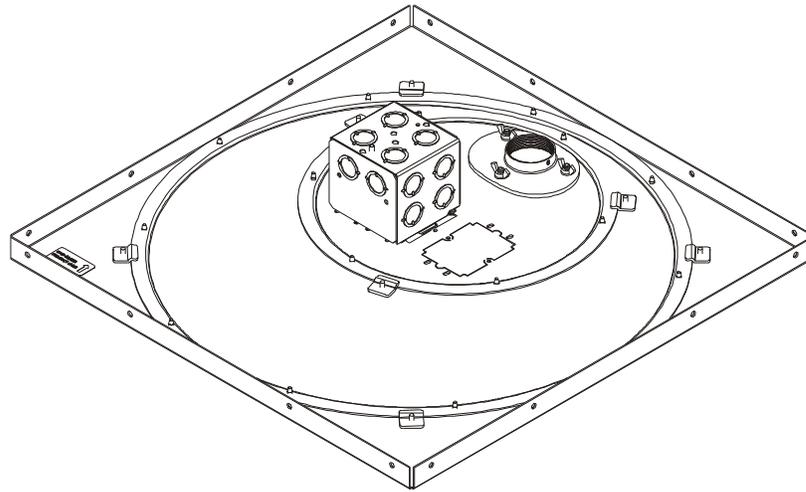


---

# INSTALLATION INSTRUCTIONS

# ADDENDUM

---



---

## Above-Tile and Ceiling Tile Kits

---

## DISCLAIMER

Milestone AV Technologies, and its affiliated corporations and subsidiaries (collectively, "Milestone"), intend to make this manual accurate and complete. However, Milestone makes no claim that the information contained herein covers all details, conditions or variations, nor does it provide for every possible contingency in connection with the installation or use of this product. The information contained in this document is subject to change without notice or obligation of any kind. Milestone makes no representation of warranty, expressed or implied, regarding the information contained herein. Milestone assumes no responsibility for accuracy, completeness or sufficiency of the information contained in this document.

Chief® is a registered trademark of Milestone AV Technologies. All rights reserved.



### IMPORTANT SAFETY INSTRUCTIONS



**WARNING** alerts you to the possibility of serious injury or death if you do not follow the instructions.



**CAUTION** alerts you to the possibility of damage or destruction of equipment if you do not follow the corresponding instructions.



**WARNING:** FAILURE TO READ AND FOLLOW THE FOLLOWING INSTRUCTIONS CAN RESULT IN SERIOUS PERSONAL INJURY, DAMAGE TO EQUIPMENT OR VOIDING OF FACTORY WARRANTY. It is the installer's responsibility to make sure all components are properly assembled and installed using the instructions provided.

**READ ALL INSTRUCTIONS BEFORE USING THIS PRODUCT!!!!**



**DANGER:** TO REDUCE THE RISK OF ELECTRIC SHOCK:

1. Always turn off power at source before installing the outlet.



**WARNING:** TO REDUCE THE RISK OF BURNS, FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS:

- Always turn off power at source before servicing or removing the outlet.
- Use this mounting system only for its intended use as described in these instructions. Do NOT use attachments not recommended by the manufacturer.
- Do not use outdoors - for indoor use only!
- Route cables as shown in these installation instructions.
- To disconnect, turn off power at source.



**WARNING:** RISK OF ELECTRIC SHOCK!  
Make sure the outlet is properly grounded. See Grounding Instructions.



**WARNING:** Failure to provide adequate structural strength for this component can result in serious personal injury or damage to equipment! It is the installer's responsibility to make sure the structure to which this component is attached can support five times the combined weight of all equipment. Reinforce the structure as required before installing the component.



**WARNING:** Exceeding the weight capacity can result in serious personal injury or damage to equipment! It is the installer's responsibility to make sure the combined weight of all components attached to the CMS445P2 does not exceed 50 lbs (22.68 kg).

- The weight capacity of the CMS445P2 may be LIMITED to the lowest weight capacity of any other component located between the CMS445P2 and the supporting structure!



**CAUTION:** This equipment must be installed and assembled by qualified service personnel in accordance with local building and electrical codes.

**NOTE:** Knockouts are provided for ease of installation. Any unused knockouts that have been punched are to be closed up with a metal plug.

**NOTE:** Ambient Temperature - The manufacturer's maximum ambient temperature is 104°F (40°C) and minimum ambient temperature is 30°F (-1°C) so that the installer is able to determine acceptability of use of Accessories and components.



**CAUTION:** Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

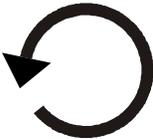
**IMPORTANT ! :** The CMS445P2 is designed for installation above existing suspended ceiling tile.

**IMPORTANT ! :** The CMS445P2 has been designed to support a single UL Listed electrical receptacle, a double UL Listed electrical receptacle or both.

