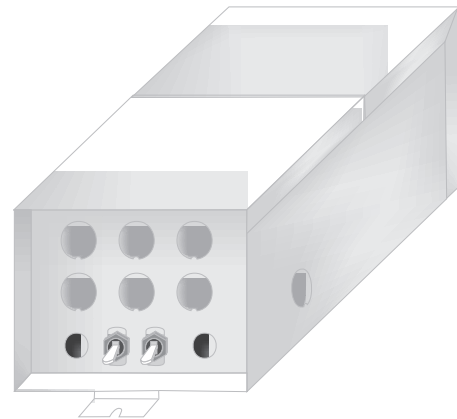


12V (277V IN) Single Feed or Dual Feed Two-Circuit Remote Magnetic Transformers

700AT2X30_277 , 700AT4X30_277 1.7



GENERAL PRODUCT INFORMATION:



This product is ETL listed and 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.

All 277 volt transformer wires must be connected to the same phase.

This product is suitable for dry locations only.

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 will 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 Tech Lighting low voltage lighting systems only.

During installation, make sure all power connections are tight.

Read all instructions thoroughly. Read "Important Safety Information" on page 8 before proceeding with the installation.

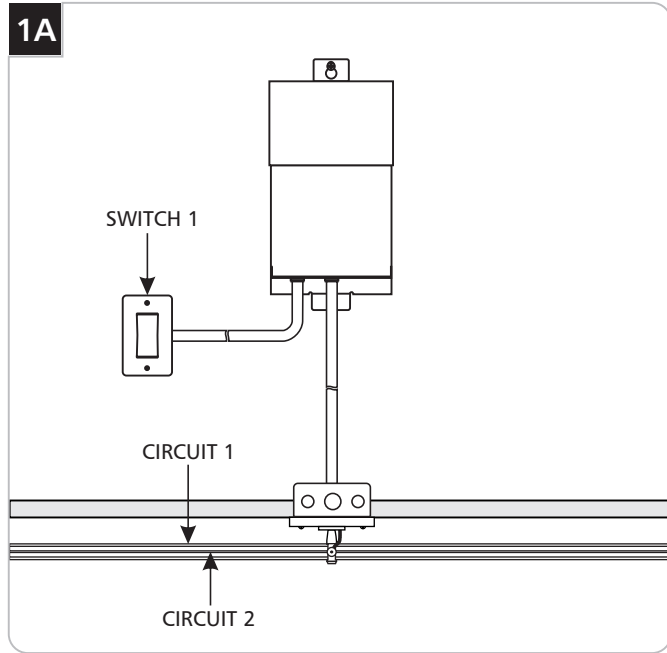
CAUTION — RISK OF FIRE

This product requires installation by a qualified electrician. Before installing be sure to read all instructions and **TURN THE POWER TO THE ELECTRICAL BOX OFF.**

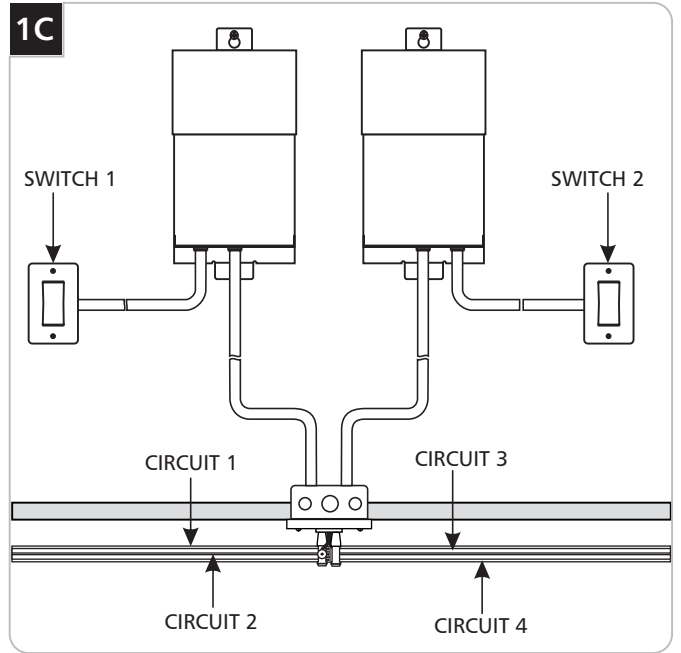
Install 277V Wires

- 1 Turn off the electrical power at the panel.
- 2 Remove transformer cover by loosening the two Phillips screws on the side of the transformer.
- 3 Install wires from transformer to the switch or dimmer.

