

Advance Xtanium outdoor LED drivers with SimpleSet technology are designed to give OEMs ultimate flexibility. With wide operating windows and simple programming, the drivers make it easy for luminaire manufacturers to design luminaires of different sizes and lumen levels for outdoor applications.

Specifications

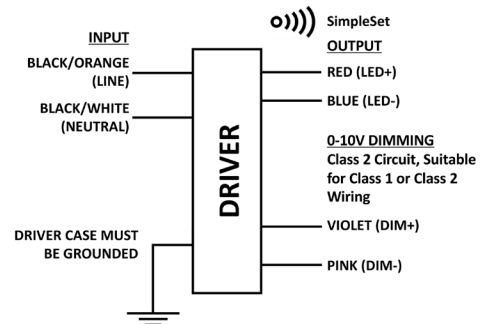
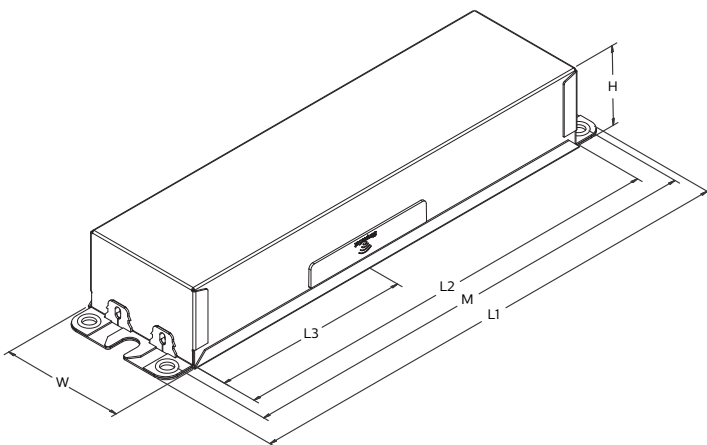
Input Voltage (Vac)	Output Power (W)	Output Voltage (V)	Output Current (A)	Efficiency @ Max Load and 70°C Case	Max Case Temp. (°C)	Input Current (A)	Max. Input Power (W)	THD @ Max Load (%)	Power Factor @ Max Load	Surge Protection (Combi-Wave, KV)	Envir. Protection Rating	Dimming	Dimming Range (with specified dimmers)	Min. Output Current (A)	Driver Type
277	180	50-144	0.1 - 1.8	92	Life - 85°C UL - 90°C	0.7	200	<10%	>0.95	6	UL damp & dry and Type HL	0-10V Analog Class 1 and 2 Wiring	10% - 100%	0.1	Constant Current
480				93.5		0.4									

Enclosure

	In. (mm)	Tolerance
Case Length (L2)	8.31 (211.0)	± 0.5mm
Case Width (W)	2.31 (58.0)	± 0.5mm
Case Height (H)	1.48 (37.6)	± 1.0mm
Mounting Length (M)	8.91 (226.2)	± 0.5mm
Overall Length (L1)	9.45 (240.0)	± 1.0mm
Center of SimpleSet Antenna (L3)	3.75 (95.3)	± 1.0mm

Wiring Diagram

	Wire Length (mm)
Black/Orange (Line)	270 (± 30)
Black/White (Neutral)	270 (± 30)
Red (Positive, LED output)	270 (± 30)
Blue (Negative, LED output)	270 (± 30)
Violet (Positive, 0-10V)	270 (± 30)
Gray (Negative, 0-10V)	270 (± 30)



Warning

- Install in accordance with national and local electrical codes.
- The field-wiring leads or push-in terminals shall be enclosed.



Xitanium XJ180C180V144BSF2

180W 0.1-1.8A 0-10V dimming with SimpleSet

Features

- 50,000+ hour lifetime¹
- Programmable output current through SimpleSet
- 277-480V "Duravolt" range
- 0-10V dimming suitable for UL Class 1 and Class 2 wiring

Benefits

- Ideal for use in industrial systems at 277V lines with poor power quality or where loss of neutral issues are prevalent
- Enables long life luminaire designs
- Enables fixture designs with wide variety of loads and adjustable current options

Application

- Area
- Roadway
- Parking garages
- Floodlights
- High-bay

Electrical Specifications

All the specifications are typical and at 25°C Ta unless specified otherwise.

