



CANYON LIGHTING CONTROL SYSTEM

Installation & User Manual

The Olympus — Room Controller · CYN-PP-2

The Aspen — Rotary Dimmer · CYN-DIM-R1

The Tahoma — Modular Switch · CYN-SWX

The Sierra — Occupancy/Vacancy Sensor · CYN-SEN-S1



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**WARNING! SYSTEM MUST BE INSTALLED IN ACCORDANCE
WITH LOCAL AND NATIONAL ELECTRICAL CODES. INDOOR
USE ONLY**

▲ CAUTION ▲

Risk of Fire and Electric Shock. De-energize the circuit at the branch circuit breaker or fuse before installing or servicing. This equipment must be connected to an equipment-grounding (earthing) conductor — do not energize without a ground connection. Do not interconnect the Class 2 (12 VDC bus) output of one Olympus to the output of another controller or to any other power source; connect only Canyon Controls Class 2 devices to the CAN Bus. No user-serviceable fuses or battery. The Olympus Room Controller may be connected to 120 VAC supply circuits. All servicing should be performed by qualified service personnel. To reduce the risk of electric shock, disconnect all power sources before servicing. **MUST BE INSTALLED BY A QUALIFIED ELECTRICIAN.**

SAVE THESE INSTRUCTIONS

IMPORTANT SAFETY INSTRUCTIONS

- READ AND FOLLOW ALL SAFETY INSTRUCTIONS.
- Be aware that Line Voltage connections to the Olympus Room Controller are 120 VAC.
- Not intended for outdoor use or exposure to direct weather. For indoor, dry locations only.
- Disconnect power at the circuit breaker or fuse before installation or servicing.
- Keep Class 1 (line voltage) and Class 2 (low voltage / Cat5e) wiring separated in accordance with the National Electrical Code (NEC / NFPA 70) and Canadian Electrical Code (CEC).
- Equipment should be mounted in locations where it will not readily be accessible to unauthorized personnel.
- The Aspen, Tahoma, and Sierra connect only to the Class 2 Cat5e CAN Bus. Never connect line voltage to any RJ45 port or wall station.
- The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
- This equipment contains no user-serviceable parts. Do not open the Olympus enclosure while energized.
- Using this equipment for anything other than its intended use will immediately void the manufacturer's warranty.

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1. Introduction

The Canyon Lighting Control System is a complete, Cat5e-connected ecosystem of dimmers, switches, and sensors designed to install cleanly, configure instantly, and scale from a single room to a campus. Every Canyon wall station and sensor connects via a single Cat5e cable to **The Olympus** Room Controller — the intelligent hub that powers and coordinates every Canyon-equipped space.



THE OLYMPUS
Room Controller · System Hub



THE ASPEN
Rotary Dimmer



THE TAHOMA
Modular Switch



THE SIERRA
Occ/Vac Sensor

The Olympus provides two independently controlled 0–10 V dimming zones, two 16 A relays rated 120 VAC, dual RJ45 CAN Bus ports, and wired USB commissioning. Downstream devices are powered over the Cat5e bus — no additional power supplies are required at wall stations or sensors. Each Olympus PowerPack provides 10 W of Class 2 bus power (12 VDC, 0.83 A); after controller overhead (< 3 W) approximately 6–7 W remains for downstream devices — roughly six wall stations (Aspen / Tahoma, < 1 W each), three Sierra sensors (< 2 W each), or a mixed total of about five to six devices per PowerPack. Long Cat5e home-runs reduce the available budget; verify loading on extended runs.

2. Design Features

- **One Cat5e.** Every device daisy-chains or home-runs on standard Cat5e (T568B) cable using the CAN Bus protocol — no proprietary bus, no special cabling.
 - **Zero software out of the box.** A three-position DIP switch on the rear of every device assigns it to a lighting zone — basic control works the moment the system is powered, with no programming required.
 - **Millivolt-precision dimming.** Two independent 0–10 V dimming zones with millivolt-level control enable granular dimming curves and warm-dim tuning for architectural lighting.
 - **Dual 16 A relays.** Heavy-duty switching rated 120 VAC for high-wattage lighting circuits and receptacle (plug-load) control.
 - **USB programming.** Wired USB (CDC) commissioning enables configuration via the Canyon app — scenes, schedules, dimming curves, and multi-controller coordination. No wireless radio is populated on this device.
 - **Local schedules.** Scheduled on/off and dimming events run locally in the Olympus; there is no battery-backed real-time clock, so time-of-day must be reconfirmed via the app after a power interruption.
 - **Smart sensing.** The Sierra combines PIR motion, audio detection, and an integrated photocell for occupancy/vacancy control and daylight harvesting.
 - **Unified design language.** The Tahoma's button faceplates are interchangeable across its own 1–8-button configurations; the Aspen is a self-contained, encapsulated dimmer with its own housing.
-

- **Energy code ready.** Supports ASHRAE 90.1, IECC, and Title 24 Part 6 strategies: multi-level dimming, occupancy/vacancy sensing, daylight harvesting, and receptacle control.

3. System Devices

The following Canyon Controls devices are compatible with the Canyon Lighting Control System. All wall stations and sensors connect to the Olympus via Cat5e and are powered over the bus.

DEVICE	SKU	DESCRIPTION	
	The Olympus Room Controller	CYN-PP-2	2-zone room controller. 2× 0–10 V dimming, 2× 16 A relays @ 120 VAC, 2× RJ45 CAN Bus ports, wired USB commissioning.
	The Aspen Rotary Dimmer	CYN-DIM-R1	Precision rotary encoder dial with infinite-rotation dimming, momentary press on/off, and LED intensity arc. Controls up to 2 lighting zones. Finishes: White, Brushed Aluminum, Brushed Brass, Anodized Aluminum.
	The Tahoma Modular Switch	CYN-SWX-{n}- {W/B}	Momentary push-button wall station in 1, 2, 3, 4, 5, 6, or 8-button configurations with interchangeable buttons and status LED per button. Colors: White, Black.
	The Sierra Occ/Vac Sensor	CYN-SEN-S1	Multi-technology flush-mount ceiling sensor: PIR motion (360°), audio detection, and integrated photocell for daylight harvesting. Coverage up to 1,000 ft².

Mix and match. Pick one device or all four — they work together by design. Multiple Olympus controllers can be combined over CAN Bus for larger spaces. Third-party devices are not natively supported on the Canyon CAN Bus; customers may submit third-party devices to Canyon Controls for compatibility evaluation (service may include a testing fee).

4. Specifications

4.1 The Olympus — Room Controller (CYN-PP-2)

ELECTRICAL	
Input Voltage	120 VAC, 60 Hz
Relay Rating	2 × 16 A @ 120 VAC resistive; 16 A electronic ballast (LED driver) @ 120 VAC; 16 A general-use (receptacle) @ 120 VAC
Dimming Output	2 × 0–10 VDC, millivolt-level precision, 0–100% range (warm-dim capable)
CAN Bus Ports	2 × RJ45, Cat5e (T568B), CAN 2.0B @ 250 kbps
Bus Output	12 VDC Class 2 (SELV) output — 0.83 A, 10 W max — powers downstream Canyon devices over Cat5e
Wireless	None — no radio populated; wired USB (CDC) for app configuration
Power Supply	Internal Class 2 power supply — 12 VDC, 0.83 A, 10 W output; input 120 VAC, 60 Hz
Battery	Coin-cell holder present on the PCB, unpopulated on R1 — no cell fitted, no timeclock/RTC function
Consumption	< 3 W typical (controller only, excluding relay loads)
MECHANICAL & ENVIRONMENTAL	
Mounting	Standard junction box, or above an accessible (non-plenum) suspended ceiling; ½" threaded conduit connector
Dimensions	5.45" × 2.84" × 1.44" (138.5 × 72.1 × 36.5 mm), excl. conduit nipple
Operating Temperature	32°F to 104°F (0°C to 40°C), indoor, non-condensing
Storage Temperature	-15°F to 160°F (-26°C to 71°C)
Relative Humidity	0–90% non-condensing
Enclosure	UL 94 flame-rated thermoplastic, black

