SINGLE SOURCE CLASSROOM LIGHTING AND CONTROL SOLUTIONS

A+ CLASS™

AN EFFECTIVE LEARNING ENVIRONMENT requires at least two levels of lighting, is easy to operate and saves energy. The A+CLASS™ system provides all three plus additional options for teaching enhancements and energy saving strategies.

SINGLE SOURCE

A+CLASS™ systems are available from Alera Lighting. All components originate within the Hubbell platform for a single source – not just a single point of sale. This user friendly, single source approach ensures continuity throughout the project cycle and beyond. Simple. Sustainable. Dependable. A+CLASS.

A+CLASS™ systems are based on LEED for Schools, CHPS-CA, TX, MA, WA & NY, CEC Pier recommendations and other significant best practices adopted by school districts, lighting designers, states and localities.

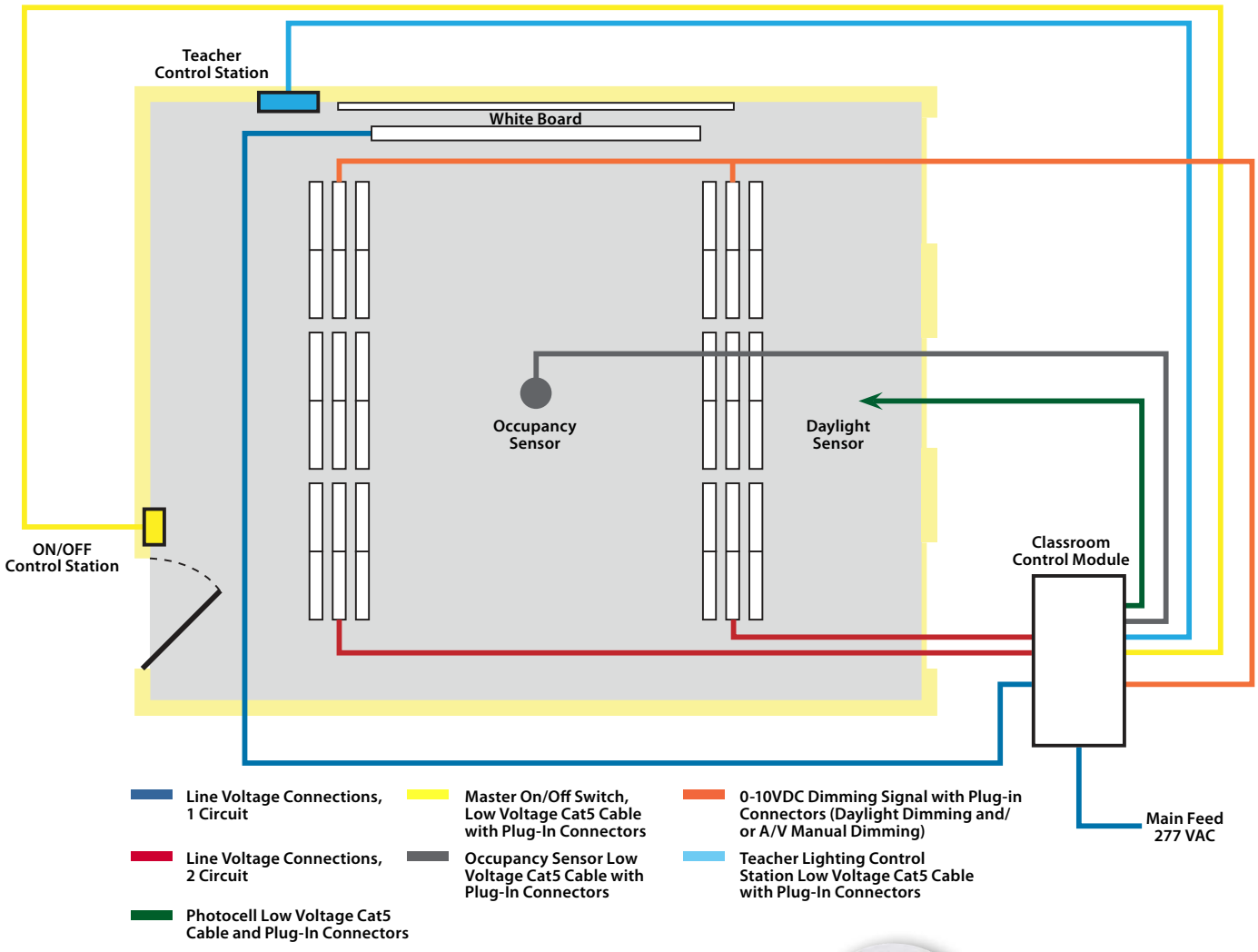
PUTTING KNOWLEDGE TO WORK

The A+ CLASS™ system represents the combined efforts of Alera Lighting, Hubbell's leading manufacturer of architectural and specialty fluorescent luminaires, and Hubbell Building Automation, Hubbell's industry leader in the application of technology to the business of energy saving lighting controls.

