

- Hot-plugging Protection
- Parallel LED Protection
- Ultra High Efficiency (Up to 96%)
- Full Power at Wide Output Current Range (Constant Power)
- Adjustable Output Current (AOC) with Programmability
- Isolated 0-10V/PWM/Resistor/3-Timer-Modes Dimmable
- INV Digital Dimming, UART Based Communication Protocol
- Dim-to-Off
- Minimum Dimming Level with 5% or 10% Selectable
- Maximum Dimming Level with 9V or 10V Selectable
- Fade Time Adjustable
- Always-on Auxiliary Power: 12Vdc, 250mA
- Low Inrush current
- **Output Lumen Compensation**
- End-of-Life Indicator
- Input Surge Protection: DM 6kV, CM 10kV
- All-Around Protection: IOVP, IUVP, OVP, SCP, OTP
- IP66/IP67 and UL Dry/Damp/Wet Location
- TYPE HL, for Use in a Class I, Division 2 Hazardous (Classified) Location
- 5 Years Warranty







global-mark (T)



#### **Description**

The SSM-1K5SxxxMx series is a 1500W, constant-current, programmable and IP66/IP67 rated LED driver that operates from 249-528Vac input with excellent power factor. Created for many lighting applications including high mast, sports, UV-LED, aquaculture and horticulture, etc. It provides an auxiliary voltage and dim-to-off functionality for powering low voltage, wireless controls. The dimming control supports 0-10V dimming as well as two-way communication via Digital Dimming, a UART based communication protocol. The high efficiency of these drivers and compact metal case enables them to run cooler, significantly improving reliability and extending product life. To ensure trouble-free operation, protection is provided against input surge, input under voltage, input over voltage, output over voltage, short circuit, and over temperature.

#### Models

Adjustable Output	Full-Power Current	Default Output	Input Voltage	Output Voltage	Max. Output	Typical Efficiency	Power	ical Factor	Model Number
Current Range		Current	•	Range	Power	(3)		480Vac	
0.4-6.0A	4.0-6.0A	4.0 A	249~528Vac 352~500Vdc	175 ~ 375Vdc	1500W	96.0%	0.99	0.96	SSM-1K5S600Mx <sup>(4)</sup>
1-12.5A	10-12.5A	11.5 A	249~528Vac 352~500Vdc	84 ~ 150Vdc	1500W	95.5%	0.99	0.96	SSM-1K5S12AMx <sup>(4)</sup>
2.8-31.5A	28-31.5A	28 A	249~528Vac 352~500Vdc	34 ~ 54Vdc	1500W	96.0%	0.99	0.96	SSM-1K5S31AMx <sup>(5)</sup>

Notes: (1) Output current range with constant power at 1500W.

- (2) Certified input voltage range: 277-480Vac
- (3) Measured at 100% load and 480Vac input (see below "General Specifications" for details).
- (4) x = G are UL Recognized, CE, CCC, global-mark, etc. models; x = T are UL Recognized, CE(built-in use), etc.
- (5) SELV output,x = G are UL Recognized, CE, etc. models; x = T are UL Recognized, CE(built-in use), etc. models.

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All specifications are typical at 25 ℃ unless otherwise stated.

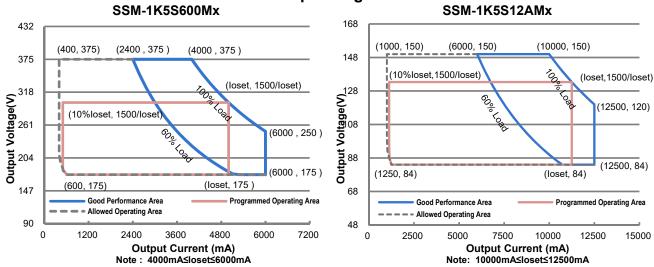
Specifications are subject to changes without notice.

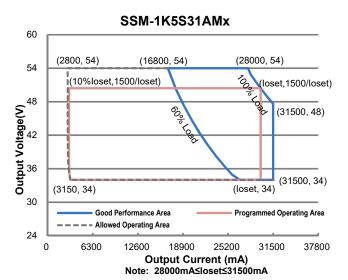
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Rev.A

# **I-V Operating Area**





### **Input Specifications**

Parameter	Min.	Тур.	Max.	Notes
Input AC Voltage	249 Vac	-	528 Vac	
Input DC Voltage 352 Vdc - 500 Vdc				
Input Frequency	47 Hz	-	63 Hz	
	-	-	0.75 MIU	UL 8750; 480Vac/60Hz
Leakage Current			0.70 mA	IEC 60598-1; 480Vac/60Hz, grounding effectively
In most AC Command	-	-	6.44 A	Measured at 100% load and 277 Vac input.
Input AC Current	-	-	3.72 A	Measured at 100% load and 480 Vac input.
Inrush Current(I <sup>2</sup> t)	-	-	4.52 A <sup>2</sup> s	At 480Vac input, 25℃ cold start, duration=22.7ms, 10%lpk-10%lpk. See Inrush Current Waveform for the details.