4.2 The Aspen — Rotary Dimmer (CYN-DIM-R1)

Input Power	Powered over Cat5e from the Olympus (12 VDC Class 2 / SELV); < 1 W
Control Type	Rotary encoder (infinite rotation) + momentary press on/off
Zones	Up to 2
Connection	RJ45, Cat5e (T568B), CAN Bus; daisy-chain or home-run
Indicator	LED intensity arc — real-time dim level feedback
Zone Selector	3-position DIP switch, rear-mounted
Mounting	Standard single-gang box, depth ≥ 2.5"
Dimensions	4.72" × 3.35" (120 × 85 mm) faceplate; 0.87" (22.1 mm) box depth — see Section 5.2
Operating / Storage Temp	32°F to 131°F (0–55°C) / -15°F to 160°F (-26–71°C); 0–90% RH non-condensing
Finishes	White, Brushed Aluminum, Brushed Brass, Anodized Aluminum; integral faceplate (encapsulated unit; not interchangeable with other products)

4.3 The Tahoma — Modular Switch (CYN-SWX-{n}-{W/B})

Input Power	Powered over Cat5e from the Olympus (12 VDC Class 2 / SELV); < 1 W
Control Type	Momentary push button
Configurations	1, 2, 3, 4, 5, 6, or 8 buttons (interchangeable)
Button Programming	ON, OFF, ON/OFF, Raise/Lower, Scene, Group
LED Feedback	Status LED per button
Connection	RJ45, Cat5e (T568B), CAN Bus; daisy-chain or home-run
Zone Selector	3-position DIP switch, rear-mounted
Mounting	Standard single-gang box, depth ≥ 2.5"
Dimensions	4.72" × 3.35" (120 × 85 mm) faceplate — see Section 5.3
Operating / Storage Temp	32°F to 131°F (0–55°C) / -15°F to 160°F (-26–71°C); 0–90% RH non-condensing
Colors / Finishes	White, Black; Brushed Brass, Brushed Aluminum, Anodized Aluminum

4.4 The Sierra — Occupancy/Vacancy Sensor (CYN-SEN-S1)

Input Power	Powered over Cat5e from the Olympus (12 VDC Class 2 / SELV); < 2 W typical
Detection — PIR	Passive infrared, 360° field of view
Detection — Audio	Integrated audio presence sensing
Detection — Photocell	Integrated ambient light sensor; daylight harvesting capable
Coverage	Up to 1,000 ft ² (~36 ft diameter at 8–12 ft ceiling height)
Modes	Occupancy (auto-ON / auto-OFF) or Vacancy (manual-ON / auto-OFF)
Connection	RJ45, Cat5e (T568B), CAN Bus
Adjustability	360° sensor body rotation for aiming after installation
Mounting	Flush / recessed ceiling mount with integrated spring clips (drywall or ceiling-tile cutout)
Dimensions	3.82" (96.95 mm) trim ring; 1.96" (49.8 mm) lens; 2.91" (74 mm) overall height; 7.06" (179.25 mm) clip span
Operating Temperature	32°F to 104°F (0°C to 40°C); 0–90% RH non-condensing
Finish	White, low-profile, paintable cover

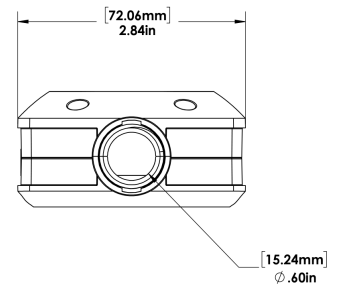
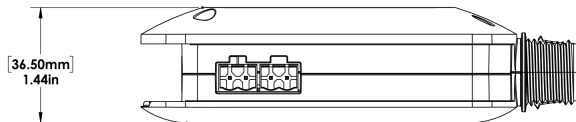
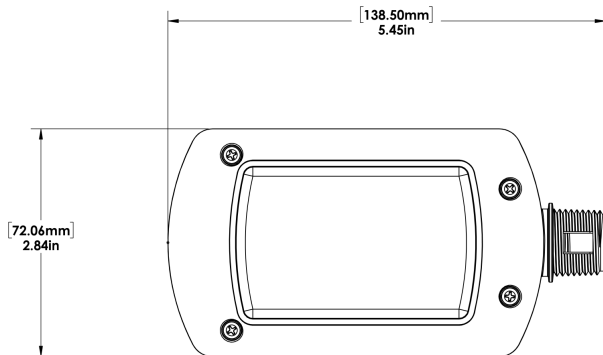
4.5 Approvals (All Devices)

- Certification pending — ETL Listing by Intertek to ANSI/UL Std. 916 and CSA C22.2 No. 205 in progress (see Section 15). Do not rely on a safety listing until the ETL mark is authorized.
- FCC Part 15 / ISED Canada — testing not yet completed; no radio populated
- RoHS Compliant
- Energy codes: ASHRAE 90.1, IECC, Title 24 Part 6 control strategies supported

5. Dimensions

5.1 Olympus Dimensions

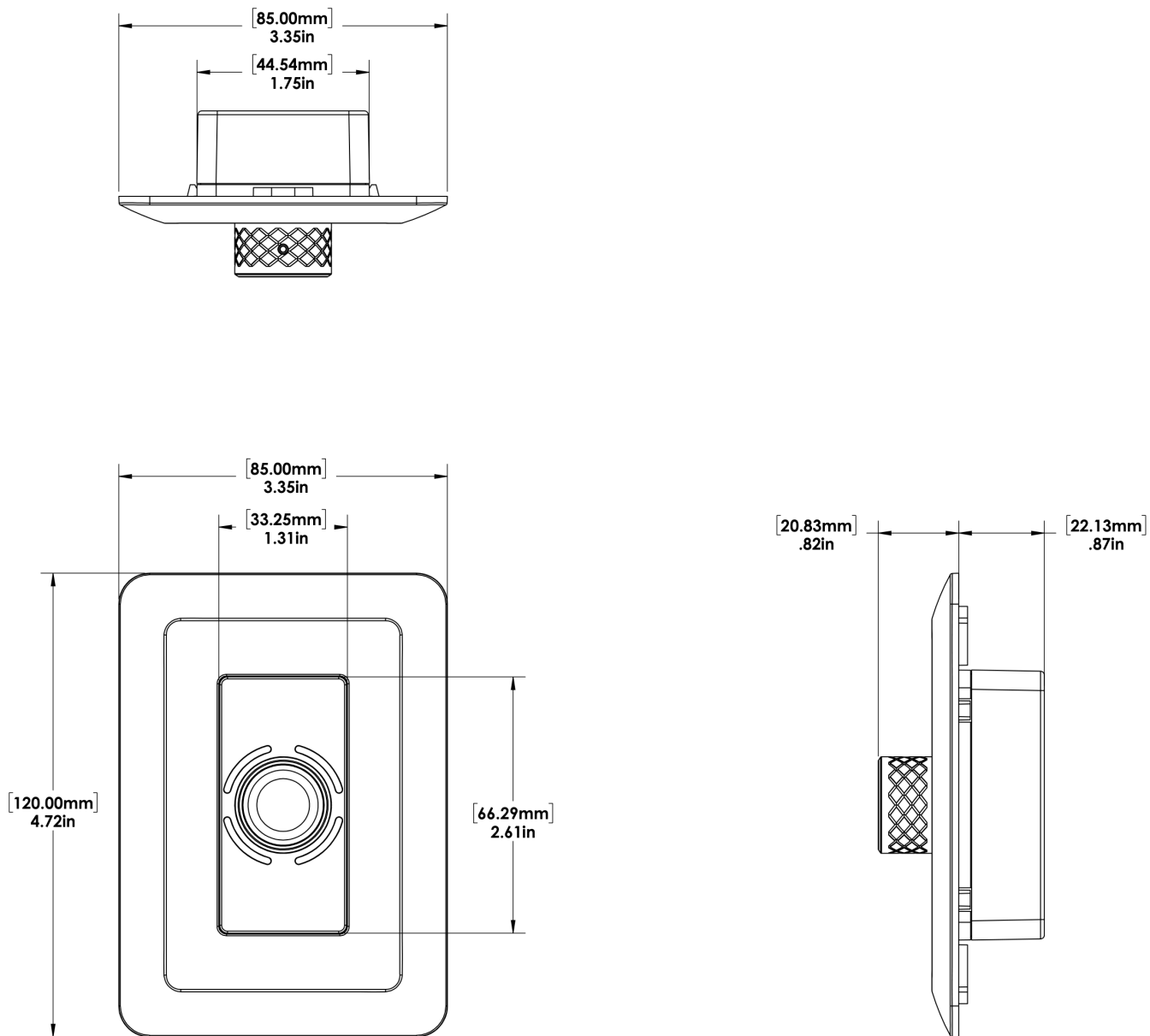
- Electrical rough-in can be completed before devices arrive on-site.
- Lightweight chassis mounts directly to a standard junction box via the integrated ½" threaded conduit connector, or rests above an accessible (non-plenum) suspended ceiling.



