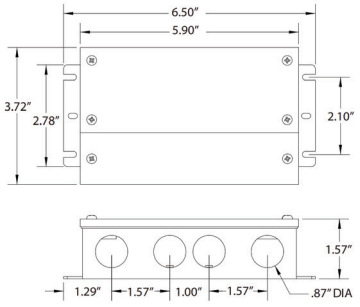


Project: _____ Type: _____

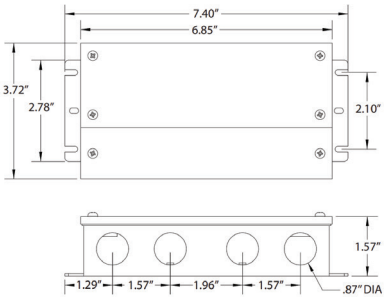
- Adjustable PWM & voltage reduction switch
- Universal 100-277VAC Input
- NEMA 4X Rain-tight enclosure for wet locations
- 1, 2, 3, 5 Channel
- Class 2
- Up to 95% efficiency
- Built-in active PFC function
- 0 - 100% Dimming range
- Variety of dimming options: ELV, MLV, TRIAC, 0-10V
- Short circuit, Overload and over heat protection
- Flicker-free
- IP66
- 5 Year Warranty

Dimensions

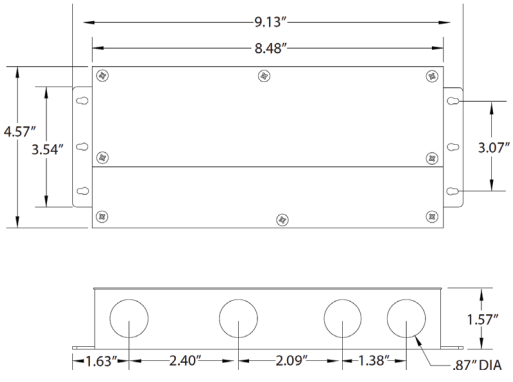
INF-DR-J-30-1-2.5-12



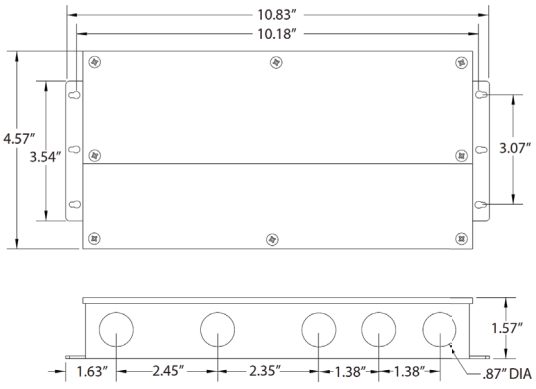
INF-DR-J-60-1-5-12



INF-DR-J-180-3-5-12



INF-DR-J-300-5-5-12



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Order and Specification Guide - Single Circuit