Product Data

Order Information	
Full Product Code	XJ180C180V144BSF2 (Mid-Pack, 10pcs/Box), 12NC: 929001782313
Line Frequency	50/60Hz
Min. Mains Voltage Operational	249 Vac
Max. Mains Voltage Operational	528 Vac
277Vac Mains Excursions	Can handle loss of neutral and line voltage excursions from 249Vac to 528Vac for the entire life of the driver.
Output Information	
Maximum Open Circuit Voltage	200Vdc
Output Current Ripple (ripple = peak to average / average)	15% max @ max lout (Low frequency ripple (≤120Hz) content <5%)
Output Current Tolerance (in the performance window)	<5%
Protections	Short Circuit, Open Circuit Protection for LED + and LED - and Temperature Foldback
Features	
0-10V Dimming	150µA (±3%) source current from driver.
AOC (Adjustable Output Current)	0.1A-1.8A via SimpleSet (Factory Default at 1.5A)
Additional SimpleSet Configurable Features	Adjustable Min Dim level Adjustable Lumen Output Adjustable Lumen Output Min OEM Write Protection Driver Thermal Limit (DTL) advanced Dynadimmer
Environment & Approbation	
Operating Ambient Temp. Range	-40°C to +55°C
Max Case Temperature (Tcase)	85°C for Life & 90°C for UL Safety
Agency Approbations	UL 8750, cUL, Class P (UL, cUL)
Electromagnetic Compliance	FCC Title 47 Part 15 Class A
Audible Noise	<24dB Class A
Weight	2.1 Lbs/0.95 kgs

1. Advance Xitanium LED drivers are manufactured to engineering standards correlating to a designed and average life expectancy of 50,000 hours of operation at maximum rated case temperature. Minimum 90% survivals based on MTTF modeling.

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0-10V Dimming Curve

Dimming source current from the driver: 150µA (@ 0<Vdim<8V)

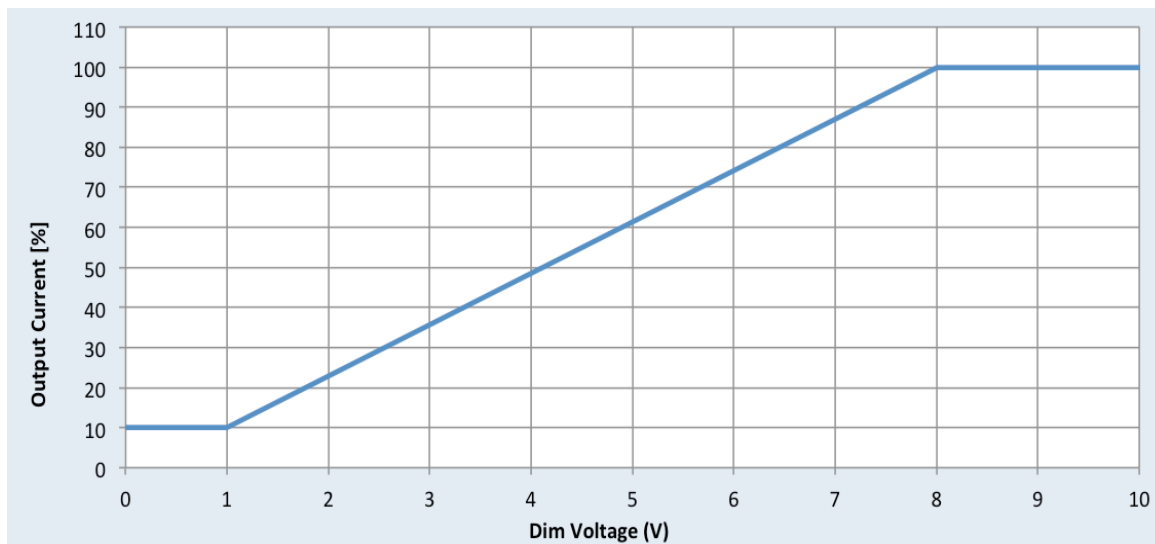
Minimum dim level: Factory default 10% of lout setting as default

Maximum output voltage on the dimming wires: 12V

The dimming lead leakage current is 0.042mA. The maximum number of drivers that can be connected in parallel to one dimming control circuit is based on this dimming lead leakage current and the calculation is described in the corresponding Design-in Guide.