Rev.A

1500W Programmable Driver with INV Digital Dimming

**Input Specifications (Continued)** 

Parameter	Min.	Тур.	Max.	Notes
PF	0.90	-	-	At 277-480Vac, 50-60Hz, 60%-100%
THD	-	-	20%	Load (900 - 1500W)

**Output Specifications** 

Parameter	Min.	Тур.	Max.	Notes	
Output Current Tolerance	-5%loset	-	5%loset	100% load	
Output Current Setting(loset Range)					
SSM-1K5S600Mx	400 mA	-	6000 mA		
SSM-1K5S12AMx	1000 mA	-	12500 mA		
SSM-1K5S31AMx	2800 mA	-	31500 mA		
Output Current Setting Range with Constant Power					
SSM-1K5S600Mx	4000 mA	-	6000 mA		
SSM-1K5S12AMx	10000 mA	-	12500 mA		
SSM-1K5S31AMx	28000 mA	·	31500 mA		
Total Output Current Ripple (pk-pk)	-	5%lomax	10%lomax	100% load, 20 MHz BW	
Output Current Ripple at < 200 Hz (pk-pk)	-	-	2%lomax	60%-100% load	
Startup Overshoot Current	-	-	10%lomax	100% load	
No Load Output Voltage SSM-1K5S600Mx SSM-1K5S12AMx SSM-1K5S31AMx	-		420 V 170 V 60 V		
Line Regulation	-	-	±0.5%	100% load	
Load Regulation	-	-	±3.0%		
Turn-on Delay Time	-	-	0.5 s	Measured at 277-480 Vac input, 60%- 100% Load	
Temperature Coefficient of loset	-	0.03%/°C	-	Case temperature = 0°C ~Tc max	
12V Auxiliary Output Voltage	10.8 V	12 V	13.2 V		
12V Auxiliary Output Source Current	0 mA	-	250 mA	Return terminal is "Dim-"	
12V Auxiliary Output Transient Peak Current@ 6W	-	-	500 mA	500mA peak for a maximum duration of 2.2ms in a 6.0ms period during which time the average should not exceed 250mA.	
12V Auxiliary Output Transient Peak Current@10W	-	-	850 mA	850mA peak for a maximum duration of 1.3ms in a 5.2ms period during which time the average should not exceed 250mA.	