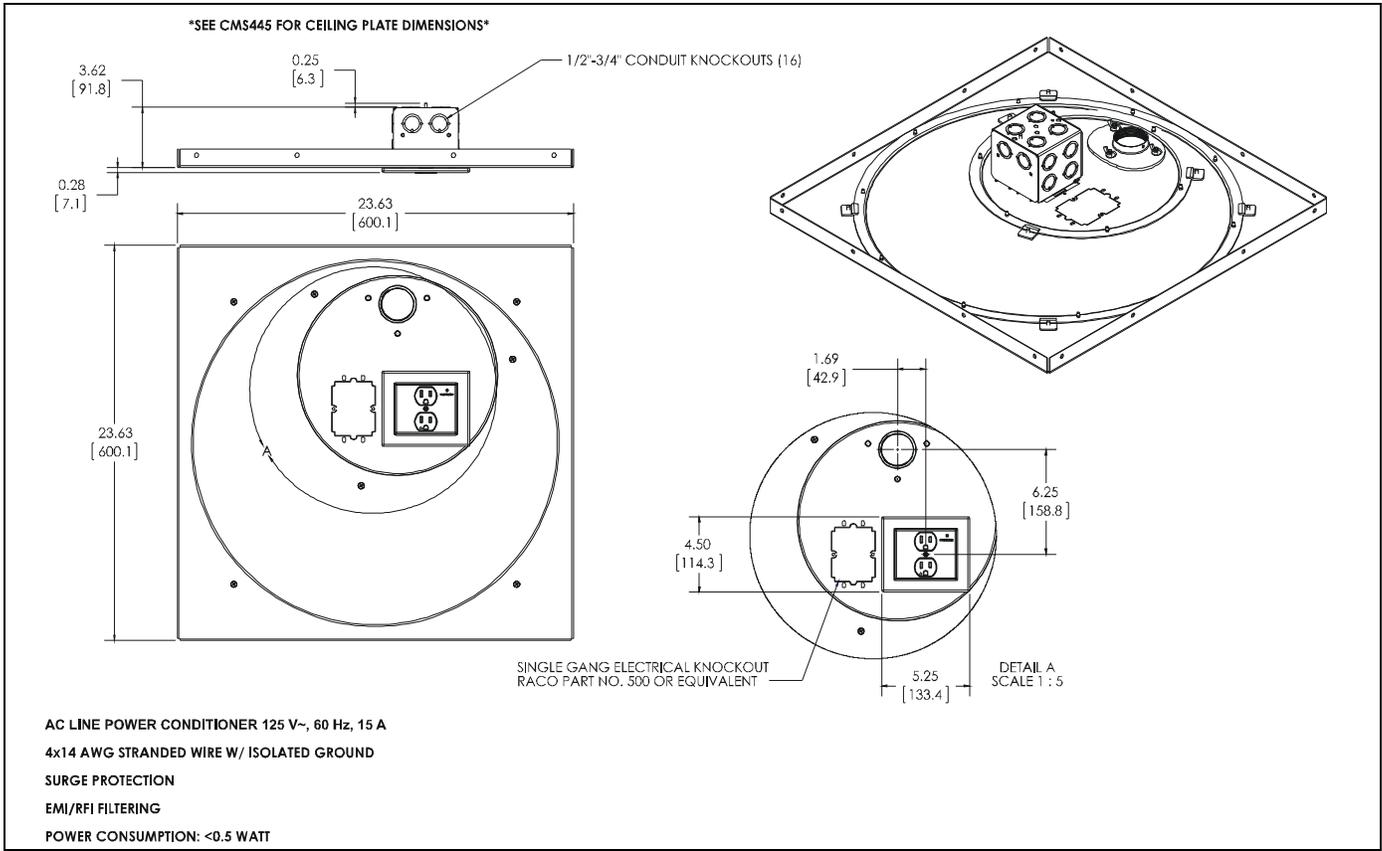
**NOTE:** It is the installer's responsibility to ensure that the enclosure is bonded to the ground in the switch box, in accordance with the National Electric Code, ANSI/NFPA 70 or Canadian Electrical Code, CSA C22.1.

