td>
<td>125 deg F</td>
</tr>
</tbody>
</table>

Cable Length and Positioning

Standard
1.82m (6') cable

Wash Down Version
1.82m (6') cable

Custom Cables Lengths

For custom cables the maximum overall length allowed is 7.62 meters (25').
For longer cable lengths please contact us. Please note this is not an option on M12.
ICS 3 & ICS 3S Inline Controllers

Wiring Information

Standard Wiring Information

<table>
<thead>
<tr>
<th>Pin</th>
<th>Channel</th>
<th>Wire Color</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>24V DC</td>
<td>Brown</td>
<td>Power</td>
</tr>
<tr>
<td>2</td>
<td>RESERVED</td>
<td>White</td>
<td>Input</td>
</tr>
<tr>
<td>3</td>
<td>GND</td>
<td>Blue</td>
<td>Power</td>
</tr>
<tr>
<td>4</td>
<td>PNP/Active High Trigger</td>
<td>Black</td>
<td>Input</td>
</tr>
<tr>
<td>5</td>
<td>0-10V Analog Control</td>
<td>Gray</td>
<td>Input</td>
</tr>
</tbody>
</table>

I3 Version

- Light is in CONTINUOUS MODE when power is applied. The light will remain operating in continuous mode until a trigger pulse is detected, or for as long as the trigger input is HIGH.
- The first trigger pulse will initiate STROBE MODE. The controller remains in STROBE MODE until the power is toggled. In STROBE MODE the output light pulse width always corresponds to the duration of the input trigger width.
- A period of overdrive occurs within 5msec from the beginning of the pulse. After this period of time, the on-time of the pulse is at the continuous output level.
- Analog control is optional for remote dimming (0-10VDC) in both models.

I3S Version

- The “I3S” version is identical to I3 except that the device will not power on continuous by default. To employ this controller in continuous mode, the black wire (Pin 4) must be connected to +24V. The output is only active when the trigger input is HIGH.

I3 / I3S Wiring, Best Practices

To prevent any unwanted behavior from the controller use the following guidelines:

- Unused wires should be trimmed, or isolated to prevent accidental shorting of leads
- If floating, tie unused analog input: GRAY to +24VDC
- If floating tie unused trigger input: BLACK to +24VDC
- Tie drain wire to EARTH GND, or DC GND if earth is not available (noise immunity)
ICS 3 & ICS 3S Inline Controllers

Wiring Diagrams (Camera Specific)

It is possible to connect controller to cameras with dedicated driver outputs. (M12 Connector option required.)

**TYPICAL CONNECTION, CAMERA - TELEDYNE DALSA: BOA / BOA PRO**

**TYPICAL CONNECTION, CAMERA - COGNEX: INSIGHT 7000**

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**Wiring Diagrams**

- **Typical Connection, Camera - Teledyne Dalsa: BOA / BOA Pro**
  - I/O PNP / Sourcing
  - 5-30VDC
  - *External resistors may not be needed
  - Check documentation on I/O for recommendations and voltage limits

- **Typical Connection, Camera - Cognex: Insight 7000**
  - I/O NPN / Sinking
  - 5-30VDC
  - *External resistors may not be needed
  - Check documentation on I/O for recommendations and voltage limits

- **Analog Dimming:**
  - 0 = 10%, 10 = 100% output
  - Analog dimming works in both strobe and continuous

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ICS 3 / BLACK / PIN 4
ICS 3 / BLUE / PIN 3
ICS 3 / GRAY / PIN 5
GND

---

*External resistors may not be needed
Check documentation on I/O for recommendations and voltage limits

---

Analog Dimming: 0 = 10%, 10 = 100% output
Analog dimming works in both strobe and continuous

---

The ICS 3 does not have a true sinking input. The emitter must be tied to the trigger as shown

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*External resistors may not be needed
Check documentation on I/O for recommendations and voltage limits
ICS 3 & ICS 3S Inline Controllers

Part Number Key

<table>
<thead>
<tr>
<th>Model</th>
<th>Controller</th>
<th>Connector/Control</th>
<th>Optional Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>SL185</td>
<td>XXX</td>
<td>XX</td>
<td>XXX</td>
</tr>
</tbody>
</table>

Example light part number for I3 lighting controller: SL185-WHI3

Additional Information

This is flextech™ enabled with the following software:

Adaptive Overdrive™

For lights with an integrated driver, Adaptive Overdrive™ control provides a safe, maximal output pulse regardless of camera exposure time.

Upon receiving an external trigger input, an Adaptive Overdrive™ enabled device produces a high power output pulse for up to 5 mSec. Should the external trigger pulse width exceed 5 mSec, the light output pulse gradually tails off to a sustained, safe level for the remaining exposure period. Traditional fixed duration strobe drivers cannot provide similar performance (see Fig. 1). Adaptive Overdrive™ is provided with ICS 3 and ICS 3S inline controllers as well as EuroBrite™ lighting products.

Adaptive Power™

For lights with an integrated driver and built-in temperature sensor, Adaptive Power™ control maximizes light output by factoring in the ambient temperature, as well as the heat sinking potential of the customer’s light-head mounting structure.

Upon initialization, an Adaptive Power™ enabled lighting system can “learn” about its thermal dissipation potential by monitoring the temperature rise of the assembly versus time. Performance increases of 3X are achievable, compared to a device that is mounted in free space. This optimization process applies to both strobed and continuous modes of operation.

![Fig. 1](image-url)
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 two years from the original date of purchase. Should a defect develop during this period, please contact Ai Customer Service or your Ai distributor for a Return Merchandise Authorization (RMA), and return the complete product, freight prepaid, to Ai. If a defect is found, Ai will - at our discretion - repair or replace the product without charge. Ai claims no liability for any implied warranties, including “merchantability” and “fitness for a specific purpose.”

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@advill.com.

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