

DALI-2 & PUSH Dimmable LED Driver - Constant Voltage Output - KV-2C-DP2A Series 300W

KV-2C-DP2A Series 300W (DT8)

Whole Family: KV-XX300-2C-DP2A (XX=12/24/48VDC) [60W 80W 96W 100W 120W 150W 200W 300W 320W 360W]



ICES-005



Class P

TYPE HL

IP66
SELV

RoHS



Features

| | |
|-------------------------|--|
| Output: | Constant Voltage |
| Range: | 110-277VAC |
| 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: | IP66 can be used indoor and outdoor.(EU) Full aluminum protection housing, for dry, damp & wet locations.(US) |
| Design features: | CCT brightness and color temperature adjustment. |
| Dimming function: | DALI-2 & PUSH 2 in 1 dimming |
| Dimming range: | 0.2-100% dimming depth 0.2% |
| Min load: | Min load is 20% |
| Application: | Suitable for LED lighting and moving sign applications |
| Warranty: | 5 years warranty |
| Others: | PWM output, flicker-free dimming |

DALI-2 & PUSH Dimmable LED Driver - Constant Voltage Output - KV-2C-DP2A Series 300W

Specification

| Model | | KV-12300-2C-DP2A | KV-24300-2C-DP2A | KV-48300-2C-DP2A |
|--------------|---------------------------------|---|------------------|------------------|
| Certificate | | UL / cUL / FCC / CE / ENEC / ICES-005 / SAA / Class P / TYPE HL / SELV / ROHS / Reach | | |
| Output | DC Voltage | 12V | 24V | 48V |
| | Voltage Tolerance | ±4% | ±2% | ±2% |
| | Voltage Regulation | ≤0.5% | ≤0.5% | ≤0.5% |
| | Load Regulation | ±2% | ±1% | ±1% |
| | RIPPLE & NOISE (max.) | 260mVp-p | 420mVp-p | 570mVp-p |
| | Overshoot voltage | <10% (full load) | | |
| | Rated current | 25A | 12.5A | 6.25A |
| | Rated power | 300W | | |
| Input | Voltage Range | 110-277VAC | | |
| | Frequency Range | 50 / 60Hz | | |
| | Power Factor (Typ.) @ full load | 0.95 | | |
| | THD(Typ.) @ full load | ≤10%@120VAC ≤10%@230VAC ≤15%@277VAC | | |
| | Efficiency(Typ.) @ full load | ≥88%@120VAC | ≥90%@120VAC | ≥90%@120VAC |
| | | ≥90%@230VAC | ≥92%@230VAC | ≥92%@230VAC |
| | | ≥91%@277VAC | ≥93%@277VAC | ≥93%@277VAC |
| | AC Current (Max.) | 3.5A | | |
| | Standby power | ≤0.5W | | |
| | Inrush Current (Typ.) | 38.8A, 490us @50%Ipeak 120VAC 132A, 31.2us @50%Ipeak 230VAC 68A, 171us @50%Ipeak 277VAC | | |
| | Leakage current | <0.5mA | | |
| Protection | Short Circuit | Shut down o/p voltage, recovers automatically after fault condition is removed | | |
| | Over Load | 105%~110% Hiccup mode, recovers automatically after fault condition is removed. | | |
| | Over temperature | When the ambient temperature exceeds 50 °C ±5 °C, the output is turned off | | |
| Environment | Working TEMP. | -40~+50°C (see below derating curve) | | |
| | Working Humidity | 20 - 95%RH non-condensing | | |
| | Storage TEM.,Humidity | -40 - +80°C,10 - 95% RH non-condensing | | |
| | TEMP.coefficient | ±0.03%/°C(0 - 50°C) | | |
| | Vibration | 10 ~ 500Hz, 5G 12 minutes/cycle, X Y Z axis 72 minutes each | | |
| Safety & EMC | Safety standards | EN61347-1; EN61347-2-13 UL8750; CAN/CSA-C22.2 No.250.13 | | |
| | Withstand voltage | I/P-O/P:3.75KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC (EU) I/P-O/P:1.88KVAC I/P-FG:1.88KVAC O/P-FG:0.5KVAC (US) | | |
| | Isolation resistance | I/P-O/P: 100MΩ/ 500VDC/ 25°C/ 70% RH | | |
| | Surge Immunity Test | AC Power Line: Differential Mode 2KV, Common Mode 4KV | | |
| | EMC Immunity | EN61547; EN61000-4-2,3,4,5,6,11 FCC/ICES do not request this test. | | |
| | EMC Emission | EN55015; EN61000-3-2,3 FCC Part15 Subpart B; ANSI C63.4a-2017; ICES-005 Issue 5 | | |

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| | | |
|---------------|---|------------------------------|
| Others | Net Weight | 1.18KG |
| | Dimension | 302*78*25.1mm(L*W*H) |
| | Packing | 350*300*215mm 20pcs /CTN |
| Notes | 1. Unless otherwise specified, all specifications are measured at 120V input, rated load, and 25°C ambient temperature. 2. Default states: Output voltage level is level 1. (see below NFC voltage regulation level table) Output frequency is 4KHZ. 3. LED driver Meets the harmonic emissions requirements of ANSI C82.77-10. | |

