

# DALI 2 & PUSH Dimmable LED Driver

150W Slimline Constant Voltage Series



|                         |                                                               |
|-------------------------|---------------------------------------------------------------|
| Output:                 | Constant Voltage                                              |
| Range:                  | 100-277VAC                                                    |
| PFC design:             | Built-in active PFC function                                  |
| Efficiency:             | Up to 93%                                                     |
| Protections:            | Short circuit/ over load/ over temperature                    |
| Heat dissipation:       | Cooling by free air convection                                |
| Waterproof performance: | IP20 for indoor                                               |
| Dimming function:       | DALI Protocol IEC62386; PUSH-DIM                              |
| Dimming range:          | 0-100% dimming depth: 0.1%                                    |
| PWM output:             | Frequency 4K Hz, reaching the exemption level                 |
| NFC function            | Adjust slightly, read & write output voltage, and set address |
| Application:            | Suitable for LED lighting and moving sign applications        |
| Warranty:               | 5 years warranty                                              |

## Specification

| Model           |                           | TGR-DALI-150W-12-T                                                            | TGR-DALI-150W-24-T            | TGR-DALI-150W-36-T            | TGR-DALI-150W-48-T            |
|-----------------|---------------------------|-------------------------------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Certificate     |                           | CE / UKCA / RoHS                                                              |                               |                               |                               |
| Output          | DC Voltage                | 12V<br>(12-13.5Vadjust by NFC)                                                | 24V<br>(24-26V adjust by NFC) | 36V<br>(36-38V adjust by NFC) | 48V<br>(48-50V adjust by NFC) |
|                 | Voltage Tolerance         | ±0.2V                                                                         |                               |                               |                               |
|                 | Voltage Regulation        | ±2%                                                                           |                               |                               |                               |
|                 | Rated current             | 12.5A                                                                         | 6.25A                         | 4.16A                         | 3.12A                         |
|                 | Rated power               | 150W                                                                          |                               |                               |                               |
|                 | Load Regulation           | 2%                                                                            | 1%                            |                               |                               |
|                 | Standby power             | ≤ 0.5W @120VAC & @230VAC                                                      |                               |                               |                               |
| Input           | Voltage Range             | 110-277VAC                                                                    |                               |                               |                               |
|                 | Frequency Range           | 47 - 63Hz                                                                     |                               |                               |                               |
|                 | Power Factor @ full load  | PF≥0.98@120VAC                                                                | PF≥0.96@230VAC                | PF≥0.95@277VAC                |                               |
|                 | THD(Typ.) @ full load     | ≤10%@120VAC                                                                   | ≤10%@230VAC                   | ≤15%@277VAC                   |                               |
|                 | Efficiency<br>@ full load | 90%@120VAC                                                                    | 91%@120VAC                    | 91%@120VAC                    | 91%@120VAC                    |
|                 |                           | 92%@230VAC                                                                    | 93%@230VAC                    | 93%@230VAC                    | 93%@230VAC                    |
|                 |                           | 92%@277VA                                                                     | 93%@277VAC                    | 93%@277VAC                    | 93%@277VAC                    |
|                 | AC Current (Max.)         | 1.7A                                                                          |                               |                               |                               |
|                 | Inrush Current (Typ.)     | 25.6A, 324us@50%120VAC      73.6A, 83.8us@50%230VAC<br>50.4A, 452us@50%277VAC |                               |                               |                               |
| Leakage current | <0.5mA                    |                                                                               |                               |                               |                               |