Approved Dimmer List

Manufacturer	Manufacturer Part Number
Lutron	Visit www.lutron.com/advance for a list of dimmers (Mark VII) that will work with this driver
Leviton	IllumaTech IP7 series
Advance	Sunrise - SR1200ZTUNV



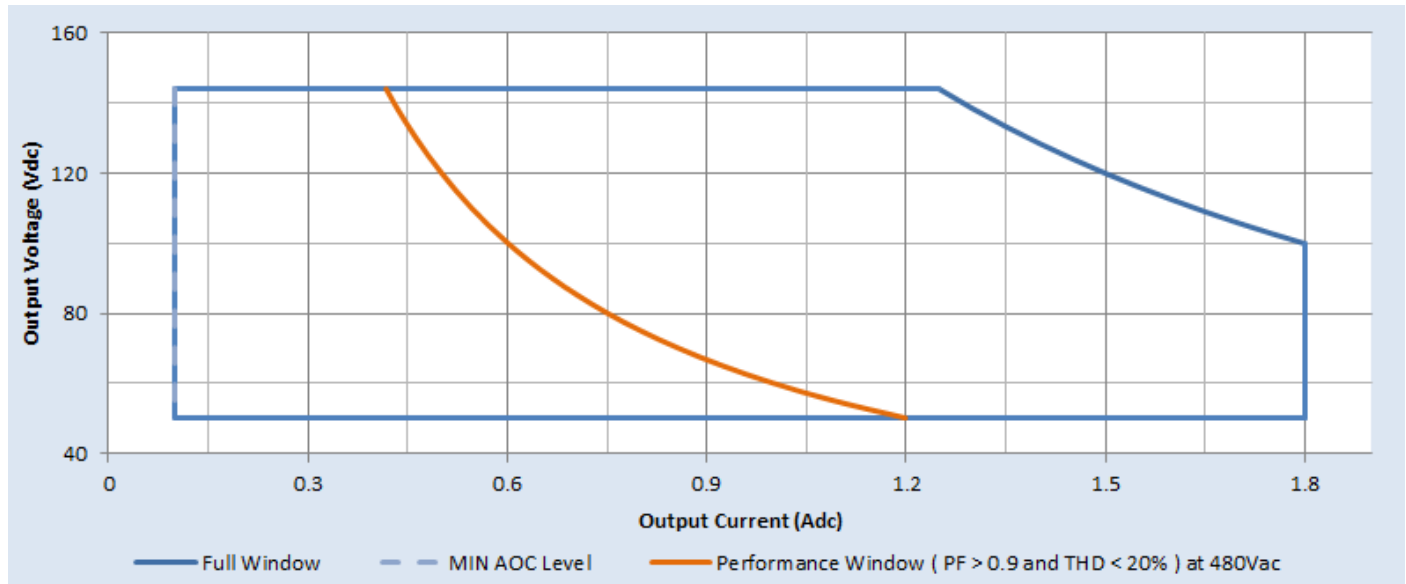
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Driver Output Window



Notes

1. Factory default output current is 1.5A.
2. To get a 100% to 10% dimming range, the output current setting through AOC should be $\geq 1A$.
3. Factory default minimum dimming level is 10%. This can be adjusted between 10% and 100% using Advance MultiOne.

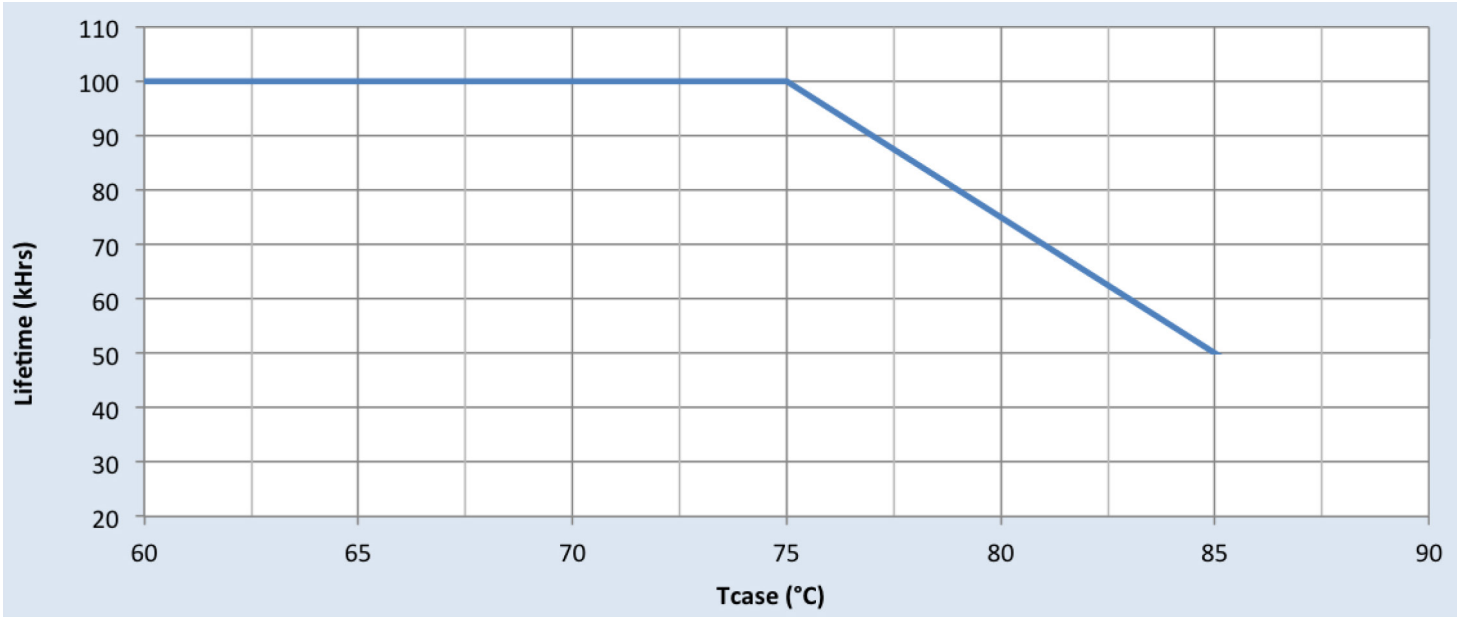
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Driver Lifetime vs. Driver Case Temperature