The Olympus — product dimensions (Drawing: OT-POWERPACK-ASSEMBLY, Sheet 2)

5.2 Aspen Dimensions

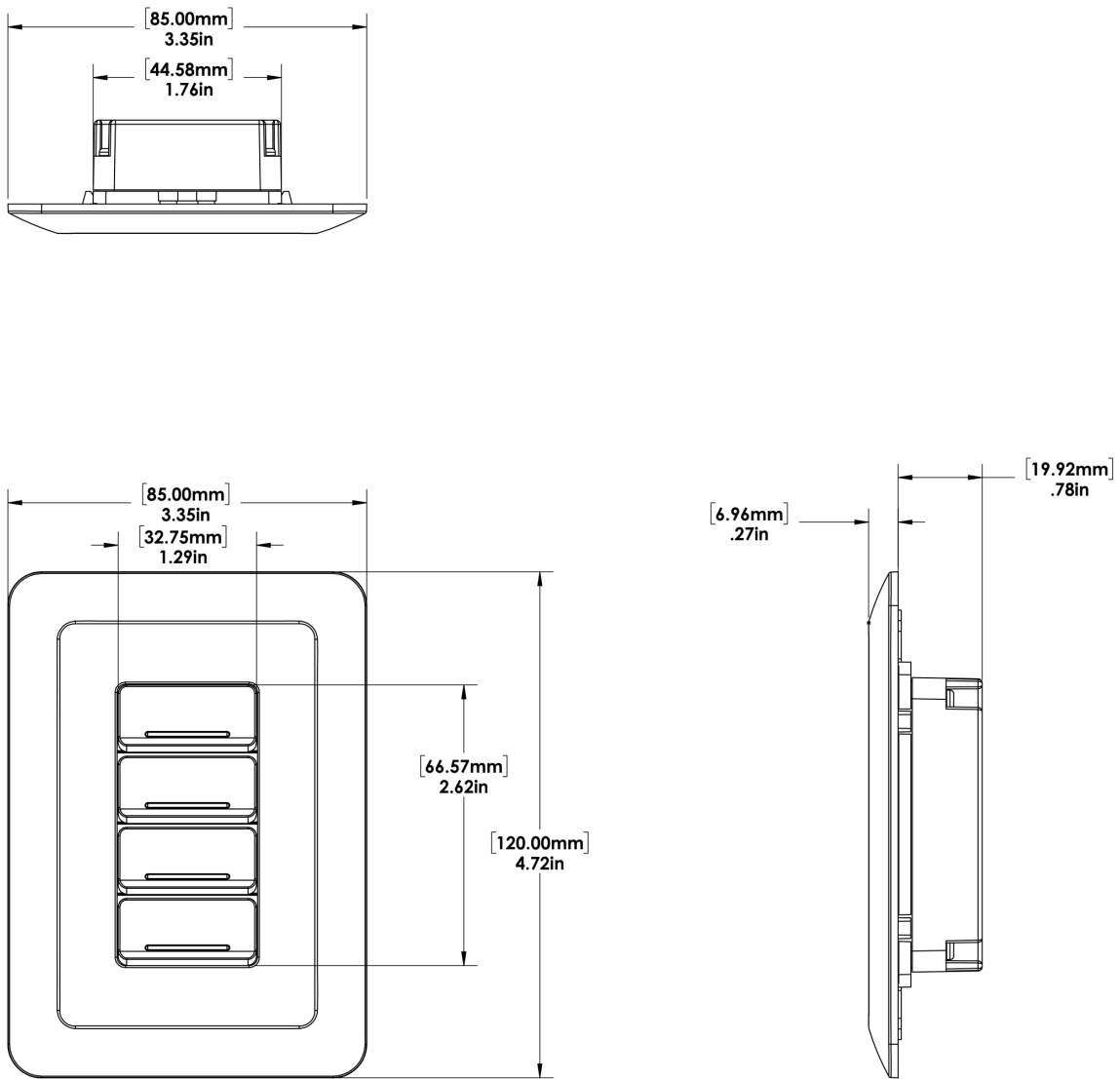
- Mounts to a standard single-gang switch box (depth $\geq 2.5"$) using the supplied mounting screws.
- The Aspen is a self-contained, encapsulated unit; its faceplate is not interchangeable with other products.



The Aspen — product dimensions (Drawing: OT-DIALDIMMER-ASSEMBLY, Sheet 2)

5.3 Tahoma Dimensions

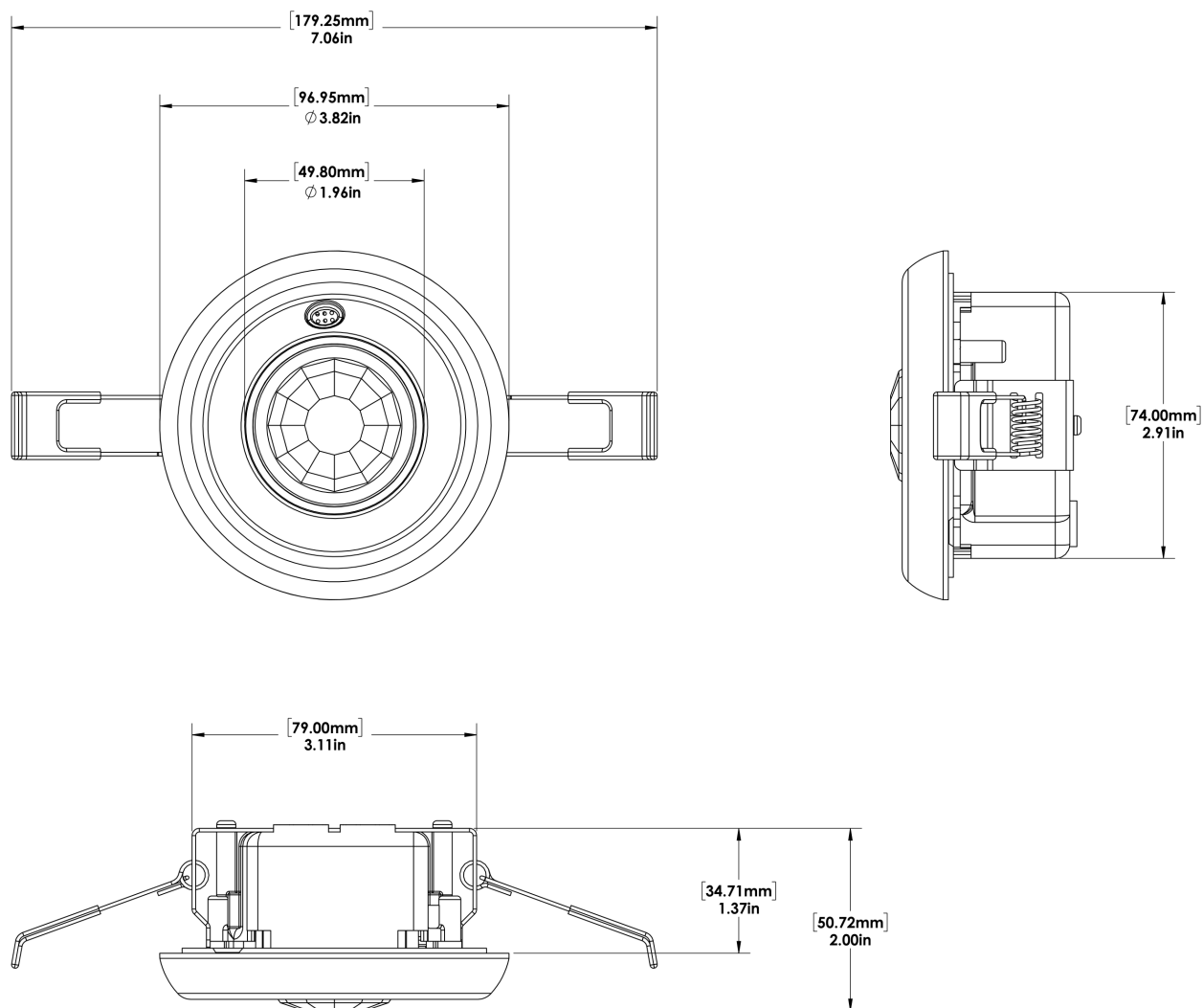
All Tahoma configurations share the same outer frame and mounting footprint — only the interior button layout changes. The 4-button drawing below is representative; 1-, 2-, and 8-button dimensions are identical except for button apertures.