**General Specifications** 

Efficiency at 277 Vac input: SSM-1K5S600Mx	Parameter	Min.	Тур.	Max.	Notes
Incompanies   1000 mA	Efficiency at 277 Vac input:				
I		00.00/	05.00/		
SSM-1K5S12AMX				-	Measured at 100% load and steady-state
Lo= 10000 mA   92.0%   94.0%   -		93.576	95.5%	_	
Column   C		92.0%	94.0%	-	
Comparison   Com		92.0%	94.0%	-	
In= 31500 mA   92.5%   94.5%   -		00.50/	0.4.50/		
Efficiency at 400 Vac input: SSM-1K5S600MX lo= 4000 mA lo= 6000 mA lo= 6000 mA SSM-1K5S12AMX lo= 10000 mA SSM-1K5S12AMX lo= 12500 mA SSM-1K5S31AMX lo= 28000 mA lo= 31500 mA lo= 30.0% lo= 31500 mA lo= 6000 mA lo= 6000 mA lo= 30.0% lo= 6000 mA lo= 10000 mA lo= 10000 mA lo= 10000 mA lo= 10000 mA lo= 12500 mA lo= 12500 mA lo= 12500 mA lo= 12500 mA lo= 10000 mA lo= 1000				-	
SSM-1K5S600Mx		92.576	94.576		
Deciding Case Temperature for Safety Tc_s   Deciding Case Temperature for Safety Tc_s   Deciding Case Temperature for Safety Tc_s   Operating Case Temperature for Safety Tc_s   Operating Case Temperature   Operating Case Temperature for Safety Tc_s   Operating Case Temperature   Operating Case Temperatu					
SSM-1K5S12AMx				-	
Case temperature for Safety Tc S   Some starting   Some start   Some		94.0%	96.0%	-	
Dec   12500 mA   93.0%   95.0%   -		02.00/	05.00/		
SSM-1K5S31AMx				_	
Color		33.070	33.070	_	measured immediately after startup.)
Efficiency at 480 Vac input: SSM-1K5S600Mx		94.0%	96.0%	-	
SSM-1K5S600Mx   Io= 4000 mA   Io= 4000 mA   Io= 6000 mA   Io= 10000 mA   Io= 10000 mA   Io= 12500 mA   Io= 31500 m		94.0%	96.0%	-	
Io= 6000 mA   94.0%   96.0%   -					
SSM-1K5S12AMx				-	
Io= 10000 mA   p3.0%   95.0%   -   (Efficiency will be about 2.0% lower if measured immediately after startup.)		94.0%	96.0%	-	
SSM-1K5S31AMx   Io= 28000 mA   Io= 31500 mA   94.0%   96.0%   -		03.0%	05.0%	_	
SSM-1K5S31AMx				_	
Standby Power					modeline immediatory and startup.
Standby Power         -         1.5 W         -         Measured at 480Vac/50Hz; Dimming off           MTBF         -         229,000 Hours         -         Measured at 480Vac input, 80%Load and 25°C ambient temperature (MIL-HDBK-217F)           Lifetime         -         100,000 Hours         -         Measured at 480Vac input, 80%Load and 70°C case temperature; See lifetime vs. Tc curve for the details           Operating Case Temperature for Safety Tc_s         -         51,000 Hours         -         Measured at 400Vac input, 100%Load and 40°C ambient temperature           Operating Case Temperature for Warranty Tc_w         -         +90°C         -         -         +80°C         Case temperature for 5 years warranty Humidity: 10%RH to 95%RH           Storage Temperature         -         -         +85°C         Humidity: 5%RH to 95%RH           Dimensions         Inches (L × W × H) Millimeters (L × W × H)         18.27 × 3.54 × 1.91 Hours         464 × 90 × 48.5         With mounting ear 19.25 × 3.54 × 1.91 Hours         19.25 × 3.54 × 1.91 Hours         489 × 90 × 48.5				-	
MTBF         -         229,000 Hours         -         Measured at 480Vac input, 80%Load and 25°C ambient temperature (MIL-HDBK-217F)           Lifetime         -         100,000 Hours         -         Measured at 480Vac input, 80%Load and 70°C case temperature; See lifetime vs. Tc curve for the details           -         51,000 Hours         -         Measured at 400Vac input, 100%Load and 40°C ambient temperature           Operating Case Temperature for Safety Tc_s         -40°C         -         +90°C           Operating Case Temperature for Warranty Tc_w         -40°C         -         +80°C         Case temperature for 5 years warranty Humidity: 10%RH to 95%RH           Storage Temperature         -40°C         -         +85°C         Humidity: 5%RH to 95%RH           Dimensions         Inches (L × W × H) Millimeters (L × W × H) Millimeters (L × W × H)         18.27 × 3.54 × 1.91 A64 × 90 × 48.5         With mounting ear 19.25 × 3.54 × 1.91 A89 × 90 × 48.5	lo= 31500 mA	94.0%	96.0%	-	
MTBF         -         229,000 Hours         -         25°C ambient temperature (MIL-HDBK-217F)           Lifetime         -         100,000 Hours         -         Measured at 480Vac input, 80%Load and 70°C case temperature; See lifetime vs. Tc curve for the details           Operating Case Temperature for Safety Tc_s         -51,000 Hours         -         Measured at 400Vac input, 100%Load and 40°C ambient temperature           Operating Case Temperature for Warranty Tc_w         -40°C         -         +90°C           Storage Temperature         -40°C         -         +80°C         Case temperature for 5 years warranty Humidity: 10%RH to 95%RH           Dimensions         Inches (L × W × H)         18.27 × 3.54 × 1.91         With mounting ear           Inches (L × W × H)         18.27 × 3.54 × 1.91         464 × 90 × 48.5         With mounting ear           Millimeters (L × W × H)         464 × 90 × 48.5         489 × 90 × 48.5	Standby Power	-	1.5 W	-	•
Hours   217F)	MTRE	_		_	
Lifetime  - 100,000 Hours - 70°C case temperature; See lifetime vs. Tc curve for the details  - 51,000 Hours - 40°C - +90°C  Operating Case Temperature for Safety Tc_s  Operating Case Temperature for Safety Tc_s  Operating Case Temperature for Warranty Tc_w  Storage Temperature  -40°C - +80°C - +80°C  Case temperature for 5 years warranty Humidity: 10%RH to 95%RH  Storage Temperature  -40°C - +85°C  Humidity: 5%RH to 95%RH  With mounting ear 19.25 × 3.54 × 1.91 464 × 90 × 48.5  With mounting ear 19.25 × 3.54 × 1.91 464 × 90 × 48.5	I WILD!		Hours		
Lifetime  - Hours - 70°C case temperature; See lifetime vs. Tc curve for the details  - 51,000			100 000		
Lifetime    S1,000		-		-	
Operating Case Temperature for Safety Tc_s  -40°C  -40°	Lifetime				
Safety Tc_s         -40 °C         - 40 °C		-		-	
Operating Case Temperature for Warranty Tc_w -40°C - +80°C	Safety Tc_s	-40°C	-	+90°C	
Dimensions    Inches (L × W × H)   18.27 × 3.54 × 1.91   19.25 × 3.54 × 1.91     Millimeters (L × W × H)   464 × 90 × 48.5   489 × 90 × 48.5	Operating Case Temperature for	-40°C	-	+80°C	
Inches (L × W × H)       18.27 × 3.54 × 1.91       19.25 × 3.54 × 1.91         Millimeters (L × W × H)       464 × 90 × 48.5       489 × 90 × 48.5	Storage Temperature	-40°C -		+85°C	Humidity: 5%RH to 95%RH
Millimeters (L × W × H) 464 × 90 × 48.5 489 × 90 × 48.5	Dimensions				
	,			-	.55 50 15.5