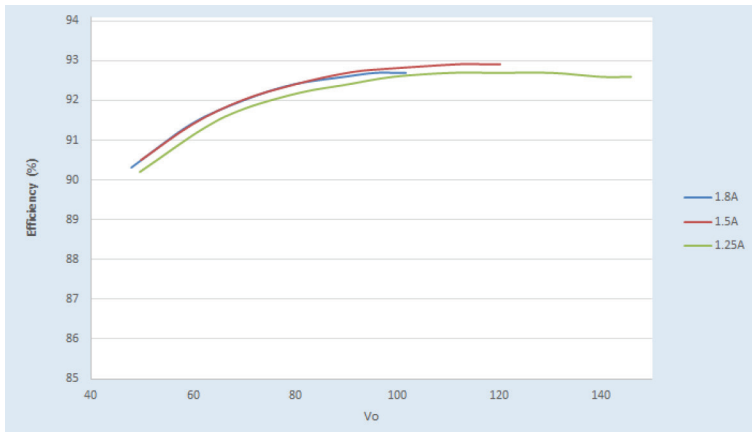
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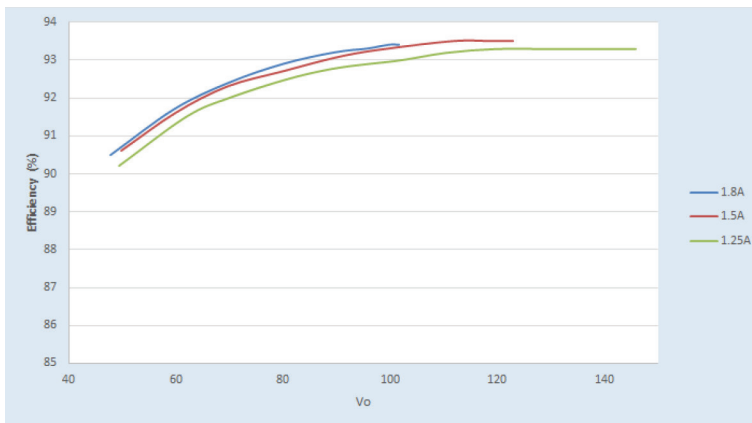
Performance Characteristics

Based on measurements on a typical sample at 70°C case. The accuracy of the measurements is within the tolerance of the measurement instruments.