The Tahoma (4-button shown) — product dimensions (Drawing: OT-SWITCH-FOURBUTTON-ASSEMBLY, Sheet 2)

5.4 Sierra Dimensions

- Flush / recessed ceiling sensor with integrated spring clips — mounts into a drywall or ceiling-tile cutout (approx. 3.1" / 79 mm); only the 3.82" (96.95 mm) trim ring is visible.
- Rotate the sensor body up to 360° after installation for precise aiming.



The Sierra — product dimensions (Drawing: OT-SENSOR-ASSEMBLY-FLUSHMOUNT, Sheet 2)

Coverage Pattern

- 360° field of view; up to 1,000 ft² coverage (~36 ft diameter) at 8–12 ft mounting height.
- Major motion (PIR): ~18 ft radius. Minor/audio-assisted detection: ~12 ft radius typical.
- Rotate the sensor body up to 360° after installation for precise aiming.

6. Installation Instructions

▲ CAUTION ▲

De-energize the branch circuit before installation. Line voltage (120 VAC) connections are made at the Olympus Room Controller only. Installation must be performed by a qualified electrician in accordance with the NEC/CEC and all local codes.

6.1 Olympus Installation Notes

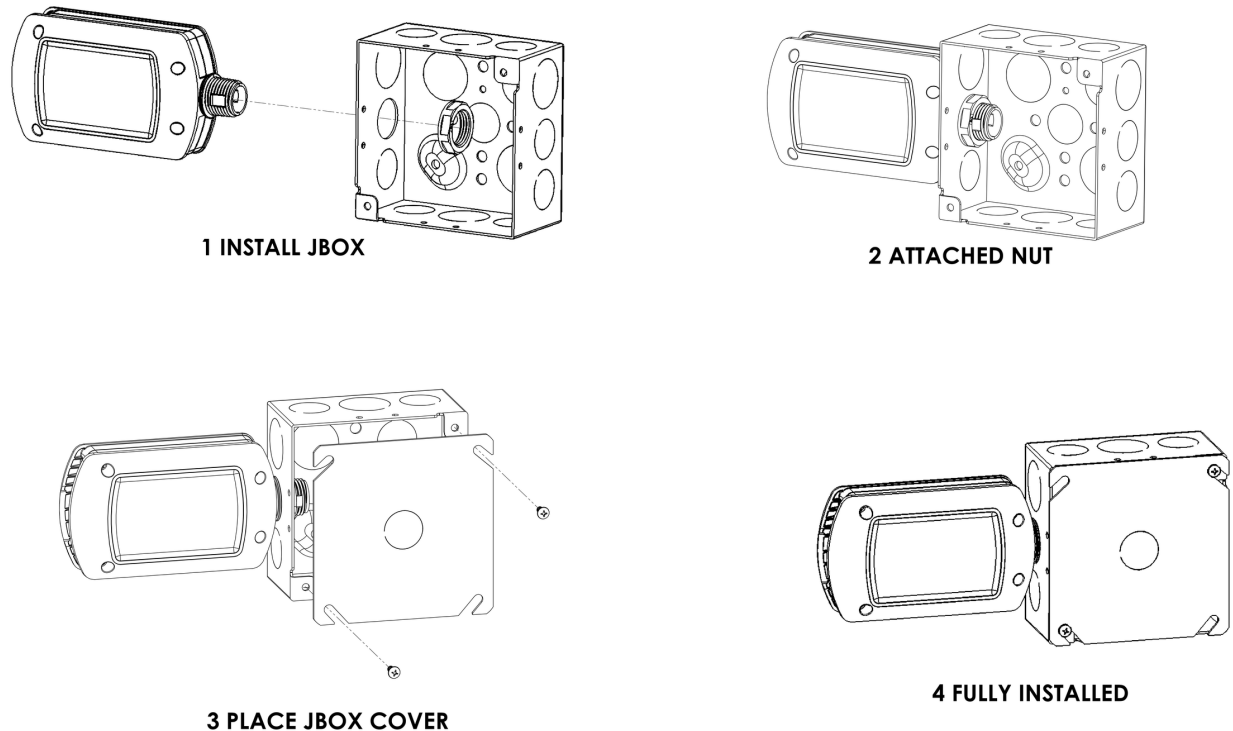


Figure 6-1 — Olympus mounting sequence. Class 1 line-voltage leads enter through the ½" knockout; Class 2 Cat5e enters through the opposite knockout. Class 1 and Class 2 wiring is separated inside the junction box.

1. Mount the Olympus to an approved junction box or panel: feed the Class 1 line-voltage conductors through the ½" knockout, apply the locknut to the threaded conduit connector, and tighten. The Olympus may also be installed above an accessible suspended ceiling where permitted. It is not rated for installation in air-handling spaces (plenums).
2. Connect line voltage (120 VAC): Hot to the line input, Neutral to neutral, and equipment ground per the wiring diagrams in Section 13.
3. Each relay is an isolated dry contact with both sides brought out as leads, so it is wired exactly like a switch leg: bring the feed to one relay lead and take the switched conductor to the load from the other. Because the two relays are isolated from one another, the two zones may share a single branch circuit or be fed from two separate circuits. Each contact is rated 16 A max @ 120 VAC.
4. Connect 0–10 V dimming leads (Zone 1 and Zone 2) to the driver/ballast dimming inputs, observing polarity (+/–). Use Class 2 wiring practices.
5. Connect Cat5e CAN Bus cable(s) to the RJ45 ports (either port; both are equivalent). Maintain Class 1 / Class 2 separation.

6. Use appropriately sized wire nuts and approved terminations for all wire and load connections. Use 60°C minimum-rated copper conductors only (or as marked on the product); aluminum conductors are not permitted at the line terminals.
7. Restore power. The Olympus boots and automatically discovers connected Canyon devices. Each zone returns to the output state it held before power was removed — zone state is written to non-volatile memory, so it survives a power interruption.