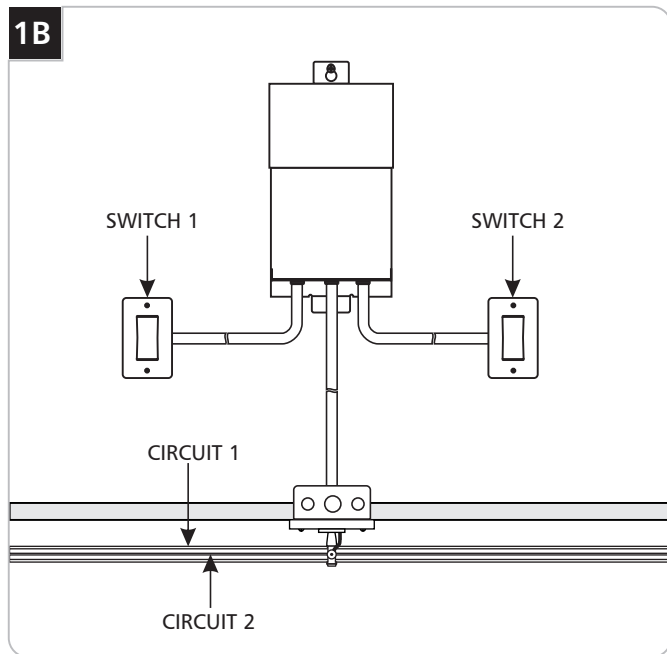
NOTE: Select one out of six possible switching options that fits the design.



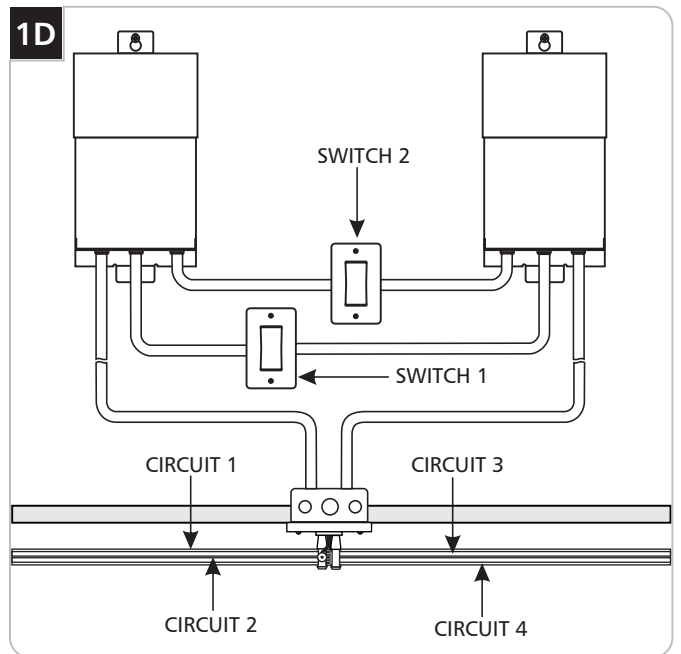
Switch 1 turns on/off both Circuits.