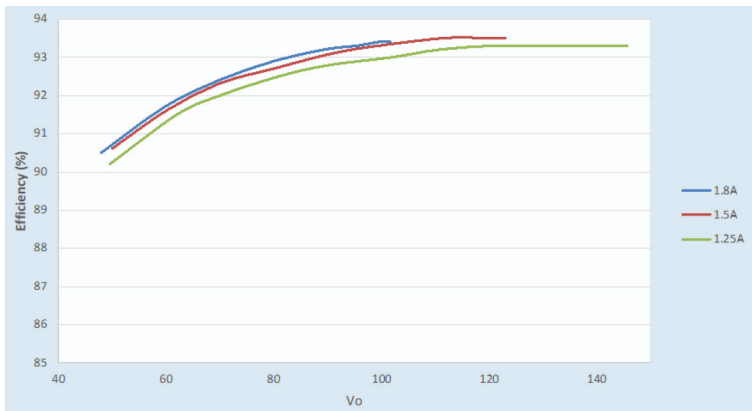
Efficiency Vs. Output Voltage at 277Vac



Efficiency Vs. Output Voltage at 347Vac



Efficiency Vs. Output Voltage at 480Vac



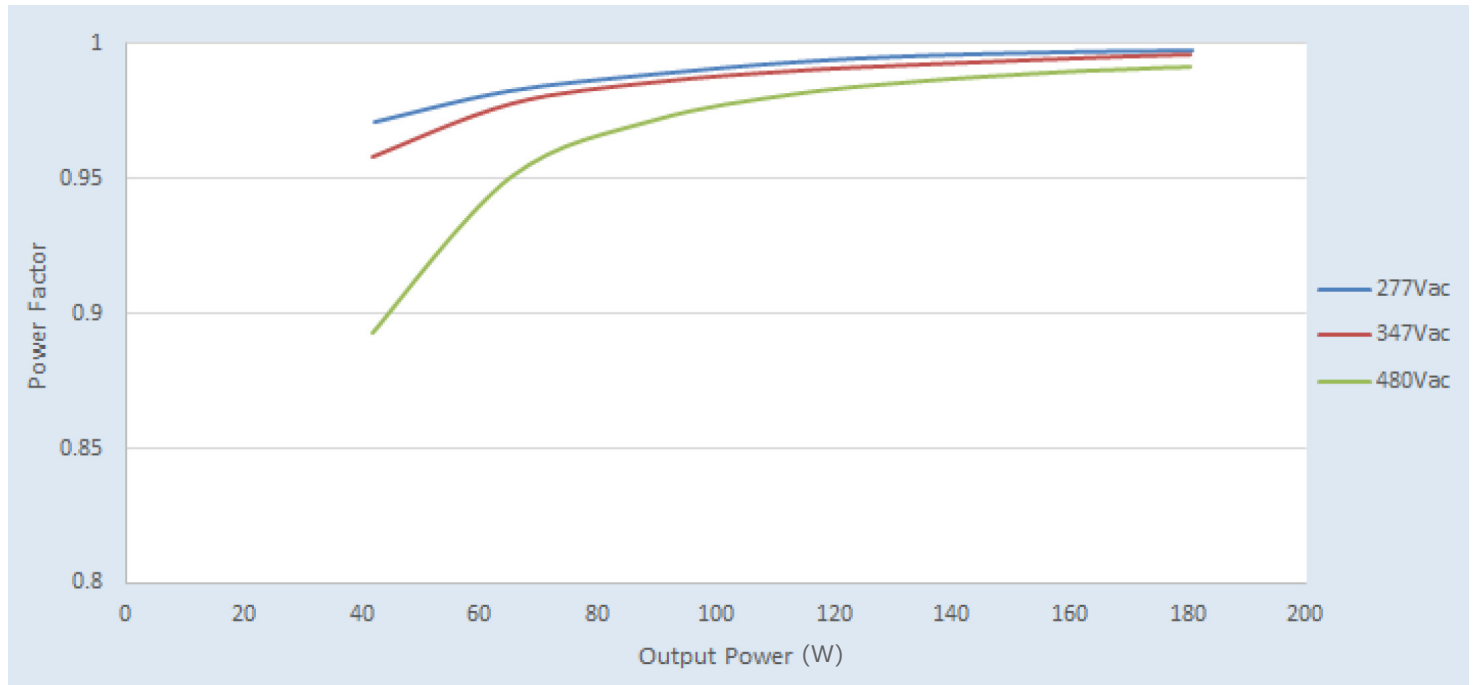
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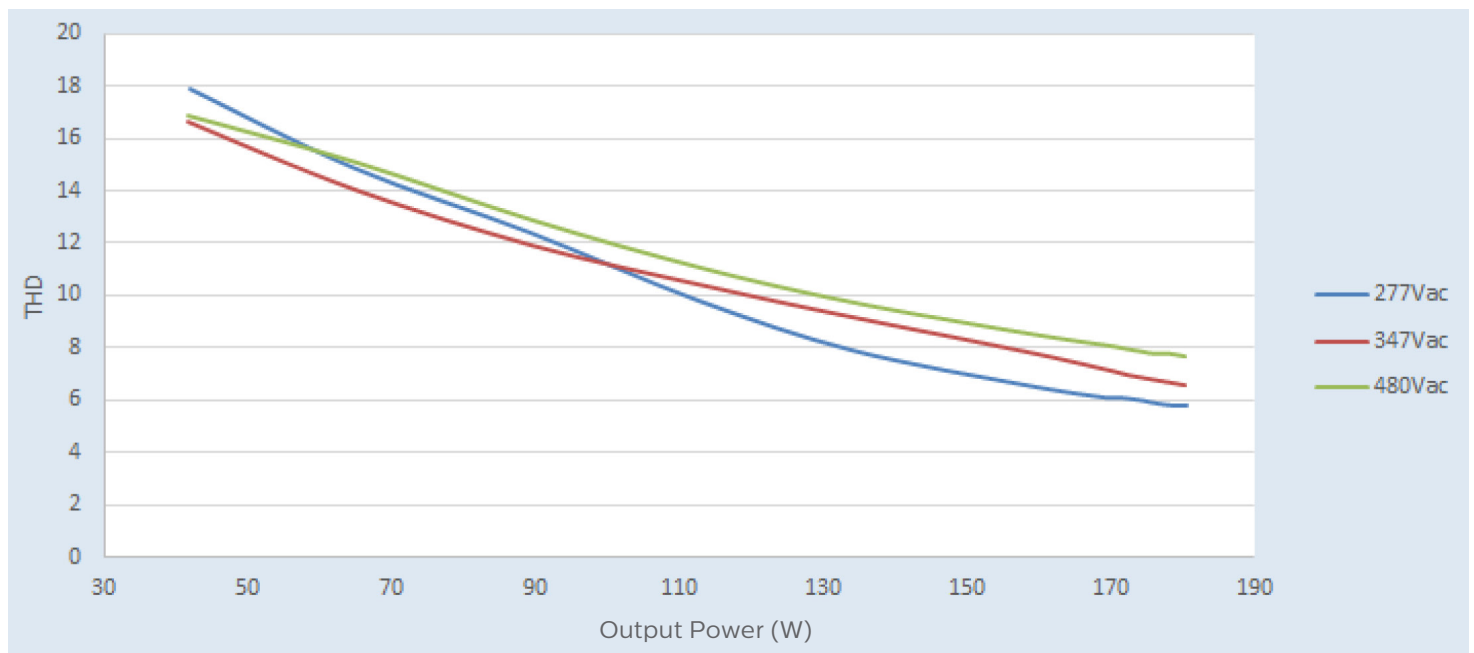
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Power Factor Vs. Output Power