**--SAVE THESE INSTRUCTIONS--**

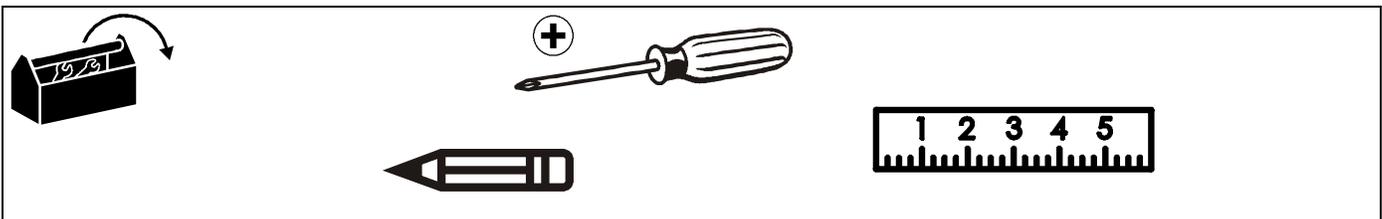
**LEGEND**

	<p><b>Tighten Fastener</b></p> <p>Apretar elemento de fijación</p> <p>Befestigungsteil festziehen</p> <p>Apertar fixador</p> <p>Serrare il fissaggio</p> <p>Bevestiging vastdraaien</p> <p>Serrez les fixations</p>		<p><b>Pencil Mark</b></p> <p>Marcar con lápiz</p> <p>Stiftmarkierung</p> <p>Marcar com lápis</p> <p>Segno a matita</p> <p>Potloodmerkteken</p> <p>Marquage au crayon</p>
	<p><b>Loosen Fastener</b></p> <p>Aflojar elemento de fijación</p> <p>Befestigungsteil lösen</p> <p>Desapertar fixador</p> <p>Allentare il fissaggio</p> <p>Bevestiging losdraaien</p> <p>Desserrez les fixations</p>		<p><b>Drill Hole</b></p> <p>Perforar</p> <p>Bohrloch</p> <p>Fazer furo</p> <p>Praticare un foro</p> <p>Gat boren</p> <p>Percez un trou</p>
	<p><b>Phillips Screwdriver</b></p> <p>Destornillador Phillips</p> <p>Kreuzschlitzschraubendreher</p> <p>Chave de fendas Phillips</p> <p>Cacciavite a stella</p> <p>Kruiskopschroevendraaier</p> <p>Tournevis à pointe cruciforme</p>		<p><b>Adjust</b></p> <p>Ajustar</p> <p>Einstellen</p> <p>Ajustar</p> <p>Regolare</p> <p>Afstellen</p> <p>Ajuster</p>
	<p><b>Open-Ended Wrench</b></p> <p>Llave de boca</p> <p>Gabelschlüssel</p> <p>Chave de bocas</p> <p>Chiave a punte aperte</p> <p>Steeksleutel</p> <p>Clé à fourche</p>		<p><b>Remove</b></p> <p>Quitar</p> <p>Entfernen</p> <p>Remover</p> <p>Rimuovere</p> <p>Verwijderen</p> <p>Retirez</p>
	<p><b>By Hand</b></p> <p>A mano</p> <p>Von Hand</p> <p>Com a mão</p> <p>A mano</p> <p>Met de hand</p> <p>À la main</p>		<p><b>Optional</b></p> <p>Opcional</p> <p>Optional</p> <p>Opcional</p> <p>Opzionale</p> <p>Optie</p> <p>En option</p>
	<p><b>Hex-Head Wrench</b></p> <p>Llave de cabeza hexagonal</p> <p>Sechskantschlüssel</p> <p>Chave de cabeça sextavada</p> <p>Chiave esagonale</p> <p>Zeskantsleutel</p> <p>Clé à tête hexagonale</p>		<p><b>Security Wrench</b></p> <p>Llave de seguridad</p> <p>Sicherheitsschlüssel</p> <p>Chave de segurança</p> <p>Chiave di sicurezza</p> <p>Veiligheidsleutel</p> <p>Clé de sécurité</p>

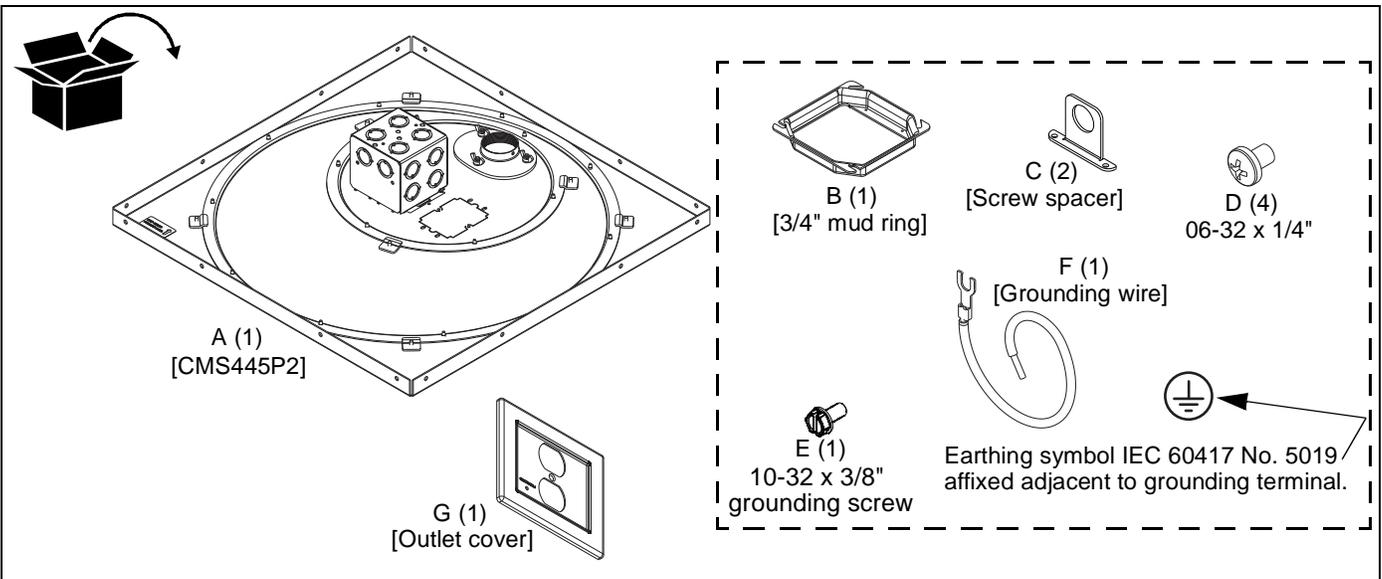
**DIMENSIONS - CMS445P2**



**TOOLS REQUIRED FOR INSTALLATION**



**ADDITIONAL PARTS**



## Isolated Ground Receptacle

This product incorporates an isolated ground receptacle, identified by the orange triangle on its face. This feature may be useful to reduce common noise in the connected equipment. Its intended use is to reduce electrical noise (electromagnetic interference) by purposely insulating the grounding circuit from any metallic wiring system. The ground pin of the receptacle is connected to the green/yellow wire and is isolated from the metal mounting yoke of the receptacle. The accessible metal of the product is connected to the green wire. If it is not desired to use this feature, connect the green/yellow and green wires together.

