

PDRAS

Multizone Control System

Flexible all-in-one lighting control solution

The Philips Dynalite PDRAS brings energy management, occupancy detection, daylight harvesting, and code-compliance for multizone spaces, with simple, intuitive controls and optional ethernet connectivity for plug-and-play installation.

The PDRAS uses the latest generation of Dynalite hardware, preprogrammed and configured in our factory to work seamlessly together. Simple plenum installation with pluggable user interfaces and sensors ensures industry-leading performance right out of the box.

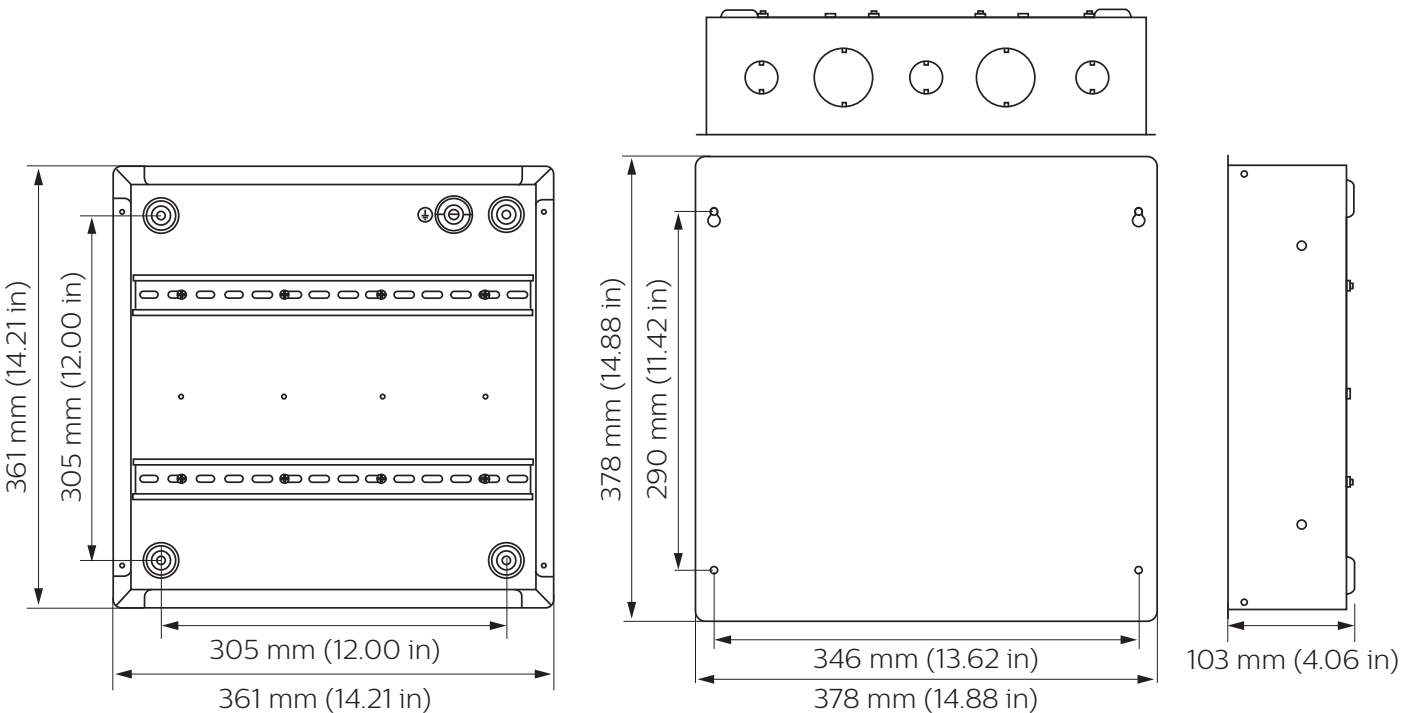
PDRAS

Flexible all-in-one lighting control solution

- **Single-box solution** – Assembled, programmed, and tested in the factory to provide complete out-of-the-box functionality.
- **Multizone support** – Each control system can manage up to five separate zones in single- or dual-room applications.
- **Networked multifunction sensor** – Reduce installation complexity and ceiling/plenum clutter with combined occupancy and light level (lux) detection.
- **Optional networked PIR and ultrasonic sensors** – Expand your system's occupancy detection footprint with up to three extra PIR sensors and/or one long-range ultrasonic sensor per room. Sensors communicate with each other so that their combined occupancy status determines the system response.
- **Integrated daylight harvesting** – Multifunction sensors micro-adjust lighting levels to meet energy management regulations without disrupting occupant comfort.
- **Stations with large buttons and simple labelling** – Ensures straightforward operation for non-technical users.
- **UL924 input** – Integrates seamlessly with compatible emergency systems.
- **Direct-drive relays** – Isolate power to lighting groups and wall outlets to eliminate standby power consumption.
- **Software-selectable 1-10V / DALI control** – Although factory-set for 1-10V, each control channel can be individually configured for DALI operation using Dynalite's System Builder commissioning software on a connected PC or laptop.
