

# saturno 120 power supply

Ref: 38.040

**Features:**

- Class I protection
- High PF, high efficiency, low THD
- Flicker free ≤0.5%
- Indoor office lighting
- Decorative lighting
- Commercial lighting
- Degree of protection: IP20



Electrical output	Power (W)	63W max.
	Voltage (V)	33V - 42V
	Current	1500mA
	Ripple voltage	<1V
	Current tolerance	±5%
	Time to light	220V - 240V <0.5s
	Temperatuqe drift	±10%
	Line regulation	±5%
Electrical input	Line regulation	±5%
	Rated input volatge	AC: 220V-240V (max. AC: 200-264V); DC: 200-373V
	Frequency	47-63Hz
	Input current	0.4A max.
	Power factor	≥0.94 / 230V
	THD	≤20%
	Efficiency	≥89% / 230V
	Input current	<0.3A @ 230Vac
	Inrush current (peak/duration)	I <60A/350uS - 230V
	Stand-by power	Pin ≤0.5W / 264V
Protection	No-load	max. output volatge (no-load voltage) 55V
	Short-circuit	hiccup mode (auto-recovery)
Environment	Working temperature	-30 / +50 °C
	Working humidity	20-90% RH, (no condensation)
	Storage temperature / humidity	-40 / +80°C (6 months under the class I environment); 10-90% RH (no condensation)
	Atmospheric pressure	86-103KPa
	Degree of protection	IP20
Other	Dimensions	245x30x21mm
	Guarantee	5 years