### References

Application Guide for Isolated Ground Wiring Devices 2007. National Electrical Manufacturers Association (NEMA)

IEEE Std 1100™-2005, "IEEE Recommended Practice for Powering and Grounding Electronic Equipment" (Emerald Book), Section 8.5.3.2.

IEEE Std 142™-2007, "IEEE Recommended Practice for Grounding of Industrial and Commercial Power Systems" (Green Book), Sections 5.5.1, 5.5.2

NFPA-70, "National Electrical Code", Article 250.146 Connecting Receptacle Grounding Terminal to Box.

- (D) Isolated Ground Receptacles. Where installed for the reduction of electrical noise (electromagnetic interference) on the grounding circuit, a receptacle in which the grounding terminal is purposefully insulated from the receptacle mounting means shall be permitted. The receptacle grounding terminal shall be connected to an insulated equipment grounding conductor run with the circuit conductors. This equipment grounding conductor shall be permitted to pass through one or more panel boards without a connection to the panel board grounding terminal bar as permitted in 408.40, Exception, so as to terminate within the same building or structure directly at an equipment grounding conductor terminal of the applicable derived system or service. Where installed in accordance with the provisions of this section, this equipment grounding conductor shall also be permitted to pass through boxes, wire ways, or other enclosures without being connected to such enclosures.
- Informational Note: Use of an isolated equipment grounding conductor does not relieve the requirement for grounding the raceway system and outlet box.

C22.2 No. 1, "Canadian Electrical Code, Part 1", Rule 10-906 Bonding conductor connection to circuits and equipment.

- (6) A bonding jumper shall be installed to connect the bonding conductor to the grounding terminal of a receptacle and in such a manner that disconnection or removal of the receptacle will not interfere with, or interrupt grounding continuity.
- (7) In the case of metallically enclosed systems where the grounding path is provided by the metal enclosure, a bonding jumper shall be installed to bond the grounding terminal of the receptacle to the enclosure.
- (8) Notwithstanding Sub-rules (6) and (7), the bonding jumper, in the case of receptacles having grounding terminals isolated from the mounting strap required for special equipment, shall be

permitted to be extended directly back to the distribution panel.



**WARNING:** IMPROPER INSTALLATION CAN RESULT IN DEATH OR SERIOUS PERSONAL INJURY! This accessory should be installed by qualified personnel.

**IMPORTANT ! :** In addition to the CMS445 installation instructions accompanying the products, the following steps must also be taken when installing the **CMS445P2**.

**NOTE:** The CMS445P2 must be connected to a 15 Amp branch circuit.

**IMPORTANT ! :** There are two different methods of CMS445P2 installation:

- If installing the CMS445P2 in the **flush mode**, proceed to **Installing in Flush Mode** section.
- If installing the CMS445P2 in the **above-tile mode**, proceed to **Installing in Above-Tile Mode** section.

### Installing in Flush Mode

1. Remove 6-32 x 1/2" Phillips flat head screw and #06 locking washer from outlet box. (See Figure 1)

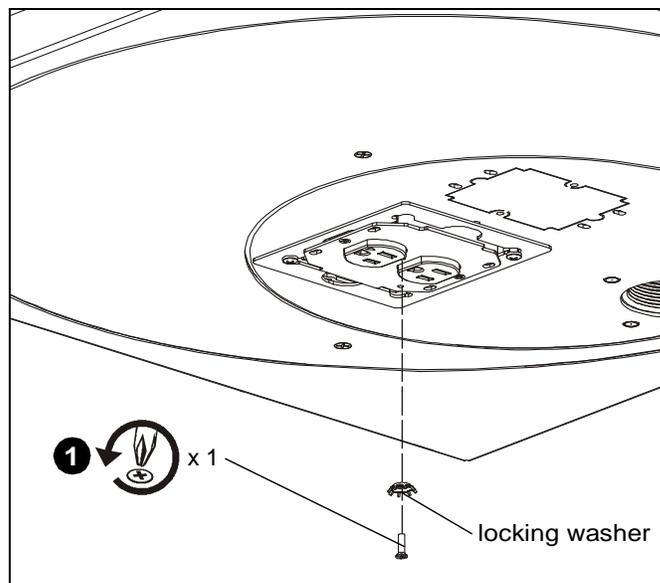


Figure 1

- Loosen but do not remove two Phillips head screws holding outlet box to outer housing. (See Figure 2)

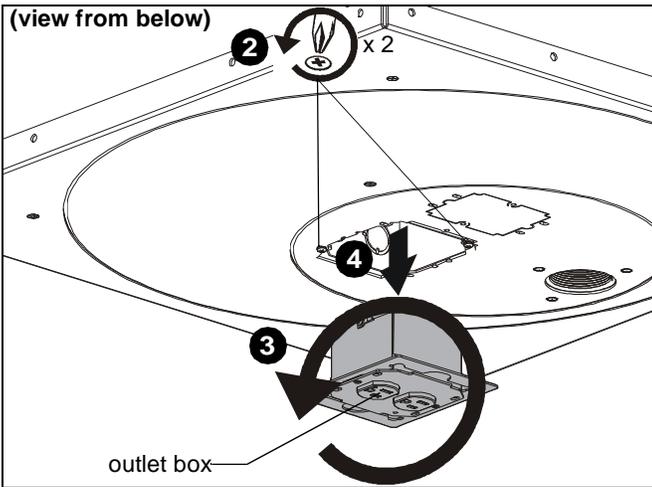


Figure 2

- Rotate outlet box counter-clockwise until it is free to be removed from housing. (See Figure 2)
- Remove outlet box from housing. (See Figure 2)
- Use #10-32 x 3/8" flange screw (E) and flathead screwdriver to attach grounding wire (F) to housing at hole near earthing symbol. (See Figure 3)

