MAGNETIC REMOTE TRANSFORMER INSTALLATION GUIDE

stone LIGHTING

150w, 300w, 600w, 12V Remote Multitap Transformers.

1. Securely mount transformer to desired location using the mounting tabs located on the top and bottom of the transformer.
2. Turn the line voltage power off at the electrical breaker panel.
3. Remove the front cover of the remote transformer by loosening the two side Philips screws.
4. Remove the desired knockouts on the front or side of the transformer.
5. Install conduit and 120VAC wires from the transformer to the desired line voltage circuit.
6. Connect the black transformer wire to the line voltage HOT using wire nuts. Do not use crimp style wire nuts.
7. Connect the white transformer wire to the line voltage NEUTRAL using wire nuts. Do not use crimp style wire nuts.
8. Install conduit and low voltage wires from the transformer to the remote power feed junction box.
9. Use the **VOLTAGE DROP TABLE** to determine appropriate wire gauge.
10. Connect one of the low voltage wires into to the terminal marked "COM". Securely tighten using a flat head screw.
Important: make sure the low voltage connection is tight to avoid overheating connections.
11. Based on the distance and the secondary wire gauge, use the **VOLTAGE DROP TABLE** to determine what terminal tap voltage to use.
12. After selecting the appropriate tap voltage in step 8, insert the remaining low voltage secondary wire into the selected terminal. Securely tighten using a flat head screw. Important: make sure the low voltage connection is tight to avoid overheating connections.
13. Turn the line voltage power on at the electrical breaker panel.
14. Verify the secondary side circuit breaker on the remote transformer front panel is in the on position.
15. Install lighting system and connect to remote power feed canopy.
16. Verify the lighting system voltage is between 11.2VAC to 11.7VAC (21.6VAC to 23.5VAC).
17. Allow the entire system to operate for a minimum of ten minutes. Verify the secondary connections at the remote transformer and on the lighting system itself. The connections should not be excessively hot to the touch. If any connection is hot, than turn the system off and reconnect and tighten connection.
18. Replace the transformer front cover and tighten side screws.

12V VOLTAGE DROP TABLE

OUTPUT CURRENT	12V TAP 1	13V TAP 2	14V TAP 3	15V TAP 4
25 amps	1ft to 7ft	1ft to 8ft	9ft to 16ft	17ft to 25ft
	1ft to 11ft	1ft to 13ft	14ft to 25ft	26ft to 40ft
	1ft to 18ft	1ft to 20ft	22ft to 43ft	44ft to 64ft
12.5 amps	1ft to 20ft	10ft to 25ft	26ft to 42ft	43ft to 58ft
	1ft to 32ft	16ft to 40ft	41ft to 69ft	70ft to 92ft
	1ft to 51ft	25ft to 65ft	66ft to 109ft	110ft to 147ft

LOW-VOLTAGE WIRE SIZE TABLE

Use to determine the correct THHN wire size for a recommended 3 percent drop in voltage at the specified wattage.

The length shown is the length of wire from the transformer to the power feed.

12 Volt	5 ft.	6-15 ft.	16-20 ft.	21-40 ft.	41-60 ft.	61-90 ft.
150 Watt	#12 GA	#8 GA	#6 GA	#4 GA	#2 GA	#1 GA

LOW-VOLTAGE WIRE SIZE TABLE

Use to determine the correct THHN wire size for a recommended 3 percent drop in voltage at the specified wattage.

The length shown is the length of wire from the transformer to the power feed.

24 Volt	5 ft.	6-15 ft.	16-20 ft.	21-40 ft.	41-60 ft.	61-90 ft.
300 Watt	#14 GA	#12 GA	#10 GA	#6 GA	#6 GA	#4 GA

Remote Transformer Selection

Remote mounting the transformer provides a clean minimalist look that will not detract from the beauty of the space. Also, remote mounting the transformer is the only way to guarantee a noise free installation. The transformer should be installed in an accessible remote location such as a closet. Once the transformer is installed, electrical wire is used to connect the transformer to a power feed canopy or power bolts. Using the correct gauge wire to connect the transformer to the track is essential for providing the desired voltage at the fixture. The wire gauge used to supply power to the track should be sized according to the distance between the transformer and the track.

Voltage Drop Chart 5-15 feet			D	%	D	%	D	%
D = Distance % = Light Output		AWG	Volts 5'	Light Output	Volts 10'	Light Output	Volts 15'	Light Output
No Dimmer	Tap #1	# 10	12.0	100%	11.7	92%	11.5	85%
No Dimmer	Tap #1	# 8	12.1	103%	11.9	98%	11.8	94%
No Dimmer	Tap #2	# 10	12.5	116%	12.3	108%	12.0	100%
No Dimmer	Tap #2	# 8	12.6	120%	12.5	115%	12.3	110%
With Dimmer	Tap #2	# 10	12.0	100%	11.7	92%	11.5	85%
With Dimmer	Tap #2	# 8	12.1	103%	11.9	98%	11.8	94%

stone LIGHTING

Remote Transformer Selection

Voltage Drop Chart 20-30 feet			D	%	D	%	D	%
D = Distance % = Light Output		AWG	Volts 20′	Light Output	Volts 25′	Light Output	Volts 30′	Light Output
No Dimmer	Tap #1	# 10	11.2	78%	11.0	72%	10.7	66%
No Dimmer	Tap #1	# 8	11.6	89%	11.5	85%	11.3	81%
No Dimmer	Tap #2	# 10	11.7	92%	11.5	85%	11.2	79%
No Dimmer	Tap #2	# 8	12.2	105%	12.0	100%	11.8	95%
With Dimmer	Tap #2	# 10	11.2	78%	11.0	72%	10.7	66%
With Dimmer	Tap #2	# 8	11.6	89%	11.5	85%	11.3	81%

Voltage Drop Chart 35-45 feet			D	%	D	%	D	%
D = Distance % = Light Output		AWG	Volts 35′	Light Output	Volts 40′	Light Output	Volts 45′	Light Output
No Dimmer	Tap #1	# 10	10.4	60%	10.2	55%	9.9	50%
No Dimmer	Tap #1	# 8	11.2	77%	11.0	73%	10.8	69%
No Dimmer	Tap #2	# 10	11.0	72%	10.7	66%	10.4	61%
No Dimmer	Tap #2	# 8	11.7	91%	11.5	86%	11.4	82%
With Dimmer	Tap #2	# 10	10.4	60%	10.2	55%	9.9	50%
With Dimmer	Tap #2	# 8	11.2	77%	11.0	73%	10.8	69%

Voltage Drop Chart 50-60 feet			D	%	D	%	D	%
D = Distance % = Light Output		AWG	Volts 50′	Light Output	Volts 55′	Light Output	Volts 60′	Light Output
No Dimmer	Tap #1	# 10	9.7	46%	9.4	41%	9.1	37%
No Dimmer	Tap #1	# 8	10.7	66%	10.5	62%	10.4	59%
No Dimmer	Tap #2	# 10	10.2	55%	9.9	50%	9.7	46%
No Dimmer	Tap #2	# 8	11.2	78%	11.1	74%	10.9	71%
With Dimmer	Tap #2	# 10	9.7	46%	9.4	41%	9.1	37%
With Dimmer	Tap #2	# 8	10.7	66%	10.5	62%	10.4	59%