6.2 Aspen & Tahoma Installation Notes (Wall Stations)

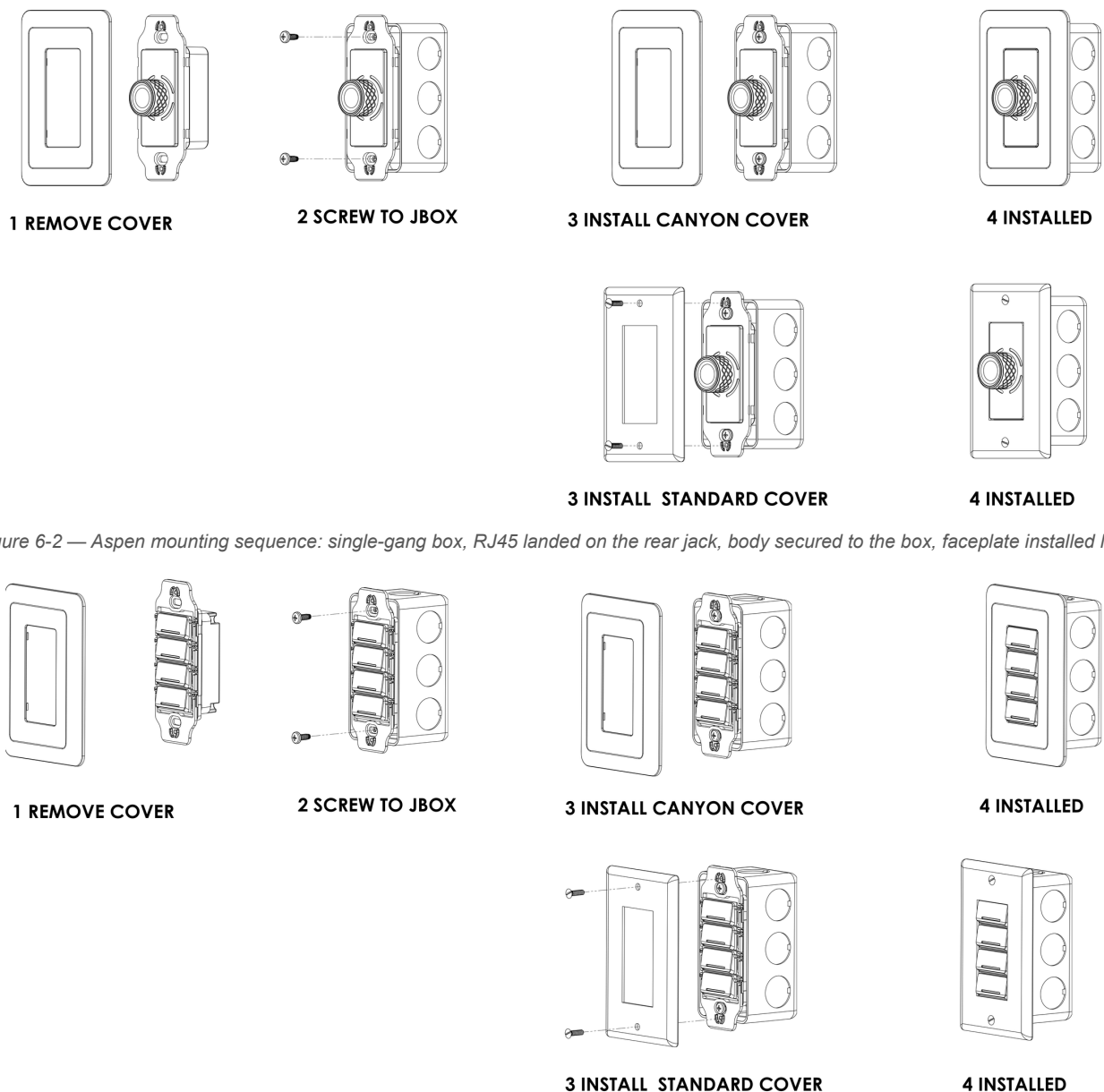


Figure 6-2 — Aspen mounting sequence: single-gang box, RJ45 landed on the rear jack, body secured to the box, faceplate installed last.

Figure 6-3 — Tahoma mounting sequence. Every Tahoma ships with a universal body; the button plate is installed over the body after the device is secured.

1. Install a standard single-gang switch box (depth ≥ 2.5 ") at the desired control location. No line voltage is required at the wall station — only Cat5e.

2. Pull Cat5e from the Olympus (or from the previous device in the daisy chain) into the box. Terminate with an RJ45 plug to T568B.
3. Set the rear zone selector — a three-position DIP switch, addresses 1–3 (see Section 8).
4. Plug the Cat5e into the RJ45 port on the rear of the device. If daisy-chaining onward, connect the outgoing cable to the second RJ45 port.
5. Secure the device to the box with the supplied mounting screws and snap on the faceplate.

6.3 Sierra Installation Notes (Ceiling Sensor)

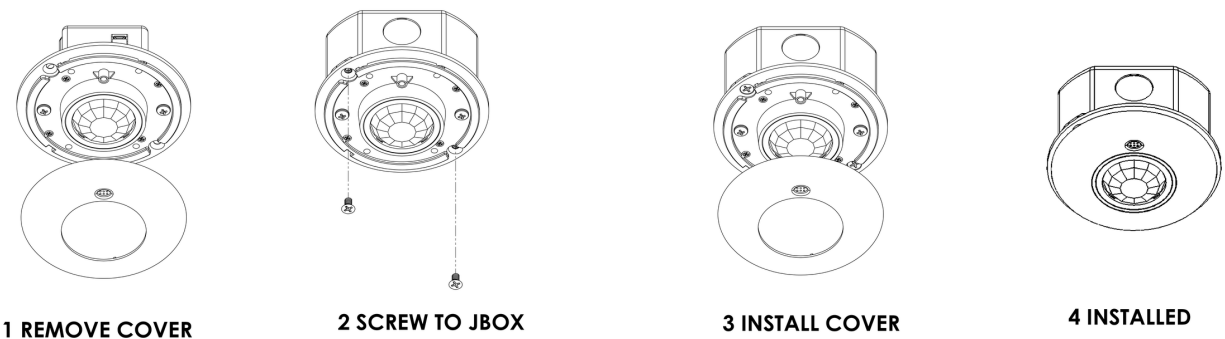


Figure 6-4 — Sierra ceiling-sensor mounting sequence. Class 2 Cat5e only — no line-voltage conductors terminate at the Sierra.

1. Cut a ceiling opening (approx. 3.1" / 79 mm) at the sensor location; the Sierra retains via integrated spring clips. A junction-box bracket is available where a box is required. For best coverage, position the sensor centrally, 8–12 ft above the floor, away from HVAC diffusers and direct line-of-sight to windows.
2. Pull Cat5e from the Olympus or the previous device in the chain; terminate to T568B.
3. Set the rear zone selector DIP (see Section 8), connect the RJ45, and secure the sensor to the box.
4. Rotate the sensor body as needed to aim the PIR coverage after installation.

7. Installation Diagrams

7.1 Cat5e CAN Bus & RJ45 Pinout (T568B)

All Canyon devices communicate and receive power over standard Cat5e terminated to T568B. Either RJ45 port on any device may be used — ports are equivalent and support daisy-chain or home-run topologies.

PIN	CONDUCTOR (T568B)	SIGNAL
1	White/Orange	CAN_0_P
2	Orange	CAN_0_N
3	White/Green	CAN_0_P
4	Blue	PWR_12V (+12 V bus power)
5	White/Blue	GND
6	Green	CAN_0_N
7	White/Brown	GND
8	Brown	PWR_12V (+12 V bus power)

- Use straight-through (T568B–T568B) patch wiring. Crossover cables are not supported.
- The CAN Bus and bus power are Class 2. Route Cat5e separately from line-voltage conductors.
- DO NOT connect Canyon RJ45 ports to Ethernet networks, PoE switches, or any non-Canyon equipment.

7.2 Network Topologies

- **Daisy chain:** Olympus → Aspen → Tahoma → Sierra. Each device has two RJ45 ports; pass the bus through.
- **Home run:** Run each device directly back to an Olympus RJ45 port, splitting as needed.
- **Multi-controller:** Combine multiple Olympus controllers over CAN Bus for larger spaces; coordinate via the Canyon app (wired USB).