CAT NO.	INF-DR-J-30-1-2.5-12	INF-DR-J-60-1-5-12
Rated Power	30W	60W
Number of Channel(s)	1	1
Transformer Classification	Class 2	Class 2
Rated Current	2.5A	5A
DC Voltage	12V	12V
Fine Tune Voltage	12V-13V	12V-13V
Voltage Tolerance	±5%	±5%
Voltage Regulation	≤0.5%	≤0.5%
Load Regulation	≤2%	≤2%
Dimming	Forward Phase - (MLV), Reversed Phase - (TRIAC, ELV, PWM), 0-10V	
OUTPUT MODE SELECTION The DIP switch in the "ON" position represents the PWM (Pulse - Width Modulation) mode, and in the "1" position represents the VR (Modulation of DC Voltage) mode. **Insure power is switched off for 3 seconds before switching modes.**		
Input		
Input Voltage	100-277VAC	
Frequency Range	50 /60Hz	
Power Factor (Typ.) @ full load	>0.95	
THD (Typ.) @ full load	<15%@120VAC <15%@277VAC	
Efficiency (Typ.) @ full load	≥77%@120VAC ≥79%@277VAC	≥83%@120VAC ≥84%@277VAC
AC Current (Max.)	0.4A	0.75A
Inrush Current (Typ.)	25A,120us@50%Ipeak 120VAC 60A,136us@50%Ipeak 277VAC	31.6A,152us@50%Ipeak 120VAC 76.8A,156us@50%Ipeak 277VAC
Physical		
Net Weight	1.89 lbs.	2.07 lbs.
Dimension	6.50"L x 3.72"W x 1.57"H	7.40"L x 3.72"W x 1.57"H
Protection		
Short Circuit	Hiccup mode, can be automatically restored after abnormal removal.	
Over loading	105%~110% Constant - Current Mode, automatic recovery after exception.	
Over heating	55°C ±5°C shut down o/p voltage (auto recover after cooling)	
Environment		
Working Temp.	-40~+40°C (see below derating curve)	
Working Humidity	20 - 95%RH non-condensing	
Storage Temp	-40 - +80°C	
Storage Humidity	10 - 95% RH non-condensing	
Temp. Coefficient	±0.03%/°C (0 - 50°C)	
Vibration (10-500Hz)	5G 12 min./cycle, X Y Z axis 72 minutes each	
Safety Compliance & EMC		
Certification	FCC, ICES-005, SELV, RoHS, REACH	
Safety Standards	UL8750; CAN/CSA-C22.2 No.250.13, UL	
Environment	Outdoor/Indoor	
IP Rating	IP66	
Withstand Voltage	I/P-O/P: 1.88KVac I/P-FG: 1.88KVac O/P-FG: 0.5KVac	
Isolation Resistance	I/P-O/P:100MΩ / 500VDC / 25 / 70% RH	
EMC Emission	FCC Part 15 Subpart B; ANSI C63.4:2014+A1:-2017; ICES-005 Issue 5	

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Order and Specification Guide - Multi Circuit

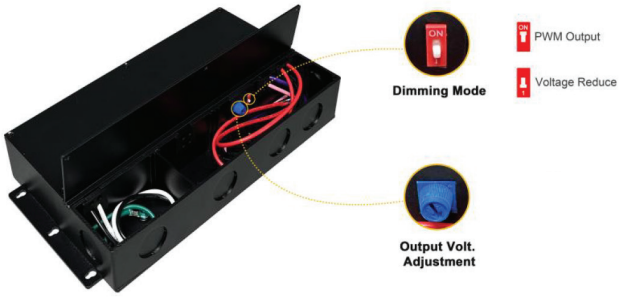
CAT NO.	INF-DR-J-180-3-5-12	INF-DR-J-300-5-5-12
Rated Power	180W	300W
Number of Channel(s)	3	5
Transformer Classification	Class 2	Class 2
Rated Current	5A	5A
DC Voltage	12V	12V
Fine Tune Voltage	12V-13V	12V-13V
Voltage Tolerance	±1%	±0.5V
Voltage Regulation	≤0.5%	≤0.5%
Load Regulation	±1%	±1%
Dimming	Forward Phase - (MLV), Reversed Phase - (TRIAC, ELV, PWM), 0-10V	
OUTPUT MODE SELECTION The DIP switch in the "ON" position represents the PWM (Pulse - Width Modulation) mode, and in the "1" position represents the VR (Modulation of DC Voltage) mode. **Insure power is switched off for 3 seconds before switching modes.**		
Input		
Input Voltage	100-277VAC	
Frequency Range	50 /60Hz	
Power Factor @ full load	>0.95	
THD (Typ.) @ full load	<20%@120VAC &277VAC	≤10%@120VAC &277VAC
Efficiency (Typ.) @ full load	≥90%@120VAC ≥91.5%@277VAC	≥ 89.5% @120VAC ≥ 92% @277VAC
AC Current (Max.)	1.98A	3A
Inrush Current (Typ.)	23A,1.3ms@50%Ipeak 120VAC 49A,960us@50%Ipeak 277VAC	124A@50%Ipeak 640us
Physical		
Net Weight	2.43 lbs.	3.64 lbs.
Dimension	9.13"L x 4.57"W x 1.57"H	10.83"L x 4.57"W x 1.57"H
Protection		
Short Circuit	Hiccup mode, recovers automatically after fault condition is removed.	
Over loading	105%~120% Hiccup mode, recovers automatically after fault condition is removed.	
Over heating	100°C ±10°C shut down o/p voltage (auto recover after cooling)	
Environment		
Working Temp.	-40~+40°C (see below derating curve)	
Working Humidity	20 - 95%RH non-condensing	
Storage Temp	-40 - +80°C	
Storage Humidity	10 - 95% RH non-condensing	
Temp. Coefficient	±0.03%/°C (0 - 50°C)	
Safety Compliance & EMC		
Certification	FCC, ICES-005, SELV, RoHS, REACH	
Safety Standards	UL8750; CAN/CSA-C22.2 No.250.13, UL	
Environment	Outdoor/Indoor	
IP Rating	IP66	
Withstand Voltage	I/P-O/P: 1.88KVac I/P-FG: 1.88KVac O/P-FG: 0.5KVac	
Isolation Resistance	I/P-O/P:100MΩ / 500VDC / 25 / 70% RH	
EMC Emission	FCC Part 15 Subpart B; ANSI C63.4:2014+A1:-2017; ICES-005 Issue 5	