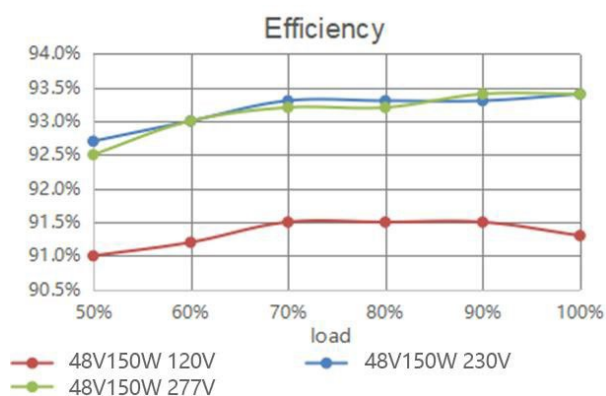
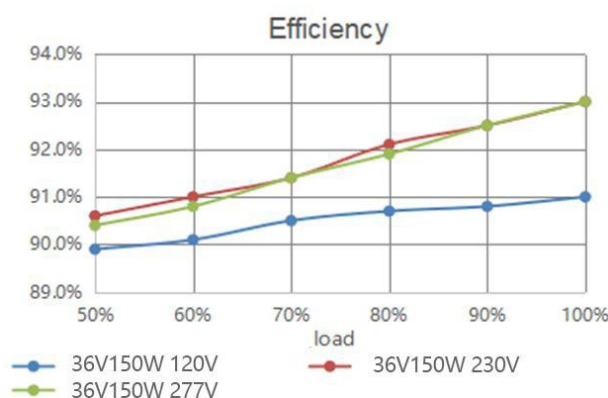
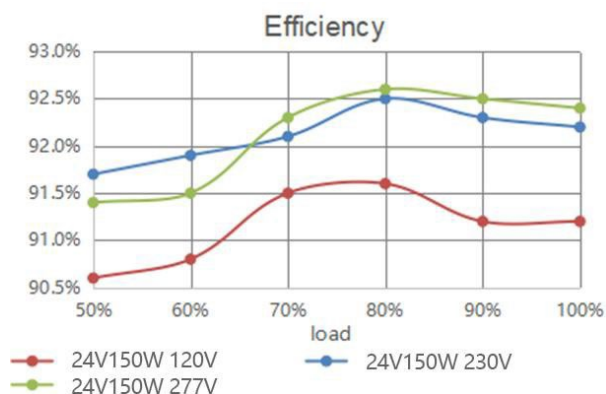
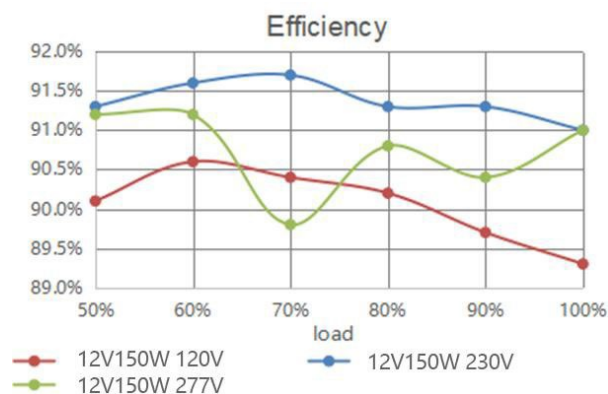
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|                         |                                                                                                      |                                                                                            |
|-------------------------|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| <b>Protection</b>       | Short Circuit                                                                                        | Hiccup mode, recover automatically after fault condition is removed                        |
|                         | Over Load                                                                                            | ≤120%, Hiccup mode, recover automatically after fault condition is removed                 |
|                         | Over temperature                                                                                     | Shell surface temp. 100℃±10℃, output will be off; recovers automatically after temp. drops |
| <b>Environment</b>      | Working TEMP.                                                                                        | -40~+60℃ (see below derating curve)                                                        |
|                         | Working Humidity                                                                                     | 20 - 90%RH non-condensing                                                                  |
|                         | Storage TEM.,Humidity                                                                                | -40 - +80℃, 10 - 95% RH non-condensing                                                     |
|                         | TEMP.coefficient                                                                                     | ±0.03%/℃ (0 - 50℃)                                                                         |
|                         | Vibration                                                                                            | 10~500Hz, 2G 10min./1 cycle, period for 60min. each along X,Y,Z axes                       |
| <b>Safety &amp; EMC</b> | Safety standards                                                                                     | EN61347-1 EN61347-2-13 (EU) & UL8750 UL1310(US)                                            |
|                         | Withstand voltage                                                                                    | I/P-O/P: 3.75KVAC (EU) & I/P-O/P: 1.8KVAC (US)                                             |
|                         | Isolation resistance                                                                                 | I/P-O/P: 00MΩ / 500VDC / 25℃ / 70%RH                                                       |
|                         | EMC immunity                                                                                         | EN61000-4-2,3,4,5,6,11 EN61547                                                             |
|                         | EMC Emission                                                                                         | EN55015 EN61000-3-2,3 (≥50%) (EU) & FCC Part 15 Subpart B(US)                              |
| <b>Others</b>           | Net Weight                                                                                           | 0.35Kg                                                                                     |
|                         | Dimension                                                                                            | 367.8*29.9*22.5mm (L*W*H)                                                                  |
|                         | Packing                                                                                              | 385*270*185mm 50pcs /CTN                                                                   |
| <b>Notes</b>            | 1. All parameters NOT specially mentioned are measured at rated load and 25℃ of ambient temperature. |                                                                                            |
|                         | 2. Tolerance: includes set up tolerance and load regulation .                                        |                                                                                            |