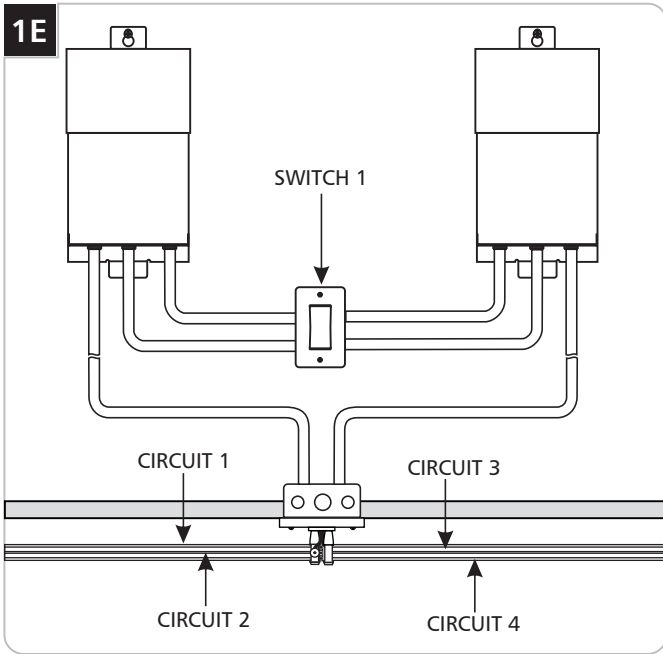
Switch 1 turns on/off Circuits 1 & 2.
Switch 2 turns on/off Circuits 3 & 4.



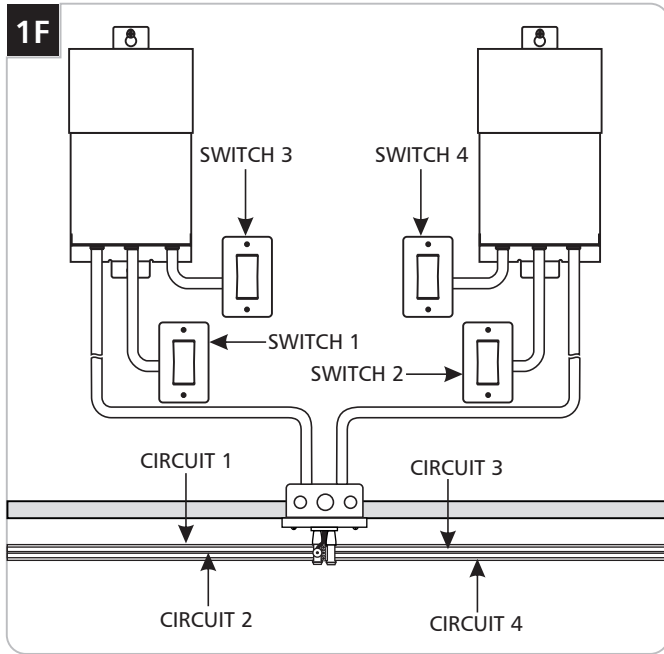
Switch 1 turns on/off Circuit 1 and Switch 2 turns on/off Circuit 2.



Switch 1 turns on/off Circuits 1 & 3.
Switch 2 turns on/off Circuits 2 & 4.



Switch 1 turns on/off all four Circuits.