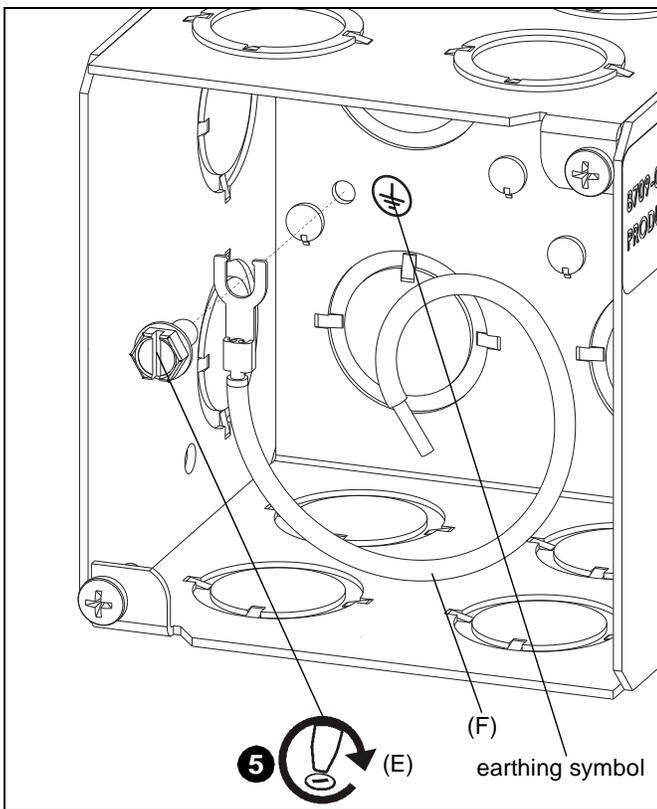


Figure 3

- Wire the outlet box as required. Refer to Table 1 and Table 2 for input and output specifications. (See Figure 4)

Table 1: Input Specifications

Input	
Input voltage, frequency	125 V AC, 60 Hz
Input connection type	4x14 AWG stranded, UL Style 1015, CSA TEW
Input Wire colors	Black - Line White - Neutral Green - Box Ground Green/Yellow - Isolated Ground
Input wire length (ft.)	1 (with a 3/4" stripped end)

Table 2: Output Specifications

Output	
Output	15 A, 1875 W
Power consumption	<0.5 watt
Fuses	Thermal current interrupting circuits are in MOVs
Quantity/Type	Duplex NEMA 5-15R Isolated Ground Receptacle
Color/Markings	Grey with protection symbol (Orange triangle)



**CAUTION:** Isolated ground-mounting means NOT grounded. Grounding wire connection required.

**IMPORTANT ! :** If a separate isolated green/yellow ground wire is installed in the building wiring, attach it separately to the green/yellow isolated ground wire on box. If there is no separate green/yellow isolated ground wire, connect green ground wire to both green/yellow isolated ground wire and green box ground wire on box.

**NOTE:** The grounding conductors serving this outlet are to be connected to earth ground at the service equipment or other acceptable building earth ground such as the building frame in the case of a high-rise steel-frame structure. Connections should be made with minimum AWG 14 copper wire intended for use on a 15 Amp circuit. The conductors used to connect the outlet to the line or bus and ground shall not be any longer than necessary and shall avoid unnecessary bends.

**NOTE:** An insulated grounding conductor that is identical in size and insulation material and thickness to the grounded and ungrounded circuit supply conductors, except that it is green with or without one or more yellow stripes, is to be installed as part of the circuit that supplies the outlet. Refer to Table 250-122 of the National Electrical Code regarding the appropriate size of the grounding conductor.

**NOTE:** Pressure terminal or pressure splicing connectors and soldering lugs used in the installation of the outlet shall be identified as being suitable for the material of the conductors. Conductors of dissimilar metals shall not be intermixed in a terminal or splicing connector where physical contact occurs between dissimilar conductors unless the device is identified for the purpose and conditions of use.

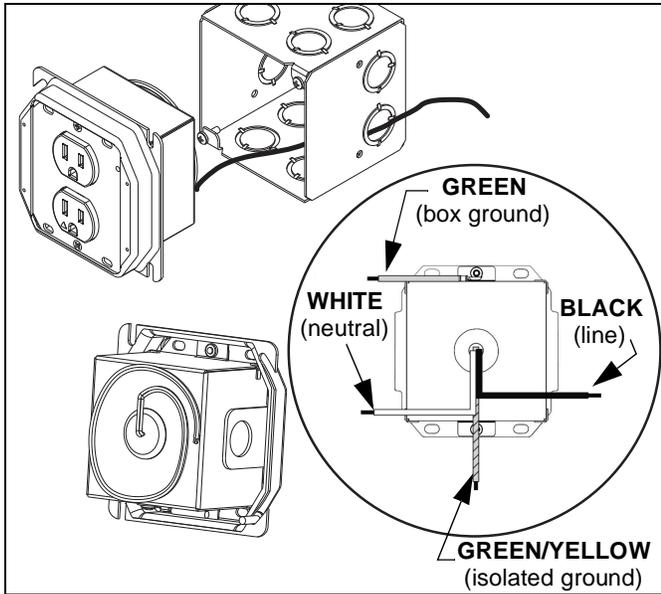


Figure 4

7. Replace the outlet box in the housing. (See Figure 5)
8. Rotate outlet box clockwise until it is in proper position to be secured to the housing. (See Figure 5)
9. Tighten two Phillips screws to secure outlet box to housing. (See Figure 5)