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Rev.A

# **Dimming Specifications**

P	arameter	Min.	Тур.	Max.	Notes
Absolute Max Vdim (+) Pin	Absolute Maximum Voltage on the Vdim (+) Pin		-	20 V	
Source Curre	nt on Vdim (+)Pin	90 uA	100 uA	110 uA	Vdim(+) = 0 V
Dimming Output Range with	SSM-1K5S600Mx SSM-1K5S12AMx SSM-1K5S31AMx	10%loset	-	loset	4000 mA ≤ loset ≤ 6000 mA 10000 mA ≤ loset ≤ 12500 mA 28000 mA ≤ loset ≤ 31500 mA
10%-100% (Default)	SSM-1K5S600Mx SSM-1K5S12AMx SSM-1K5S31AMx	400 mA 1000 mA 2800 mA	-	loset	400 mA ≤ loset < 4000 mA 1000 mA ≤ loset < 10000 mA 2800 mA ≤ loset < 28000 mA
Dimming Output Range with	SSM-1K5S600Mx SSM-1K5S12AMx SSM-1K5S31AMx	5%loset	-	loset	4000 mA ≤ loset ≤ 6000 mA 10000 mA ≤ loset ≤ 12500 mA 28000 mA ≤ loset ≤ 31500 mA
5%-100% (Settable)	SSM-1K5S600Mx SSM-1K5S12AMx SSM-1K5S31AMx	200 mA 500 mA 1400 mA	-	loset	400 mA ≤ loset < 4000 mA 1000 mA ≤ loset < 10000 mA 2800 mA ≤ loset < 28000 mA
Recommende Range	ed Dimming Input	0 V	-	10 V	
Dim off Voltag	Dim off Voltage		0.5 V	0.65 V	Default 0-10V dimming mode.
Dim on Voltaç	ge	0.55 V	0.7 V	0.85 V	Beladit 0-10V diffilling mode.
Hysteresis		-	0.2 V	1	
PWM_in High	ı Level	3 V	-	10 V	
PWM_in Low	Level	-0.3 V	-	0.6 V	
PWM_in Freq	luency Range	200 Hz	-	3 KHz	
PWM_in Duty	Cycle	1%	-	99%	
PWM Dimmin	PWM Dimming off (Positive Logic)		5%	8%	Dimming mode set to PWM in Inventronics Programing Software.
PWM Dimming on (Positive Logic)		5%	7%	10%	
PWM Dimmin Logic)	PWM Dimming off ( Negative Logic)		95%	97%	]
PWM Dimmin Logic)	ig on ( Negative	90%	93%	95%	
Hysteresis		-	2%	-	

**Safety &EMC Compliance** 

Safety Category	Standard
UL/CUL	UL 8750,CAN/CSA-C22.2 No. 250.13
CE	EN 61347-1, EN 61347-2-13
СВ	IEC 61347-1, IEC 61347-2-13
CCC	GB 19510.1, GB 19510.14
global-mark	AS/NZS 61347.1, AS/NZS 61347.2.13



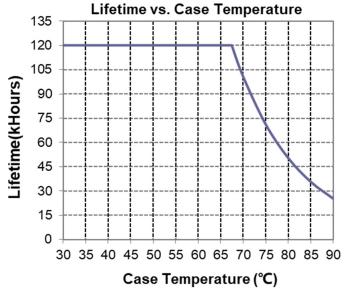


# **Safety &EMC Compliance (Continued)**

EMI Standards	Notes
EN IEC 55015/GB/T 17743 <sup>(1)</sup>	Conducted emission Test &Radiated emission Test
EN IEC 61000-3-2/GB 17625.1	Harmonic current emissions
EN 61000-3-3	Voltage fluctuations & flicker
	ANSI C63.4 Class B
FCC Part 15 <sup>(1)</sup>	This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: [1] this device may not cause harmful interference, and [2] this device must accept any interference received, including interference that may cause undesired Operation.
EMS Standards	Notes
EN 61000-4-2	Electrostatic Discharge (ESD): 8 kV air discharge, 4 kV contact discharge
EN 61000-4-3	Radio-Frequency Electromagnetic Field Susceptibility Test-RS
EN 61000-4-4	Electrical Fast Transient / Burst-EFT
EN 61000-4-5	Surge Immunity Test: AC Power Line: Differential Mode 6 kV, Common Mode 10 kV
EN 61000-4-6	Conducted Radio Frequency Disturbances Test-CS
EN 61000-4-8	Power Frequency Magnetic Field Test
EN 61000-4-11	Voltage Dips
EN 61547	Electromagnetic Immunity Requirements Applies To Lighting Equipment

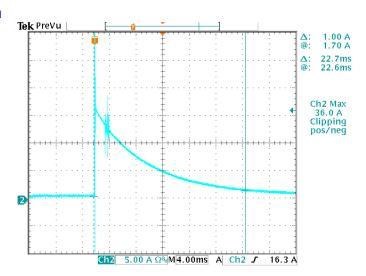
**Note:** (1) This LED driver meets the EMI specifications above, but EMI performance of a luminaire that contains it depends also on the other devices connected to the driver and on the fixture itself.

