

# 120 Volt to 12 Volt Dual Feed 600W Remote Magnetic Transformers

1.5

## VISUAL COMFORT & Co.

ARCHITECTURAL COLLECTION

### CAUTION - RISK OF FIRE

This product must be installed in accordance with the applicable installation code by a person familiar with the construction and operation of the product and the hazards involved.

Use minimum 90°c supply conductors.



### GENERAL PRODUCT INFORMATION:



This transformer is ETL listed for use with low voltage lighting systems of brands offered by Generation Brands.

This product is suitable only for indoor dry locations and approved for use at any height above the finished floor.

A typical installation is shown. Specific installation must be in accordance with the local electrical codes.

This product may be dimmed only with a low voltage magnetic dimmer. Using a dimmer not designed for low voltage magnetic applications may work initially, but could eventually cause transformer failure and will void the warranty. The dimmer must be derated as indicated by the dimmer manufacturer.

This product is intended for use with Generation Brands low voltage lighting system brands only.

During installation, make sure all power connections are tight.

Read all instructions thoroughly. Read "Important Safety Information" on next column before proceeding with the installation.

### Important Safety Information

Do not conceal or extend bus bar conductors through a building wall.

Do not install this lighting system in a damp or wet location.

To reduce the risk of fire and burns, do not install this lighting system where the uninsulated open bus bar conductors can be shorted or contact any conductive materials.

To reduce the risk of the system overheating and possibly causing a fire, make sure all the connections are tight.

Do not install fixture assemblies closer than six inches to curtains or similarly combustible materials.

Turn the electrical power off before modifying the lighting system in any way.

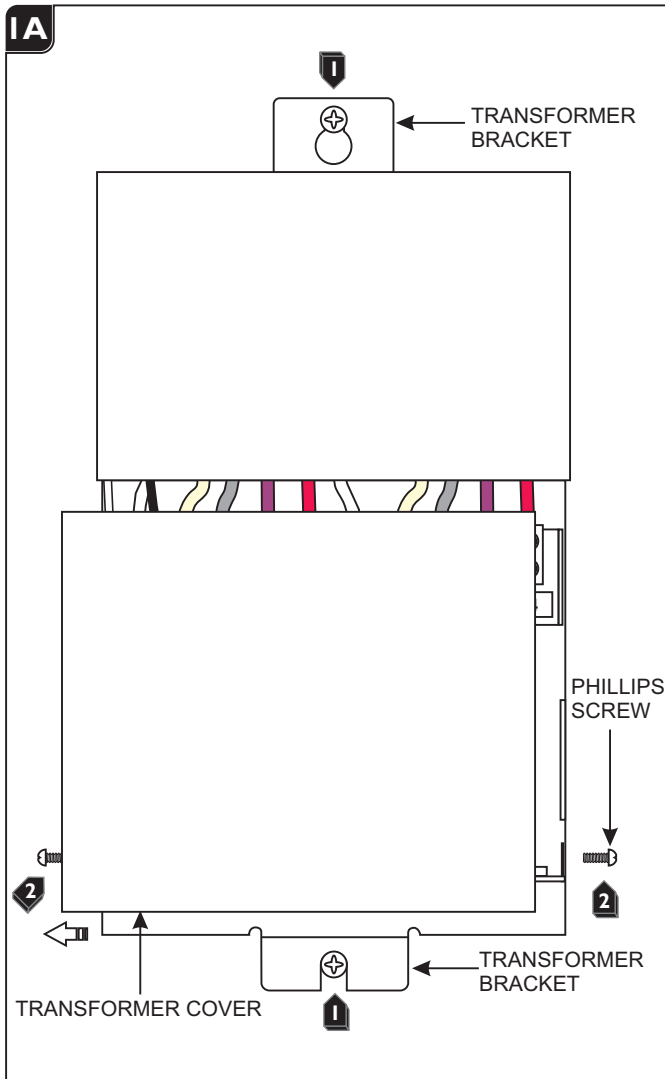
The fixtures used with the system must be identified for use with the corresponding system.

Minimum volume of the electrical box must be 6 cubic inches (98 cubic centimeters).

**To Reduce Risk of Fire**, it is important to wire the remote transformer for the system as described in this installation instruction.

