



CM360

Ceiling Mounted PIR Intrusion Detector

CM360-18 - 18 Ft Mounting Height

CM360-33 - 33 Ft Mounting Height



Description: The ALEPH CM360 series ceiling mount sensors are dedicated high ceiling omni-view PIR Intrusion Detectors. Each model allows the choice of 4 independent dual pyro detection patterns 90°, 180°, 270° or 360°. Intrusion detection is indicated via 4 independent LED's, (one per quadrant). With selectable Pulse Count and Sensitivity adjustments the CM360 allows absolute detection in extreme security applications.

Installation: Determine the type of coverage required (90° to 360°) and select mounting orientation to match. Detector range is determined by mounting height (Refer to Detector Orientation and Range vs. Mounting height Diagrams on Pg 2). Maximum mounting height is 18' for the CM360-18 & 33' for the CM360-33. For correct detection a level ceiling is required. To begin separate the base assembly from the detector head by sliding the base lock lever away from the sensor and rotating the detector head counter-clockwise to the short mark on the base. When rotation movement is complete, pull head away from the base.

Both CM360 models require a power supply of 10.6 to 16 VDC. Maximum current draw is 33mA (16mA nominal). Use 18-24 gage non-shielded, four conductor wire material for all wiring connections (Refer to Pg 3 for further info). Do not run wiring parallel, in close proximity, to existing AC wiring. For UL installations, all wiring must be in accordance with NEC, NPFA 70 standards.

After choosing mount location mount base to ceiling, using supplied mount points. Complete wiring to the appropriate base terminals.

Make appropriate switch configuration settings (For Detection Area type, Sensitivity, Setting, Pulse Count selection, and LED enable), (Refer to Pg 3 for further info). A Pulse Count setting of 4 should be appropriate for installations at standard mount heights. Where a quick catch is required (or in smaller installation areas) select Pulse Count 2. Additional Catch performance can be gained by switching the Sensitivity Switch setting to High. A High Sensitivity setting lowers the alarm threshold level for a detection. The LED switch enables / disables all LED functions. When completed, reattach head to base Re-secure Latch Lock lever.

Caution: The CM360 models are for indoor use only, do not mount in open or outdoor areas. Avoid installations where the detector directly views heating, cooling, sun or automobile headlight sources. Do not mount in areas where water or oil vapors are present. Avoid mounting so that screens or curtains are blocking the detector's field of view.

Walk Test: After installation is complete, perform a walk test to ensure that detection is matching the desired coverage. Readjust settings if detection characteristics need improvement. Note: Only one quadrant can be in alarm at any given time. For multi-quadrant configurations, make sure there is no other activity within the scope of detection during walk test. After initial walk test, the security system should be tested routinely to insure correct operation. At a minimum, the system needs to be tested once per year.

Troubleshooting:

Trouble	Cause	Remedy
Unit does not power up. Unit does not warm up. (LED continues to flash 30 sec after power up).	No or low input power. Input power polarity reversed. The sensor head to base connection is faulty.	Apply proper input voltage. Correct wiring polarity. Reset head to base connection.
Alarm LED does not light up	Selectable Sw 5 is set to "OFF" "Detection Area" settings incorrect. Incorrect Sensor Mounting height. Sensitivity / Pulse Count settings incorrect for secured area.	Set to "On" / up. Reset Sw. 1 & 2 to match coverage area and/or remount sensor. Increase mounting height. Low mounting heights reduce detection area. Reset Sw 3 & 4 to match detection characteristics required.
Alarm LED / Relay triggers without movement in detection area.	Unsecured environment / Animals / Rodents in detection area. Heater /Air conditioning equipment in sensor view. Direct Sun or headlights in sensor view.	Block access of animals/rodents. Remove the hazard equipment. Re-aim sensor so it is not viewing the equipment. Add curtain / shade to block light sources.
LED indicates Alarm, no alarm output	Incorrect wiring at base / alarm output terminals. Open circuit in wiring between detector and control panel. Lightning damage to detector	Correct wiring fault. Replace/repair wiring. Replace detector.
Alarm LED on constantly, no fault in protected area or wiring.	Abnormal supply voltage	Ensure that there is correct voltage (10.6 to 16 VDC) at power terminals

Testing & Maintenance:

Inspection:

An inspection of this unit should be made periodically, consisting of, but not limited to all mounting, wiring and the condition of the interior / components.