MCB recommendation

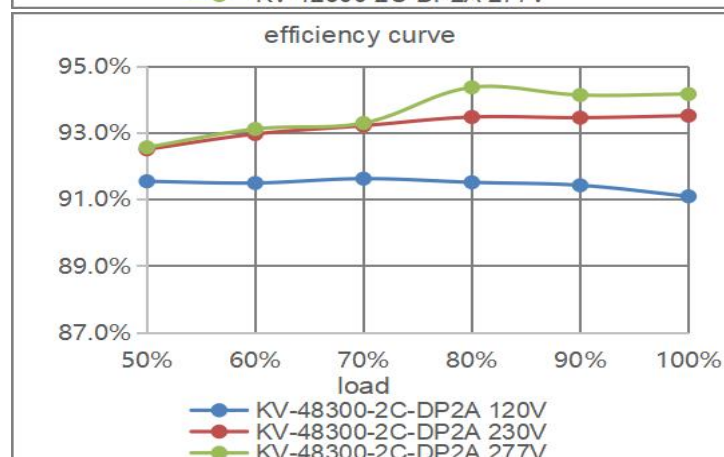
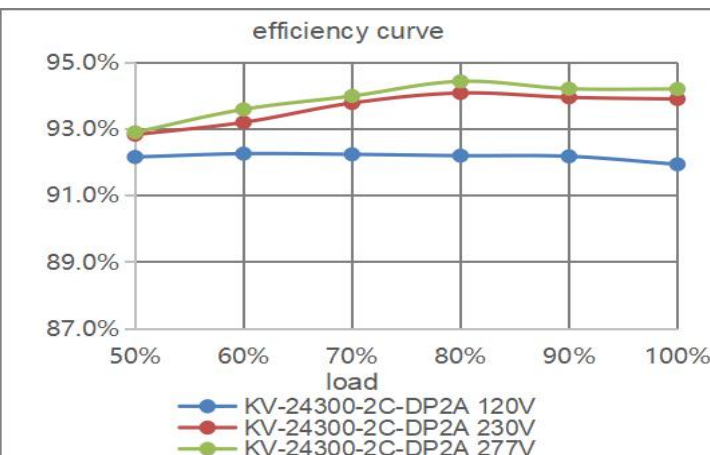
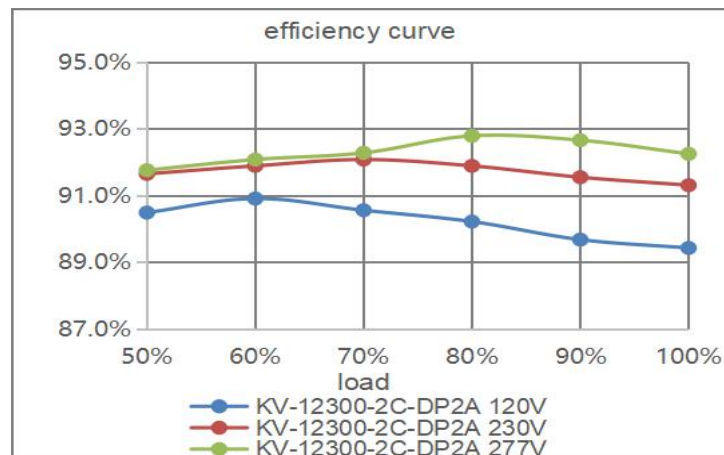
| | | |
|---|-------|--------------------------|
| When the input voltage is 120Vac, the number of LED Driver matched by circuit breakers is as follows: | | |
| MCB Type | Level | The number of LED Driver |
| C type(breaking capacity:6KA) | 10A | 3 |
| | 13A | 4 |
| | 16A | 5 |
| | 20A | 6 |
| | 25A | 8 |
| When the input voltage is 230Vac, the number of LED Driver matched by circuit breakers is as follows: | | |
| MCB Type | Level | The number of LED Driver |
| C type(breaking capacity:6KA) | 10A | 6 |
| | 13A | 7 |
| | 16A | 9 |
| | 20A | 12 |
| | 25A | 15 |
| When the input voltage is 277Vac, the number of LED Driver matched by circuit breakers is as follows: | | |
| MCB Type | Level | The number of LED Driver |
| C type(breaking capacity:6KA) | 10A | 7 |
| | 13A | 9 |
| | 16A | 11 |
| | 20A | 14 |
| | 25A | 18 |

Note:

1. The above quantities of the led drivers connected on the Type C is recommended base on the maximum ambient temperature is 50 °C.
2. The breaker should be selected according to the input rated voltage, input rated current, ambient temperature, and trip characteristic curve.