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Output Mode Selection - How To

PWM and VR Dimming: Selection and Setup

The PWM/VR switch selects how the driver reduces LED brightness. The DIP switch in the "ON" position represents the PWM (Pulse - Width Modulation) mode, and in the "1" position represents the VR (Modulation of DC Voltage) mode.



NOTE: Insure power is switched off for 3 seconds before switching modes.

PWM Mode

How it works: PWM switches the LED output on and off extremely quick. Shorter/quicker "on" periods produce less light while maintaining the normal voltage during each pulse.

Why use PWM?

- Helps maintain consistent light color as brightness decreases.
- Supports deep dimming; 0.1% PWM dimming depth.
- 20 kHz PWM, or 20,000 cycles per second.

When to use it: Start with PWM for LED strips that support PWM dimming, especially when consistent color and low-level dimming are priorities. For camera applications, test at the intended shutter settings; high-frequency PWM does not guarantee artifact-free results with every camera.

Step By Step:

1. **Confirm compatibility and load.** Check that the LED strip supports PWM dimming, and meets the minimum load requirements (see chart).
2. **Disconnect AC power to the driver**. Setting the dimmer to minimum does not disconnect power.
3. **Move the PWM/VR switch to "ON."** This selects PWM mode.
4. **Restore power after at least 3 seconds with AC power disconnected.** The new mode takes effect after power is restored.
5. **Test from full brightness down to the lowest desired level.** Check for smooth dimming, consistent color, flicker, or sudden shutoff. If cameras are used, check the recorded image as well.

VR Mode

How it works: VR lowers the output voltage to reduce LED current and brightness. The amount of dimming depends on how the connected LED strip responds to lower voltage.

Why use VR?

- Provides an alternative to PWM output for LED strips designed for voltage dimming.
- May help when PWM produces camera artifacts or undesirable behavior in the connected lighting.
- Allows the same driver to accommodate a different dimming response without replacing the power supply.

When to use it: Choose VR when the LED strip manufacturer specifies voltage dimming, or when testing confirms better results than PWM. Some strips with onboard current regulation may resist voltage dimming and then shut off abruptly. Color may also change as brightness decreases.

Step By Step:

1. **Confirm voltage-dimming compatibility and load.** Check that the LED strip supports reduced-voltage dimming, matches the driver's rated voltage, and meets the minimum connected load shown below.
2. **Disconnect AC power to the driver**. Setting the dimmer to minimum does not disconnect power.
3. **Move the PWM/VR switch to "1."** This selects VR mode.
4. **Restore power after at least 3 seconds with AC power disconnected.** The new mode takes effect after power is restored.
5. **Test the full dimming range.** Check for smooth brightness changes, color changes, uneven illumination, or early shutoff. If evaluating VR for camera use, repeat the camera test under the same conditions.
6. **Keep VR if it provides the desired results.** If performance is worse, return to PWM using the same power-off procedure.