- **Ethernet connectivity*** – Enables network access to the school LAN for centralized monitoring and management.

* Future provision for -E variants only, not enabled at release.

Dimensions



Specifications

Due to continuous improvements and innovations, specifications may change without notice.



PDRAS Multizone Control System

Electrical

Cabinet Supply	120 / 277 / 347 VAC @ 0.4 A (max)
DyNet Output	24 VDC @ 0.4 A (Class 2)
Short Circuit Current Rating (SCCR)	5 kA
Maximum CH-CH Voltage	300 VAC
Maximum CH-XX-CH Voltage	480 VAC
XX = unpopulated channel (2x terminals) for isolation	
(Refer to Installation Instructions for phase separation terminations.)	
IEC Overvoltage Category	III

Control

Serial Ports	1 x RS-485 1 x Ethernet 10/100 baseT*
Supported Protocols	DyNet
Control Channel Outputs	5 (DALI Broadcast, DALI Addressed, 1-10 V)
Dry Contact Inputs	1 x UL924
Diagnostic Functions	Device online/offline status 28-day rolling event log (-E variants only)

* Future provision for -E variants only, not enabled at release.

Physical

Dimensions (H x W x D)	378 x 378 x 103 mm (14.88 x 14.88 x 4.06 in)
Packed Weight	9.3 kg (20.5 lb)
Construction	Steel wall mount enclosure Textured powder coat finish
Color	Raven Black (Cardinal Paint BK59)
Serial Ports	1 x pluggable RJ45 terminal (DyNet) 1 x RJ45 (Ethernet)*
Supply Terminals	3 x screw terminal
Supply Terminal Conductor Size	0.5-5 mm ² (20-10 AWG) solid or stranded wire
Control Terminals	5 x 2-way screw terminal DA-, DA+
Control Terminal Conductor Size	2.5 mm ² (#12 AWG) (max)
Output Terminals	5 x 2-way screw terminal IN, OUT
Output Terminal Conductor Size	5 mm ² (#10 AWG) (max)

Environment**

Operating Temperature	0° to 40°C ambient (32° to 104°F)
Storage/Transport Temperature	-25° to 60°C ambient (-13° to 140°F)
Relative Humidity	0 to 90% non-condensing
IP Rating	IP20 (Type 1 indoor use only, refer to Installation Instructions)
IEC Pollution Degree	II

