

## Surface Mount Power Units

TF6150E 12 volt, 150 watt, single output

TF6300 12 volt, 300 watt, single 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 bus bar conductors (Flex 12 Trac) through a building wall.
3. Do not install this system in damp or wet locations.
4. 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.
5. Do not install any luminaire closer than 6 inches (15.25 cm) from any curtain, or similar combustible material.
6. To reduce the risk of fire and overheating, make sure all connections are tight.
7. Turn off electrical power before installing or modifying the system in any way.
8. Use 10 or 12 gauge wire to connect the output to the Trac.
9. These transformers are intended for use with Juno Flex 12 Series or Trac 12/25 Series low voltage lighting systems only.

### PARTS LIST

Open the carton and identify all of the following parts:

- |                                    |     |
|------------------------------------|-----|
| (1) Chassis / transformer assembly | (A) |
| (1) Cover                          | (C) |
| (1) Knob                           | (K) |
| (1) Parts bag including:           |     |
| (1) Mounting strap                 | (B) |
| (1) Grommet                        | (G) |
| (2) Nuts, 1/8 inch                 | (N) |
| (1) Nipple, 1/8 x 2 3/4 inch       | (Q) |
| (1) Ground screw                   | (S) |
| (2) Wire nuts                      |     |

### PRODUCT FEATURES

Juno's surface mounted power units are used to convert 120 volts AC to 12 volts nominal to provide power to the Flex 12 trac. The Trac length should not exceed 24 feet in either direction from the feed. The power units are designed to be mounted to a standard ceiling mounted junction box that is adequately supported. They can be used with one or two Pendants, or with the Flexible Feed (Pendants and Flexible Feed sold separately). The power units are capable of supporting up to 20 lbs. They should not be mounted in any location that may entrap heat.

The TF6150E is capable of operating from 50 to 150 watts of lamp load and is dimmable with most higher quality incandescent dimmers. In some cases, dimmers designed for electronic transformers may be necessary for optimal dimming results. The unit has short circuit and overload protection that will automatically reset itself when the short or overload is removed.

The TF6300 is capable of operating from 150 to 300 watts of lamp load and is dimmable only with dimmers specifically designed for magnetic transformers. To protect against an overload or short circuit, the unit contains a circuit breaker that must be manually reset after the short or overload has been removed.

### INSTALLATION

**WARNING: Make sure power is off before assembly**

1. Make sure that the supply wires protrude from the junction box at least 7 inches.
2. Thread the nipple (Q) through the nut (N) and strap (B) with the tapered side away from the nut as shown. Attach the ground screw (S) to the strap.
3. Pass the supply wires from the junction box through the nipple as shown. Secure the strap to the junction box with two screws. Connect the ground wire from the junction box to the ground screw on the strap.
4. Adjust the nipple to protrude 2 inches from the mounting surface and lock in place with the nut.
5. (TF6300 only) Loosen the two wing nuts (W) on the center mounting bracket (M) of the transformer assembly and rotate the bracket out of the way.
6. Pass the supply wires and the nipple through the center of the assembly (A). Raise the assembly to the mounting surface. Place the remaining nut over the supply wires and thread it onto the nipple to hold the assembly in place.
7. Rotate the assembly if necessary to orient the pendant(s) as desired, and finish tightening the nut to secure the assembly in place.
8. Connect the white and black supply wires to the stranded input wires from the assembly with the wire nuts provided.
9. (TF6300 only) Carefully bend the supply wires to the side, rotate the top bracket back in place, and tighten the wing nuts.
10. Install the Pendant Feed or Flexible Feed per the appropriate instructions on the following page.  
----- See steps 11-15 on back. -----
16. Connect the feed wires to the terminal block (TB). CAUTION: For all connections, make sure that the stripped wire is fully inserted into the connector, all strands of copper are inserted in the terminal and all 4 screws are tight.
17. Connect the green ground wire from the assembly to the tab (T) on the inside of the cover (C).
18. (TF6300 only) Make sure that the circuit breaker switch (CB) located on the side of the assembly, is on.
19. Put the cover in place and secure it to the assembly with the knob (K). Install the Trac and fixtures per the instructions included with them.
20. Apply AC power. Confirm that all fixtures function acceptably. Adjust fixtures as desired.