# Lifetime vs. Case Temperature

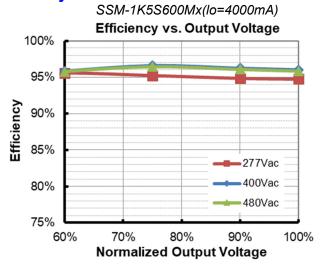


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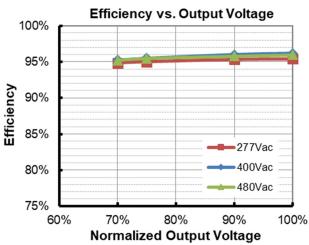
#### **Inrush Current Waveform**

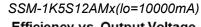


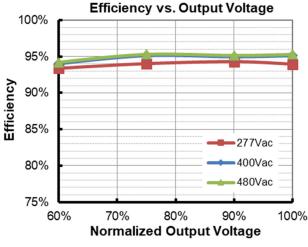
#### Efficiency vs. Load



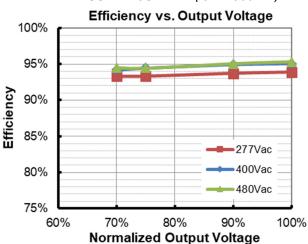
# SSM-1K5S600Mx(lo=6000mA)



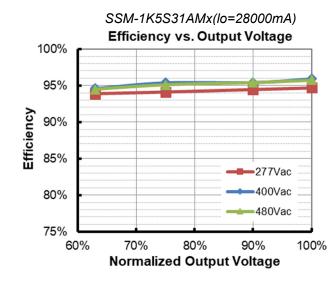


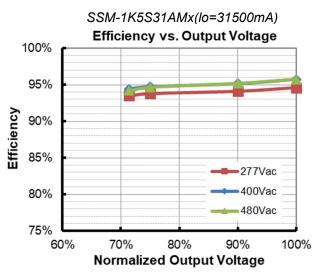


# SSM-1K5S12AMx(lo=12500mA)

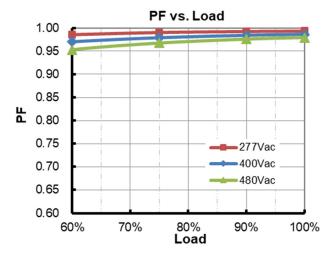


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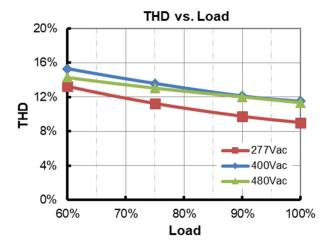




#### **Power Factor**

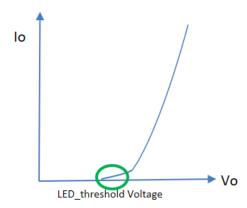


#### **Total Harmonic Distortion**



# **Hot-plugging Protection**

This feature protects LEDs when connecting to a driver that is already powered on. This is disabled by default and can be enabled through the Inventronics Programing software.



LED threshold voltage (Vth) is the minimum voltage required for current to flow through the LED load. After this threshold is met, the LED forward voltage (Vf) increases as the current increases.

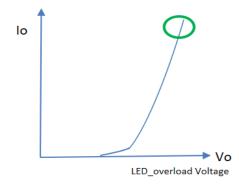
Set Vth close to, but higher than the actual LED threshold voltage for optimized performance. The greater the difference between the Vth setting and the actual LED threshold voltage, the higher the overshoot current will be. The Vth setting must be lower than Vf.

Please test, program, and tune this feature for each LED load design.

Parameter			Min.	Тур.	Max.	Notes	
Hot- plugging Protection		SSM-1K5S600Mx	175V	-	375V	Set Vth close to, but higher thar the actual LED threshold voltage	
	LED Threshold Voltage Setting Range	SSM-1K5S12AMx	84V	-	150V		
	rango	SSM-1K5S31AMx	44V	-	54V		
Setting Tolerance		Tolerance	-2%	-	2%		

#### **Parallel LED Protection**

This feature helps protect parallel LEDs from a high, overcurrent condition by limiting the voltage. This is disabled by default and can be enabled through the Inventronics Programing software.



Set V\_overload close to, but higher than the maximum forward voltage for optimized performance. The greater the difference between the V\_overload setting and the maximum forward voltage, the higher the overload stress will be. The V\_overload setting must be higher than Vf.

Please test, program, and tune this feature for each LED load design.

	Parameter			Тур.	Max.	Notes	
		SSM-1K5S600Mx	175V	1	390V		
Parallel LED	Overload Voltage Setting Range	SSM-1K5S12AMx	84V	-	160V	Set V_overload close to, but higher than the maximum LED forward voltage	
Protection	range	SSM-1K5S31AMx	47V	-	56V	Torward voltage	
	Setting Tolerance		-2%	-	2%		

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All specifications are typical at 25 ℃ unless otherwise stated.