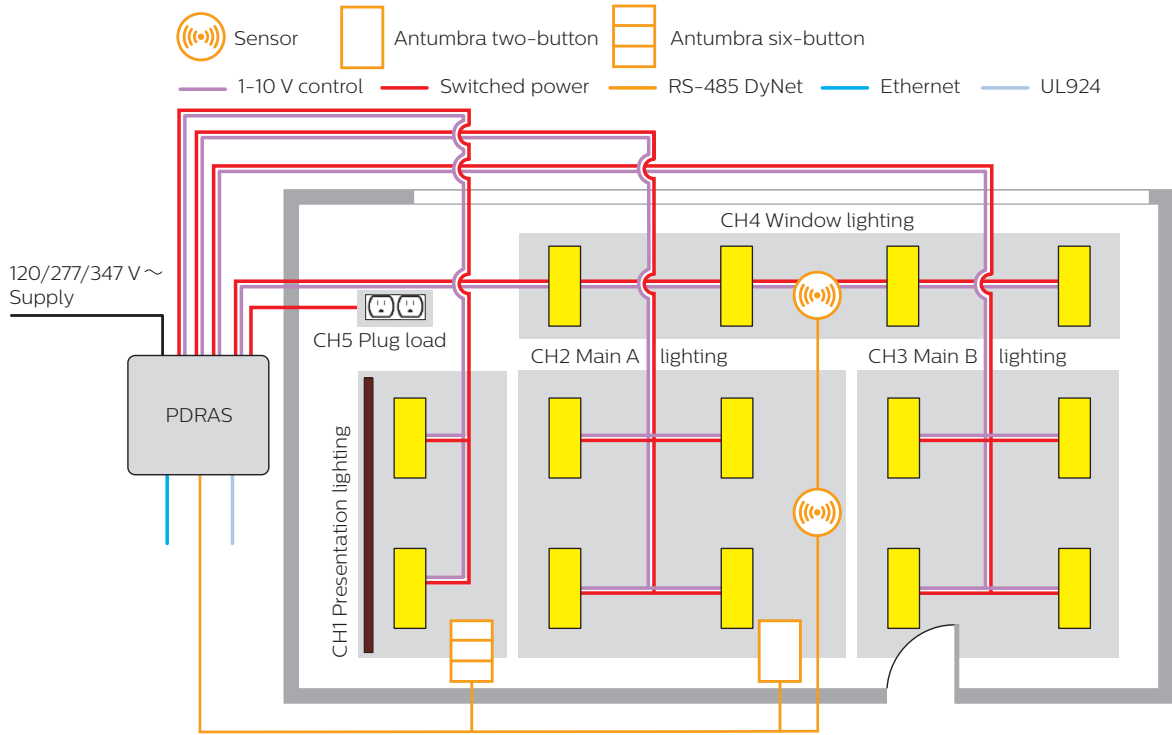
Compliance

Certification	UL/cUL, FCC, ICES-003, RoHS
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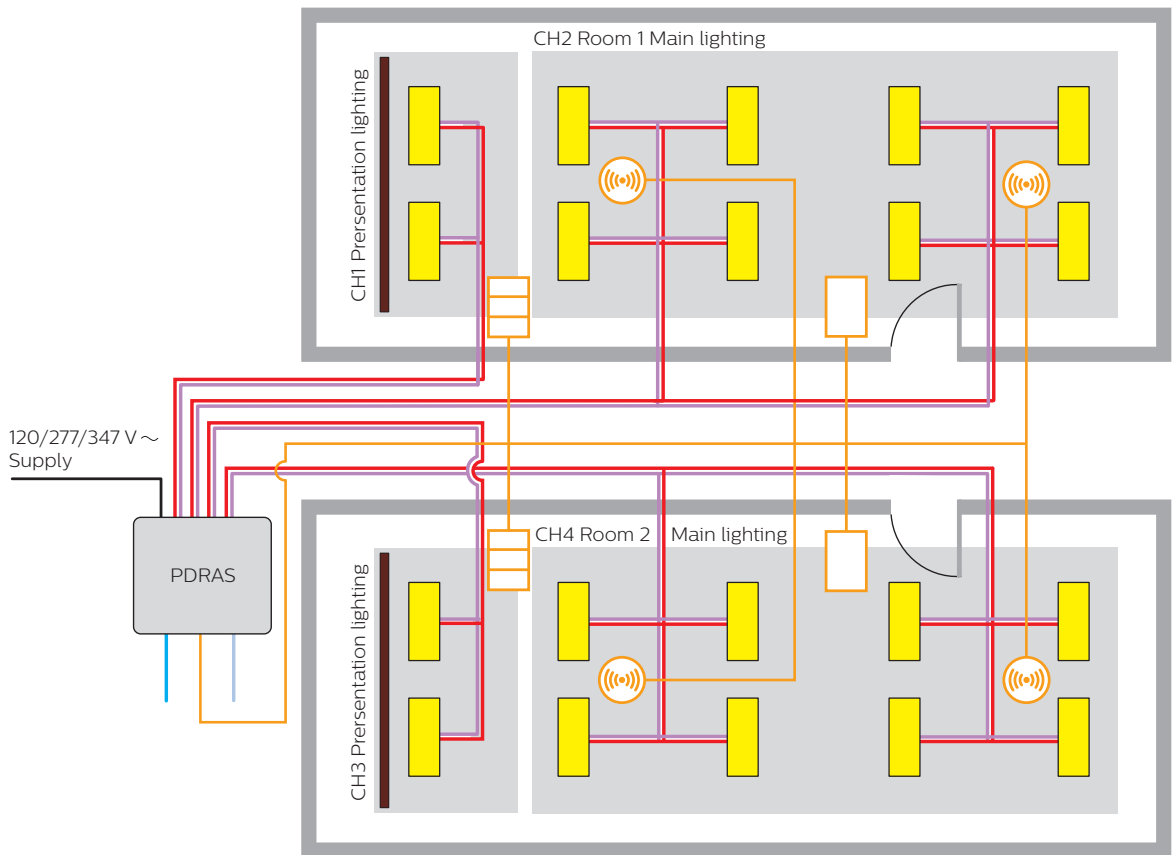
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** For indoor installation only