## Surface Mount Power Units

**TF6150E 12 volt, 150 watt, single output**  
**TF6300 12 volt, 300 watt, single output**

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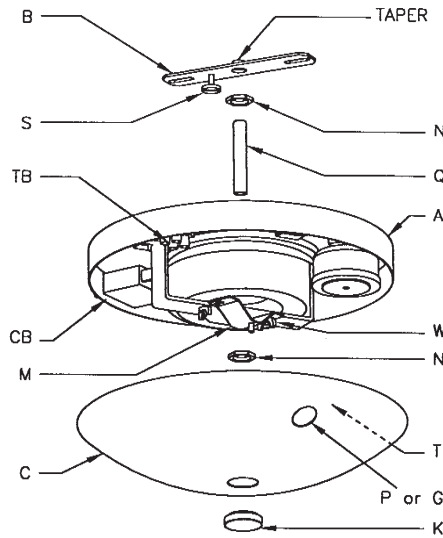
**Flexible Feed, Using:**  
**TF950 Flexible Feed Kit &**  
**TF21 Electrical Feed Cylinder**

**Note:** The Flexible Feed is not intended to support the Trac or any weight, only to provide power to the Trac.

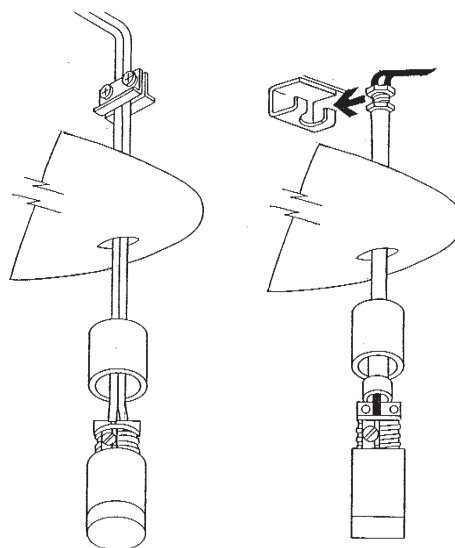
11. Insert tinned end of wires through holes in top of feed cylinder and firmly tighten terminal screws.
12. Pass wires through top cap and screw cap onto feed cylinder.
13. Pass wires through grommet (G) in cover. Determine cord length, leaving some slack and tighten clamp in place.
14. Hook wire onto bracket.
15. Return to step 16 on the previous page.

**Pendant Feed, Using:**  
**TF900 Series Pendant Stem, &**  
**TF21 Electrical Feed Cylinder**

11. Thread two nuts on top of stem leaving space between nuts. Slide top cap onto stem. Install and tighten bushing onto stem.
12. Cut two pieces of 10-ga. solid copper wire to length. Strip one end of each wire 5/8". Tightly bind one wire under each feed cylinder terminal screw.
13. Push wire through stem and screw top cap onto Feed Cylinder as shown. Pass assembly through cover.
14. Carefully bend wires at top of stem 90° and push assembly onto bracket. Tighten nuts.
15. Return to step 16 on the previous page.



TF6300 (shown) TF6150 (similar mounting)



TF950 & TF21

TF900 & TF21



# INSTALLATION INSTRUCTIONS

## GUIDELINES FOR A TROUBLE-FREE LOW VOLTAGE INSTALLATION

- 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.
 

$300 \text{ WATTS} = 120 \text{ VOLTS} \times 2.5 \text{ AMPS}$ 
 $300 \text{ WATTS} = 12 \text{ VOLTS} \times 25 \text{ AMPS}$
- 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.	11.8 V @ 120v input	12.4 V @ 126v input (+5%)
B. Use of a dimmer to control the transformer.	11.8 V (no dimmer)	11.2 V (with dimmer set at maximum)
C. The amount of load applied to the transformer.	11.8 V @ 300w	12.0 V @ 150v
D. Length of wire between transformer and trac.	11.5 V @ 5 feet (#10)	10.8 V 20 feet (#10)
E. Transformer operating temperature	11.8 V room temp.	11.5 V max lamp
- 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 compensated for.

**TABLE PREDICTING VOLTAGE AT FIRST LAMP FOR VARIOUS WIRE LENGTHS AND LOADS USING TF6300 TRANSFORMER**

Distance from Transformer to 1st Lamp	120V INPUT				
	12V, 8.33A, 100W	12V, 12.5A, 150W	12V, 16.67A, 200W	12V, 20.83A, 250W	12V, 25A, 300W
	<b>#10 AWG</b>				
0'	12.067	12.000	11.933	11.867	11.800
1'	12.050	11.975	11.899	11.824	11.749
2'	12.033	11.949	11.865	11.782	11.698
3'	12.016	11.924	11.832	11.739	11.647
4'	11.999	11.898	11.798	11.697	11.596
5'	11.982	11.873	11.764	11.655	11.546
6'	11.965	11.847	11.730	11.612	11.495
7'	11.948	11.822	11.696	11.570	11.444
8'	11.931	11.796	11.662	11.527	11.393
10'	11.897	11.746	11.594	11.443	11.291
12'	11.863	11.695	11.526	11.358	11.189
14'	11.829	11.644	11.458	11.273	11.087
16'	11.795	11.593	11.390	11.188	10.986
20'	11.727	11.491	11.255	11.018	10.782
24'	11.659	11.389	11.119	10.849	10.578
28'	11.592	11.287	10.983	10.679	10.375

The shaded areas represent the suggested operating range of 11.0 to 11.8 volts at the first lamp on the Trac.

- 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.

## 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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