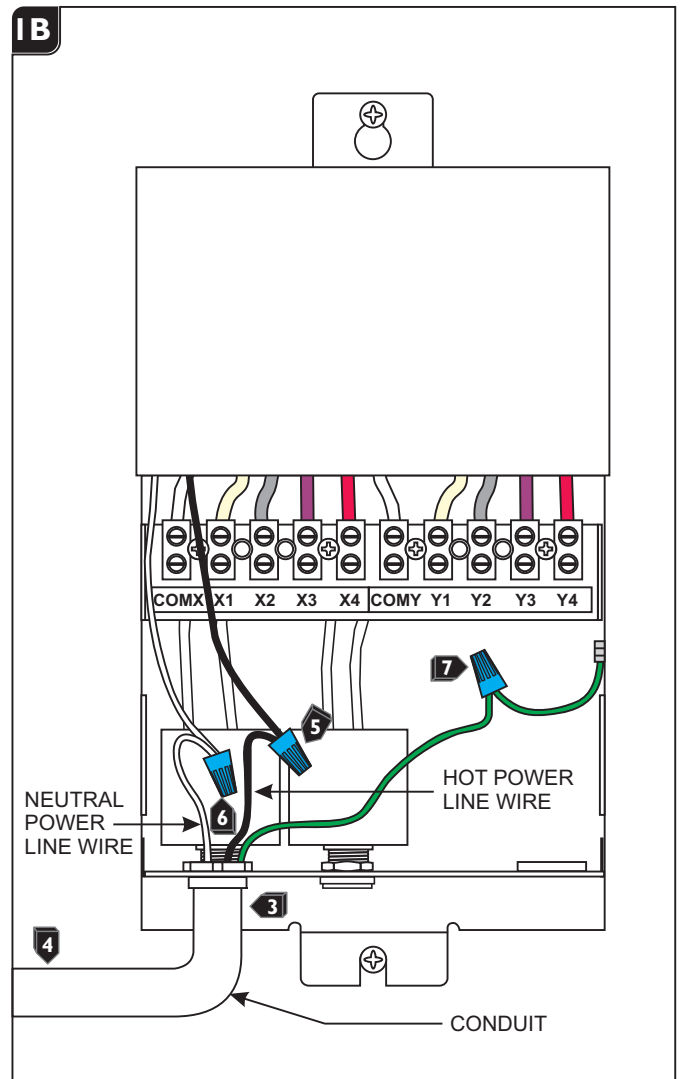
Load each circuit of the remote transformer to **MAXIMUM** 300 Watt.

# Install the Remote Transformer



**NOTE:** In order to use small gage wires from the transformer to the electrical box, it is recommended to install the remote transformer near (if possible) the electrical box. See "Low Voltage Wire Size Table" below.