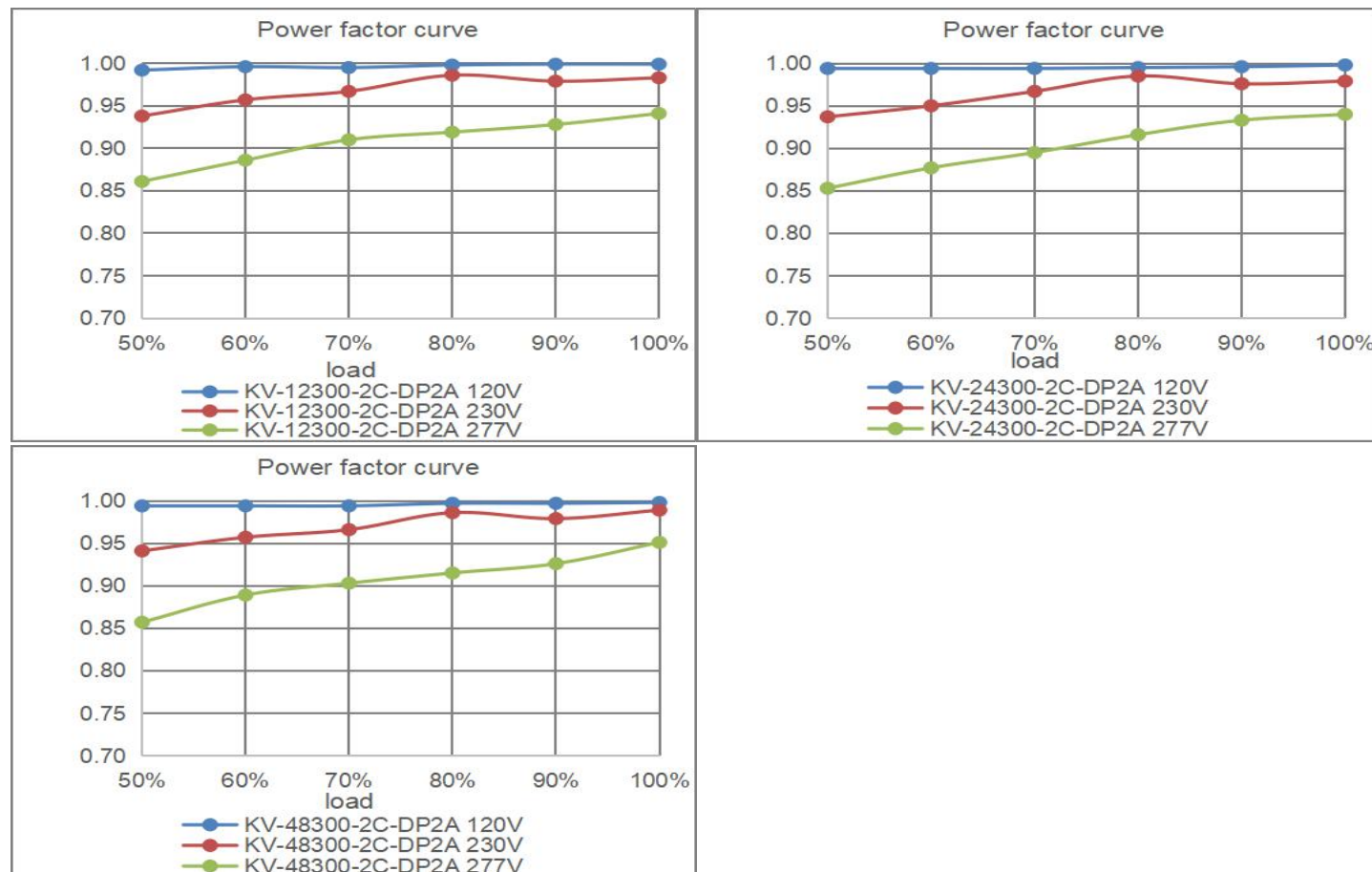
DALI-2 & PUSH Dimmable LED Driver - Constant Voltage Output - KV-2C-DP2A Series 300W

Efficiency Curve (efficiency vs output load)

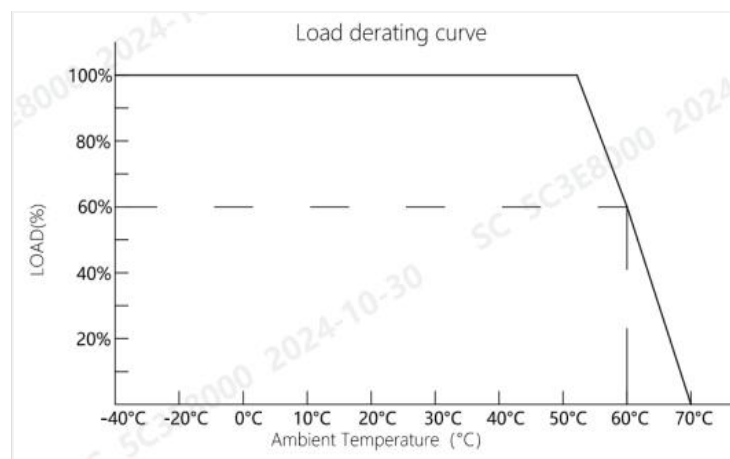


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Power Factor Curve (power factor vs output load)