### Efficiency Curve (efficiency vs output load)

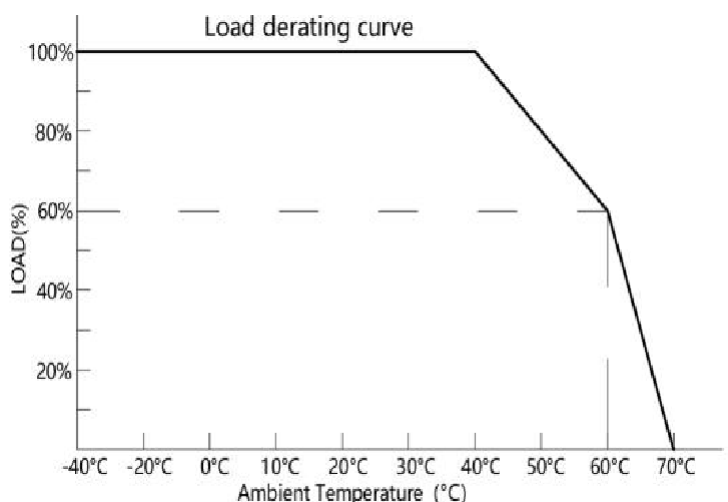


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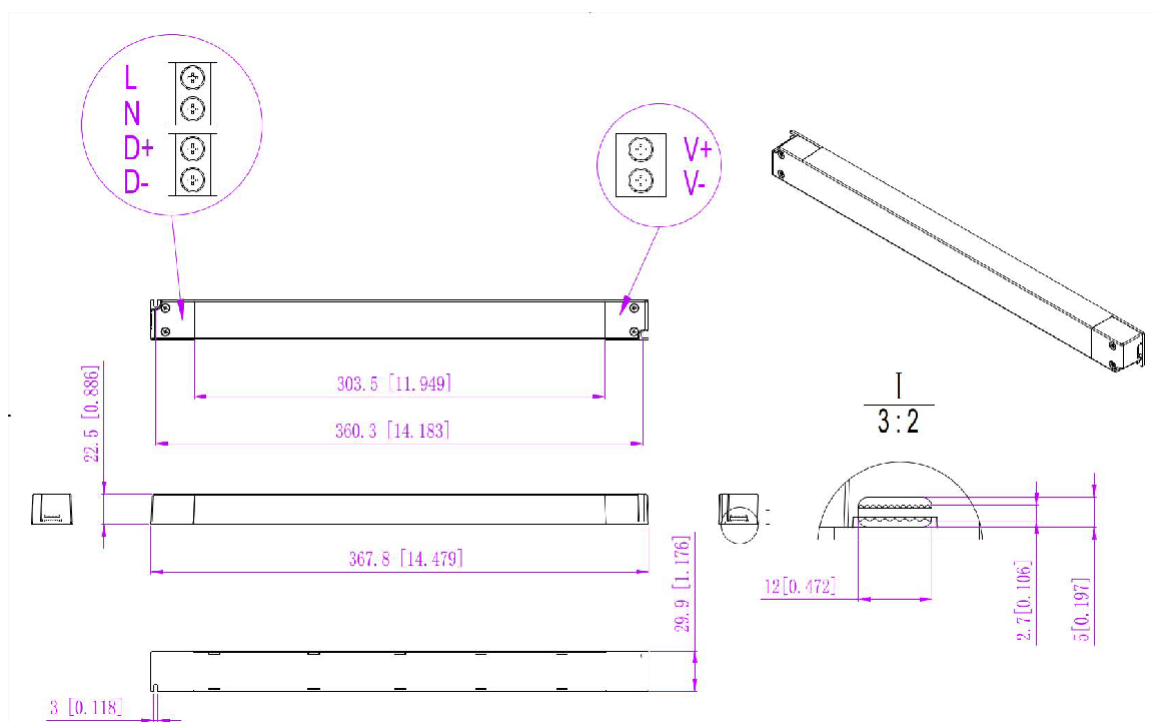