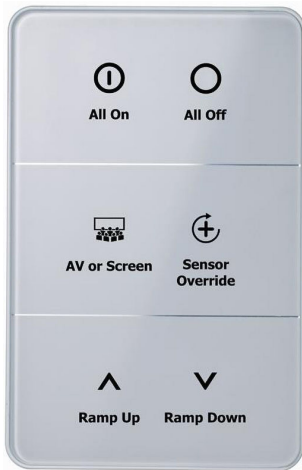
Example Layout - Single-Room



Example Layout - Dual-Room



Antumbra User Interfaces



Six Button



Two Button



Four Button (optional)

Output Channel Ratings

Load Type	Maximum Rating per Output*
	CH1-CH5
General Use Incandescent Standard Driver Electronic Driver	16 A, 277 VAC
Motor	16 FLA (1 HP), 120 VAC 14.5 FLA (2 ½ HP), 240 VAC 14.1 FLA (3 HP), 277 VAC
Pilot Duty	6 A, 120 VAC 3 A, 240 VAC 2.6 A, 277 VAC
Box Load	80 A

* 347 VAC loads require external contactors, to be supplied by the installer.

Contactors must have a 120 VAC, <10VA coil rating, and contact voltage and current ratings suitable for the load in the application.

Control Channel Ratings

DALI	Channel	Device
Guaranteed Current	20 mA	
Maximum Current	250 mA	
Maximum Drivers	10	50
Insulation	Basic	

1-10V	Channel
Current	sink 10 mA source 10 mA

Maximum Devices Per Room

The following per-room limits apply to each device:

Name	Description	Max Qty Per Room
PA6BPA-WW-L-PDRAS	Antumbra six-button UI	1
PA4BPA-WW-L-PDRAS	Antumbra four-button UI	1
PA2BPA-WW-L-PDRAS	Antumbra two-button UI	1
DUS360CS-xxxxx-ML	Motion + lux sensor	1
DUS360CS-xxxxx-M	Motion-only sensor	3
DUS804CS-UP-NA-xxxxx-M	Ultrasonic motion-only sensor	1

Ordering Information - Single-Room Systems

The following components must be ordered for each single-room control system:

Qty.	Name	Description
1	PDRASxxx	Single-room controller
2	DACM-PDRAS	Communication module
1	PA6BPA-WW-L-PDRAS	Antumbra six-button UI
1	PA2BPA-WW-L-PDRAS	Antumbra two-button UI
1	DUS360CS-PDRAS-ML	Single-room motion + Lux sensor