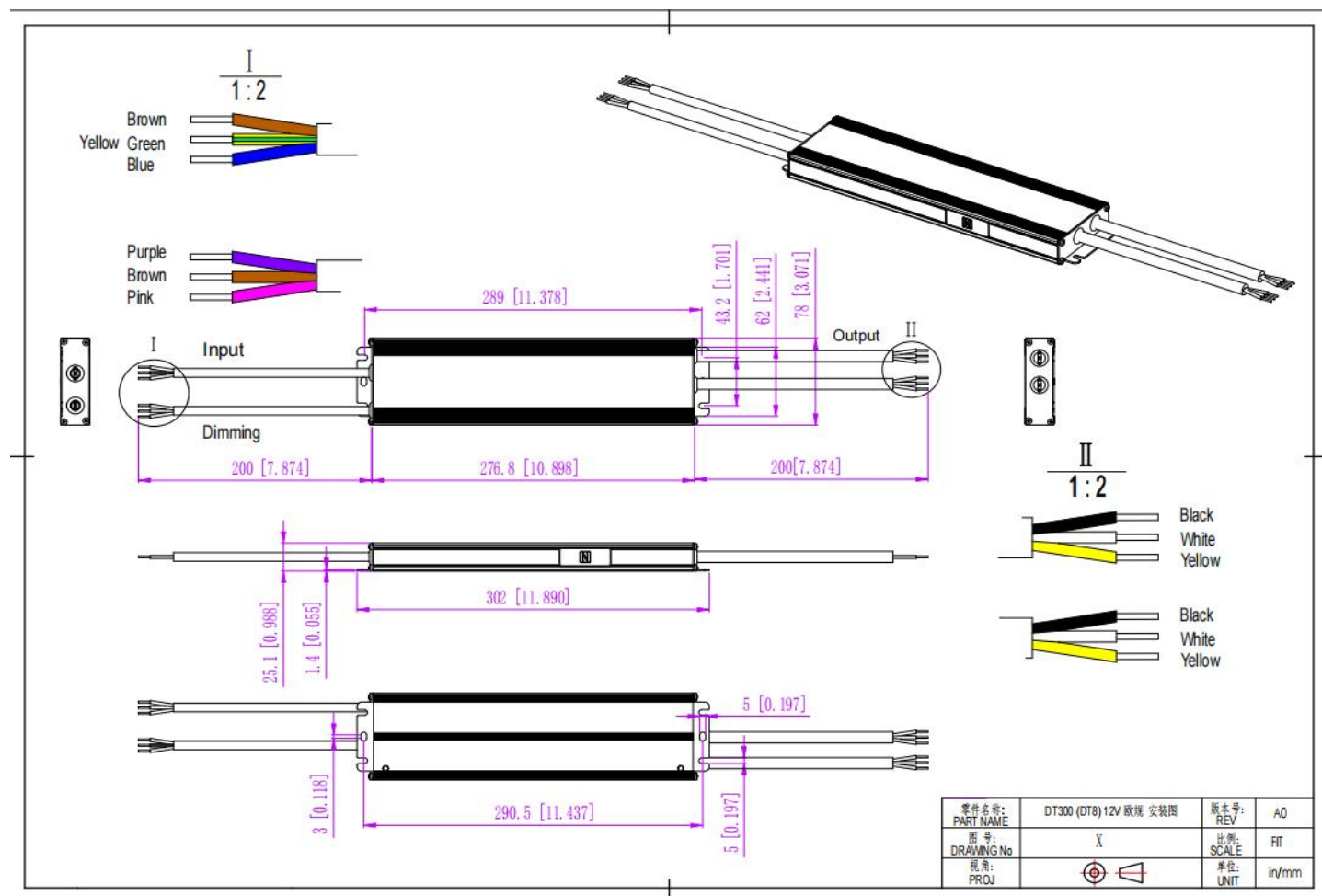
Derating Curve (output load vs TEMP.)



1. To extend their life, please refer to the Derating Curve and derate according to the temperature.
2. The output current of the LED driver should be selected according to the rated current of the lamp and the ambient temperature. Normally, we recommend the power supply to reserve a certain amount of load to extend LED driver's life.