### Derating Curve (output load vs TEMP.)



1. To extend their life, please refer to the Derating Curve and derate according to the temperature.
2. Please note that the rise in temperature of LED fixtures over a long period of time will cause their power to rise.  
Therefore, we recommend the power supply to reserve a certain amount of load to avoid overloading.

### Mechanical Specification



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### 12V&24V&36V&48V Version

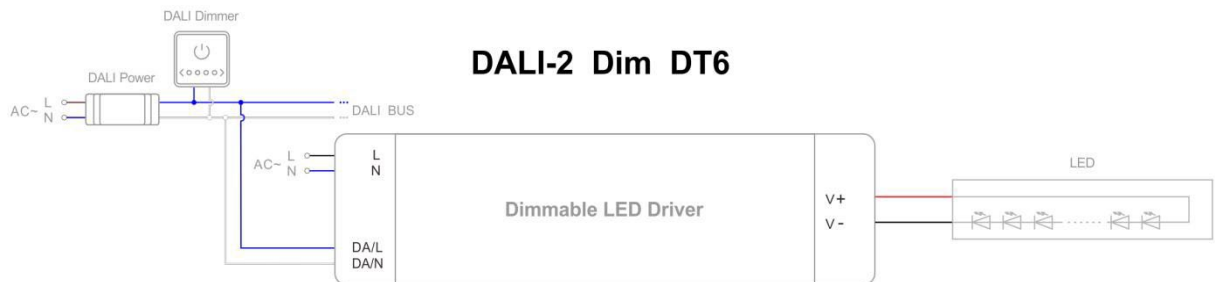
1. Input with DG128 terminals 2P: Live Wire AC (L), Neutral Wire AC(N) .
2. Output LED SEC with DG128 terminals 2P: output Positive (LED+), output negative (LED-). Connected to LED Lamps.
3. DALI or PUSH Dim. terminals with DG128 terminals 2P.  
when DALI dimming, signal dimming DA1, DA2 ( No polar ) connected to the BUS of the DALI Master;  
when PUSH dimming, (N) is connected to AC (N) while (L) is connected to Push dim switch dimmer( L) .
4. Please make sure you connect these correctly otherwise your product will not function correctly and could be damaged.

#### Warm tips:

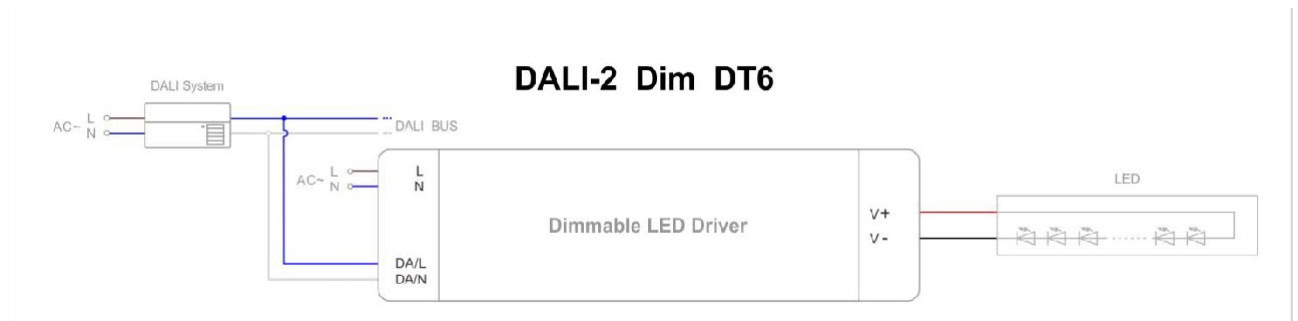
1. Suggested wire diameter: Input 0.75mm<sup>2</sup>- 2mm<sup>2</sup>; Output: 0.5mm<sup>2</sup> - 2mm<sup>2</sup>.
2. Any other requests for, we can customized.