7.3 Room Typical — Private Office (1 Zone)

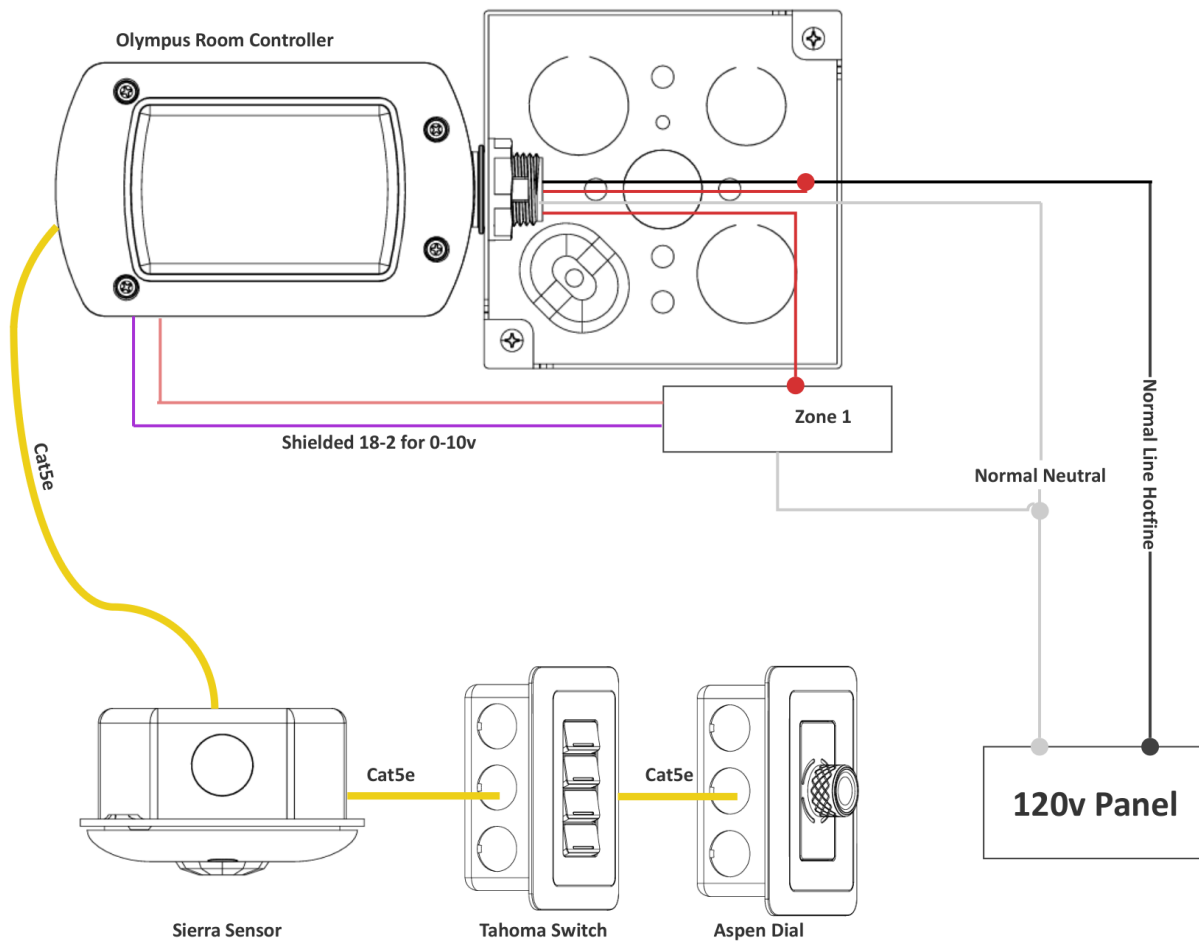


Figure 7-3 — Single-zone wiring diagram. One Olympus relay output switches the Zone 1 fixture circuit; the Aspen and Sierra connect over Class 2 Cat5e.

7.4 Room Typical — Conference Room (2 Zones, Scenes)

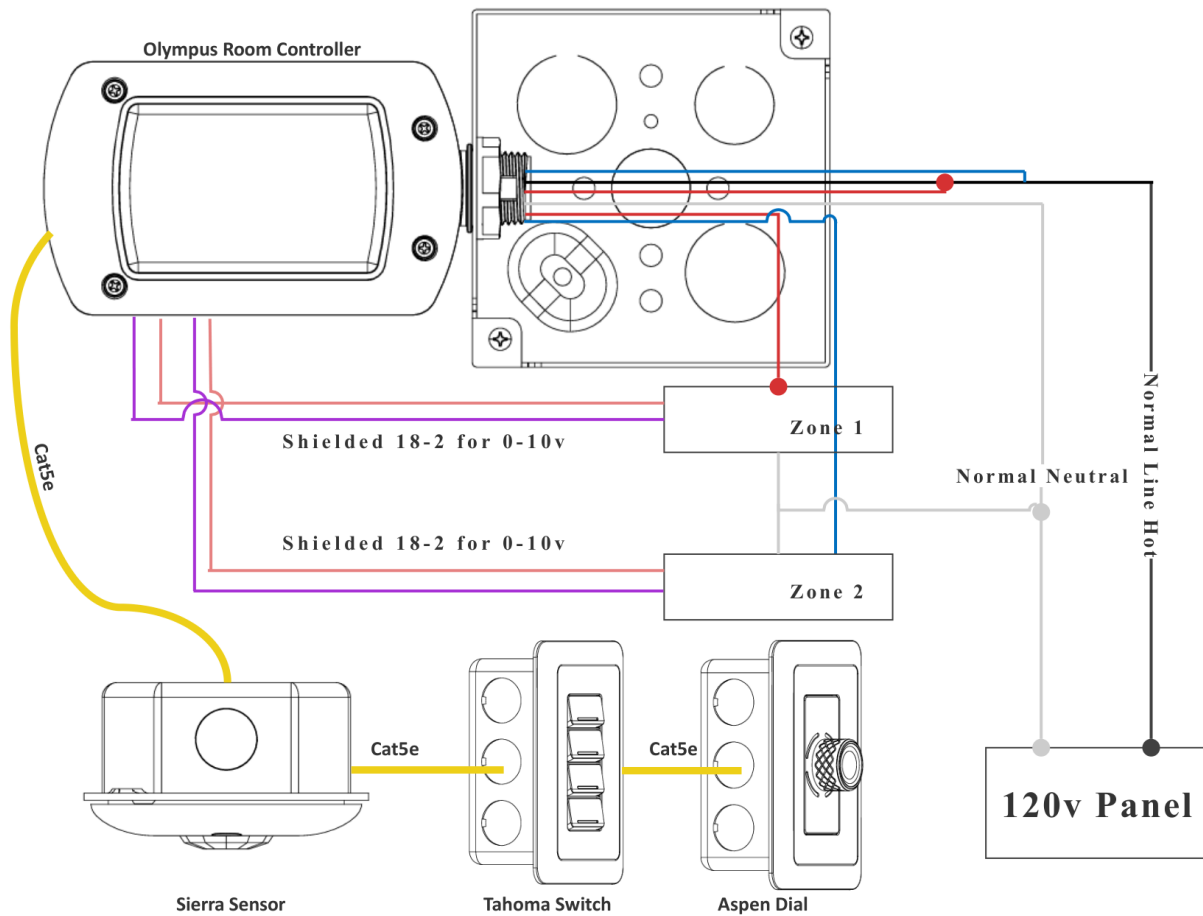


Figure 7-4 — Two-zone wiring diagram. Each Olympus relay is an isolated, two-wire switch leg, so the two zones may share one branch circuit or be fed from two separate circuits.