A+CLASS™ systems include a rich feature set with options for multi-zone daylight harvesting and A/V dimming. See example below.

2 Rows Whiteboard, General, AV

ON/OFF Control for Whiteboard and General Lighting with A/V
Manual Dimming and 2-Zone General Lighting Daylight Harvesting



Contact Alera Lighting for a selection of high performance luminaires.

HBA Occupancy Sensor

HBA Daylight Sensor

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TWO LIGHT LEVELS

- ☑ **General:** Uniform light levels across the student desks to facilitate a high quality learning environment
- ☑ **A/V (Audio/Visual):** Lowers light levels to focus attention at the front of the classroom for presentations or audio visual projections, while providing appropriate light for note taking and interaction

EASY TO OPERATE

A Teacher Light Control Station is provided for recommended placement at the front of the room near the teacher's desk, within 6" of the whiteboard.

- ☑ **General / A/V Switch:** Allows teacher to change lighting between general mode and A/V mode
- ☑ **NeverDark Feature:** A brief, two second overlap in lighting modes when switching between General and A/V ensures the classroom does not experience an interruption of light as the modes change.
- ☑ **Study Time Switch:** Provides uninterrupted General lighting for 60 minutes of individual study, testing or other periods of low activity
- ☑ An LED indicator is lit when the Study Time switch is engaged

An entry switch is placed at each classroom main entry.

- ☑ **Master Entry Switch:** A switch station at the doorway allows teachers to manually control lights if desired

Clearly marked switch functions assure that teachers, substitutes or guests will all be able to operate the system intuitively.

- ☑ All switch buttons are clearly labeled

OPTIONAL SWITCHES

- ☐ **Row Switches:** Allows individual row control by providing one switch for each lighting row within the classroom
- ☐ **Additional Master Switch** can be provided for classrooms with dual entry points where entry or exit control is desired adjacent to each doorway

SAVES ENERGY

A+CLASS uses recommended best practices to significantly reduce classroom energy consumption. Using a strategy that dramatically reduces the electrical load, provides automatic shutoff and allows teacher control, classroom energy reductions can average as much as 30-50% compared to traditional systems[1].

STANDARD FEATURES

- ☑ High performance, low energy direct/indirect fluorescent lighting provides the basis for energy reduction
- ☑ Appropriate lighting for the tasks being performed in the classroom
- ☑ Dual Technology, self adaptive occupancy sensors
- ☑ General mode control energizes no more than two lamps in cross section for assured energy conservation vs. traditional methods
- ☑ A/V mode reduces light level below General mode for presentations and additional energy savings
- ☑ Master entry switch or entry row switches for manual control at exit

FLEXIBLE CURRICULUM

A+CLASS™ systems are tailored to the specific needs of each school district, incorporating precisely those features needed to attain a personalized solution for every classroom, student base, curriculum, and budget.

OPTIONAL, ENERGY SAVING

- ☐ 1, 2, 3 or 4 Zone Daylight Dimming
- ☐ 1, 2, 3 or 4 Zone Daylight Switching
- ☐ A/V Dimming
- ☐ Recessed Lighting

[1] Source: CEC PIER 4.5, 01-2005, Energy & Cost Savings, Energy Savings. 500-01-041

A+CLASS™

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FACILITY MANAGER & INSTALLER FRIENDLY

Maintenance, commissioning or updating each A+CLASS™ system is simple and intuitive.

CLASSROOM CONTROL MODULE (CCM)

☑ Each A+CLASS™ system includes a CCM for the connection of all low voltage and line voltage components. The CCM is a UL listed central control hub for each classroom, which provides a number of user-friendly features.

COLOR CODED

☑ Each CCM comes with color-coded low voltage plug-in ports with corresponding colored low voltage cables. Each function is a different color to take the guesswork out of what-goes-where.