### Dimming Operation and Connecting Diagram ( For European Market )

- Using DALI-2 dimming with DALI power and dimmer



- Using DALI-2 dimming with DALI system and DALI bus

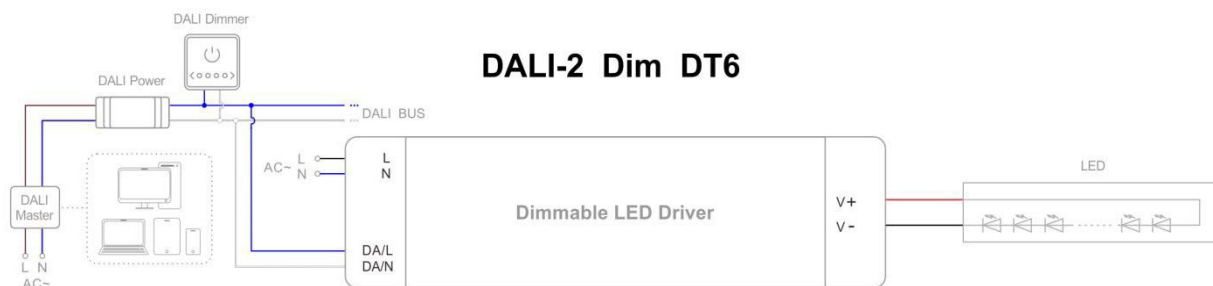


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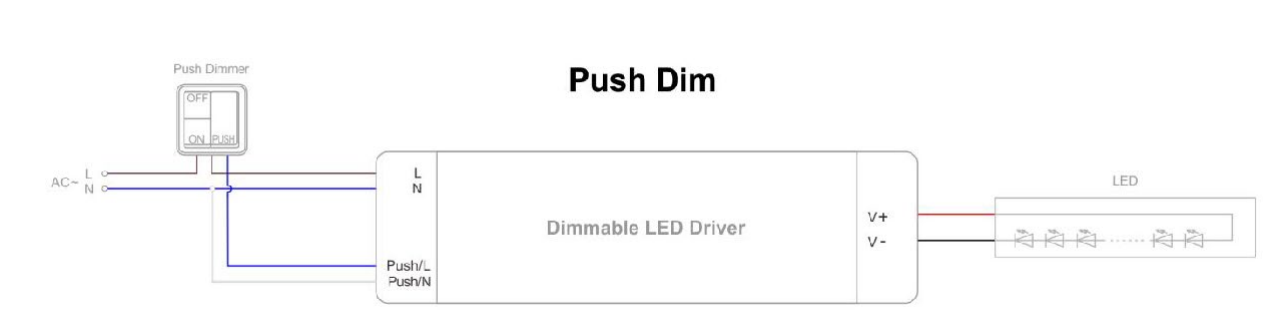
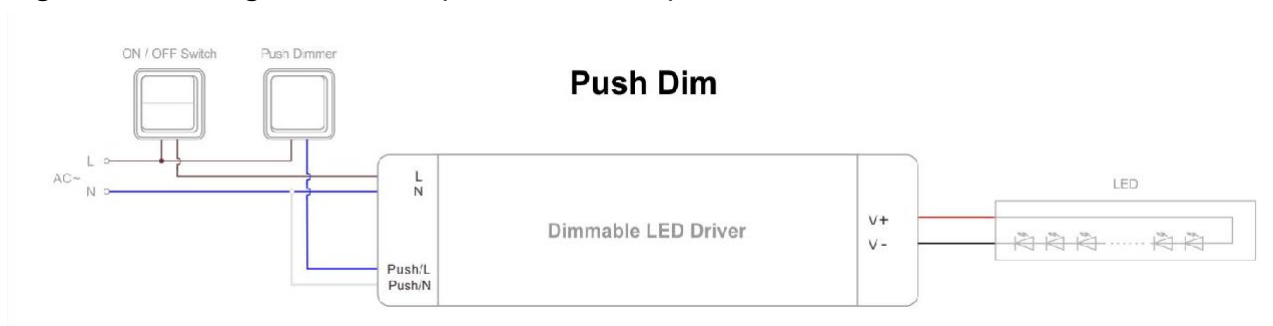
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- Using DALI-2 dimming with intelligent device, DALI master and dimmer