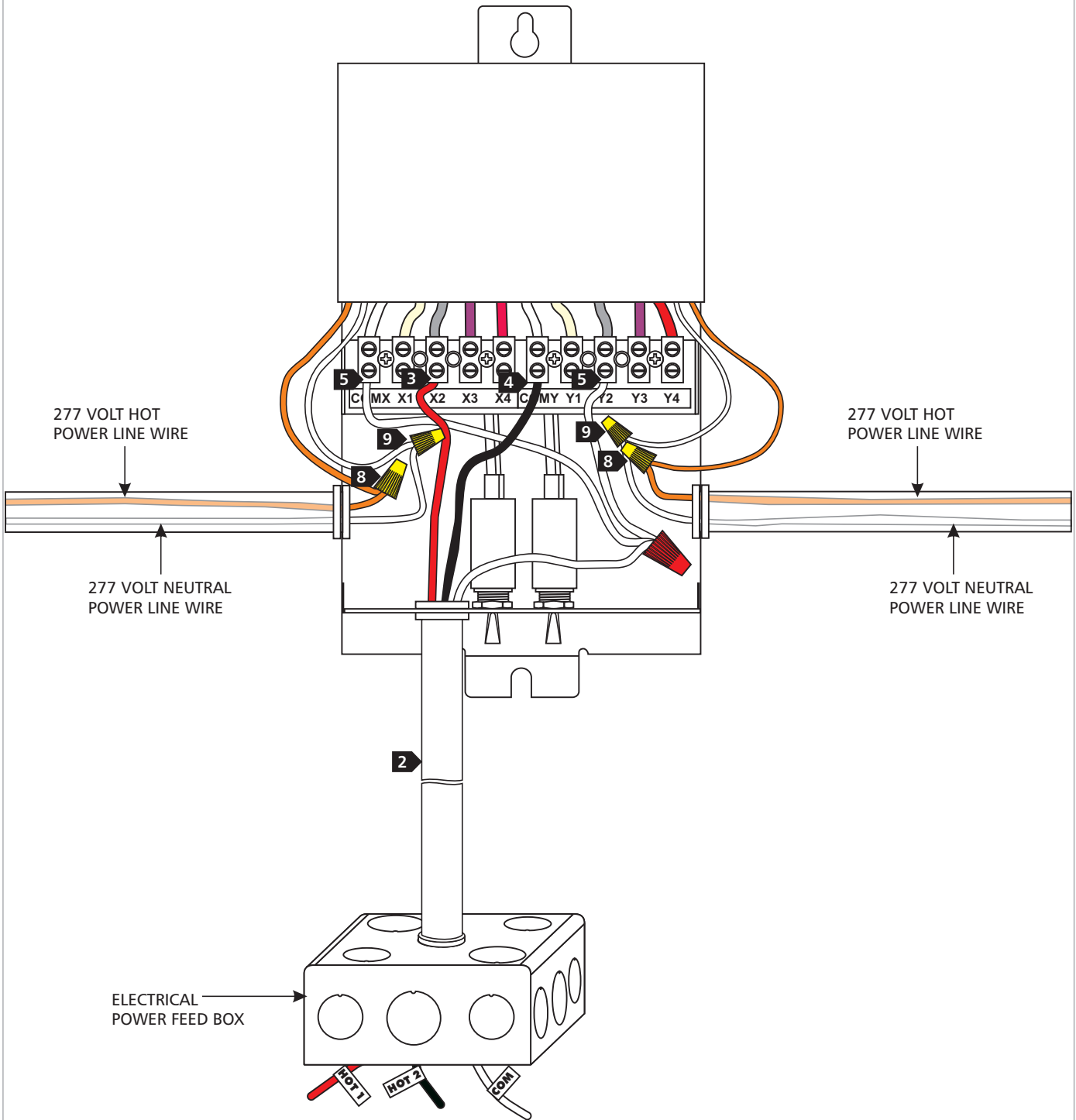
Each Circuit turns on/off by its switch.

4 Follow "Connect the 277 Volt Wires" steps on page 5 or 7.

AT2X300 Wiring:

NOTE: This type of low voltage wiring is for Two-Circuit MonoRail single post power feed.

2A



Connect the 12 Volt Low Voltage Wires

- 1 Remove transformer cover by loosening the two Phillips screws on the side of the transformer.
- 2 Install low voltage wires from the transformer to the electrical power feed box to which the power feed canopy will be attached. For best performance, use the wire size from the low voltage wire size table below.

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% drop in voltage based on 300 watt loads. Lengths are the distance from the transformer to the system power feed connector.

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

- 3 Insert one low voltage wire into the "X2" terminal (default) and tighten the screw firmly. Mark this low voltage wire in the electrical power feed box as "HOT 1".
- 4 Insert the second low voltage wire into the "COMY" terminal (default) and tighten the screw firmly. Mark this low voltage wire in the electrical power feed box as "HOT 2".
- 5 Cut two short pieces of low voltage wires (THHN). Insert one short low voltage wire into "COMX" terminal (default) and the other one into "Y2" terminal (default) and tighten the screws. Connect these two short wires to the third low voltage wire with a wire nut. Mark this low voltage wire in the electrical power feed box as "COM".
- 6 Measure the voltage at the primary power line coming into the transformer. If the voltage is not in the range of 255-277 volt, then pick the proper terminal tap using the "Terminal Tap Table" to reconnect the low voltage wire that was connected to "X2" and the short wire that was connected to "Y2" terminal taps.

TERMINAL TAP TABLE		
PRIMARY POWER LINE VOLTAGE	TERMINAL TAP TO BE USED	TERMINAL TAP TO BE USED
230-239	X4	Y4
240-254	X3	Y3
255-277	X2	Y2
277-290	X1	Y1

Connect the 277 Volt Wires

- 7 Turn off the electrical power at panel.
- 8 Connect the 277V orange transformer wire to the hot power line wire with a wire nut.
- 9 Connect the 277V white transformer wire to the neutral power line wire with a wire nut.
- 10 Turn on the electrical power at panel.