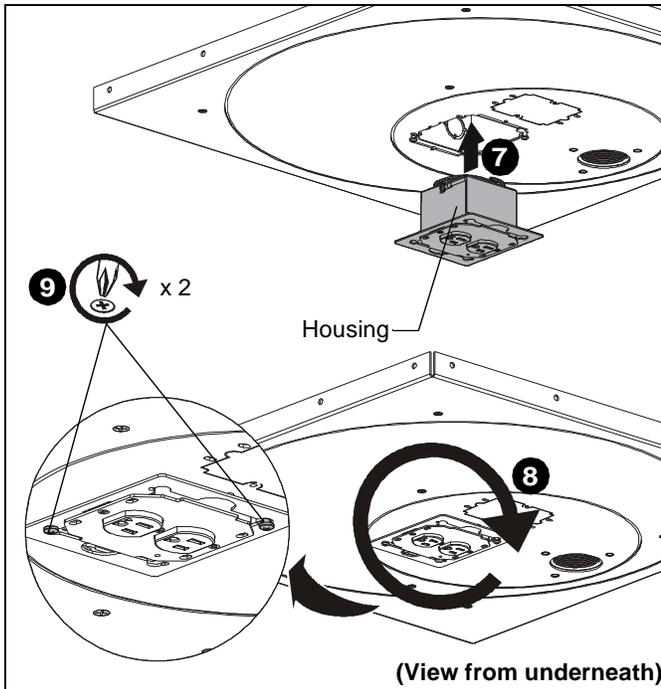


Figure 5

10. Install outlet cover (G) over outlet box using removed #06-32 x 1/2" Phillips flat head screw and #06 lock washer. (See Figure 6)

**NOTE:** Be sure to line up hole in outlet cover over light in outlet.

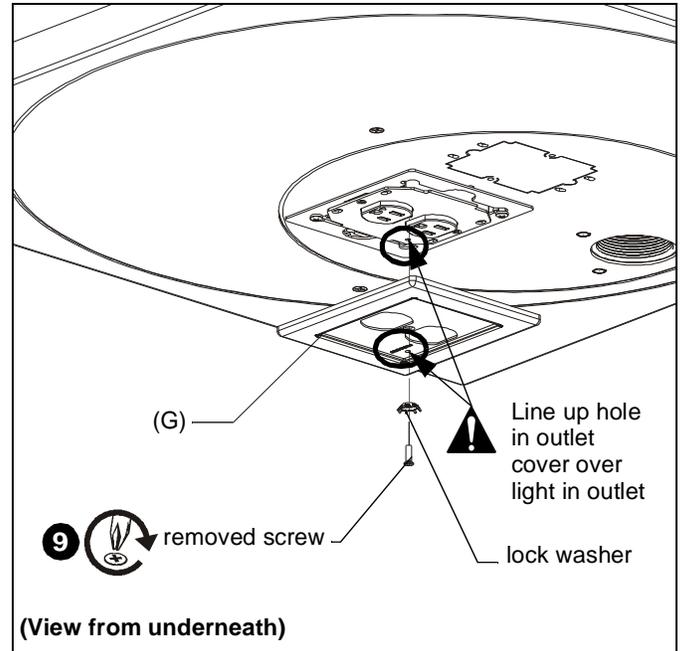


Figure 6

**Installing in Above-Tile Mode**

1. Remove 6-32 x 1/2" Phillips flat head screw and #06 locking washer from outlet box. (See Figure 7)

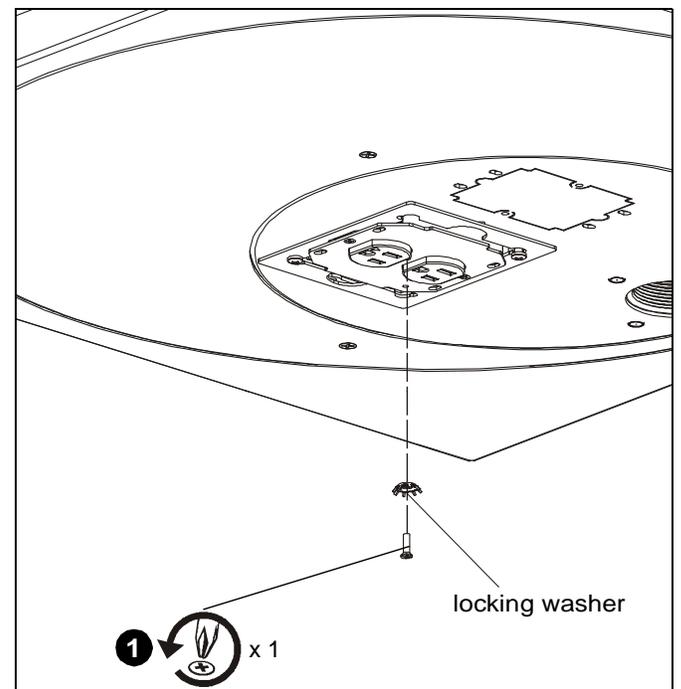


Figure 7

- Remove one Phillips head screws holding outlet box to outer housing and loosen the other one. (See Figure 8)

