



Recessed and Trac Lighting

INSTALLATION INSTRUCTIONS

Magnetic Remote Mounted Transformers

TL553N-277-BL-24V, 24 volt, 250 watt, single output

TL551N-277-BL-24V, 24 volt, 480 watt, single output

TL552N-277-BL-24V, 24 volt, 960 watt, dual output

SAVE THESE INSTRUCTIONS

IMPORTANT SAFEGUARDS:

When using electrical equipment, always adhere to basic safety precautions including the following:

IMPORTANT SAFETY / OPERATING INSTRUCTIONS

1. Read all instructions.
2. Do not conceal or extend exposed conductors through a building wall.
3. To reduce the risk of fire and burns, do not install this lighting system where the exposed bare connectors can be shorted or contact any conductive materials.
4. To reduce the risk of fire and overheating, make sure all connections are tight.
5. Do not install any luminaire closer than 6 inches (15.25cm) from any curtain, or similar combustible material.
6. Turn off electrical power before modifying the lighting system in any way.
7. These transformers are intended for use with Juno Trac 12 Series or Trac 12/25 Series or Flex 12 Series low voltage lighting system only.
8. Install transformer on a wall or other vertical surface.
9. Do not install in confined or unventilated areas that may entrap heat.
10. Do not allow transformer to come in contact with insulation.
11. Do not install in wet or damp locations or outdoors.
12. Do not install in a non-accessible location. Units are equipped with a manually resettable magnetic circuit breaker that will trip in the event of a short circuit or overload condition.
13. Use only 10 or 12 gauge wire to connect the transformer output to the Trac.
14. TL551N-277-BL-24V, TL552N-277-BL-24V, TL553N-277-BL-24V transformers should be dimmed only with dimmers specifically designed for use with magnetic transformers. The dimmer must only be connected to the 277 volt input wires providing power to the transformer.

15. All units are equipped with a terminal block. The inputs are labeled PRI and the outputs labeled SEC.
16. The TL551N-BL-24V and TJ30-24V transformers have one output, while the TL552N-BL-24V and TJ55-24V have two outputs, each capable of delivering 20 amps or 480 watts at 24 volts. The TL553N-BL-24V transformer has one 10.5 amp, 250 watt output. The first output consists of two terminals labeled 12VAC SEC and COM SEC. The second output consists of two additional terminals labeled 12VAC SEC 2 and COM SEC 2.
17. The maximum load applied to each output must not exceed the transformer rating. The load does not need to be balanced on the transformer with two outputs. Since lighter loads result in higher lamp voltage, and lamp voltage should never exceed 11.8 volts, the total load on the transformer typically should not be less than 1/2 of its maximum rated capacity.
18. Connect ground wire to the GND terminal.
19. Applying 277 volts across the COM PRI and 277VAC PRI input terminals will provide nominal 12 volts across the output terminals. Applying 277 volts across the COM PRI and BOOST PRI input terminals will provide nominal 13 volts across the output terminals. Use boost connection only if the voltage at the first lamp is less than 11.0 volts.
20. Do not apply 277 volts across the 277VAC PRI and BOOST PRI input terminals.

INSTALLATION

1. Select a mounting location for the transformer, taking care to observe the above listed safety/operating instructions.
2. Choose the appropriate wire gauge, and determine the proper wire length and transformer input, based on the desired lamp load and the table on the back of this sheet.
3. Mount the transformer and Trac to the desired surface. Run AC power lines to the transformer and output wires from the transformer to the Trac.
4. In order to avoid nuisance tripping of the panel circuit breaker, it is recommended that the use of a high magnetic type circuit breaker be selected for this and all high power, magnetic type transformer loads.
5. Connect the input and output wires to the transformer per the diagram on the case, information provided on this sheet and local electrical codes.
6. Connect the other end of the output wires to the Trac Feed.
7. Ensure that all electrical connections are tight. This step is essential for a reliable installation.
8. Install the lamps into the fixtures and the fixtures onto the Trac.
9. Apply AC power. Confirm that all fixtures function acceptably. Measure the voltage at the first lamp. Confirm that the voltage is between 11.0 and 11.8 volts.

WARRANTY

Juno Lighting Group warrants that its products are free from defects in material and workmanship. Juno Lighting Group's obligation is expressly limited to repair or replacement, without charge, at Juno Lighting Group's factory after prior written return authorization has been granted. This warranty shall not apply to products which have been altered or repaired outside of Juno Lighting Group's factory. This warranty is in lieu of all other warranties, expressed or implied, and without limiting the generality of the foregoing phrase, excludes any implied warranty of merchantability. Also, there are no warranties which extend beyond the description of the product on the company's literature setting forth terms of sale.