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Minimum Load Requirement - Both Modes

Connected load means the LED lighting's wattage at full output. It is not the minimum dimmer setting. Observe the driver's maximum output rating and temperature-related load limits as well.

Important Operating Details

- **The switch markings select a mode:** "ON" means PWM; "1" means VR. They do not turn the driver on or off.
- **A restart is required:** Switch power off for 3 seconds, change modes (PWM or VR) followed by power restoration, for a mode change to take effect.
- **Brightness may differ at the same dimmer setting after changing modes.**
- **The 0.1% dimming-depth specification applies to PWM only.**
- **No 0.1% dimming in VR mode.** VR dimming depth is by volt reduction; the resulting light level depends on the LEDs.
- **PWM/VR selection is separate from the dimmer input.** It does not select between TRIAC and 0–10V control or change the driver's nominal voltage rating.
- **Have a qualified installer perform adjustments that require access to electrical connections.**

20% minimum connected load required

Driver Rating	Minimum Load
30W	6W
60W	12W

15% minimum connected load required

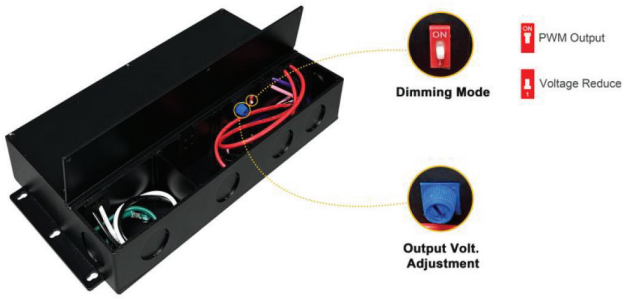
Driver Rating	Minimum Load
180W	27W
300W	45W

Output Voltage Adjustment - How To

The V+ ADJ adjuster allows fine-tuning of the driver's output voltage to match the connected LED lighting. It can help compensate for a small voltage drop in the wiring between the driver and the LEDs.

Driver Nomina Output	ADjustment Range
12V DC	12V-13V DC

NOTE: V+ ADJ is a fine adjustment, not a brightness control or a voltage selector. It does not convert a 12V driver into a 24V driver. Excessive wiring voltage drop should be corrected through proper wire sizing or layout rather than increasing voltage beyond the LED product's limits.



When to use it: Use the adjuster during installation when measurements show that the voltage reaching the LEDs needs a small correction. Leave it at the nominal setting when the lighting operates correctly.

How to adjust

1. **Confirm the LED product's permitted input-voltage range and the driver's output rating.**
2. **Measure the voltage** at the driver and at the LED connection with the lights at full brightness.
3. **If correction is needed,** make small adjustments toward the "+" marking to increase voltage or toward "–" to decrease voltage (within the rchart ange above).
4. **Recheck voltage at both locations.** Keep the LED input voltage within its permitted range and stay within the driver's rated output current and wattage.
5. **Verify full-brightness operation and dimming performance after adjustment.**

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1. Before use, confirm whether the rated input voltage of the power supply is within the mains voltage range;
2. Pay attention to the distinction between power input and output lines to avoid power damage or unnecessary safety accidents caused by
reverse connection;
3. Power supplies cannot be stacked and installed (placed). The installation distance between power supplies should be >10cm. If multiple
power supplies are located in a small space, the ambient temperature must be <55°C/131°F during use; such as: distribution boxes, etc.;
4. In order to extend the service life of the power supply, try to install the power supply in an environment conducive to heat dissipation.
As the ambient temperature increases, the power used by the power supply gradually decreases, and the life of the power supply also
gradually shortens;
5. Do not use it under abnormal load: overload will cause damage to the power supply, and extremely light load will cause the power
supply to fail to work properly;
6. In order to ensure safe use and reduce interference, please ensure that the ground wire is reliably grounded.

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