

Operating Manual

Selection and Connection of DALI DT8 LED Drivers

1. Overview and Purpose of LED Drivers

An LED driver operates from a 230V/50Hz mains voltage, providing a constant current and voltage within a specific range at the output, effectively functioning as a current stabilizer.

Do not confuse a driver with a power supply!*

Drivers are available in constant current and multi-current types. Multi-current drivers feature a DIP switch on the housing, allowing output current adjustments to connect LEDs with different current characteristics or multiple LEDs in parallel.

DT8 (Device Type 8) is designed for managing LED fixtures with adjustable color temperature (MIX, CCT).

2. Selecting an LED Driver

Driver selection should be based on the LED's technical specifications as provided by the LED manufacturer. When replacing a non-dimmable driver with a DALI DT8 dimmable driver, the technical characteristics of the dimmable driver must match those of the non-dimmable driver. Pay attention to the driver's output characteristics (OUTPUT or SEC), specifically:

- Current (measured in mA)
- Voltage range (measured in V)

The current of the dimmable driver must not exceed the current rating of the non-dimmable driver, and the voltage range should match.

Only a qualified technician should select the appropriate driver.

***Warning!** A power supply serves as a voltage stabilizer and is not suitable for individual LEDs without a current-limiting resistor, such as with LED strip lights.

3. Replacing an LED Driver

To replace a non-dimmable driver with a DALI DT8 dimmable driver, disconnect the fixture from the power supply and detach it from the non-dimmable driver by removing the driver cover and extracting wires from the terminals. Connect the DALI DT8 dimmable driver in reverse order. If the non-dimmable driver is non-dismantlable, wires may be clipped with wire cutters or a specialized tool. The DALI DT8 dimmable driver should then be connected to the lighting fixture using soldered wires or special terminals and a DALI DT8 control unit (see diagrams 1, 2, 3). If your fixture has a manual color temperature switch, it should be removed along with the non-dimmable driver.

Replacement must be performed by a qualified specialist.

4. Key Technical Specifications

| | |
|--------------------------------------|----------------------------|
| Model Number | PSL-DL40-3CCT-150-300mA-DE |
| Input Voltage, V | AC100-240 |
| Network Frequency, Hz | 50/60 |
| Power Factor | ≥0.9 |
| Max. Output Power, W | 12 |
| Output Voltage Range, V | 23-40 |
| Output Current, mA | 150/200/250/300 |
| Current Adjustment | Yes |
| Efficiency, % | ≥80 |
| Protection Class | II |
| IP Rating | IP20 |
| Dimming | Yes |
| Color Temperature Adjustment | Yes |
| Control Protocol | DALI |
| Dimming Range, % | 0.1-100 |
| Ripple Coefficient, % | ≤5 |
| Operating Temperature Range (ta), °C | -20...+45 |
| Max. Housing Temperature (tc), °C | ≤65 |
| Dimensions (L*W*H), mm | 131*30*20 |
| Weight, g | 62 |

5. Contents

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6. LED Driver Placement

Place the driver in proximity to the lighting fixture.

Note:

For installations involving multiple drivers, it is recommended to space them at least 200 mm apart and ensure at least 200 mm of free space around each unit for natural ventilation. Use forced ventilation if free space is limited.