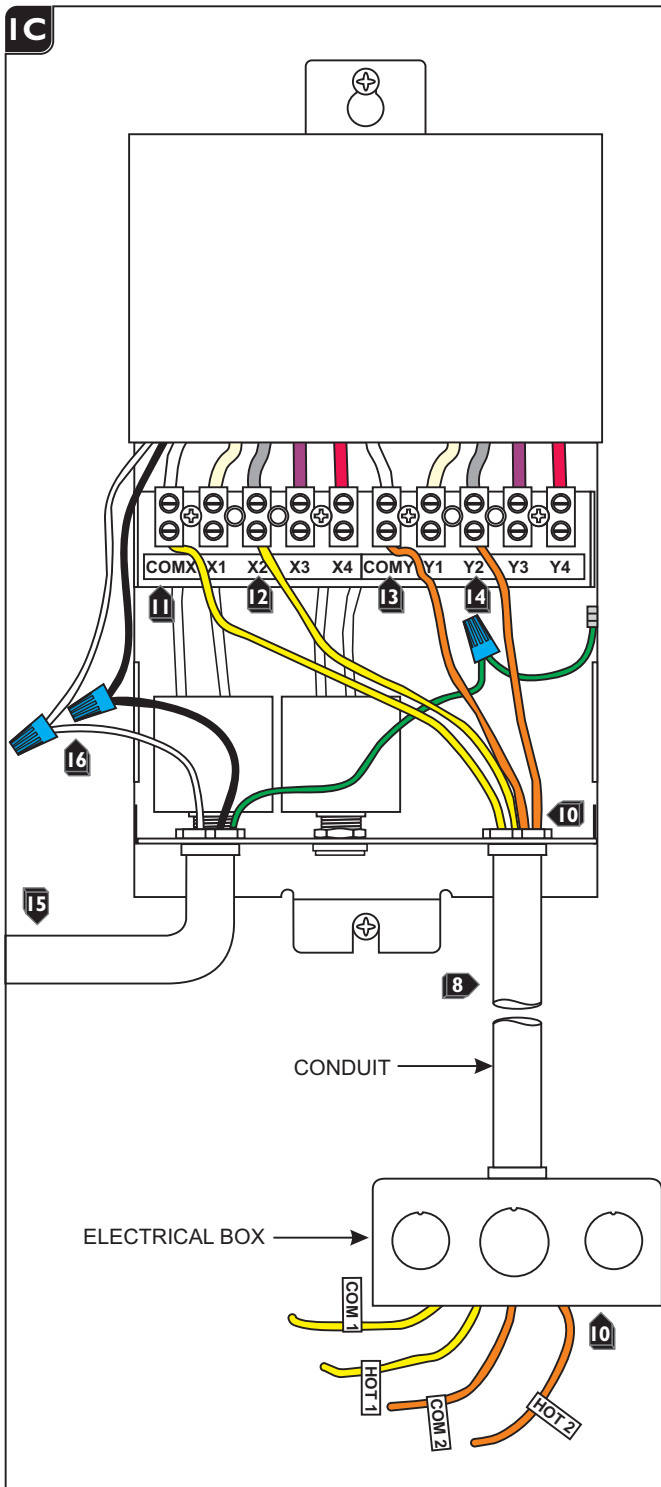
- 1 Mount the transformer to a solid surface using the keyhole slot on the mounting bracket (hardware not included).
- 2 Remove the transformer cover by loosening the two Phillips screws on the side of the transformer.



- 3 Install a conduit and power line wires from the panel to remote transformer.
- 4 **Do not** connect the power line wires to the panel at this time.
- 5 Connect the 120V black transformer wire to the hot power line wire with a wire nut.
- 6 Connect the 120V white transformer wire to the neutral power line wire with a wire nut.
- 7 Connect the ground wire to the green wire or stud labeled "ground" in the console.

**LOW VOLTAGE WIRE SIZE TABLE**

| TRANSFORMER WATTAGE | WIRE SIZE FOR 5 FT | WIRE SIZE FOR 6-15 FT | WIRE SIZE FOR 16-20 FT | WIRE SIZE FOR 21-40 FT | WIRE SIZE FOR 40-60 FT | WIRE SIZE FOR 61-90 FT |
|---------------------|--------------------|-----------------------|------------------------|------------------------|------------------------|------------------------|
| 300 WATT            | #10 GA             | #6 GA                 | #4 GA                  | #1 GA                  | #1/0 GA                | #3/0 GA                |



- 8 Install a conduit from the transformer to the electrical box.
- 9 For the best performance, use the "Low Voltage Wire Size Table" on page 2 to select the wire size.

**NOTE:** Other wire sizes that comply with electrical code can be used, but may result in an increased voltage drop and reduced lamp intensity.

**NOTE:** The THHN wire sizes are for 3% or less drop in voltage based on 300 watt loads. Lengths are the distance from the transformer to the system power feed connector.