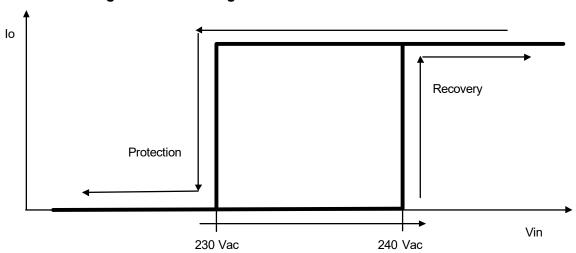


Rev.A

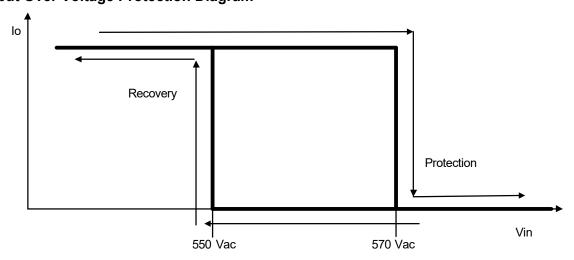
### **Protection Functions**

Par	ameter	Min.	Тур.	Max.	Notes			
Over Temperat	ture Protection	Decreases of	Decreases output current, returning to normal after over temperature is removed.					
Short Circuit Protection		Auto Recovery. No damage will occur when any output is short circuited. The output shall return to normal when the fault condition is removed.						
Over Voltage Protection		Limits outpu	Limits output voltage at no load and in case the normal voltage limit fails.					
Input Under Voltage	Input Protection Voltage	220 Vac	230 Vac	240 Vac	Turn off the output when the input voltage falls below protection voltage.			
Protection (IUVP)	Input Recovery Voltage	230 Vac	240 Vac	250 Vac	Auto Recovery. The driver will restart when the input voltage exceeds recovery voltage.			
Input Over	Input Over Voltage Protection	550 Vac	570 Vac	590 Vac	Turn off the output when the input voltage exceeds protection voltage.			
Voltage Protection (IOVP)	Input Over Voltage Recovery	530 Vac	550 Vac	570 Vac	Auto Recovery. The driver will restart when the input voltage falls below recovery voltage.			
	Max. of Input Over Voltage	-	590 V		The driver can survive for 8 hours with a stable input voltage stress of 590Vac.			

# Input Under Voltage Protection Diagram



# Input Over Voltage Protection Diagram



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All specifications are typical at 25 ℃ unless otherwise stated.

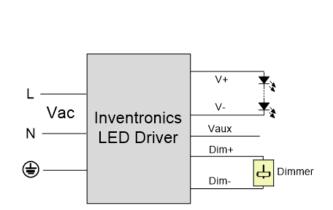
Specifications are subject to changes without notice.

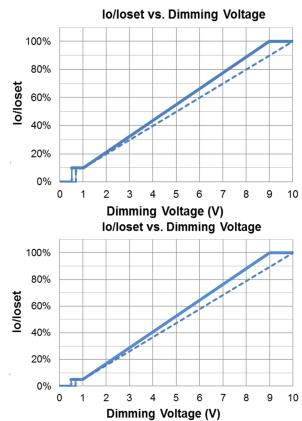
# **Dimming**

### 0-10V Dimming

The recommended implementation of the dimming control is provided below.

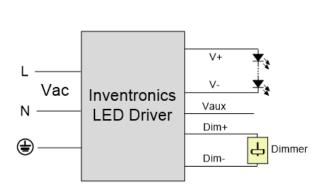
Rev.A

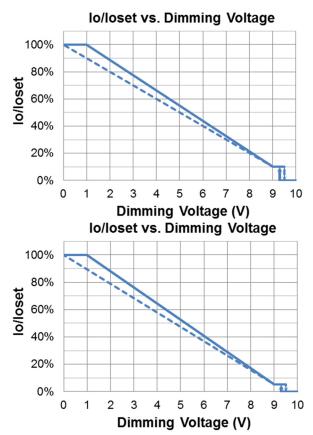




Implementation 1: Positive logic







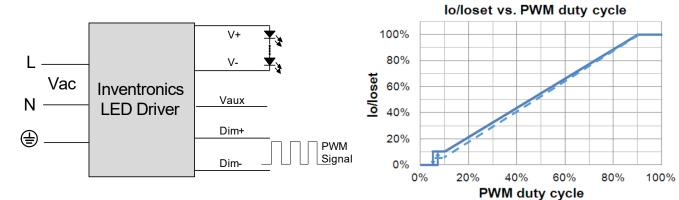
Implementation 2: Negative logic

#### Notes:

- Do NOT connect Dim- to the output V- or V+, otherwise the driver will not work properly.
- The dimmer can also be replaced by an active 0-10V voltage source signal or passive components like zener.
- When 0-10V negative logic dimming mode and Dim+ is open, the driver will dim to off and be standby.

#### **PWM Dimming**

The recommended implementation of the dimming control is provided below.

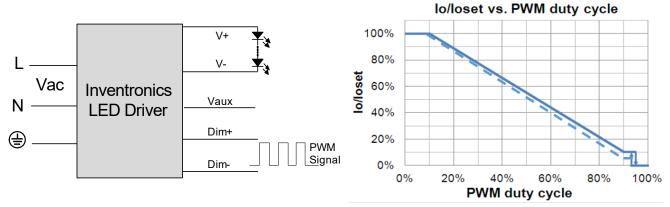


Implementation 3: Positive logic

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All specifications are typical at 25 ℃ unless otherwise stated.



