

AHAC-DT – MicroSet dual tech low/line voltage ceiling sensors

Project Name:	Prepared By:
Project Number:	Date:
Catalog Number:	Type:

Ceiling sensors description

The dual technology sensor's combination of ultrasonic and passive infrared technologies offers the most complete sensing equipment available today. MicroSet self-adjusting dual technology sensors drastically simplify and reduce a contractor's installation and adjustment time period.

Design features

- MicroSet self-adjusting time delay and sensitivity
- Products tested to NEMA WD 7 - 2011 Occupancy Motion Sensors Standard
- Built-in light level sensor (Low voltage only)
- BAS/HVAC isolated relay (Low voltage only)
- Selectable walk-through mode (Low voltage only)
- Dual relay control (Low voltage only)
- Units available for control of single or two separate loads (Line voltage only)



AHAC-DT



AHSP20-MV

Table 1. MicroSet dual tech - line voltage ceiling sensor

Catalog no.	Coverage	Field of view	Frequency	Features
<input type="checkbox"/> AHAC-DT-2000-MV	2000 sq. ft.	Two way (360°)	32 kHz	With daylight sensor
<input type="checkbox"/> AHAC-DT-2000-DMV	2000 sq. ft.	Two way (360°)	32 kHz	Dual relay with daylight sensor
<input type="checkbox"/> AHAC-STEM	—	—	—	—

Table 2. MicroSet dual tech - low voltage ceiling sensor

Catalog no.	Coverage	Field of view	Frequency	Features
<input type="checkbox"/> AHAC-DT-2000	2000 sq. ft.	Two way (360°)	32 kHz	—
<input type="checkbox"/> AHAC-DT-1000	1000 sq. ft.	Two way (360°)	32 kHz	—
<input type="checkbox"/> AHAC-DT-0501	500 sq. ft.	One way (180°)	40 kHz	—
<input type="checkbox"/> AHAC-STEM	—	—	—	—

Table 3. Heavy duty switchpack

Catalog no.	Description	Features
<input type="checkbox"/> AHSP20-MV*	Heavy duty switchpack	Capable of switching up to 20A

*For more information about switchpack visit our website at www.eaton.com/wiringdevices

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Powering Business Worldwide

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Applications

The MicroSet self-adjusting technology continuously monitors multiple sub-frequencies in the event that if a continuous Doppler shift occurs, such as those created by airflow from an air duct, the sensor will identify the noise as continuous and then block it out of view at a select sub-frequency. It will continue to monitor other sub-frequencies for human motion. This avoids false-activation, while still maintaining the high level of sensitivity that is necessary for sensing minor motion in a changing environment. Separate concurrent time delays for both Passive Infrared and Ultrasonic technologies avoid false activations or deactivations. In Automatic ON Mode, the lights turn ON when a person enters the room.

Table 4. Specifications


Catalog no.	AHAC-DT - low voltage series
Technology	Passive Infrared (PIR) and Ultrasonic (US)
Power Requirements	<p>Input 10-30 VDC from Greengate Switchpack or Greengate system Maximum current needed is 25mA per sensor</p> <p>Output Open collector output to switch up to ten Greengate Switchpacks Isolated Form C Relay Ratings: 1A 30 VDC/V/AC</p>
Time Delays	Self-adjustable, 15 seconds/test (10 minutes Auto), or Selectable 5, 15, 30 minutes, or Zero Time Delay
Coverage	500, 1000, and 2000 sq. ft.
Light Level Sensing	0 to 300 foot-candles
Operating Environment	<p>Temperature: 32°F - 104°F (0°C - 40°C) Relative humidity: 20% to 90%, non-condensing (For indoor use only)</p>
Housing	Durable, injection molded housing. Polycarbonate resin complies with UL 94V-0
Size	1.42"H x 4.5"W (36.068mm x 114.3mm)
Mounting	Mounts directly to ceiling tile, to a 4" square box and round mud ring or to 4" octagon box
LED Indicators	Red LED for PIR detection; Green LED for Ultrasonic detection
Standards	FCC Compliant cULus Listed RoHS Compliant 