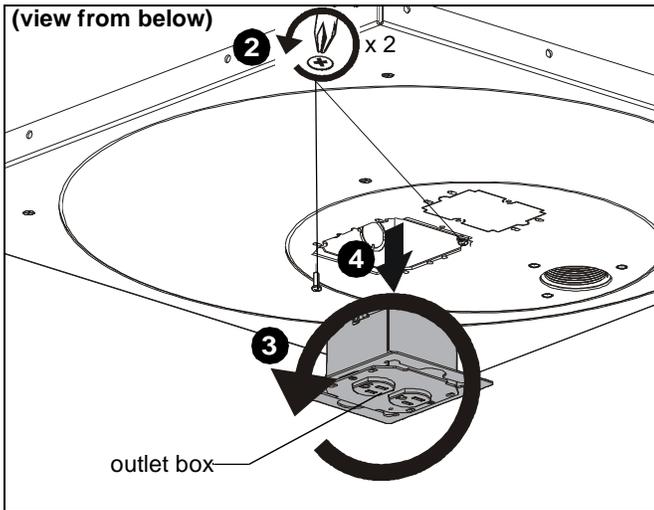


Figure 8

- Rotate outlet box counter-clockwise until it is free to be removed from housing. (See Figure 8)
- Remove outlet box from housing. (See Figure 8)
- Use #10-32 x 3/8" flange screw (E) and flathead screwdriver to attach grounding wire (F) to housing at hole near earthing symbol. (See Figure 9)

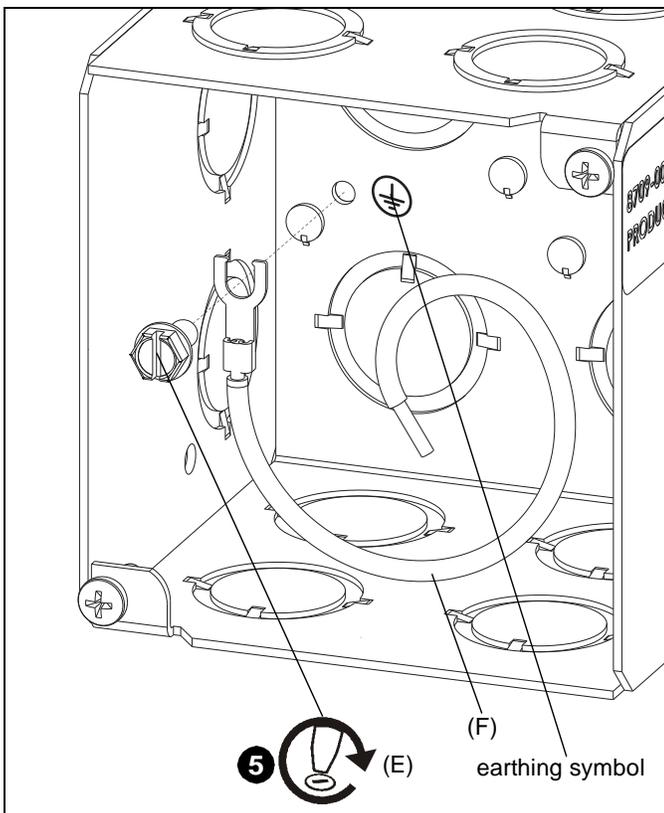


Figure 9

- Remove four Phillips screws from ring attached to outlet box. (See Figure 10)
- Remove and discard ring from outlet box. (See Figure 10)

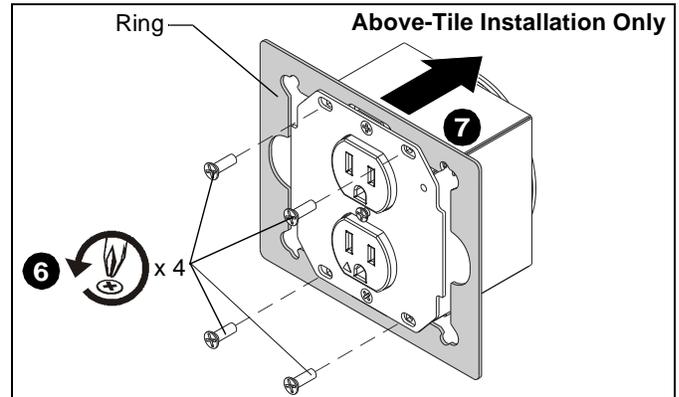


Figure 10

- Wire the outlet box as required. Refer to Table 1 and Table 2 on page 6) for input and output specifications. (See Figure 4)
- Lower outlet box into the mud ring (B) and attach two screw spacers (C) inside the mud ring on either side of outlet box using four 06-32 x 1/4" Phillips pan head screws (D). (See Figure 11)
- Lower housing from above CMS445P2, install outlet box assembly up into housing, and rotate clockwise into place. (See Figure 11) and (See Figure )