7.5 Room Typical — Classroom with Receptacle Control (2 Zones + Plug Load)

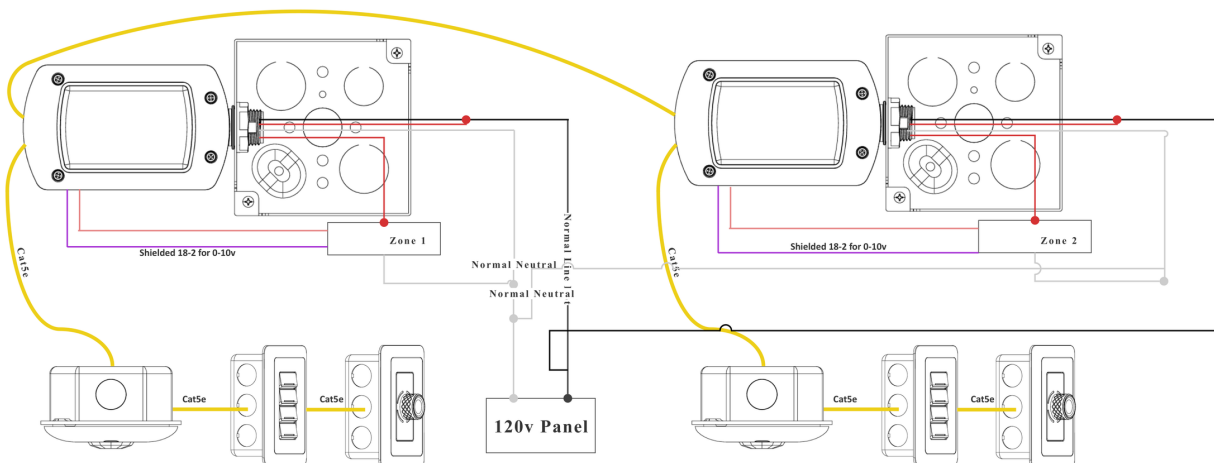


Figure 7-5 — Dual power pack wiring diagram. A second Olympus adds relay capacity for receptacle (plug-load) control; both units share the Class 2 Cat5e bus.

Room typicals are reference layouts only. Fixture counts, sensor coverage, and zoning must be engineered per project per the applicable energy code.

8. Zone Selector & Out-of-Box Operation

Every Canyon device carries a rear-mounted zone selector — a **three-position DIP switch** with addresses **1, 2** and **3**. Set exactly one switch ON, mount the device, power the system — basic control works immediately, with no software required. The Olympus automatically discovers and adopts each device on the bus.

DIP ADDRESS	ASSIGNMENT
1 All zones	Controls both lighting zones and both 16 A relays on the Olympus. The factory default — right for most rooms.
2 Zone 1 only	Dedicates this device to the first lighting zone on its Olympus.
3 Zone 2 only	Dedicates this device to the second lighting zone on its Olympus.

Set exactly one switch ON. If no switch is ON, or more than one is ON, the device falls back to **All zones** (address 1). A mis-set switch therefore fails to a visible, working state rather than to a dead device.

Out-of-Box Commissioning

1. **Mount** the Olympus in a J-box or above the ceiling; wire line voltage in, loads out (Section 6.1).
2. **Connect** devices via Cat5e — daisy-chain Aspens, Tahomas, and Sierras, or home-run each to the Olympus.
3. **Set the zone DIP** on the rear of each device to address 1, 2, or 3.
4. **Power up.** Devices auto-program from their zone DIP switches; switches switch, dimmers dim, and sensors control their assigned zones immediately. Fine-tune later in the Canyon app at any time.

Need finer control than the three DIP addresses — scenes, schedules, groups across controllers? All zone selector settings can be overridden in the Canyon app via wired USB (Section 9). Returning the app setting to “DIP” hands control back to the rear switch.

9. Programming — Canyon App (USB)

The Olympus includes a wired USB (CDC) port for configuration from a PC using the **Canyon app**. The zone selector DIP covers basic control (Section 8); the app unlocks everything else. No wireless radio is populated on this device.

9.1 Connecting to the Olympus

Connect a USB cable between the PC and the Olympus USB port and open the Canyon app; it detects the connected controller automatically. Rename controllers during first connection to keep multi-room projects organized.

9.2 Device Discovery & Status

The Devices list shows every adopted device on the CAN bus with its type, name, zone assignment, and status. Devices are adopted automatically when powered (auto-adoption) — no manual addressing. From here you can rename devices, identify them (flash their LED), and override zone selector DIP assignments per device.

9.3 Zones & Groups

The Zones view shows live status of both dimming zones and both relays, with manual override controls for testing. Create groups to bind zones together — including zones on other Olympus controllers — so one wall station or sensor can drive several rooms or an open-plan area.

9.4 Scenes

Create scenes (level presets across zones and groups) and assign them to Tahoma buttons. Typical conference room: Meeting (100%/80%), AV (10%/40%), Off.

9.5 Schedules

Program scheduled events — on/off times, dim levels, and scene triggers, by day of week. The Olympus does not have a battery-backed real-time clock: schedules are stored locally, but time-of-day must be reconfirmed via the app after a power interruption.

9.6 Behaviors

Behaviors are if/then automation rules: choose a *trigger* (occupancy event, time window, photocell threshold, button press), an *action* (on/off, level, scene), and a *target* (zone, relay, or group). Examples: hold the lights at 50% maximum after 10 PM; turn receptacles off 20 minutes after vacancy; trigger the AV scene when zone 1 dims below 20%.

9.7 Dimming Curves & Daylighting

Fine-tune response curves, high/low trim, fade rates, and warm-dim behavior per zone. With a Sierra connected, enable daylight harvesting and set the target light level — the Olympus trims output automatically based on the photocell reading and continues to do so with no app connected.

10. Wiring and Start-Up

10.1 Wiring Practices

- Use appropriately sized wire nuts and approved terminations for all wire and load connections.
- Use **60 °C minimum-rated copper conductors**, or as marked on the product.
- The Olympus is supplied with factory-soldered leads. It has no field-wiring terminal block for line voltage: bring the Olympus supply and relay leads through the integral ½" threaded hub into the junction box and splice them to the branch-circuit and load conductors using wire connectors listed for the purpose and sized for the box fill, per NEC 300.15 and 314.16. Bond the equipment grounding conductor to the junction box. **No line-voltage splice is made inside the Olympus enclosure.** The only field-wiring terminals on the product are the two pluggable Class 2 headers (J2, J8) for the 0–10 V zone outputs; wire these with shielded 18-2 cable to the supplied Phoenix Contact mating connectors and seat each connector fully onto its header before energizing. Protect the supply branch circuit with an overcurrent device rated not more than 20 A (or as required for the connected load).
- Observe 0–10 V polarity: violet (+) and gray (–) per driver manufacturer convention.
- Follow the provided project-specific wiring diagrams; the diagrams in Section 13 are reference configurations.
- Terminate all Cat5e to T568B and test continuity before energizing. No splices in Cat5e runs — pass through device RJ45 ports or use a single home run.
- Route Class 2 (Cat5e, 0–10 V) wiring separated from Class 1 (line voltage) conductors per NEC/CEC.

10.2 Start-Up Checklist

1. Verify supply voltage (120 VAC) and confirm all load and Cat5e connections before energizing.
2. Energize the branch circuit. The Olympus status LED turns solid green when boot and device discovery are complete (see Section 12).
3. Confirm every wall station and sensor shows its status LED — each device is powered over the bus.
4. Test each wall station: toggle and dim its assigned zone(s); confirm the Aspen LED arc tracks the level.
5. Walk-test each Sierra: confirm detection and auto-off behavior in the assigned zone.
6. Verify the full dimming range (0–100%) on each zone; set high/low trim in the Canyon app if required.
7. If receptacles are controlled, verify they de-energize when the space is vacated.

10.3 Cautions — DO NOT

- **DO NOT** connect line voltage to any RJ45 port, wall station, or sensor.
- **DO NOT** connect Canyon RJ45 ports to Ethernet networks, PoE switches, routers, or any non-Canyon equipment.
- **DO NOT** exceed 16 A per relay, or parallel the two relays to increase capacity.
- **DO NOT** share a neutral between separately protected circuits unless permitted by code and handle ties are installed.
- **DO NOT** service the Olympus with the circuit energized. If more than one circuit feeds the controlled space (e.g., lighting + receptacle circuits), de-energize **all** of them — more than one disconnect may be required.
- **DO NOT** install in wet or damp locations, or where ambient temperature exceeds the rated operating range.

11. Networked System

Every Canyon device on the Cat5e bus is automatically discovered and adopted by its Olympus — no addressing, termination, or polarity configuration is required. Each detected device appears in the Canyon app Devices list with its type, zone assignment, and status.