Cleaning:

Clean the plastic parts of this unit with a soft, clean, damp, cloth.

Testing:

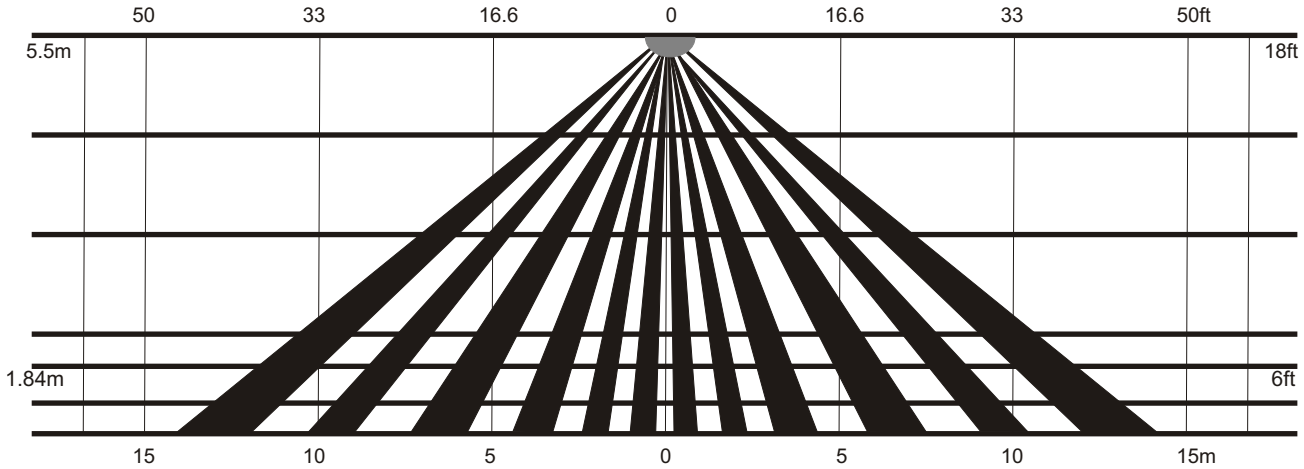
This unit should be test routinely for proper operation. At a minimum the unit's operation needs to be fully checked yearly.

Notes:

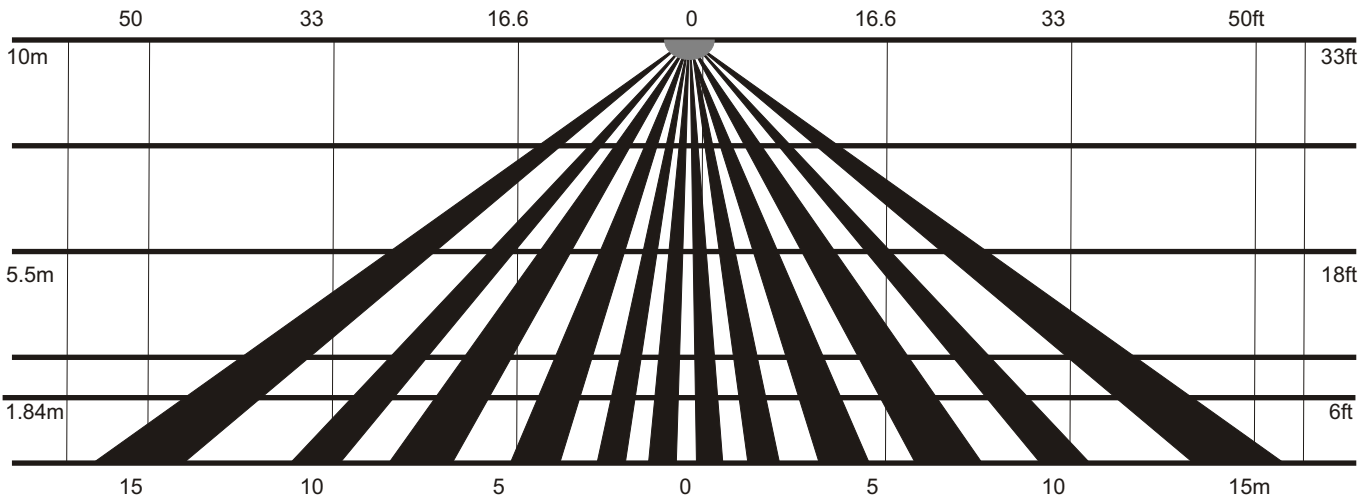
This unit is designed to be incorporated into an overall alarm system. As it is part of the system **ALEPH** cannot assume responsibility for theft or damage if the system fails to operate.

