JUNO®
Recessed and Trac Lighting

INSTALLATION INSTRUCTIONS

Magnetic Remote Mounted Transformers
TF5150BL 12 volt, 150 watt, single output
TF5300BL 12 volt, 300 watt, single output
TF5600BL 12 volt, 600 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 Flex 12 Series or Trac 12/25 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 circuit breaker that will trip in the event of a short circuit or overload condition.
13. Use only 10 or 8 gauge wire to connect the transformer output to the Trac.
14. TF5150BL, TF5300BL and TF5600BL transformers should be dimmed only with dimmers specifically designed for use with magnetic transformers. When used in conjunction with a non-resistive LED load, these transformers should be dimmed using only dimmers qualified for this application by Juno Lighting Group as listed on Juno specification sheet, which can be accessed at www.junolightinggroup.com. Use of dimmers not qualified by Juno Lighting Group for this application can result in flicker, reduced dimming range and erratic performance. The dimmer must only be connected to the 120 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 TF5150BL transformer has one output capable of delivering 12.5 amps or 150 watts. The TF5300BL transformer has one output, while the TF5600BL has two outputs, each capable of delivering 25 amps or 300 watts at 12 volts. 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 for each circuit. 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 120 volts across the COM PRI and 120VAC PRI input terminals will provide nominal 12 volts across the output terminals. Applying 120 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 120 volts across the 120VAC 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 (e.g. Square D no. QOB120HM) 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 ten. To achieve the same power levels at the lamp, the output current is increased by the same factor of ten. To accommodate these high current levels, heavy gauge wire and secure connections are essential, or product failure can result.

300 WATTS = 120 VOLTS x 2.5 AMPS 300 WATTS = 12 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.	11.7V @ 120V input	12.3V @ 126V input (+5%)
B. Using the “120V” or “BOOST” transformer input.	11.7V (120V input)	12.5V (BOOST input)
C. Use of a dimmer to control the transformer.	11.7V (no dimmer)	11.1V (with dimmer set at maximum)
D. The amount of load applied to the transformer.	11.7V @ 300W	12.3V @ 150W
E. Length of wire between transformer and trac.	11.7V @ 5 feet (#10)	10.4V @ 30 feet (#10)
F. Gauge of wire between transformer and trac.	11.1V (#8 @ 30 feet)	10.4V (#10 @ 30 feet)
G. Transformer operating temperature.	11.7V room temp.	11.4V 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 12 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 compensulated for.

4. CHOOSE THE CORRECT PARAMETERS FOR THE APPLICATIONS
In general, for a fully loaded transformer, use the 120V input and 10 guage wire for runs up to 15 feet. For runs from 15 to 25 feet, use the BOOST input and 10 guage wire. For longer runs, use 8 gauge wire and/or decrease the load as decribed in the table below.

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

Distance from Transformer to 1st Lamp	120V INPUT				BOOST INPUT			
	12V, 25A, 300W		12V, 12.5A, 150W		12V, 25A, 300W		12V, 20.5A, 150W	
	#10	#8	#10	#8	#10	#8	#10	#8
5	11.740	11.854	12.270	12.327	12.540	12.654	13.170	13.227
15	11.220	11.563	12.010	12.181	12.020	12.363	12.910	13.081
20	10.960	11.417	11.880	12.109	11.760	12.217	12.780	13.009
30	10.440	11.126	11.620	11.963	11.240	11.926	12.520	12.863
40	9.920	10.834	11.360	11.817	10.720	11.634	12.260	12.717
50	9.400	10.543	11.100	11.671	10.200	11.343	12.000	12.571
60	8.880	10.251	10.840	11.526	9.680	11.051	11.740	12.426
70	8.360	9.960	10.580	11.380	9.160	10.760	11.480	12.280
80	7.840	9.668	10.320	11.234	8.640	10.468	11.220	12.134
100	6.800	9.085	9.800	10.943	7.600	9.885	10.700	11.796
150	4.200	7.628	8.500	10.214	5.000	8.428	9.400	11.114

The shaded areas represent the suggested operating range of 11.0 to 12.0 volts at the first lamp on the trac. Juno suggests that the voltage measured at the first lamp be between 11.0 and 11.8 volts for 12V incandescent lamps and between 11.4 and 12.0 volts for 12V LED fixtures. Do not exceed 12 volts. A voltmeter should be used to confirm that the proper voltage is present.

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 11.0 and 11.8 volts for 12V incandescent lamps (between 11.4 and 12.0 volts for 12V LED fixtures).