- Using PUSH dimming with dimmer (on & off function)



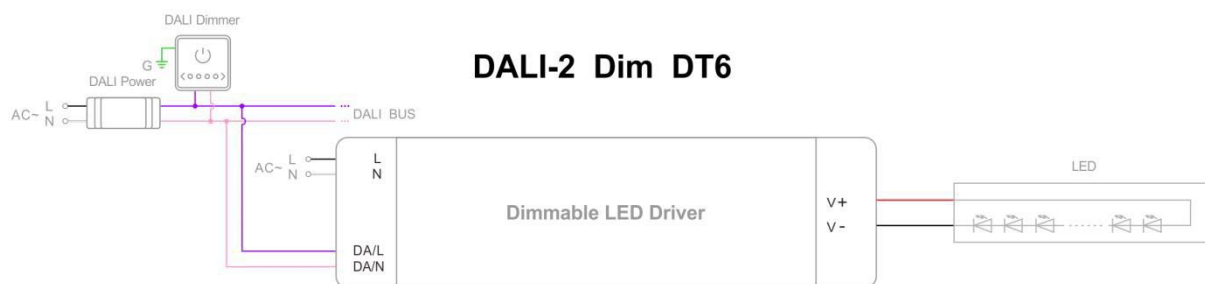
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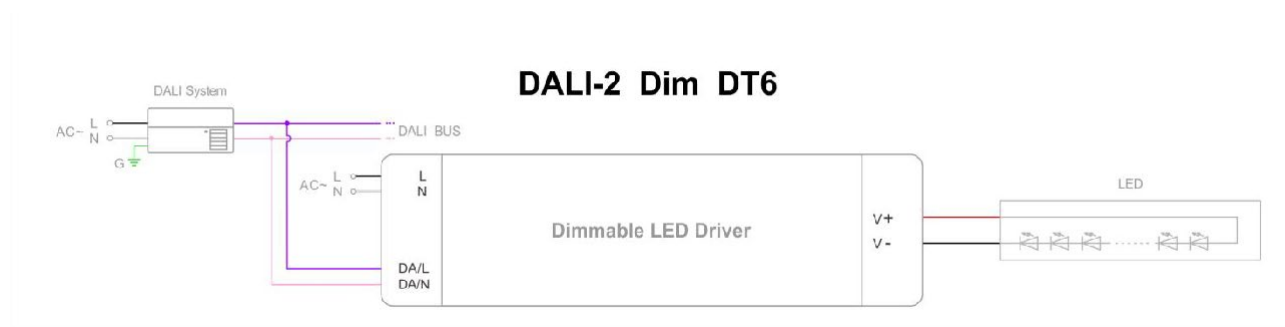


## Dimming Operation and Connecting Diagram ( For North American Market )

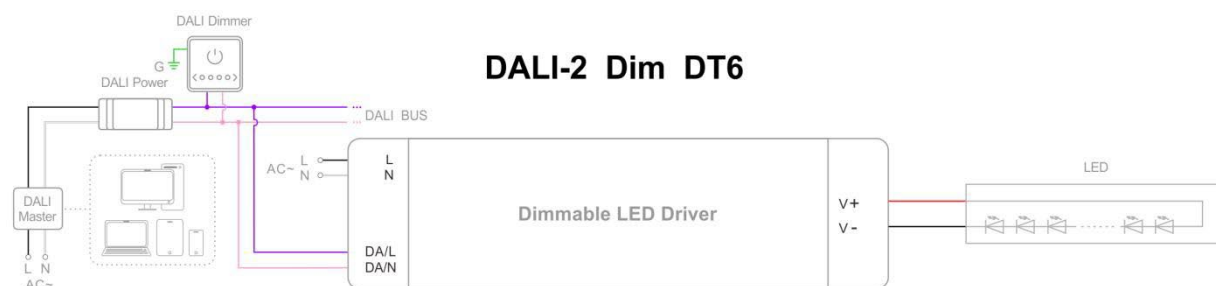
- Using DALI-2 dimming with DALI power and dimmer