Total Harmonic Distortion (THD) Vs. Output Power

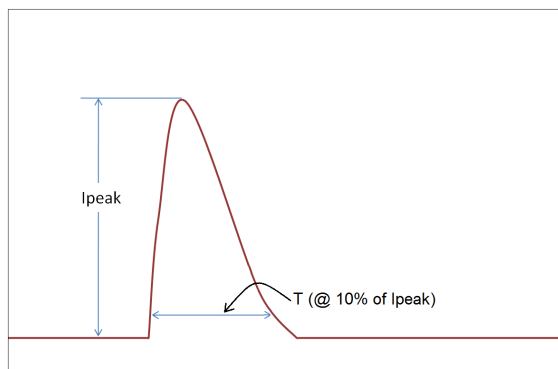


Note: PF>0.9, THD<20%.

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Inrush Current Info



Vin	Ipeak	T (@ 10% of Ipeak)
277 Vrms	46.7A	293.0μS
347 Vrms	59.9A	290.5μS
480 Vrms	80.6A	284.5μS

Inrush current is measured at peak of the corresponding line voltage. Source impedance per NEMA 410.

Lightning Surge Info

ANSI Surge Type	Differential Mode (L-N)	Common Mode (L-G, N-G, L&N-G)
1.2/50μs Combination Wave (w/t 2Ω)	6kV	6kV

Isolation

Isolation	Input	Output	0-10V	Enclosure
Input	NA	2xU + 1kV	2xU + 1kV	2xU + 1kV
Output	2xU+1kV	NA	2xU + 1kV	2xU + 1kV
0-10V	2xU + 1kV	2xU + 1kV	NA	2xU + 1kV
Enclosure	2xU + 1kV	2xU + 1kV	2xU + 1kV	NA

U = Max. working voltage

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