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JUNO LIGHTING GROUP
by Schneider Electric



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INSTALLATION INSTRUCTIONS

GUIDELINES FOR A TROUBLE-FREE LOW VOLTAGE INSTALLATION

1. IMPROPER WIRE GAUGE OR POOR WIRE CONNECTIONS CAN RESULT IN PRODUCT FAILURE.

These transformers reduce the line voltage by a factor of five. To achieve the same power levels at the lamp, the output current is increased by the same factor of five. To accommodate these high current levels, heavy gauge wire and secure connections are essential, or product failure can result.

480 WATTS = 277 VOLTS x 1.73 AMPS

480 WATTS = 24 VOLTS x 20 AMPS

2. LAMP VOLTAGE CAN BE AFFECTED BY NUMEROUS FACTORS.

Many factors will affect the voltage delivered to the load. Below is a list of these factors and examples of their affects:

- | | | |
|---|-----------------------|------------------------------------|
| A. Variations in transformer input voltage. | 23.3V @ 277V input | 12.5V @ 291V input (+5%) |
| B. Using the "277V" or "BOOST" transformer input. | 23.3V (277V input) | 24.9V (BOOST input) |
| C. Use of a dimmer to control the transformer. | 23.3V (no dimmer) | 22.2V (with dimmer set at maximum) |
| D. The amount of load applied to the transformer. | 23.3V @ 480W | 24.5V @ 240W |
| E. Length of wire between transformer and trac. | 23.3V @ 10 feet (#12) | 21.3V @ 40 feet (#12) |
| F. Gauge of wire between transformer and trac. | 22.5V (#10 @ 35 feet) | 21.7V (#12 @ 35 feet) |
| G. Transformer operating temperature. | 23.3V room temp. | 22.7V max. temp. |

3. EXCESSIVE LAMP VOLTAGE AND TEMPERATURE CAN DRASTICALLY REDUCE LAMP LIFE.

Lamp life is directly affected by the applied voltage. Excess voltage as little as 1/4 volt over 24 volts can reduce lamp life by as much as 40%. Some of the factors listed above can be chosen, while others cannot, and therefore must be compensated for.

4. CHOOSE THE CORRECT PARAMETERS FOR THE APPLICATIONS

In general, for a fully loaded transformer, use the 277V input and 12 gauge wire for runs from 10 to 30 feet. For runs from 35 to 50 feet, use the BOOST input and 12 gauge wire. For longer runs, use 10 gauge wire and/or decrease the load as described in the table below.

TABLE PREDICTING VOLTAGE AT FIRST LAMP FOR VARIOUS WIRE LENGTHS, GAUGES, INPUT AND LOADS

Distance from Transformer to 1st Lamp	277V INPUT				BOOST INPUT			
	24V, 20A, 480W		24V, 10A, 240W		24V, 20A, 480W		24V, 10A, 240W	
	#12	#10	#12	#10	#12	#10	#12	#10
5	23.668	23.792	24.634	24.696	25.268	25.392	26.434	26.496
10	23.336	23.584	24.468	24.592	24.936	25.184	26.268	26.392
30	22.008	22.752	23.804	24.176	23.608	24.352	25.604	25.976
35	21.676	22.544	23.638	24.072	23.276	24.144	25.438	25.872
40	21.344	22.336	23.472	23.968	22.944	23.936	25.272	25.768
45	21.012	22.128	23.306	23.864	22.612	23.728	25.106	25.664
50	20.680	21.920	23.140	23.760	22.280	23.520	24.940	25.560
55	20.348	21.712	22.974	23.656	21.948	23.312	24.774	25.456
80	18.688	20.672	22.144	23.136	20.288	22.272	23.944	24.936
85	18.356	20.464	21.978	23.032	19.956	22.064	23.778	24.832
90	18.024	20.256	21.812	22.928	19.624	21.856	23.612	24.728
130	15.368	18.592	20.484	22.096	16.968	20.192	22.284	23.896
140	14.704	18.176	20.152	21.888	16.304	19.776	21.952	23.688
220	9.392	14.848	17.496	20.224	10.992	16.448	19.296	22.024

The shaded areas represent the suggested operating range of 22.0 to 23.6 volts at the first lamp on the Trac.

5. A VOLTMETER SHOULD BE USED TO CONFIRM THAT THE PROPER VOLTAGE IS PRESENT

After the installation is complete, a voltmeter should be used to insure that suggested lamp voltages are not being exceeded. The voltage should be measured at the first lamp on the trac. Since some of the factors listed above are constantly changing some allowance should be made for variations in voltage.

Juno suggests that the voltage measured at the first lamp be between 22.0 and 23.6 volts for 24V incandescent lamps.