Table 5. Specifications


Catalog no.	AHAC-DT - line voltage series
Technology	Passive Infrared (PIR) and Ultrasonic (US)
Power Requirements	120 to 347 V/AC, 50/60 Hz - Neutral required <p>120 V/AC Incandescent/Tungsten - 0 to 800W, 50/60 Hz Fluorescent/Ballast - 0 to 1200W, 50/60 Hz Motor Load: 1/4 HP @ 125 V/AC</p> <p>230 V/AC Fluorescent/Ballast - 0 to 1200W, 50/60 Hz</p> <p>277 V/AC Fluorescent/Ballast - 0 to 2700W, 50/60 Hz</p> <p>347 V/AC Fluorescent/Ballast - 0 to 1500W, 50/60 Hz</p>
Time Delays	Self-Adjusting, 15 seconds/test (10 minutes Auto), or Selectable 5, 15, 30 minutes
Coverage	2000 sq. ft.
Light Level Sensing	0 to 300 foot-candles
Operating Environment	<p>Temperature: 32°F - 104°F (0°C - 40°C) Relative humidity: 20% to 90%, non-condensing (For indoor use only)</p>
Housing	Durable, injection molded housing. Polycarbonate resin complies with UL 94V-0
Size	1.42"H x 4.5"W (36.068mm x 114.3mm)
Mounting	Mounts directly to ceiling tile, to a 4" square box and round mud ring or to 4" octagon box
LED Indicators	Red LED for PIR detection; Green LED for Ultrasonic detection
Standards	FCC Compliant cULus Listed RoHS Compliant 

Table 6. Color information

W (White)



White

Project Name:	Prepared By:
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Catalog Number:	Type:

Wiring diagrams

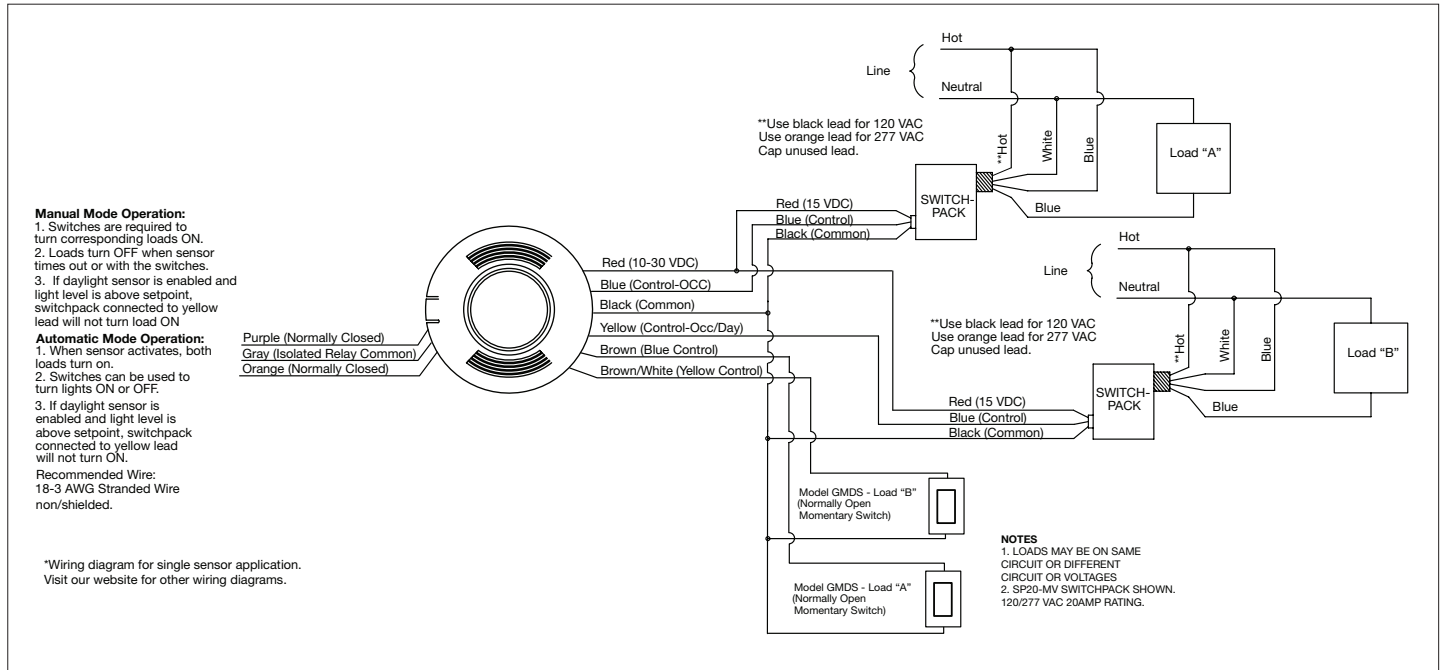


Figure 1. AHAC-DT-2000 Model

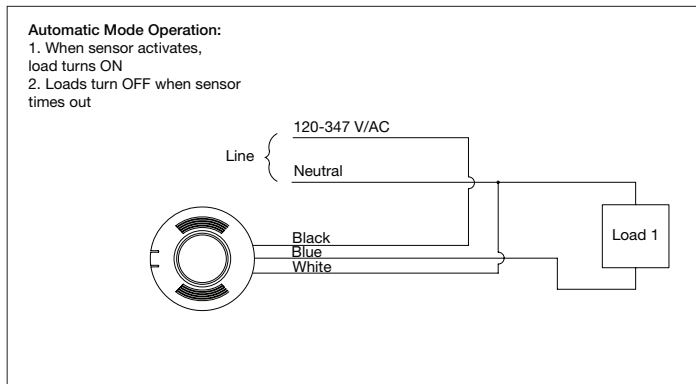


Figure 2. Single relay - line voltage series

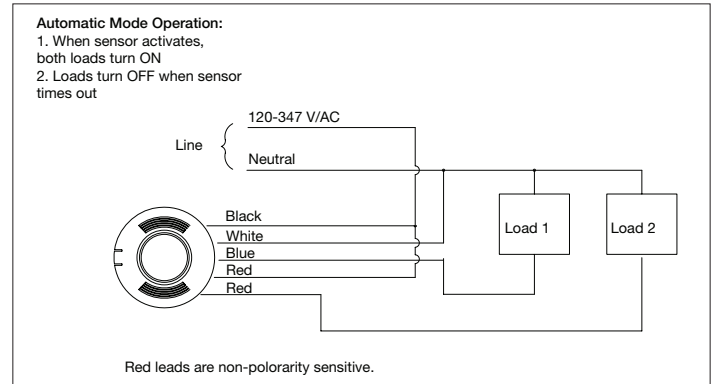
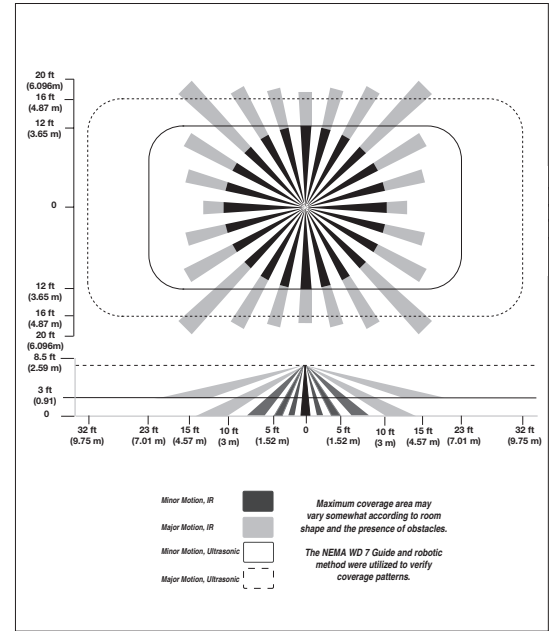
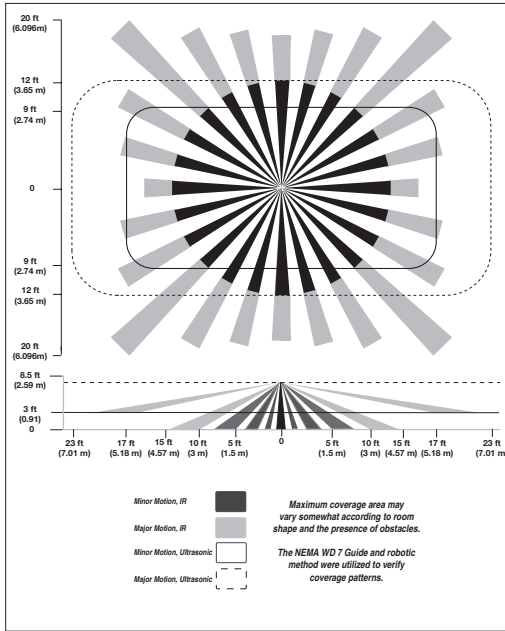
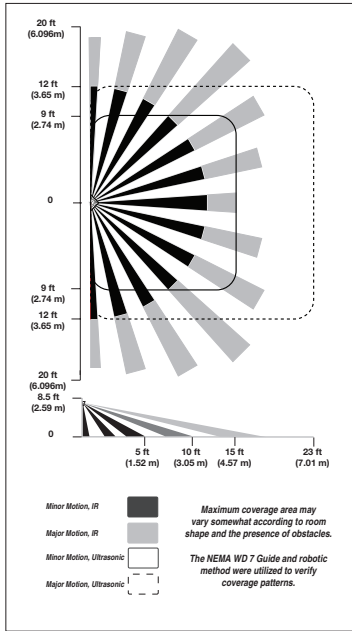