Expand your single-room system with the following optional devices:

Name	Description
DUS360CS-PDRAS-M	Single-room motion-only sensor
DUS804CS-UP-NA-PDRAS-M	Single-room ultrasonic motion-only sensor
PA4BPA-WW-L-PDRAS	Antumbra four-button UI (Requires additional DACM-PDRAS)

Ordering Codes

Single-Room Controller

12NC

PDRAS120 (120 VAC)	913703348509
PDRAS277 (277/347 VAC)	913703348609
PDRAS120-E (120 VAC + Ethernet)	913703348709
PDRAS277-E (277/347 VAC + Ethernet)	913703348809

User Interfaces

12NC

DACM-PDRAS (Communication module)	913703349609
PA6BPA-WW-L-PDRAS	913703349709
PA4BPA-WW-L-PDRAS	913703349809
PA2BPA-WW-L-PDRAS	913703349909

Room 1 Sensors

12NC

DUS360CS-PDRAS-ML (Motion + lux sensor)	913703350009
DUS360CS-PDRAS-M (Motion only sensor)	913703350609
DUS804CS-UP-NA-PDRAS-M (Ultrasonic motion sensor)	913703350909

Spare RJ45 Connectors*

12NC

DINGUS-DUS-RJ45-DUAL (Dual RJ45 sensor connector - pack of 10)	913703064409
DINGUS-UI-RJ45-DUAL (Dual RJ45 DACM connector - pack of 10)	913703334609

* Each sensor and DACM is supplied with a dual RJ45 connector.

Ordering Information - Dual-Room Systems

The following components must be ordered for each dual-room control system:

Qty.	Name	Description
1	PD2DRASxxx	Dual-room controller
4	DACM-PDRAS	Communication module
2	PA6BPA-WW-L-PDRAS	Antumbra six-button UI
2	PA2BPA-WW-L-PDRAS	Antumbra two-button UI
2	DUS360CS-PD2DRAS-ML	Dual-room motion + lux sensor

Expand your dual-room system with the following optional devices:

Name	Description
DUS360CS-PD2DRAS-M	Dual-room motion-only sensor
DUS804CS-UP-NA-PD-2DRAS-M	Dual-room ultrasonic motion-only sensor
PA4BPA-WW-L-PDRAS	Antumbra four-button UI (Requires additional DACM-PDRAS)

Ordering Codes

Dual-Room Controller

12NC

PD2DRAS120 (120 VAC)	913703349109
PD2DRAS277 (277/347 VAC)	913703349209
PD2DRAS120-E (120 VAC + Ethernet)	913703349309
PD2DRAS277-E (277/347 VAC + Ethernet)	913703349409

User Interfaces

12NC

DACM-PDRAS (Communication module)	913703349609
PA6BPA-WW-L-PDRAS	913703349709
PA4BPA-WW-L-PDRAS	913703349809
PA2BPA-WW-L-PDRAS	913703349909

Room 1 Sensors

12NC

DUS360CS-PDRAS-ML (Motion + lux sensor)	913703350009
DUS360CS-PDRAS-M (Motion only sensor)	913703350609
DUS804CS-UP-NA-PDRAS-M (Ultrasonic motion sensor)	913703350909

Room 2 Sensors

12NC

DUS360CS-PD2DRAS-ML (Motion + lux sensor)	913703350709
DUS360CS-PD2DRAS-M (Motion only sensor)	913703350809
DUS804CS-UP-NA-PD2DRAS-M (Ultrasonic motion sensor)	913703351009

Spare RJ45 Connectors*

12NC

DINGUS-DUS-RJ45-DUAL (dual RJ45 sensor connector - pack of 10)	913703064409
DINGUS-UI-RJ45-DUAL (dual RJ45 DACM connector - pack of 10)	913703334609

* Each sensor and DACM is supplied with a dual RJ45 connector.

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