- Using DALI-2 dimming with DALI system and DALI bus

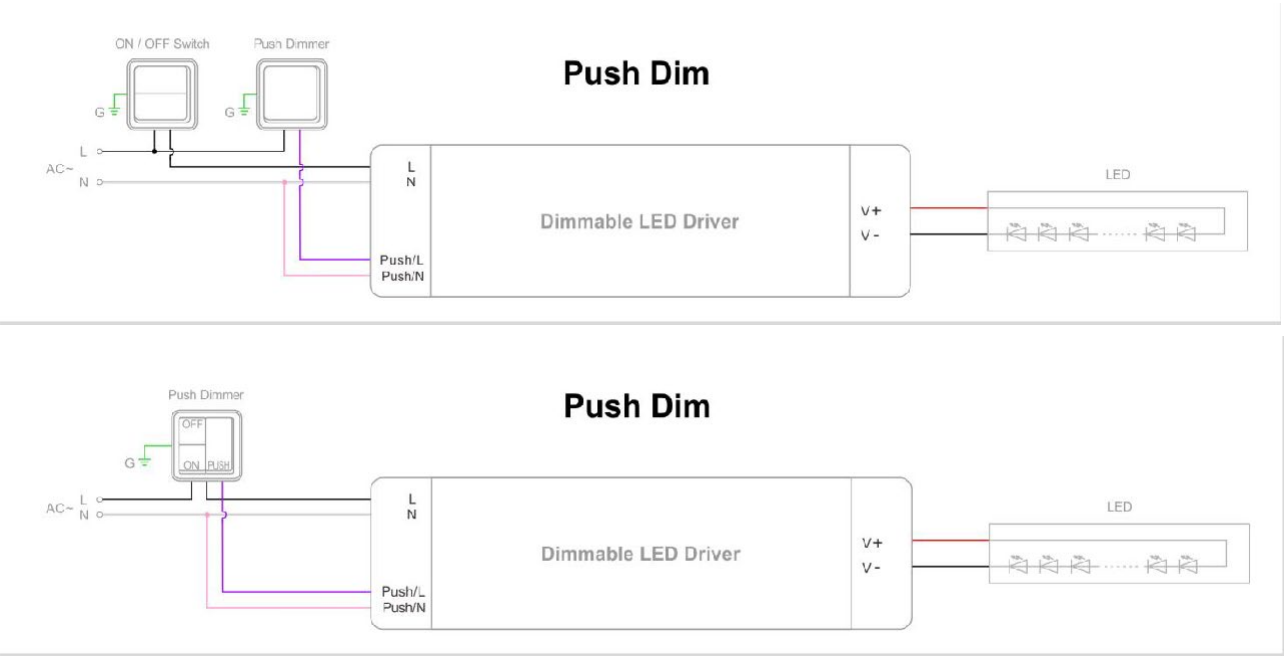


- Using DALI-2 dimming with intelligent device, DALI master and dimmer



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## NFC Function



ProNFC APP



NFC Handheld devices

- Address settings:
- NFC setting address:
- The address can be read and written by a mobile with ProNFC APP or NFC handheld device (NFC read & write device: NFC-RW) by close to the NFC signal area of the DALI driver.

| NFC voltage regulation level |         |         |         |         |         |         |         |         |         |          |
|------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|
|                              | level 1 | level 2 | level 3 | level 4 | level 5 | level 6 | level 7 | level 8 | level 9 | level 10 |
| 12V                          | 12V     | 12.2V   | 12.3V   | 12.5V   | 12.6V   | 12.8V   | 13V     | 13.1V   | 13.3V   | 13.5V    |
| 24V                          | 24V     | 24.2V   | 24.4V   | 24.7V   | 24.9V   | 25.1V   | 25.3V   | 25.6V   | 25.8V   | 26.0V    |
| 36V                          | 36V     | 36.2V   | 36.4V   | 36.7V   | 36.9V   | 37.1V   | 37.3V   | 37.6V   | 37.8V   | 38.0V    |
| 48V                          | 48V     | 48.2V   | 48.4V   | 48.7V   | 48.9V   | 49.1V   | 49.3V   | 49.6V   | 49.8V   | 50.0V    |

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## Instruction

1. This driver should be installed by qualified and professional person.
2. Please make sure the driver is installed with adequate ventilation around it to allow for heat dissipation.
3. Ensure that wiring is correct before test in order to avoid light and power supply damage.
4. If driver Cannot work normally, don't maintain privately.