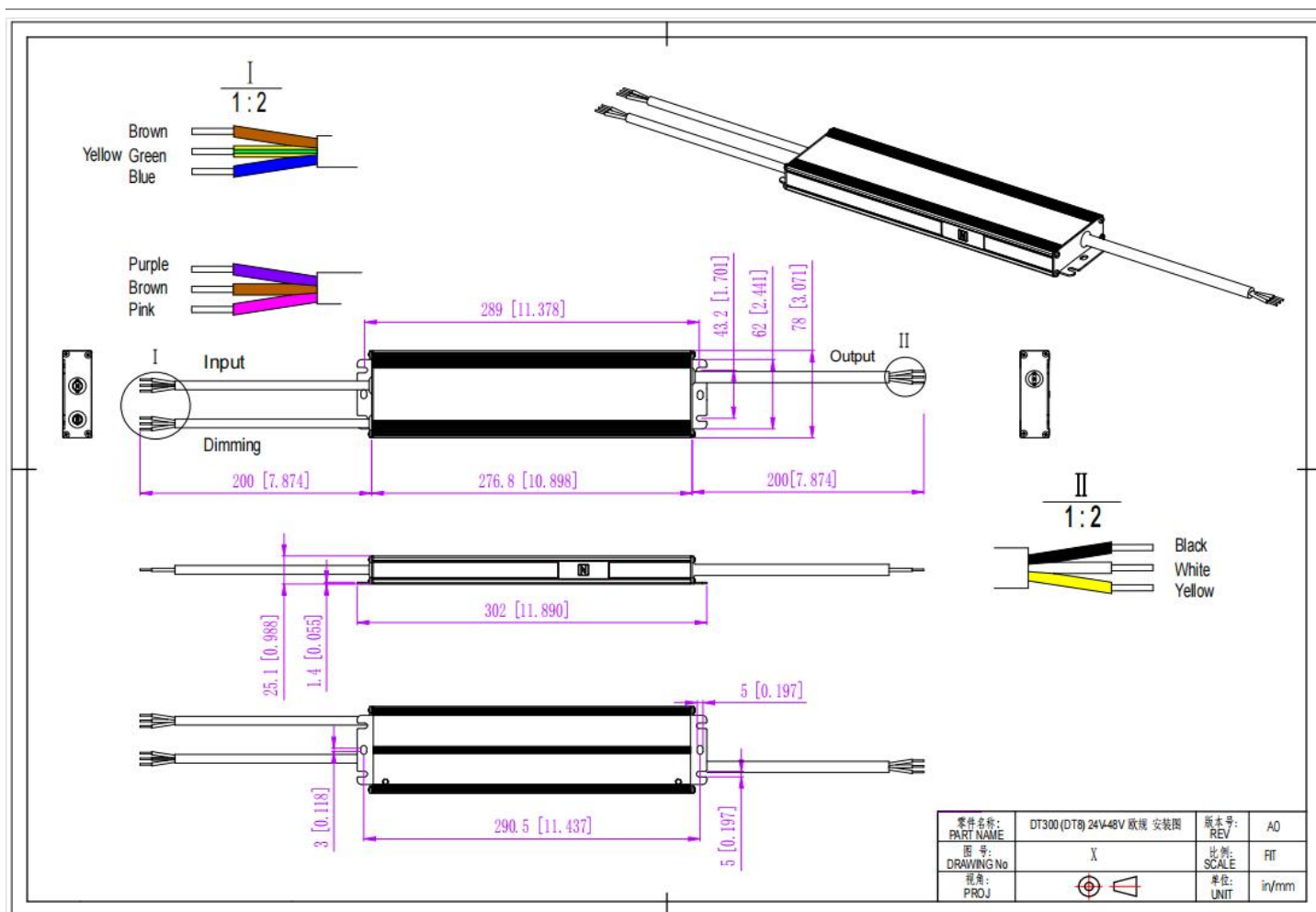
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Mechanical Specification (For European Market)



12V Version

DALI-2 & PUSH Dimmable LED Driver - Constant Voltage Output - KV-2C-DP2A Series 300W