PLUG & PLAY

☑ Each switch, occupancy sensor and photocell is equipped with a snap-in connection. Color coded snap-in cables are provided. One end snaps into the low voltage device and the other snaps into the corresponding color-coded port on the CCM.

CENTRAL INPUT

☑ Line voltage (120 or 277) feeds into the CCM at a single, centralized point and is then distributed to the classroom lighting via the CCM. This simplifies electrical circuiting and reduces the number of line voltage components, allowing switches to be powered by low voltage plug and play connections.

PORTABLE CONTROL TEMPLATES

☑ Set up a typical room and copy the control template onto the A+CLASS™ SD card. Take the SD card to the next CCM. Copy the settings onto that device. The room is now set up. Repeat for each identical classroom.

LCD DISPLAY

☑ An intuitive menu driven user interface guides the system user through system set-up and configuration. Scroll-through text menus eliminate guesswork.

REMOTE COMMISSIONING

☑ Pre-program and e-mail CCM settings for download onto the A+CLASS™ portable SD card.

FIRMWARE UPDATES

☑ Firmware, the operational program for the controller in the CCM, can be updated in the field without physically removing the controller itself. This means that the CCM programming can be easily updated and refreshed over the life of the system. As technology marches on, the A+CLASS™ system can march in step and remain current.

LABELED INPUT

☑ Line voltage output to the lighting fixtures is centralized and marked with clearly labeled output functions. The school district will never struggle to interpret a junction box with jumbles of wires attached to it. The CCM is neat, orderly, and efficient.

A+CLASS™

ASHRAE

CHPS

LEED

PIER

LEED FOR SCHOOLS 2007 CLASSROOM REQUIREMENTS EQ 6.1

Mode	Mode Description	Horizontal FC	Vertical FC
General	Measured 3' from any wall at desk height. Whiteboard light turned off for measurement.		
	Average	35-50	
	Minimum at any point	25	
Audio/ Visual	Measured 3' from side walls, 10' from front wall, 6' from back wall at desk height. Whiteboard/projection screen light turned off.		
	Acceptable range at any point	10-20	
	Projection Screen Maximum		7

LEED FOR SCHOOLS 2007

Credit	AVAILABLE CATEGORIES	Points	A+CLASS
EQ 6.1	Lighting System Design & Controllability	1	Yes[1]
EA 1	Optimize Energy Performance	2-10	Yes[2]
Credit	**ANCILLARY RELATED CATEGORIES**	**Points**	**A+CLASS**
EQ 8.1	Daylight & Views, Daylighting	1-3	Yes[3]
EQ 8.2	Daylight & Views, Views for 90% Spaces	1	Ancillary[4]
PREREQ	**PREREQUISITE: ENERGY & ATMOSPHERE**		
EA 1	Fundamental Commissioning of Building Energy Systems	Required	Ancillary[5]
Level	Certified	29-36	3-11
	Silver	37-43	
	Gold	44-57	
	Platinum	58-79	

RECOMMENDATIONS

- Select direct/indirect high performance lighting with specific parameters
- Provide both General and A/V light modes
- Minimize light on teaching wall in A/V
- Harness daylight for energy savings
- Install ceiling mount occupancy sensors for automatic off control
- Allow teachers extra lighting control during study, testing or low activity
- Purchase from a single source supplier
- Provide plug and play sensors and controls
- Modular, flexible system

[1] A+CLASS is designed specifically for classroom requirements; administrative offices and other regularly occupied spaces require individual lighting controls for 90% minimum of building occupants.

[2] A+CLASS provides significant energy savings to classrooms; points are achieved through the whole building approach as described in the LEED document.

[3] A+CLASS can be used as the lighting and control technology strategy when achieving LEED points for this credit.

[4] Ancillary to lighting and controls; may be related to 8.1

[5] A+CLASS can be used to facilitate and verify classroom lighting and controls commissioning.

ALERA LIGHTING

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Based on ASHRAE 2004-2007, LEED for Schools 2007 New Construction & Major Renovations, Collaborative for High Performance Schools 2009 CA & TX, California Energy Commission PIER 4.5 2005 Study Conclusions and other best practices. Reflects a high level overview of specific, limited sections only and does not purport to communicate the totality of any requirement, suggestion or finding. Available points and/or compliance to specific programs will vary according to program, classroom and whole building specifics.

For assistance in complying to a specific program, contact your Alera Lighting representative.

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Because of continuing product improvement programs, Alera Lighting reserves the right to change specifications without notice.

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