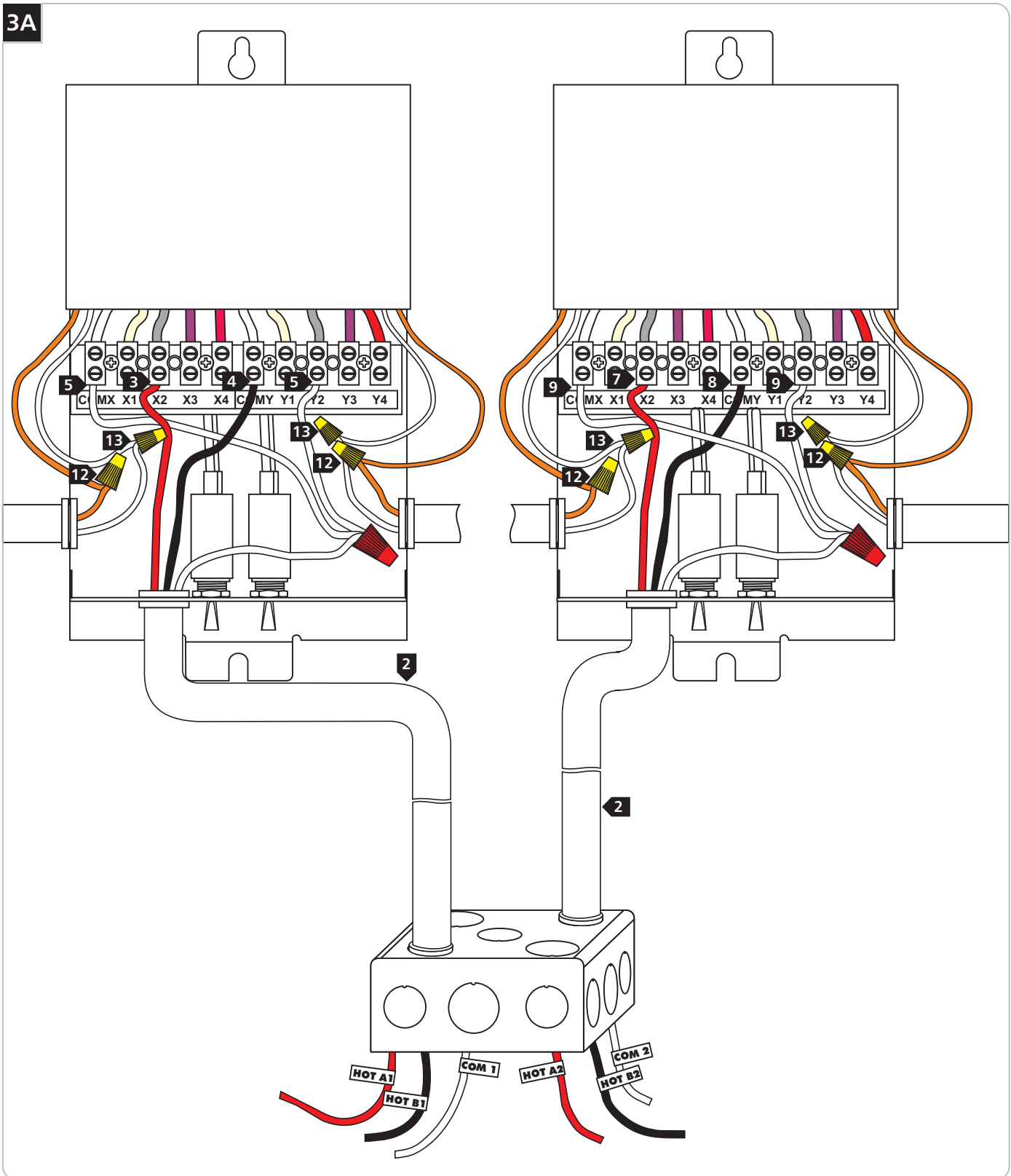
Check The System

- 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 system must be at least 80% loaded and the voltmeter should read between 11V - 12V ~AC. If the voltage does not fall in this range, call Tech Lighting "Technical Support" at 847-410-4606.
- 2 Operate the system for five minutes. On the low voltage side, all electrical connection spots should be cool to the touch. If a connection is hot to the touch, retighten the connection and check to ensure that the temperature decreases.
- 3 Replace the transformer cover and tighten the two Phillips screws on the sides of the transformer.