24V&48V Version

European wire gauge

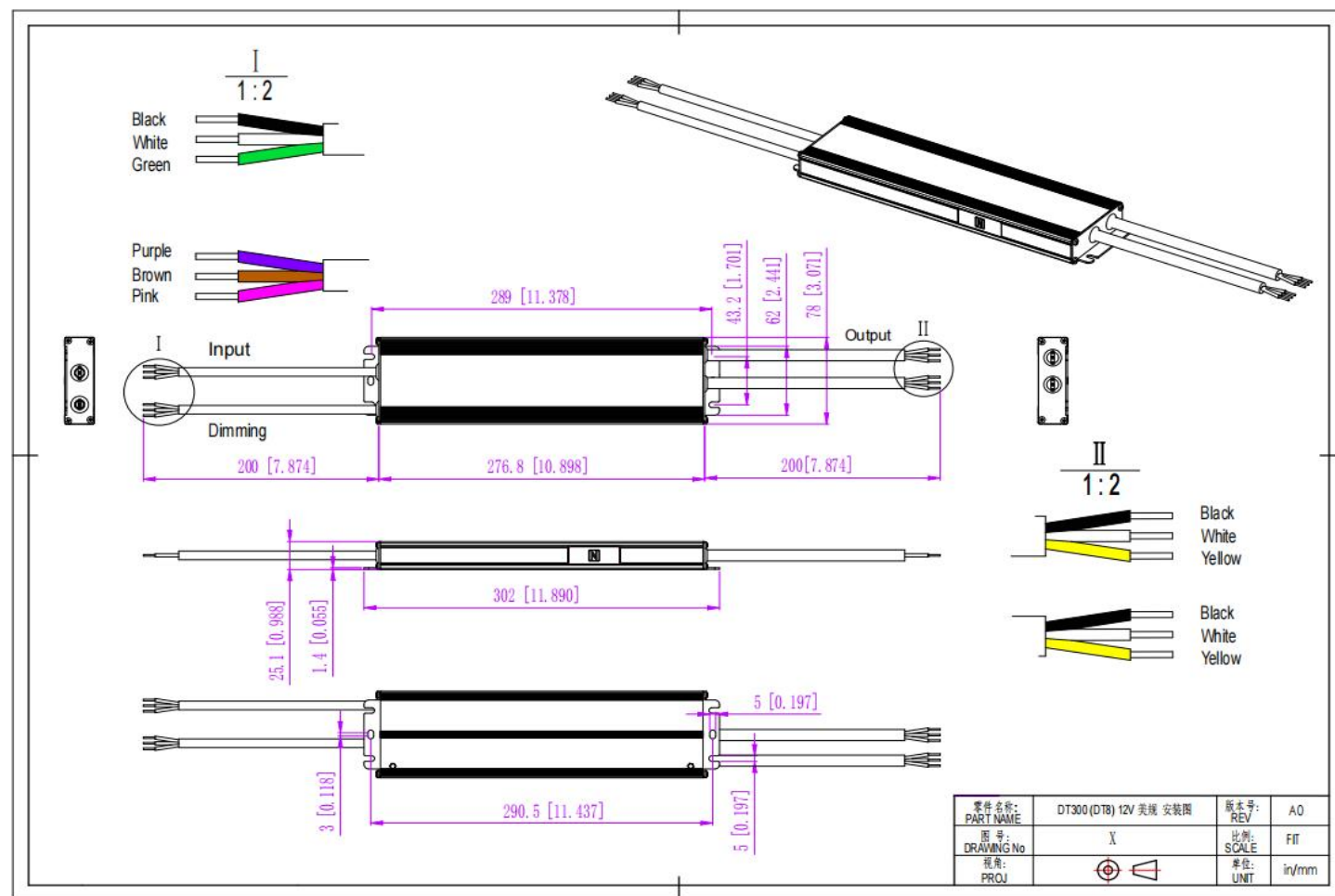
DT300

| | |
|--------------|--|
| Input wire | Brown(L) Blue(N) Yellow Green(G) (3*1.0mm ²) |
| Output wire | 12V: Black(V+) White Gray(CW-) Yellow(WW-) (3*2.08mm ²)*2 24V/48V: Black(V+) White Gray(CW-) Yellow(WW-) (3*2.08mm ²) |
| Dimming wire | Purple(DA+) Pink(DA-) Brown(CCT/L) (3*0.824mm ²) |

Remarks: Please make sure you connect these correctly otherwise your product will not function correctly and could be damaged.

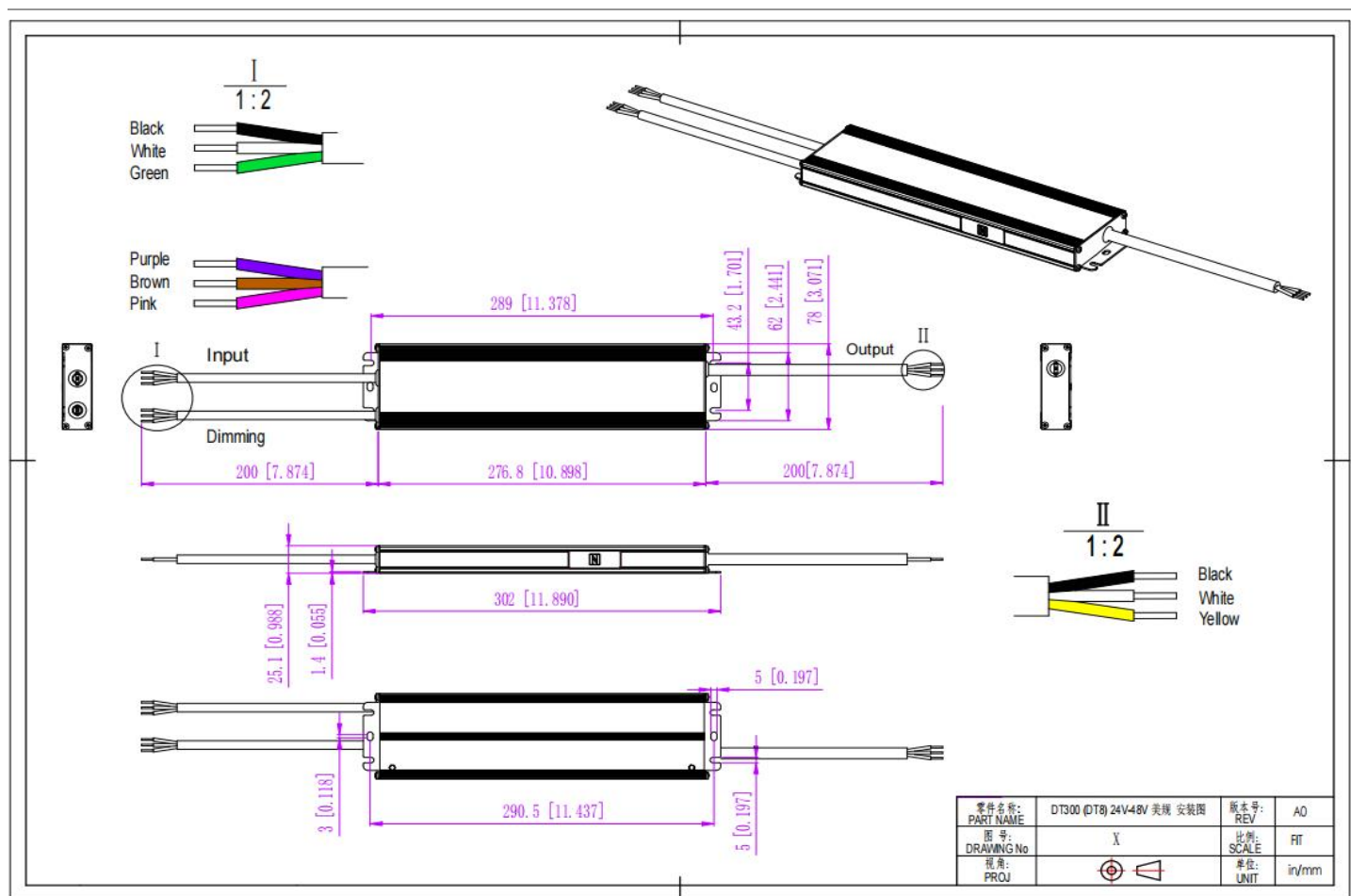
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Mechanical Specification (For North American Market)