- **Auto-adoption:** devices announce themselves when powered; the Olympus assigns control per each device's rear zone selector DIP. Replacing a device requires no commissioning — set the new device's DIP switch to match and plug it in.
- **Scaling up:** multiple Olympus controllers can be combined over CAN Bus. Each controller continues to run its own zones; groups, scenes, and schedules can span controllers via the Canyon app (wired USB).
- **Resilience:** control logic runs locally in each Olympus. Wall stations, sensors, schedules, and scenes keep working with no network, cloud, or app connection. There is no battery-backed real-time clock, so scheduled time-of-day events must be reconfirmed via the app after a power outage.
- **From room to campus:** the same architecture is unchanged from a single office to a multi-room floor — add an Olympus per room or zone group and link them.

12. LED Status Indicators

The Olympus has a status RGB LED on the enclosure face. Wall stations and sensors include their own indicators, powered over the bus.

DEVICE	INDICATOR	MEANING
Olympus	Solid green	Normal operation — bus healthy, devices adopted
	Blinking green	Boot / device discovery in progress
	Pulsing blue	Canyon app connected over USB
	Solid amber	No devices found on the CAN bus
	Blinking red	Bus fault — check Cat5e terminations and for shorts
	Solid red	Internal fault — cycle power; contact support if persistent
Aspen	LED intensity arc	Current dim level of the assigned zone, real time
	Arc sweep on power-up	Device adopted and zone assignment confirmed
Tahoma	Button status LED on	Assigned zone / scene is active

	All LEDs blinking	Device awaiting adoption — check zone selector DIP and Cat5e
Sierra	Brief flash	Motion detected (enabled during walk-test via app)
	Slow blink	Awaiting adoption — check Cat5e connection

13. Wiring Diagrams

Reference configurations. Follow project-specific wiring diagrams and all local and national electrical codes. De-energize all circuits before wiring — more than one disconnect may be required. Neutral conductors are shown simplified in the referenced figures.

DO NOT connect line voltage to any RJ45 port, wall station, or sensor. All wall stations and sensors are Class 2 devices powered over the Cat5e bus.

CONFIGURATION	DESCRIPTION AND WIRING DIAGRAM
13.1 Single zone — standalone	One dimming zone with manual dimming and vacancy control. Zone selector DIP 1 (all zones) at every device. Wiring: Figure 7-3 (Section 7.3).
13.2 Two zones	Each Olympus relay is an isolated, two-wire switch leg, so the two zones may share one branch circuit or be fed from two separate circuits. Wiring: Figure 7-4 (Section 7.4).
13.3 Lighting + controlled receptacle	Sierra occupancy state drives Relay 2 to de-energize receptacles when the space is vacant (IECC / ASHRAE 90.1 / Title 24 plug-load control). Controlled receptacles must be marked per NEC 406.3(E). Wiring: Figure 7-5 (Section 7.5).
13.4 Multi-controller network	A second Olympus adds relay and dimming capacity; both controllers share the Class 2 Cat5e bus. Line voltage, loads, and neutrals per 13.1–13.3 at each controller. Wiring: Figure 7-5 (Section 7.5).

14. Operation

14.1 Aspen Operation

- **Rotate** to dim. The infinite-rotation encoder has no end stops — smooth, continuous control from 0–100%.
- **Press** the knob to toggle on/off.
- The **LED intensity arc** shows the current dim level in real time.
- The cross-hatched knob provides superior tactile grip; the dial controls up to 2 lighting zones per its zone assignment.



Aspen knob detail and LED arc

14.2 Tahoma Operation & Button Programming

Each Tahoma button is individually programmable as ON, OFF, ON/OFF toggle, Raise/Lower, Scene, or Group. Default factory labeling by configuration:

CONFIGURATION	DEFAULT BEHAVIOR	BEST FOR
1-Button (CYN-SWX-1)	ON/OFF toggle	Single zone non-dim on/off — offices, restrooms, corridors
2-Button (CYN-SWX-2)	ON · OFF	Single zone switching
4-Button (CYN-SWX-4)	ON · OFF · ▲ · ▼	Single zone dimming — conference rooms, open offices
8-Button (CYN-SWX-8)	2 × (ON · OFF · ▲ · ▼)	Two zones of dimming, scenes, groups, presets

Alternate labeling options (scene select, group control, level presets) are available — see the Tahoma specification sheet or configure in the Canyon app. A status LED on each button indicates the current state.

14.3 Sierra Operation — Occupancy, Vacancy & Daylighting

- **Occupancy mode:** auto-ON when presence is detected / auto-OFF after the space is vacated.
- **Vacancy mode:** manual-ON at a wall station / auto-OFF after the space is vacated (often required by energy codes).
- **Multi-technology detection:** PIR motion plus audio sensing reduce false-offs in low-motion spaces; the integrated photocell measures ambient light.
- **Daylight harvesting:** when enabled, the Olympus automatically trims zone output to maintain the target light level.
- The Sierra can be used to comply with IECC, ASHRAE 90.1, and Title 24 Part 6 requirements for occupancy/vacancy sensing, daylight harvesting, and plug-load/receptacle control in commercial applications.

15. Regulatory Compliance

15.1 Safety Listing — ETL (Intertek)

Canyon Lighting Control System devices are undergoing **ETL Listing by Intertek (certification in progress)**:

- Under evaluation to ANSI/UL Std. 916 — Energy Management Equipment
- Under evaluation to CSA Std. C22.2 No. 205 — Signal Equipment

No ETL Listing has been granted. No Intertek certification mark is authorized for use on this product or its literature.

The system must be installed in accordance with the National Electrical Code (NFPA 70), the Canadian Electrical Code Part 1 (as applicable), and all local codes. Once granted, the ETL Listing applies only when devices are installed per this manual and used with Canyon Controls equipment. Do not apply the ETL mark or claim a safety listing on product or literature until Intertek authorizes it. Manufactured by Canyon Controls, Inc., 11 Summit Circle, Somers, NY 10589. Made in USA. ETL Control No.: [to be assigned].

15.2 FCC / ISED Canada

No wireless radio is populated on shipping units. The Canyon Lighting Control System contains no intentional radiator, and no licence-exempt transmitter is fitted. The system is a digital device subject to FCC Part 15 Subpart B and ISED ICES-003 as an *unintentional* radiator.

FCC Part 15 Subpart B and ISED ICES-003 testing has **not yet been completed**. No FCC or ISED compliance is claimed at this time, and no compliance statement, Class B declaration or FCC/IC identifier may be applied to the product or its literature until testing is complete and the results support it. This section will be replaced with the applicable statements once testing is finished.

15.3 Environmental & Energy Codes

- RoHS compliant.
- Supports control strategies required by ASHRAE 90.1, IECC, and California Title 24 Part 6: multi-level dimming, occupancy/vacancy sensing, daylight harvesting, automatic receptacle control, and scheduling.

16. Warranty & Support

Five-Year Limited Warranty

Canyon Controls warrants to the original purchaser that this product, at the time of its sale by Canyon Controls, is free of defects in materials and workmanship under normal and proper use for **five years** from the purchase date. Canyon Controls' only obligation is to correct such defects by repair or replacement, at its option.

This warranty does not cover damage resulting from accident, misuse, abuse, negligence, modification, unsuitable physical or operating environment, improper maintenance, or use not in accordance with product instructions. Canyon Controls makes no other warranty, either expressed or implied, with respect to this product. Canyon Controls is not liable for any loss, inconvenience, or damage, including direct, special, incidental, or consequential damages, resulting from the use or inability to use this product, including without limitation, damage to or loss of use of any equipment, lost sales or profits, or delay or failure to perform this warranty obligation.

Support

- **Documentation & downloads:** canyoncontrols.com/downloads — specification sheets, assembly drawings, and the system configurator.
- **System configurator:** canyoncontrols.com/configurator — build a bill of materials for your space in minutes.
- **Product pages:** canyoncontrols.com/controller · [/dial](https://canyoncontrols.com/dial) · [/switch](https://canyoncontrols.com/switch) · [/sierra](https://canyoncontrols.com/sierra)
- **Contact:** canyoncontrols.com/contact



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Rev 1.2 — September 2026