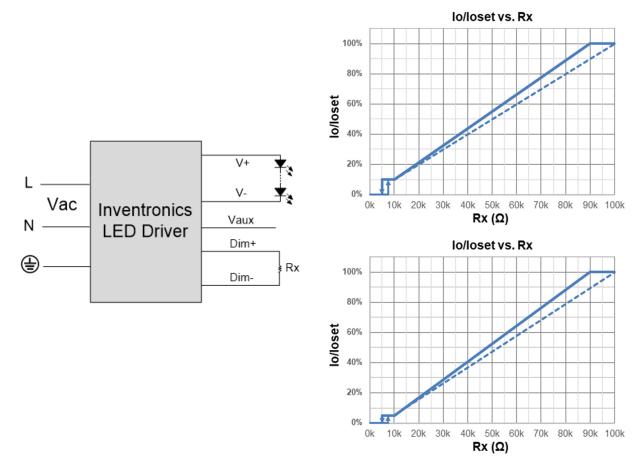
Implementation 4: Negative logic

#### Notes:

- 1. Do NOT connect Dim- to the output V- or V+, otherwise the driver will not work properly.
- 2. When PWM negative logic dimming mode and Dim+ is open, the driver will dim to off and be standby.

### Resistor Dimming

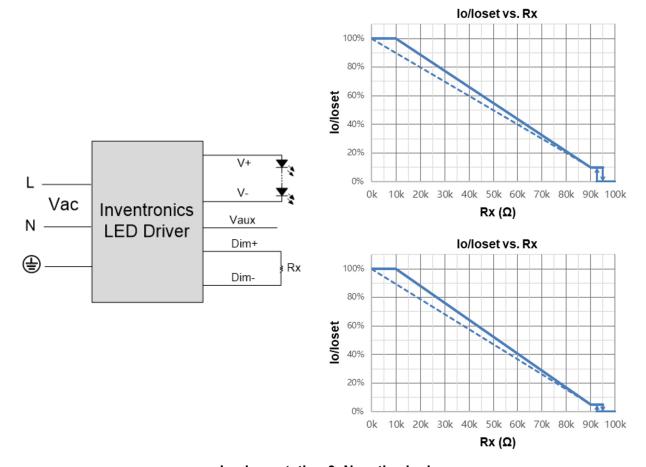
The recommended implementation of the dimming control is provided below.



Implementation 5: Positive logic

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#### Implementation 6: Negative logic

#### Notes:

- 1. Do NOT connect Dim- to the output V- or V+, otherwise the driver will not work properly.
- 2. When resistor negative logic dimming mode and Dim+ is open, the driver will dim to off and be standby.

#### Time Dimming

Time dimming control includes 3 kinds of modes, they are Self Adapting-Midnight, Self Adapting-Percentage and Traditional Timer.

- Self Adapting-Midnight: Automatically adjusts the dimming curve based on the on-time of past two
  days (if difference <15 minutes), assuming that the center point of the dimming curve is midnight local
  time.</li>
- Self Adapting-Percentage: Automatically adjusts the on-time of each step by a constant percentage =
   (actual on-time for the past 2 days if difference <15 min) / (programmed on-time from the dimming curve).</li>
- Traditional Timer: Follows the programmed timing curve after power on with no changes.

#### Output Lumen Compensation

Output Lumen Compensation (OLC) may be used to maintain constant light output over the life of the LEDs by driving them at a reduced current when new, then gradually increasing the drive current over time to counteract LED lumen degradation.

## Minimum Dimming Level with 5% or 10% Selectable

The minimum dimming level can be set as 5% or 10% by Inventronics Multi Programmer,10% is default.

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#### Maximum Dimming Level with 9V or 10V Selectable

The maximum dimming level can be set as corresponding dimming voltage is 9V or 10V by Inventronics Multi Programmer,9V is default.

#### Fade Time Adjustable

Soft-start time and dimming slope can be adjusted by Inventronics Multi Programmer to get customized fade time experience, disable mode is default.

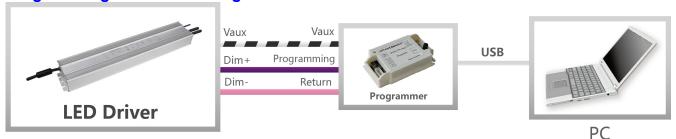
#### End Of Life

End-of-Life (EOL) is providing a visual notification to a user that the LED module has reached the end of manufacturer-specified life and that the replacement is recommended. Once active, an indication is given at each power-up of the driver, which the driver indicates this through a lower light output during the first 1 minute before normal operation is continued.

#### Digital Dimming

Inventronics Digital Dimming is a UART (Universal Asynchronous Receive Transmitter) based communication protocol. Please refer to <u>Inventronics Digital Dimming</u> file for details

#### **Programming Connection Diagram**



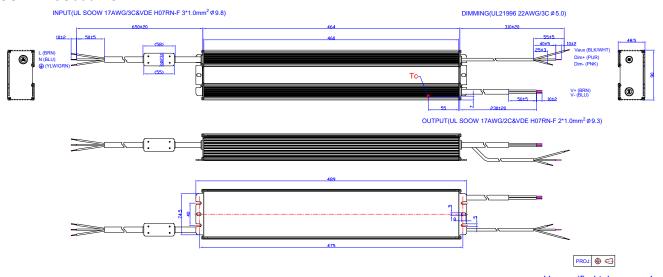
**Note:** The driver does not need to be powered on during the programming process.