AT4X300 Wiring:

NOTE: This type of low voltage wiring is for Two-Circuit MonoRail dual post power feed.

3A



Connect the 12 Volt Low Voltage Wires

- 1 Remove transformer cover by loosening the two Phillips screws on the side of the transformer.
- 2 Install low voltage wires from the transformer to the electrical power feed box to which the power feed canopy will be attached. For best performance, use the wire size from the low voltage wire size table below.

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

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

For the Left Transformer

- 3 Insert one low voltage wire into the "X2" terminal (default) and tighten the screw firmly. Mark this low voltage wire in the electrical power feed box as "HOT A1".
- 4 Insert the second low voltage wire into the "COMY" terminal (default) and tighten the screw firmly. Mark this low voltage wire in the electrical power feed box as "HOT B1".
- 5 Cut two short pieces of low voltage wires (THHN). Insert one short low voltage wire into "COMX" terminal (default) and the other one into "Y2" terminal (default) and tighten the screws. Connect these two short wires to the third low voltage wire with a wire nut. Mark this low voltage wire in the electrical power feed box as "COM 1".
- 6 Measure the voltage at the primary power line coming into the transformer. If the voltage is not in the range of 255-277 volt, then pick the proper terminal tap using the "Terminal Tap Table" to reconnect the low voltage wire that was connected to "X2" and the short wire that was connected to "Y2" terminal taps.

TERMINAL TAP TABLE		
PRIMARY POWER LINE VOLTAGE	TERMINAL TAP TO BE USED	TERMINAL TAP TO BE USED
230-239	X4	Y4
240-254	X3	Y3
255-277	X2	Y2
277-290	X1	Y1

For the Right Transformer

- 7 Insert one low voltage wire into the "X2" terminal (default) and tighten the screw firmly. Mark this low voltage wire in the electrical power feed box as "HOT A2".
- 8 Insert the second low voltage wire into the "COMY" terminal (default) and tighten the screw firmly. Mark this low voltage wire in the electrical power feed box as "HOT B2".
- 9 Cut two short pieces of low voltage wires (THHN). Insert one short low voltage wire into "COMX" terminal (default) and the other one into "Y2" terminal (default) and tighten the screws. Connect these two short wires to the third low voltage wire with a wire nut. Mark this low voltage wire in the electrical power feed box as "COM 2".
- 10 Measure the voltage at the primary power line coming into the transformer. If the voltage is not in the range of 255-277 volt, then pick the proper terminal tap using the "Terminal Tap Chart" to reconnect the low voltage wire that was connected to "X2" and the short wire that was connected to "Y2" terminal taps.

Connect the 277 Volt Wires

- 11 Turn off the electrical power at the panel.
- 12 Connect each 277V orange transformer wire to the hot power line wire(s) with a wire nut.
- 13 Connect each 277V white transformer wire to the neutral power line wire(s) with a wire nut.
- 14 Turn on the electrical power at the panel.

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 system must be at least 80% loaded and the voltmeter should read between 11V - 12V ~AC. If the voltage does not fall in this range, call Tech Lighting "Technical Support" at 847-410-4606.
- 2 Operate the system for five minutes. On the low voltage side, all electrical connection spots should be cool to the touch. If a connection is hot to the touch, retighten the connection and check to ensure that the temperature decreases.
- 3 Replace the transformer covers and tighten the two Phillips screws on the sides of each transformer.

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 to be used with the corresponding system.

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

The system is "ETL" listed for USA and Canada only when all the products used are supplied by Tech Lighting.

It is important to wire the remote transformer for the system as described in these instructions.

Load the circuit of the remote transformers to no more than the maximum rated capacity as specified.

SAVE THESE INSTRUCTIONS!



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