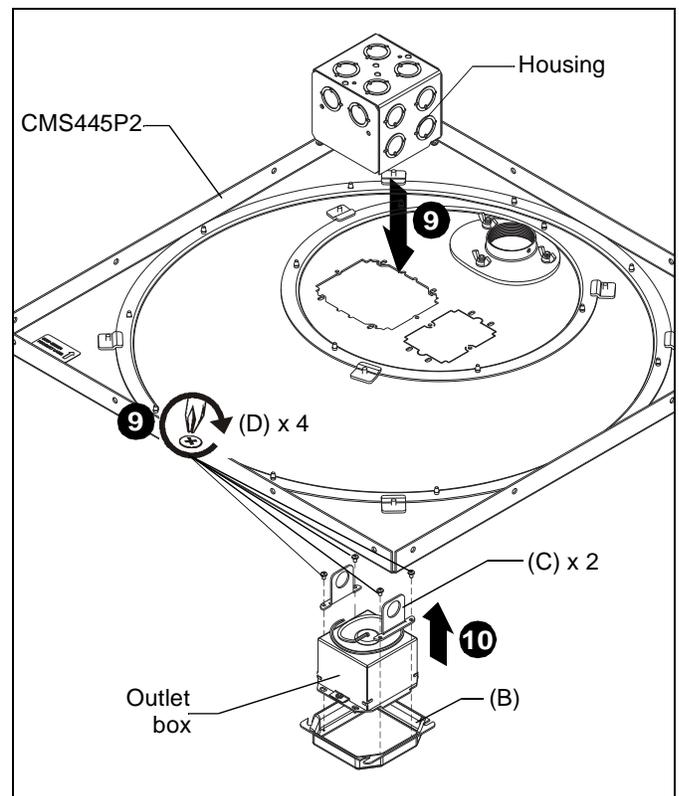


Figure 11

11. Replace removed Phillips head screw (in outlet housing) and tighten the other one to hold in place. (See Figure )

**NOTE:** Follow installation instructions (included with the CMS445P2) to complete installation. **Proceed with Step 12 after the CMS445P2 is installed above the tile.**

**NOTE:** Be sure to line up hole in outlet cover over light in outlet.

12. Install outlet cover (G) over outlet box using removed 6-32 x 1/2" Phillips flat head screw and removed #06 lock washer. (See Figure )

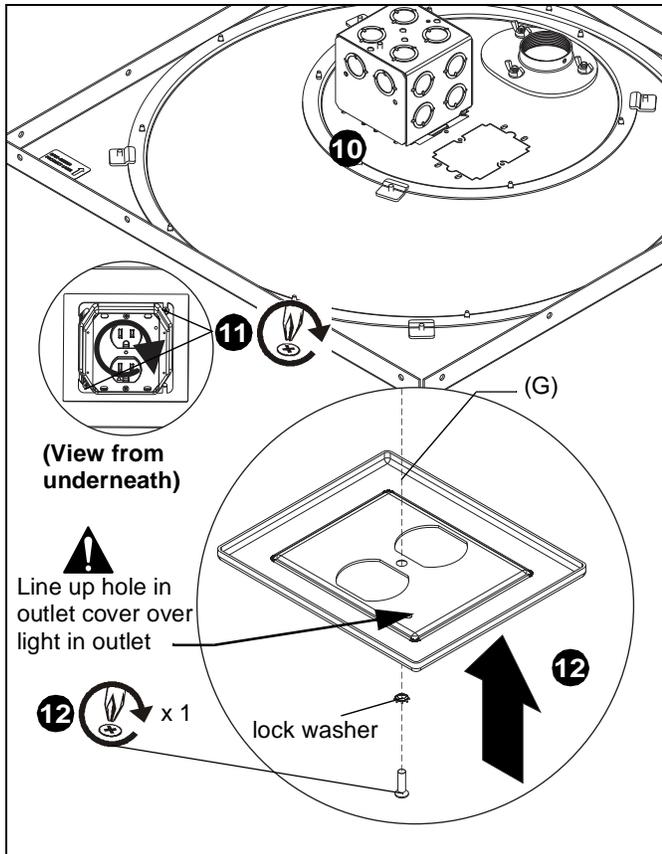


Figure 12

### Outlet Box Use

**NOTE:** The "PROTECTED" light indicates that the surge protection circuitry is active and operational. (See Figure 13)

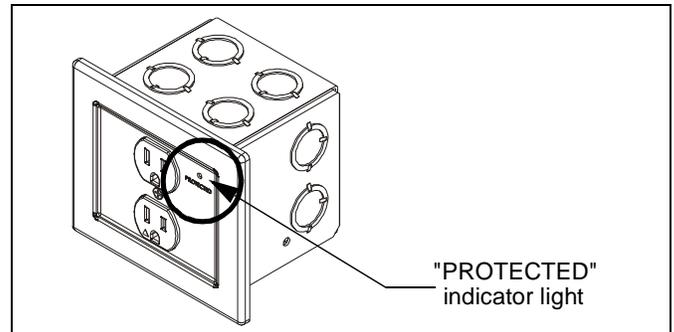


Figure 13

13. Complete the installation following the CMS445 installation instructions.







Our Mounts. **Your Vision.**

Chief, a products division of  
Milestone AV Technologies

8800-002793 Rev01

©2018 Milestone AV Technologies

[www.milestone.com](http://www.milestone.com)

01/18

<b>USA/International</b>	<b>A</b> 6436 City West Parkway, Eden Prairie, MN 55344
	<b>P</b> 800.582.6480 / 952.225.6000
	<b>F</b> 877.894.6918 / 952.894.6918
<b>Europe</b>	<b>A</b> Franklinstraat 14, 6003 DK Weert, Netherlands
	<b>P</b> +31 (0) 495 580 852
	<b>F</b> +31 (0) 495 580 845
<b>Asia Pacific</b>	<b>A</b> Office No. 918 on 9/F, Shatin Galleria 18-24 Shan Mei Street Fotan, Shatin, Hong Kong
	<b>P</b> 852 2145 4099
	<b>F</b> 852 2145 4477