12V Version

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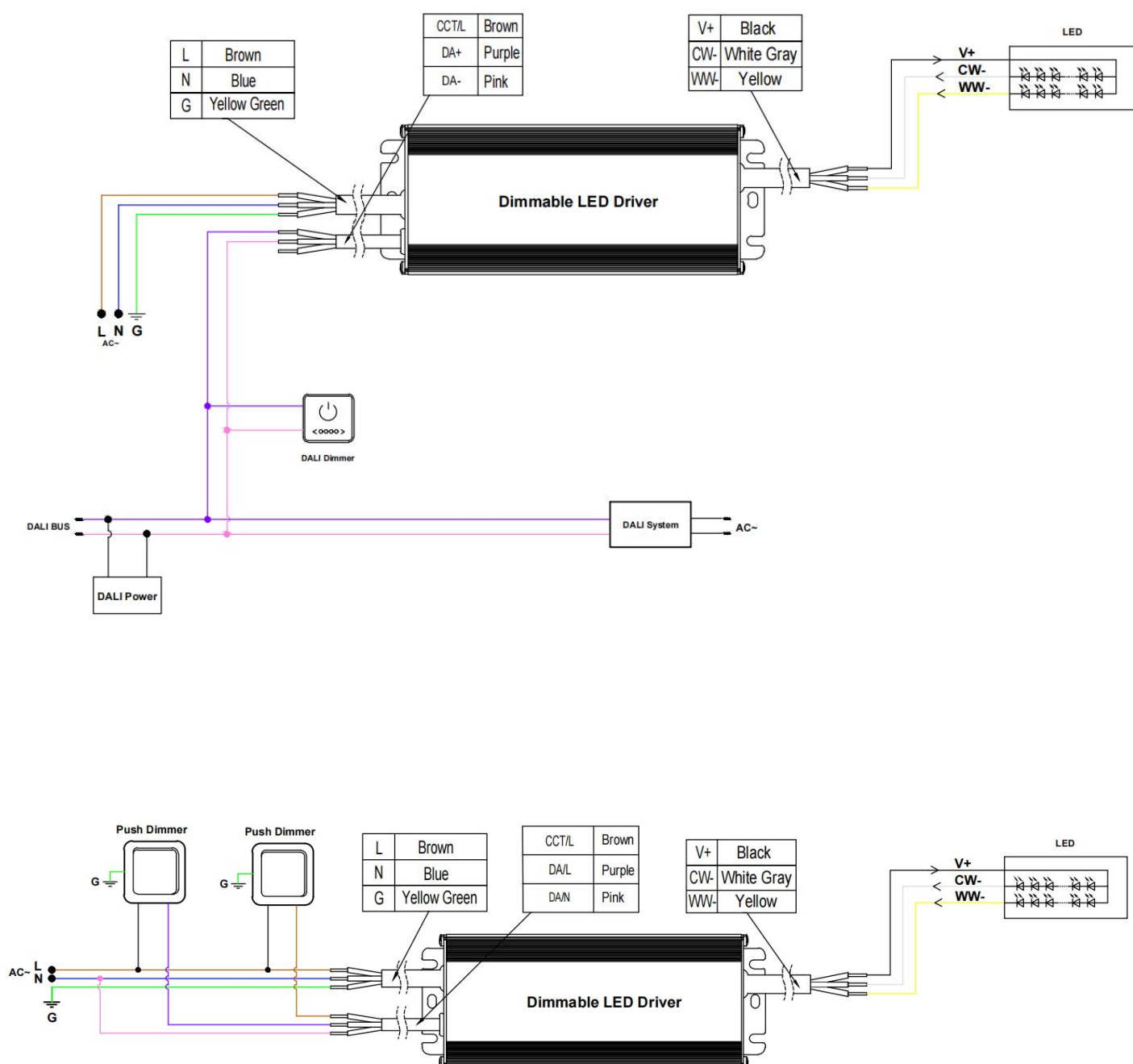
24V&48V Version

| American wire gauge | |
|--|--|
| DT200 | |
| Input wire | Black(L) White(N) Green(G) (3*18AWG) |
| Output wire | 12V: Black(V+) White Gray(CW-) Yellow(WW-) (3*14AWG)*2 24V/48V: Black(V+) White Gray(CW-) Yellow(WW-) (3*14AWG) |
| Dimming wire | Purple(DA+) Pink(DA-) Brown(CCT/L) (3*18AWG) |
| Remarks: Please make sure you connect these correctly otherwise your product will not function correctly and could be damaged. | |

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Connecting Diagram (For European Market)

