**Installation Instructions**

**NATL-SWEX60/12A**

**12V NEXUS Dimmer & Driver**

**WARNING**: This equipment is intended to be installed only by qualified personnel. The installation must be made in accordance with the current edition to the National Electric Code and all applicable state and local building codes. The final installation must be approved by the appropriate qualified electrical/building inspector(s). Improper installation may result in a fire or electrical hazard. Be sure the electrical power to the circuit has been disconnected before installing this electrical system.

**AVERTISSEMENT**: Cet équipement est destiné à être installé uniquement par du personnel qualifié. L’installation doit être faite en conformité avec l’édition actuelle du Code national de l’électricité et toutes étatiques et locales codes du bâtiment applicables. L’installation finale doit être approuvée par l’inspecteur en électricité / bâtiment qualifié approprié(s). Une mauvaise installation peut entraîner un incendie ou un risque électrique. Soyez sûr de la puissance électrique vers le circuit a été coupée avant l’installation de ce système électrique.

**SAFETY & WARNING:**
- Unlike traditional dimming controls, NEXUS requires unique wiring steps. Read all warnings and installation instructions thoroughly.
- NEC Code 725.136: Class 1 and Class 2 circuits in same enclosure must be separated by a barrier unless Class 2 circuit conductors are installed in accordance with 725.41 Class 1 Circuits.
- Only install compatible 12V Constant Voltage DC fixtures or warranty will be void.
- Do not modify product beyond instructions or warranty will be void.
- Contrairement à des contrôleurs de gradation traditionnels , NEXUS nécessite des étapes uniques de câblage . Lire tous les avertissements et les instructions d’installation à fond .
- NEC code 725,136 : classe 1 et classe 2 circuits dans la même enceinte doivent être séparés par une barrière à moins conducteurs de classe 2 de circuit sont installés conformément à 725,41 classe 1 Circuits .
- Ne pas modifier le produit au-delà des instructions ou garantie sera annulée.

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**PACKAGING CONTENTS**

- NEXUS
- Barrier
- Glossy White Face Plate
- Twisted Wire Connector (4)
- Mounting Screw (2)

**APPROVED LED FIXTURES**

NEXUS is compatible with 12V system by Nora Lighting and others including but not limited to:
- Standard Tape Light

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**TOOLS NEEDED**

- Flat-head Screwdriver
- Phillips-head Screwdriver
- Pliers

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**INSTALLATION INSTRUCTIONS**

1. **TURN POWER OFF AT CIRCUIT BREAKER.**

   **SHOCK HAZARD**! May result in serious injury or death. Turn power off at circuit breaker prior to installation.

2. **DETERMINE LOCATION TO INSTALL COMPONENTS.**

3. **REMOVE EXISTING SWITCH (IF NECESSARY)**
   - Remove trim plate and switch mounting screws.
   - Pull switch from wall.
   - Identify wires connected to switch and mark wires if desired.
   - Disconnect wires from switch.

4. **CHOOSE FACE PLATE FINISH (IF NECESSARY)**

   a. Gently squeeze top and bottom of face plate
   b. Lift face plate from housing
   c. Insert replacement face plate into top housing groove.

   Position housing slider and face plate slider at minimum brightness (bottom level) and pop on face plate.
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NATL-SWEX60/12A
12V NEXUS Dimmer & Driver

INSTALLATION INSTRUCTIONS

5. REMOVING FINS (IF NECESSARY)

It's required to break off dimmer fins when ganging multiple dimmers in same wall box.

Grip with pliers. Bend back and forth until fin breaks off

Fins have been removed

ZERO LOAD DERATING

Unlike standard high voltage AC controls, removing NEXUS fins does not reduce the dimmer's maximum wattage rating.

6. ATTACH VOLTAGE PARTITION (BARRIER)

A voltage barrier is provided, which separates high voltage and low voltage wires in the wall box. Attach before mounting.

NEC CODE 725.136
Class 1 and Class 2 circuits in same enclosure must be separated by a barrier unless Class 2 circuit conductors are installed in accordance with 725.41 Class 1 Circuits. For example, Non-Metallic (NM) cable is considered a Class 1 circuit conductor. Therefore, if both high voltage and low voltage circuits are installed with NM cable then the voltage barrier is not required for installation.

7. WIRE DIMMER

a. Strip wires on dimmer

• GND (Green): To ground wire in box.
• V+ (Red): To low voltage V+
• V- (Blue): To low voltage V-
• N (White): To 120V Neutral
• H (Black): To 120V Line Hot

For shallow boxes, barrier can be shortened. Grip with pliers. Bend back and forth until fin breaks off.