Detection Pattern:

CM360-18



CM360-33



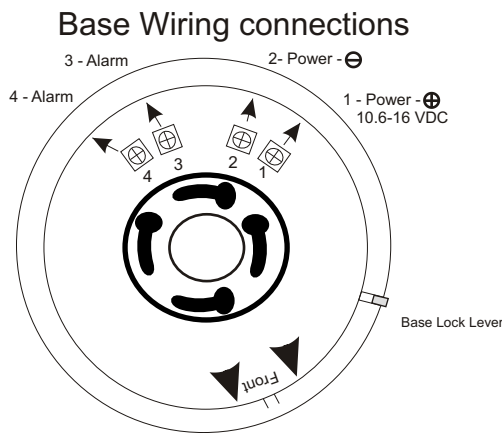
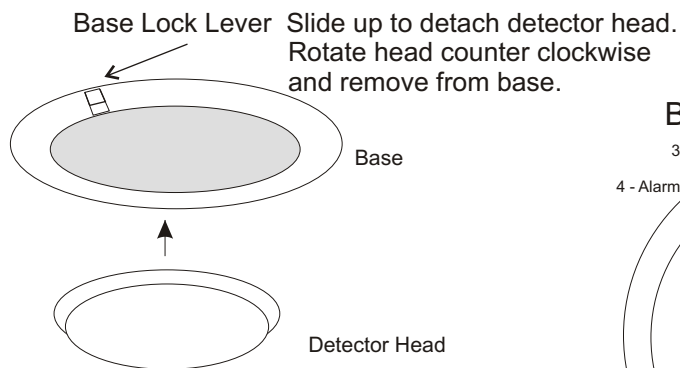
Detection Pattern Radius vs. Mounting Height

CM360-33:

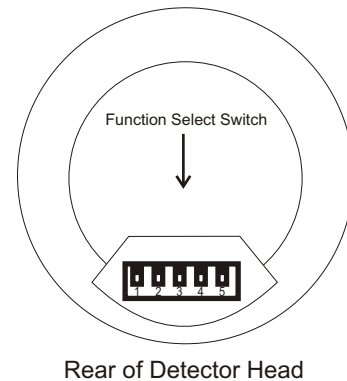
Mounting Height / Detection Area
 33.3ft / 10m = 50ft / 15.25m radius
 30ft / 9.3m = 41.6ft / 12.6m radius
 28ft / 8.5m = 38.3ft / 11.7m radius
 26ft / 7.8m = 35ft / 10.6m radius
 24ft / 7.3m = 31.6ft / 9.7m radius
 22ft / 6.6m = 28.3ft / 8.6m radius
 20ft / 6.3m = 25ft / 7.6m radius
 18ft / 5.5m = 21.6ft / 6.4m radius
 16ft / 4.9m = 18.3ft / 5.5m radius

CM360-18:

