

NYGOXSXA SE-12-100-400-W1DS

NYGOXSXA SE-12-100-400-W1DS LED Driver Instruction Manual

Constant Current Flicker Dimming LED Driver

1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of the NYGOXSXA SE-12-100-400-W1DS LED Driver. This device is a constant current LED driver designed for flicker-free dimming applications, supporting DALI-2 DT6 and T-PWM dimming protocols. It is intended for use with LED modules only.

2. SAFETY INFORMATION

Please read and understand all safety instructions before installing or operating this device. Failure to follow these instructions may result in electric shock, fire, or other hazards.

- **Qualified Personnel:** Installation and servicing must be performed by qualified electricians in accordance with all national and local electrical codes.
- **Power Disconnection:** Always disconnect power at the circuit breaker before installing, servicing, or removing the driver.
- **Proper Grounding:** Ensure the driver is properly grounded to prevent electric shock.
- **Operating Environment:** Do not expose the driver to moisture, extreme temperatures, or corrosive environments. Ensure adequate ventilation.
- **Load Compatibility:** This driver is designed for constant current LED modules. Ensure the connected LED load is compatible with the driver's output specifications.
- **LED Module Use Only:** This device is specifically designed for use with LED modules. Do not connect other types of loads.

3. PRODUCT OVERVIEW

The NYGOXSXA SE-12-100-400-W1DS LED Driver features selectable output current via DIP switches and supports advanced dimming functionalities.

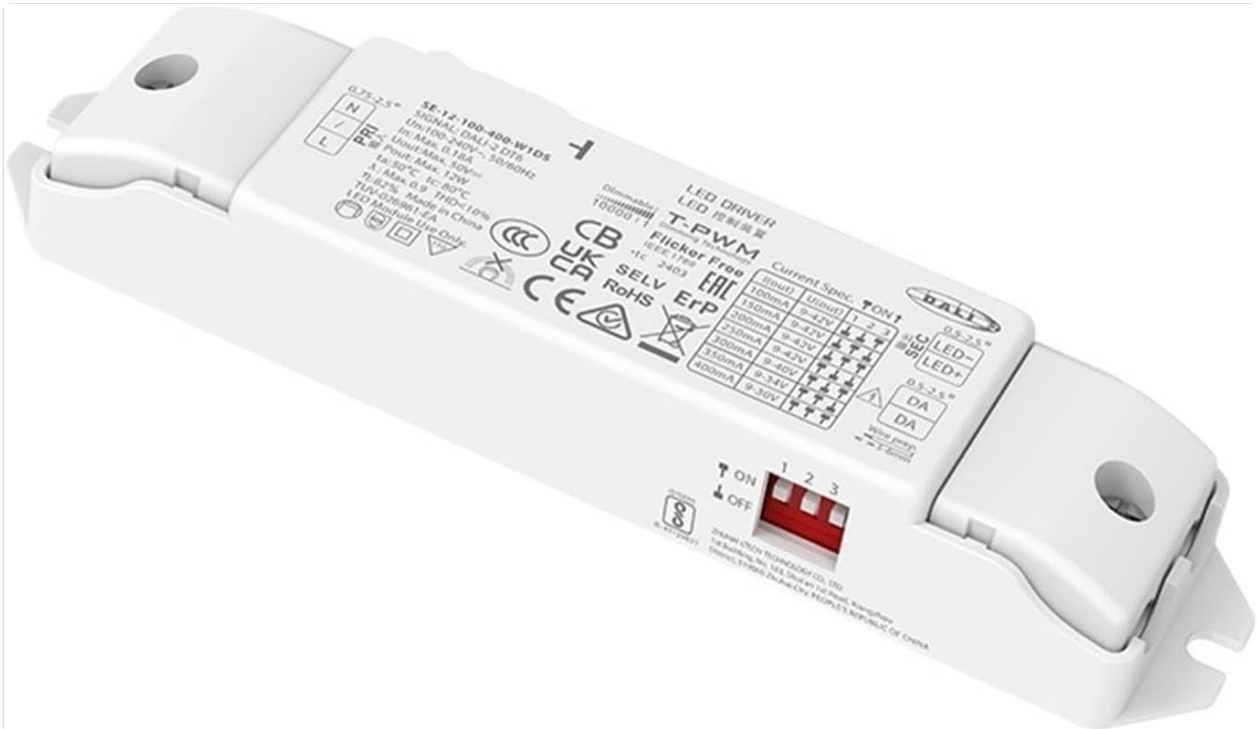


Figure 1: NYGOXSXA SE-12-100-400-W1DS LED Driver. This image shows the top view of the LED driver, highlighting the input/output terminals, product label with specifications, and the current selection DIP switches.

Key Features:

- Constant Current Output
- Flicker-Free Dimming
- DALI-2 DT6 and T-PWM Dimming Support
- Selectable Output Current (100mA to 400mA)
- Wide Input Voltage Range (100-240V AC)

4. SETUP AND INSTALLATION

Follow these steps for proper installation of the LED driver.