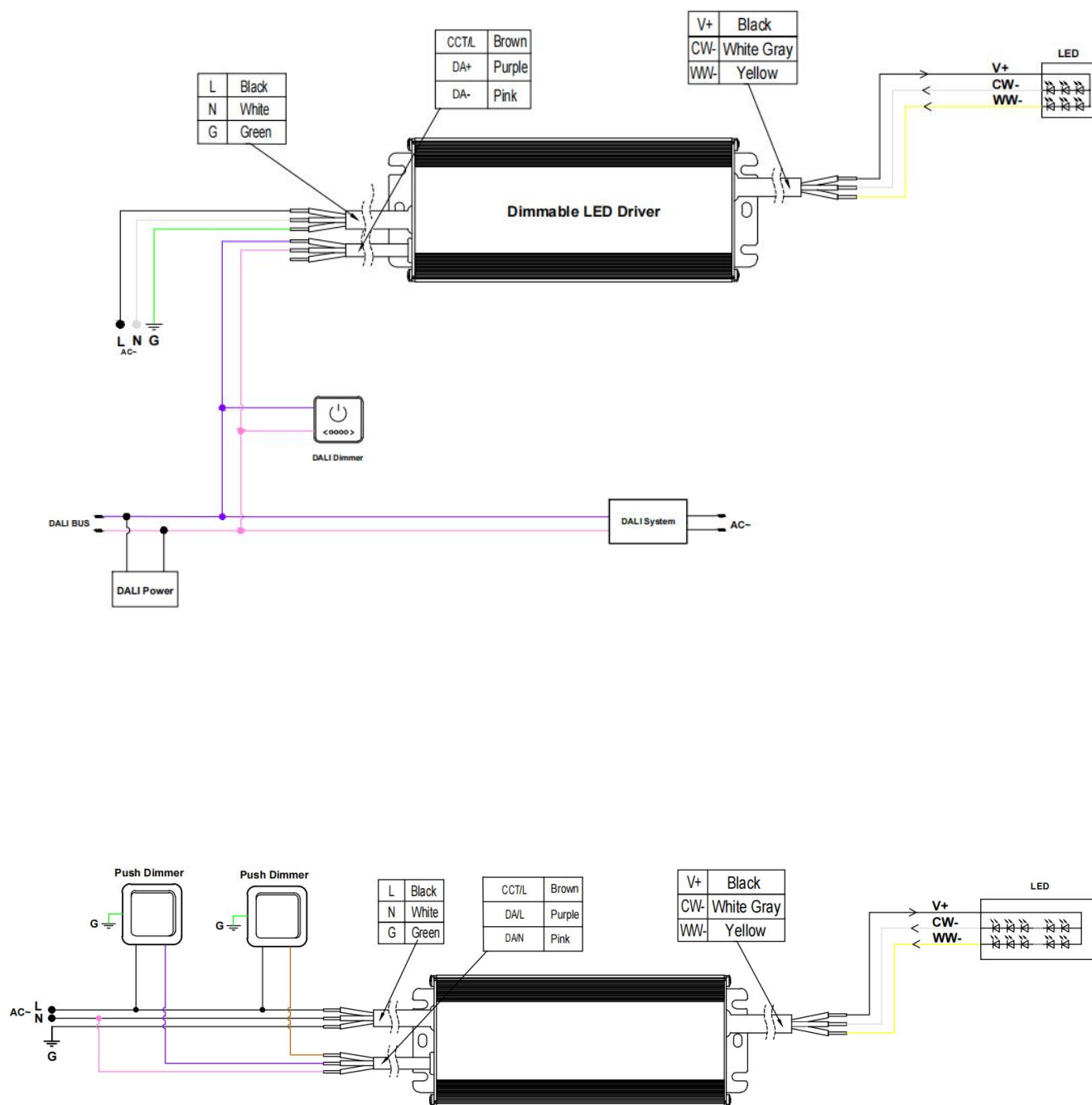
● 24V&48V Version



DALI-2 & PUSH Dimmable LED Driver - Constant Voltage Output - KV-2C-DP2A Series 300W

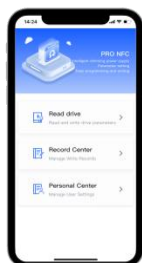
Connecting Diagram (For North American Market)

● 24V&48V Version



DALI-2 & PUSH Dimmable LED Driver - Constant Voltage Output - KV-2C-DP2A Series 300W

NFC function



ProNFC APP



NFC Handheld devices



iOS Download



Android Download

Adjust output voltage slightly by NFC

The output voltage 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 Dimmable LED 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 | 12.0V | 12.2V | 12.3V | 12.4V | 12.5V | 12.6V | 12.7V | 12.8V | 12.9V | 13.0V |
| 24V | 24.0V | 24.2V | 24.3V | 24.5V | 24.7V | 24.8V | 25.0V | 25.2V | 25.3V | 25.5V |
| 48V | 48.0V | 48.2V | 48.4V | 48.7V | 48.9V | 49.1V | 49.3V | 49.6V | 49.8V | 50.0V |

Set Address easily by NFC

The address can be read and written by a mobile with Set NFC APP or NFC handheld device (NFC read & write device: NFC-RW) by close to the NFC signal area of the Dimmable LED driver.

Instructions

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.

Have any questions, please contact Zhuhai Shengchang.

Please visit our website or contact us for more information! www.scpower.net.cn/en