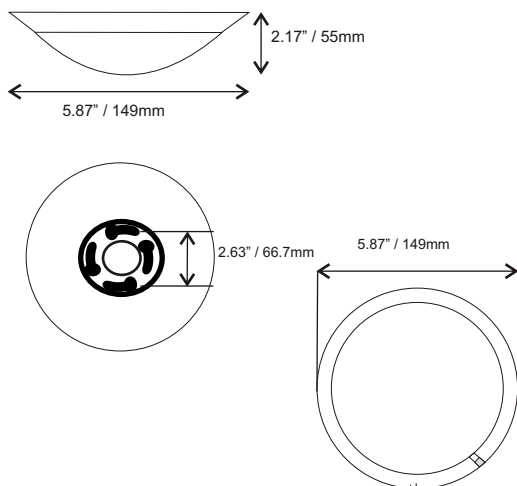
Mounting Height / Detection Area
 18ft / 5.5m = 40ft / 12.1m radius
 15ft / 4.7m = 28.3ft / 8.7m radius
 13ft / 4m = 23.3ft / 7.1m radius
 11ft / 3.3m = 18.3ft / 5.5m radius
 9ft / 2.8m = 13.3ft / 4m radius
 7ft / 2.1m = 8.3ft / 2.5m radius



Function Select Switch Location



Dimensions



Function Select Switch Settings

Function Select Switch

Switch 1 & 2 Detection Pattern Select
(Refer to detection pattern layout figure)

360° Detection Area A,B,C,D detecting

270° Detection Area A,B,C detecting

180° Detection Area A,B detecting

90° Detection Area A detecting

Switch 3 Sensitivity Select

Low High

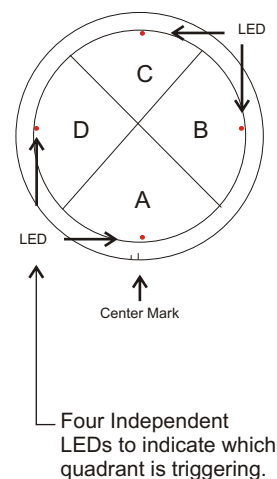
Switch 4 Pulse Count Select

2 Pulse 4 Pulse

Switch 5 Alarm LED Select

LED ON LED OFF

Detection Pattern Layout



Specifications

Model No.	CM360-18	CM360-33
Mounting Height	18' / 5.5 m max	33' / 10m max
Coverage	80' / 24m diameter	100' / 30m diameter
Detection Method	Passive Infrared	
Power Supply	10.6 to 16 VDC	
Current Consumption	33mA max / 16mA nominal	
Alarm Output	N.C. Solid State Relay/Dry Contact rating 30VDC / 100mA max	
Alarm LED Operation	Alarm: On Steady / 2Sec Flashing: During unit warm up (60 Sec) Continuously On: When sensor / circuit fault is present.	
Supervision	Detector latches in alarm when sensor fault is present	
Selectable Coverage	Four Options: 90°, 180°, 270° or 360°	
Sensitivity Control	Two-Way adjustable - High / Low, via Sw - 3	
Pulse Count Control	Two-Way adjustable - 2 / 4, via Sw - 4	
LED Control	Enabled / Disabled - via Sw - 5	
Environmental	Operating Temperature: -20° C to 50° C / -4° F to 122° F Humidity: 95% RH Max	
Installation Application	Indoors / Level Ceiling	
Dimensions	2.17in (H) x 5.87in (Diameter) / 55mm x 149mm	
Weight	7 oz / 200g	

Patent Information:
U.S. & International patents pending.

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Contact Aleph

Nippon Aleph Corporation

1-28-52 Komaoka, Tsurumi, Yokohama, Japan
Tel: 045 575 1111 Fax: 045 580 1676
WEB: <http://www.nippon-aleph.co.jp>
E-mail: security@po.nippon-aleph.co.jp

Aleph America Corporation

4700 Aircenter Cir, Reno, NV, 89502, USA
Tel: 775 827 8000 Fax: 775 827 8044
WEB: <http://www.aleph-usa.com>
E-mail: info@aleph-usa.com

Aleph Europe Ltd.

1 Newton Close, Park Farm Industrial Estate,
Wellingborough, Northamptonshire, NN8 6UW
England
Tel: 01933 679600 Fax: 01933 401165
WEB: <http://www.alepheurope.com>
E-mail: info@alepheurope.com

Aleph Central Europe Ltd.

2146 Mogyorod, Kerekto u 2, Hungary
Tel: +36 28 542250 Fax: +36 28 542251
WEB: <http://www.alephsecurity.com>
Email: sales@alephsecurity.com