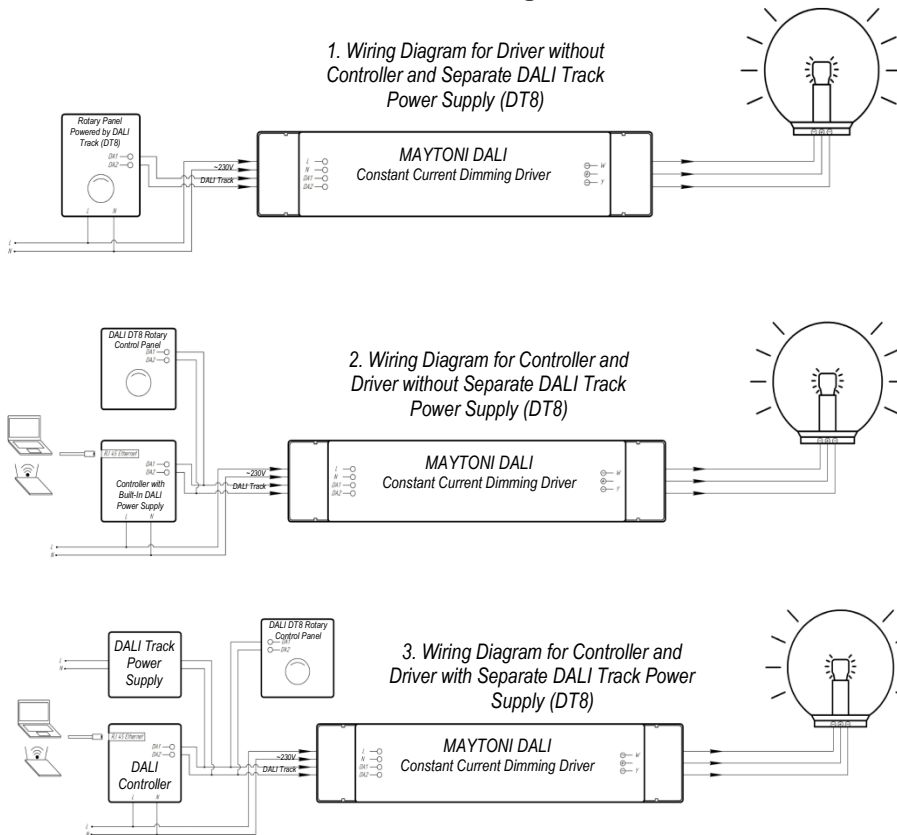
Warning:

Disconnect the power supply before starting to avoid electric shock.

7. Connecting a Driver to the Power Network

- Connect the phase wire to the L (PRI) lead;
- Connect the neutral wire to the N (PRI) lead;
- Connect the + (black) and - (yellow and white) wires to the load, maintaining polarity and color coding. If the driver has no built-in wires, connect the load wires according to the markings on the driver (Y, +, W);
- Connect the DALI track to DA terminals.

7.1. DALI DT8 LED Driver Connection Diagrams



Warning!

All lighting equipment and control units operate via two-way communication on a single DALI track, which should not exceed 300 meters. Use LSOH PVC LS cable for DALI driver connection. The recommended cable cross-section for the DALI track, based on track length, is listed below:

| DALI Track Length, m | Cable Cross-Section, mm |
|----------------------|-------------------------|
| 0-100 | 0.5 |
| 100-150 | 0.75 |
| 150-300 | 1.5 |

⚠ Safety Precautions!

- All installation work must be performed by qualified personnel with the appropriate permits. If necessary, consult a qualified electrician.
- Perform all installation and removal work only when the network is de-energized.
- Do not install drivers in locations where accidental contact with electrical connections may occur.
- Follow all connections per National Electrical Code (NEC).
- The device is not suitable for networks without the standard ~230V 50Hz, as it may malfunction or fail prematurely.

8. Troubleshooting

| Issue | Cause | Solution |
|---------------------------------|--|--|
| Driver does not work | No contact in connections | Check all connections |
| | Incorrect input and output connection to the power supply | Incorrect connection will cause immediate failure. Replace the power supply with a new one |
| | Incorrect polarity in the power supply and load connection | Connect the load, ensuring correct polarity. If the device does not operate, the load may be faulty and needs to be replaced |
| | Driver is defective | Contact the seller or service center |
| | The fixture does not dim | Check DALI track topology, verify continuity |
| | Short circuit detected in the load | Verify all connections for shorts |
| Load does not operate | Load is defective | Contact the seller or service center |
| Housing temperature is too high | Insufficient space for heat dissipation | Check air temperature, ensure proper ventilation |

Warranty

- This product is covered by a 36-month warranty from the date of sale, documented by a proof of purchase.
- Warranty service is provided if the malfunction is due to a manufacturing defect and all handling, transport, and storage guidelines in this manual are followed.
- The warranty is void in cases of misuse, damage post-purchase due to negligence, or violation of usage guidelines, as well as in events beyond control such as fire, flood, electrical surges, and other natural disasters or intentional damage by third parties.