4.1 Wiring Connections

The driver features clearly labeled terminals for input power, LED output, and dimming control. Ensure all connections are secure and comply with local electrical codes.

- **Input (PRI):** Connect the AC mains power to the 'N' (Neutral) and 'L' (Line) terminals.
- **Output (SEC):** Connect the LED module to the 'LED+' and 'LED-' terminals. Observe polarity.
- **Dimming (DA):** Connect the DALI or T-PWM control lines to the 'DA' terminals.

Wire Preparation: For all terminals, use wires with a cross-sectional area between 0.5mm² and 2.5mm² (approximately 20-14 AWG). Strip wires to the recommended length as indicated on the device (typically 8-9mm).

4.2 Current Selection (DIP Switches)

The output current of the LED driver can be set using the three DIP switches labeled '1', '2', and '3'. Refer to the table printed on the driver's label for the specific switch combinations corresponding to each output current.

Table 1: Output Current Selection

| Output Current (mA) | Output Voltage Range (V) | DIP Switch 1 | DIP Switch 2 | DIP Switch 3 |
|---------------------|--------------------------|--------------|--------------|--------------|
| 100 | 9-42 | OFF | OFF | OFF |
| 150 | 9-42 | ON | OFF | OFF |
| 200 | 9-42 | OFF | ON | OFF |
| 250 | 9-42 | ON | ON | OFF |
| 300 | 9-40 | OFF | OFF | ON |
| 350 | 9-34 | ON | OFF | ON |
| 400 | 9-30 | OFF | ON | ON |

Important: Adjust DIP switches only when the driver is disconnected from power.

5. OPERATING INSTRUCTIONS

Once installed and configured, the LED driver operates automatically. Dimming control is achieved through external DALI-2 or T-PWM signals connected to the 'DA' terminals.

- **Power On:** After all connections are made and verified, restore power to the circuit. The connected LED module should illuminate.
- **Dimming Control:** Use a compatible DALI-2 or T-PWM dimmer/controller connected to the 'DA' terminals to adjust the brightness of the LED module.
- **Flicker-Free Operation:** The driver is designed to provide stable, flicker-free light output across its dimming range.

6. MAINTENANCE

The NYGOXSXA SE-12-100-400-W1DS LED Driver requires minimal maintenance. Regular inspection can help ensure long-term reliable operation.

- **Cleaning:** Periodically clean the exterior of the driver with a dry, soft cloth. Do not use liquid cleaners or solvents.
- **Inspection:** Annually inspect wiring connections for tightness and signs of wear or damage. Check for any discoloration or unusual odors.
- **Ventilation:** Ensure that the driver's ventilation is not obstructed to prevent overheating.

In case of malfunction, do not attempt to repair the driver yourself. Contact qualified service personnel.

7. TROUBLESHOOTING

If you encounter issues with your LED driver, refer to the following common troubleshooting steps:

- **No Light Output:**

- Verify that power is supplied to the driver.
 - Check all wiring connections (input, output, dimming) for proper contact and polarity.
 - Ensure the LED module is compatible with the selected output current and voltage range.
 - Confirm the LED module itself is functional.
- **Incorrect Brightness or Flickering:**
 - Verify the dimming control signal (DALI-2 or T-PWM) is correctly connected and functioning.
 - Ensure the selected output current via DIP switches matches the requirements of the LED module.
 - Check for loose connections in the dimming circuit.
- **Overheating:**
 - Ensure the driver is installed in an area with adequate ventilation.
 - Verify that the ambient temperature (t_a) does not exceed 50°C.
 - Confirm the LED load does not exceed the driver's maximum output power (12W).

If the problem persists after following these steps, discontinue use and contact the manufacturer or a qualified technician.

8. SPECIFICATIONS

| Parameter | Value |
|---------------------------------|---|
| Model Number | SE-12-100-400-W1DS |
| Input Voltage | 100-240V AC, 50/60Hz |
| Input Current | Max 0.18A |
| Output Power | Max 12W |
| Output Current | Selectable: 100mA, 150mA, 200mA, 250mA, 300mA, 350mA, 400mA |
| Output Voltage Range | 9-42V (varies with current, see Table 1) |
| Efficiency (η) | 82% |
| Operating Temperature (t_a) | 50°C |
| Case Temperature (t_c) | 80°C |
| Dimming Protocols | DALI-2 DT6, T-PWM |
| Flicker Free | Yes |
| Certifications | CB, UKCA, SELV, ErP, RoHS, CE, EAC |
| Dimensions (L x W x H) | 0.39 x 0.39 x 0.39 inches |
| Item Weight | 1.76 ounces (50 Grams) |
| Manufacturer | NYGOXSXA |

9. WARRANTY AND SUPPORT

No specific warranty information is provided with this product. For warranty claims or technical support, please contact the manufacturer, NYGOXSXA, directly or refer to the retailer's return policy.