Figure 3. Dual relay - line voltage series

Project Name:	Prepared By:
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Catalog Number:	Type:

Coverage



AHAC-DT-0501
500 sq. ft.

AHAC-DT-1000
1000 sq. ft.

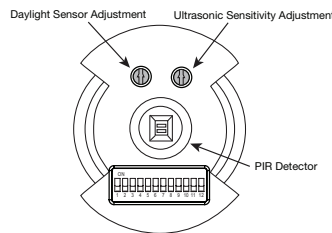
AHAC-DT-2000/MV/DMV
2000 sq. ft.

Controls (Low voltage)

DIP Switch Legend

DIP Switch	Time Delay		Activation		PIR Sensitivity	Walk-Through Mode	LEDs	Override	Sweep	Full/Half Logic	HVAC/Tracking	Zero Time Delay
	1	2	Relay 1	Relay 2								
Auto*	▼	▼	Auto ▼	Auto ▼	Full ▼	Disable ▼	Enable ▼	Disable ▼	Disable ▼	Normal ▼	Disable ▼	Disable ▼
5 Minutes	▼	▲	Manual ▲	Manual ▲	50% ▲	Enable ▲	Disable ▲	Enable ▲	Enable ▲	Swap ▲	Enable ▲	Enable ▲
15 Minutes	▲	▼										
30 Minutes	▲	▲										
*Self-Adjusts to 10 min. user mode												

Default =



Controls (Line voltage)

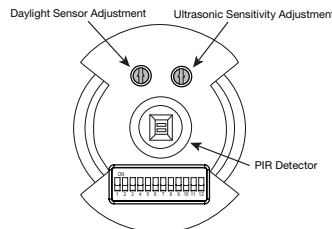
DIP Switch Legend

DIP Switch	Time Delay		Not Used		PIR Sensitivity	Walk-Through Mode	LEDs	Override	Not Used	Daylighting	Bathroom Mode	Relay Swap
	1	2	3	4								
Auto*	▼	▼			Full ▼	Disable ▼	Enable ▼	Disable ▼		Relay 2 ▼	Disable ▼	Disable ▼
5 Minutes	▼	▲			50% ▲	Enable ▲	Disable ▲	Enable ▲		Relay 1 & 2 ▲	Enable ▲	Enable ▲
15 Minutes	▲	▼										
30 Minutes	▲	▲										

(DMV model only) (DMV model only) (DMV model only)


*Self-Adjusts to 10 min. user mode



Default =



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Catalog Number:	Type:

Certifications & compliances

Catalog no.		RoHS
AHAC-DT-2000	•	•
AHAC-DT-1000	•	•
AHAC-DT-0501	•	•
AHAC-DT-2000-MV	•	•
AHAC-DT-2000-DMV	•	•
AHAC-STEM		

KEY:  cULus  RoHS

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