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Please refer to PRG-MUL2 (Programmer) datasheet for details.

#### **Mechanical Outline**

SSM-1K5S600MG



Unspecified tolerance:±1

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Specifications are subject to changes without notice.

All specifications are typical at 25 ℃ unless otherwise stated.

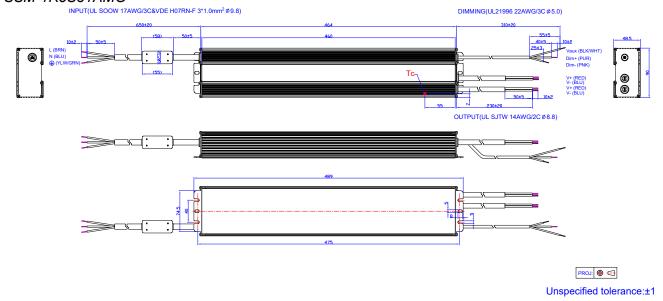
Rev.A

1500W Programmable Driver with INV Digital Dimming

# SSM-1K5S12AMG INPUT(UL SOOW 17AWGGCAVDE H07RNF 3\*1 0mm² 99.8) DIMMING(UL21996 22AWG/3C 9.5.0) DIMMING(UL21996 22AWG/3C 9.5.0) DIMMING(UL21996 22AWG/3C 9.5.0) OUTPUT(UL SOOW 17AWG/3CAVDE H07RNF 2\*1.0mm² 99.3) OUTPUT(UL SOOW 17AWG/3CAVDE H07RNF 2\*1.0mm² 99.3) Unspecified tolerance:±1

**Note:** The 2 DC output cables are connected in parallel internally because one 17AWG wire can only carry 8A. Please connect the 2 brown wires together and 2 blue wires together in application, and ensure each cable carries same current.

#### SSM-1K5S31AMG



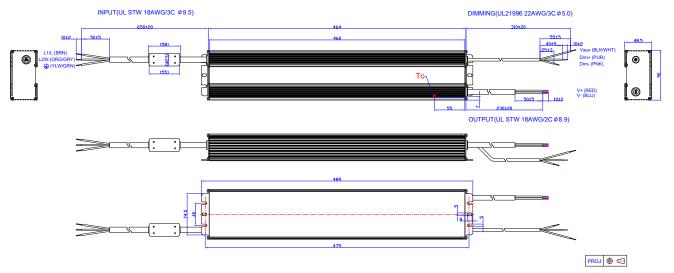
**Note:** The 2 DC output cables are connected in parallel internally because one 14AWG wire can only carry 16A. Please connect the 2 red wires together and 2 blue wires together in application, and ensure each cable carries same current.

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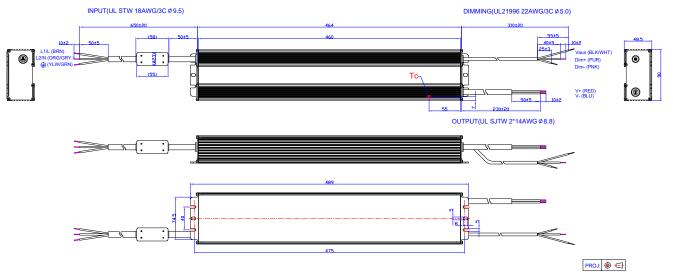
1500W Programmable Driver with INV Digital Dimming

#### SSM-1K5S600MT



#### Unspecified tolerance:±1

#### SSM-1K5S12AMT

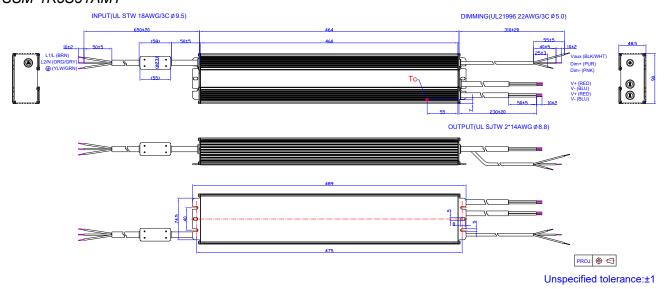


Unspecified tolerance:±1

Rev.A

1500W Programmable Driver with INV Digital Dimming

#### SSM-1K5S31AMT



**Note:** The 2 DC output cables are connected in parallel internally because one 14AWG wire can only carry 16A. Please connect the 2 red wires together and 2 blue wires together in application, and ensure each cable carries same current.

# **RoHS Compliance**

Our products comply with reference to RoHS Directive (EU) 2015/863 amending 2011/65/EU, calling for the elimination of lead and other hazardous substances from electronic products.

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Rev.A

1500W Programmable Driver with INV Digital Dimming

# **Revision History**

Change Date Rev.		Description of Change					
		ltem	From	То			
2023-07-07	Α	Datasheet Release	/	/			

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