For extra shallow wall boxes it's acceptable to use the dimmer housing as a barrier. Tuck wires on top and bottom sides of dimmer housing.

7/16" (11mm)

VOLTAGE DROP

See VOLTAGE DROP CHARTS at the end of this guide for wire gauge recommendations installed between dimmer and fixture.

IMPORTANT: Verify the voltage of the Nora product matches the Nora NEXUS output. NEXUS LED driver is a 12V DC unit.
**Installation Instructions**

**NATL-SWEX60/12A**

12V NEXUS Dimmer & Driver

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**CONSUMER ACKNOWLEDGMENT**

Nora stands behind its products when they are used properly and according to our specifications. By purchasing our product, the purchaser agrees and acknowledges that lighting design, configuration and installation is a complex process, wherein seemingly minor factors or changes in layout and infield adjustments can have a significant impact on an entire system. Choosing the correct components is essential. Nora is able to work with the original purchaser to make an appropriate product selection to the extent of the limited information that the customer can provide, but it is virtually impossible for Nora to design a system that foresees every unknown factor. For this reason, this Warranty does not cover problems caused by improper design, configuration or installation issues. Any statement from a Nora employee or agent regarding a customer’s bill of goods and/or purchase order is NOT an acknowledgment that the products purchased are designed and configured correctly. The purchaser agrees and acknowledges that it is the customer’s responsibility to adhere strictly to all information contained in the product Specification Sheets.

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**TROUBLESHOOTING**

<table>
<thead>
<tr>
<th>SYMPTOM</th>
<th>COMMON CAUSE</th>
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| Fixture does not illuminate | • Incorrect wiring. Polarity of Low Voltage V+ and V- are reversed  
• Circuit Breaker is OFF or tripped  
• Incorrect voltage pairing of dimmer and fixture. 12V dimmer models will not power a fixture with a higher voltage rating |
| Different fixtures do not dim in sync | Only install 12VDC system on the compatibility list |
| Fixture turns off at low dim level |  
• Fixture strobes/flickers at low dim level  
• Dimmer buzzes excessively |
| Fixture heats up excessively | • Incorrect voltage pairing of dimmer and fixture.  
• Fixture is not compatible |

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**SYSTEM DIAGRAM:**

**SYSTEM WORKING IMPROPERLY?**

Turn power OFF at circuit breaker and verify all connections. Review INSTRUCTIONS and TROUBLESHOOTING or call Nora Technical Support 800.686.6672.

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**OPERATION**

Slide to adjust brightness 100% - 5%

Push to turn ON / OFF
**VOLTAGE DROP CHARTS**

For best performance and lumen output, ensure proper wire gauge is installed to compensate for voltage drop of low voltage circuits.

**Example: 12V Voltage Drop & Wire Length Distance Chart**

<table>
<thead>
<tr>
<th>Wire Gauge</th>
<th>10W 0.83A</th>
<th>20W 1.7A</th>
<th>30W 2.5A</th>
<th>40W 3.3A</th>
<th>50W 2.1A</th>
<th>60W 4.2A</th>
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<td>18 AWG</td>
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<td>17 ft.</td>
<td>11 ft.</td>
<td>8 ft.</td>
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<td>16 AWG</td>
<td>54 ft.</td>
<td>27 ft.</td>
<td>18 ft.</td>
<td>13 ft.</td>
<td>10 ft.</td>
<td>9 ft.</td>
</tr>
<tr>
<td>14 AWG</td>
<td>86 ft.</td>
<td>43 ft.</td>
<td>29 ft.</td>
<td>21 ft.</td>
<td>17 ft.</td>
<td>14 ft.</td>
</tr>
<tr>
<td>12 AWG</td>
<td>134 ft.</td>
<td>68 ft.</td>
<td>45 ft.</td>
<td>34 ft.</td>
<td>27 ft.</td>
<td>22 ft.</td>
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<tr>
<td>10 AWG</td>
<td>199 ft.</td>
<td>99 ft.</td>
<td>66 ft.</td>
<td>49 ft.</td>
<td>39 ft.</td>
<td>33 ft.</td>
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1. Determine load size. Let’s assume load is 54W. Round up to the nearest load.
2. Determine distance from NEXUS to load. Let’s assume the distance is 20 ft.
3. It’s recommended to install 12 AWG to eliminate excess voltage drop.

**12V Voltage Drop & Wire Length Distance Chart**

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**VOLTAGE ADJUSTMENT:**

NEXUS can provide a 1V boost if the fixture is receiving noticeable light degradation.

- a. Pop off face plate as shown in Step 4 of INSTALLATION
- b. Use a small screwdriver to adjust output voltage by turning adjustment dial clockwise.