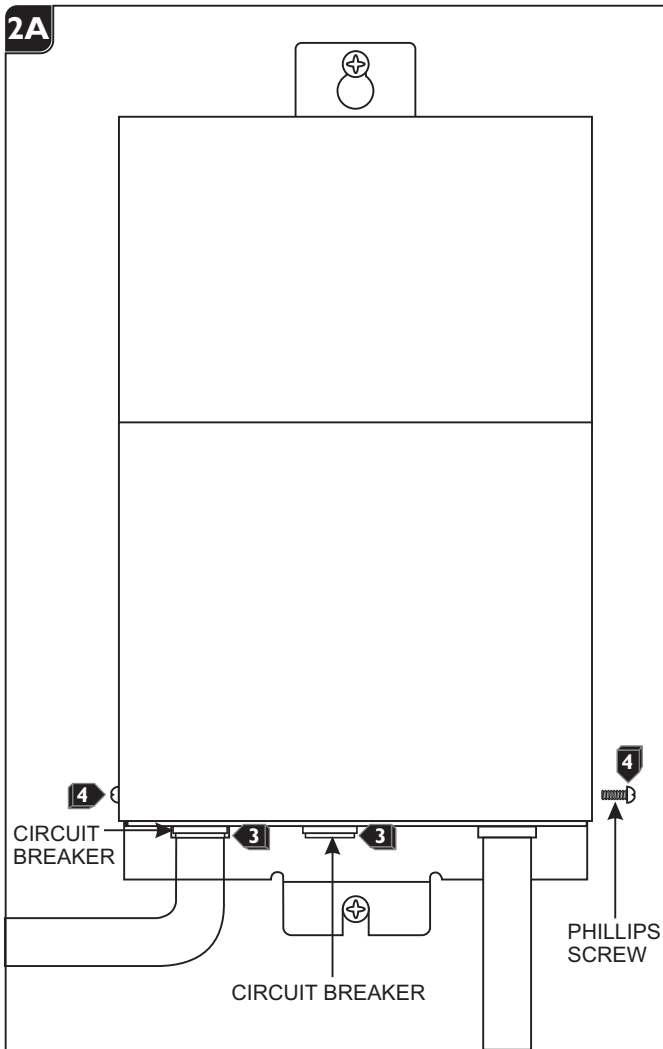
- 10 Install the low voltage wires from the transformer to the electrical power feed box.
- 11 Insert one low voltage wire into the "COMX" terminal and tighten the screw firmly. Mark this low voltage wire in the electrical box as "COM1".
- 12 Insert the second low voltage wire into the "X2" terminal tap (default) and tighten the screw firmly. Mark this low voltage wire in the electrical power feed box as "HOT1".
- 13 Insert the third low voltage wire into "COMY" terminal and tighten the screw firmly. Mark this low voltage wire in the electrical power feed box as "COM2".
- 14 Insert the fourth low voltage wire into the "Y2" terminal tap (default) and tighten the screw firmly. Mark this low voltage wire in the electrical power feed box as "HOT2".
- 15 Connect the 120 volt power line wires at the panel.
- 16 Measure the voltage at the power line wires coming into the transformer. If the voltage is not in the range of 115 - 120 volt, then pick the proper terminal tap using the "Terminal Tap Table" below to reconnect the second and fourth low voltage wires.

**TERMINAL TAP TABLE**

| PRIMARY POWER LINE VOLTAGE | TERMINAL TAP TO BE USED | TERMINAL TAP TO BE USED |
|----------------------------|-------------------------|-------------------------|
| 105 - 109                  | X4                      | Y4                      |
| 110 - 114                  | X3                      | Y3                      |
| 115 - 120                  | X2                      | Y2                      |
| 121 - 125                  | X1                      | Y1                      |

**WARNING: Risk of Fire** - The terminal taps are not for boosting the transformer low voltage power, they are selected to ensure power output voltage based upon power line conditions. Never use a higher terminal tap to compensate for voltage drop, this may overheat the low voltage wires and transformer. It is recommended to use the wire size as indicated on "Low Voltage Wire Size Table" on page 2 to avoid excessive voltage drop.

## Check the System



- 1 After installing the entire low voltage system, if the lamps have low intensity, then measure the voltage at the fixture closest to the power feed contacts with a voltmeter. The voltmeter should read between 11V - 12V ~AC. If the voltage does not fall in this range, call Encompass Lighting Group "Technical Support" at 847-410-4606.
- 2 After installing the entire system, operate the system for five minutes. On the low voltage side, all electrical connection points should be no more than warm to the touch. If a connection is hot to the touch, re-tighten the connection and check to ensure that the temperature decreases.
- 3 The transformer circuit breaker will trip if there is a short in the system. After removing the cause of the short, the circuit breaker needs to be reset to power the system up.
- 4 Replace the transformer cover and tighten the two Phillips screws on the sides of the transformer.

**SAVE THESE INSTRUCTIONS!**