**Assembly and safety information**

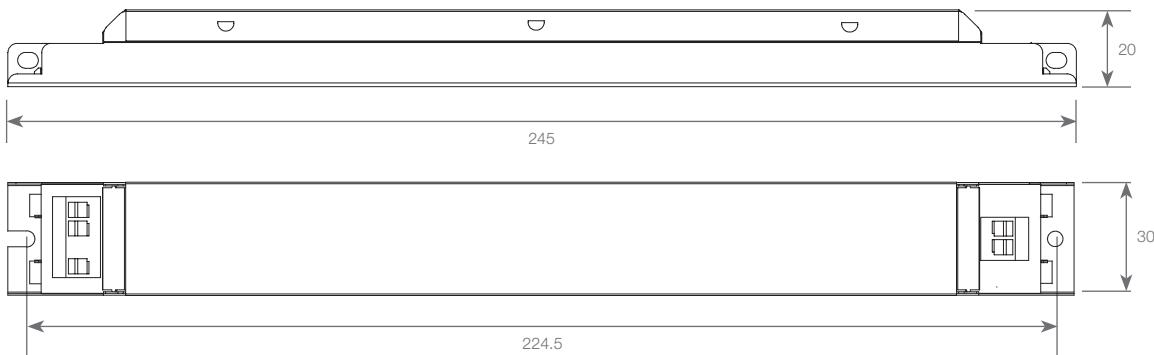
**Applied standards:**

- EN55015
- EN61547
- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

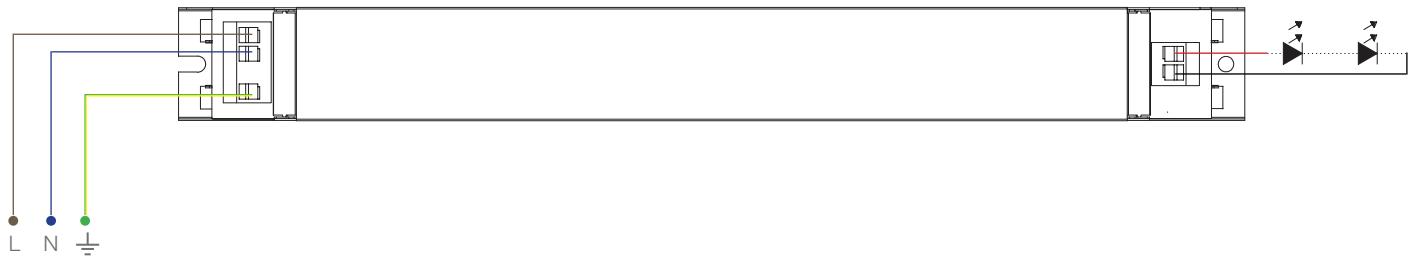
\* See lifespan table

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**Measurements:**

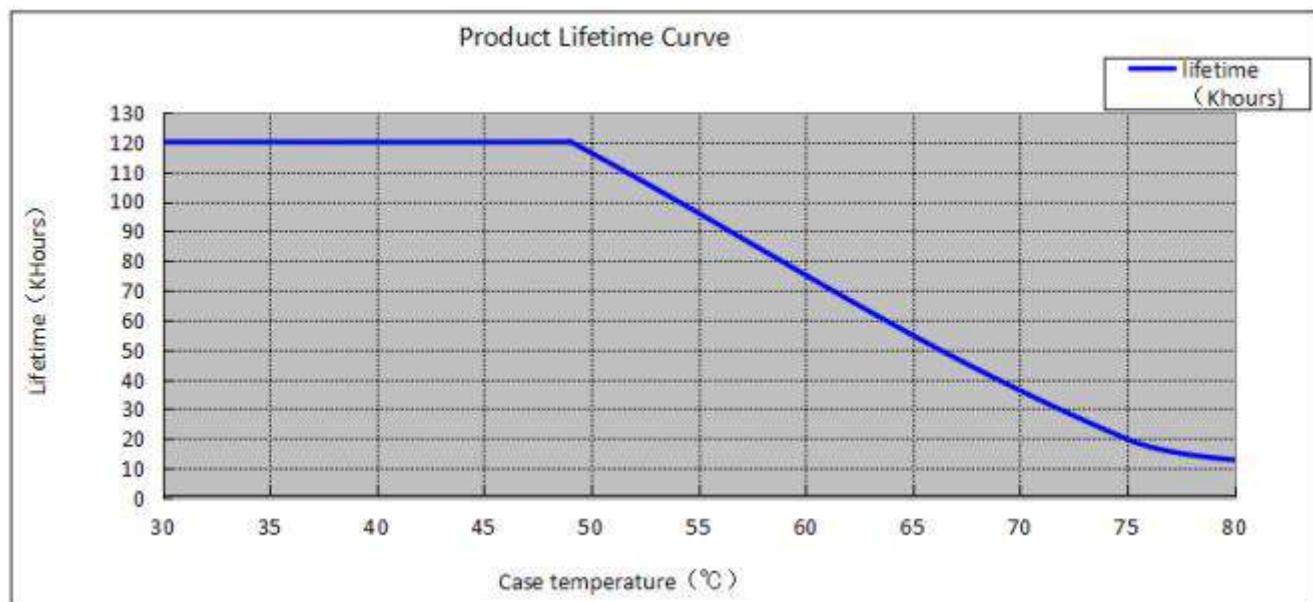


**Diagram:**



**Lifetime curve**

The curve below illustrates the driver's lifetime data when the led driver's max. case temperature reaches 40°C, 50°C, 60°C, 70°C, 80°C.



# saturno 120 power supply

Ref: 38.048

**Features:**

- Class I driver, with FG, flicker free
- Standby power consumption <0.5W to turn off dimmable port
- Optional dimming methods
- Supporting multi-power supplies synchronous dimming connected in parallel
- Cooling by free air convection
- Degree of protection: IP20
- Suitable for indoor led lighting applications
- Built-in DALI dimming function



Electrical output	Power	50,4 / 59,4W
	Voltage (V)	200V - 240V
	DC current	1.2-1.65A
	DC voltage range	3-42V
	Voltage ripple & noise	≤350mV (Vpp)
	Current ripple & noise	≤50mA (RMS)
	Constant current ADJ. range	DIP S.W
	Constant current accuracy	±5%
	Line regulation	±5%
	Load regulation	±5%
	DALI port input current	≤2mA
Electrical input	1-10V port input current	<1mA (when DIM+ is shorted with DIM- )
	Input AC voltage range	180V - 264V
	Input DC voltage range	180V - 264V
	Frequency range	47-63Hz
	Power factor	PF >0.95 - 230V / full load, PF >0.90 - 230V / >30% load
	THD	THD <10% - 230V / full load, THD <20% - 230V / >30% load
	Efficiency	90%
	Standby power	<0.5W / 230Vac
	Input current	<0.45A / 230Vac
Protection	Inrush current	<30A, <0.12A <sup>2</sup> S , Twidth=130us
	Turn on delay	<0.5A - 230V
	Short circuit	recovers automatically after environment temperature declines
Environment	Max output voltage	50V
	Over temperature	automatic recovery after fault condition is removed
	Operation temperature	-20°C / +60°C
Other	Operation humidity	10-90% RH, non-condensing
	Storage temperature/humidity	-40°C / +80°C, 5-95% RH
	Degree of protection	IP20
	Vibration	10 ~ 500Hz, 5G 12min. / 1cycle, period for 72min. each along X,Y,Z axes
	Tc	Tc=90°C (Ta=60°C)
	MTBF	500000h, MIL - HDBK - 217F (25°C)
	Dimensions	355x30x21mm
	Guarantee	5 years



\* See lifespan table



Guarantee  
5 years

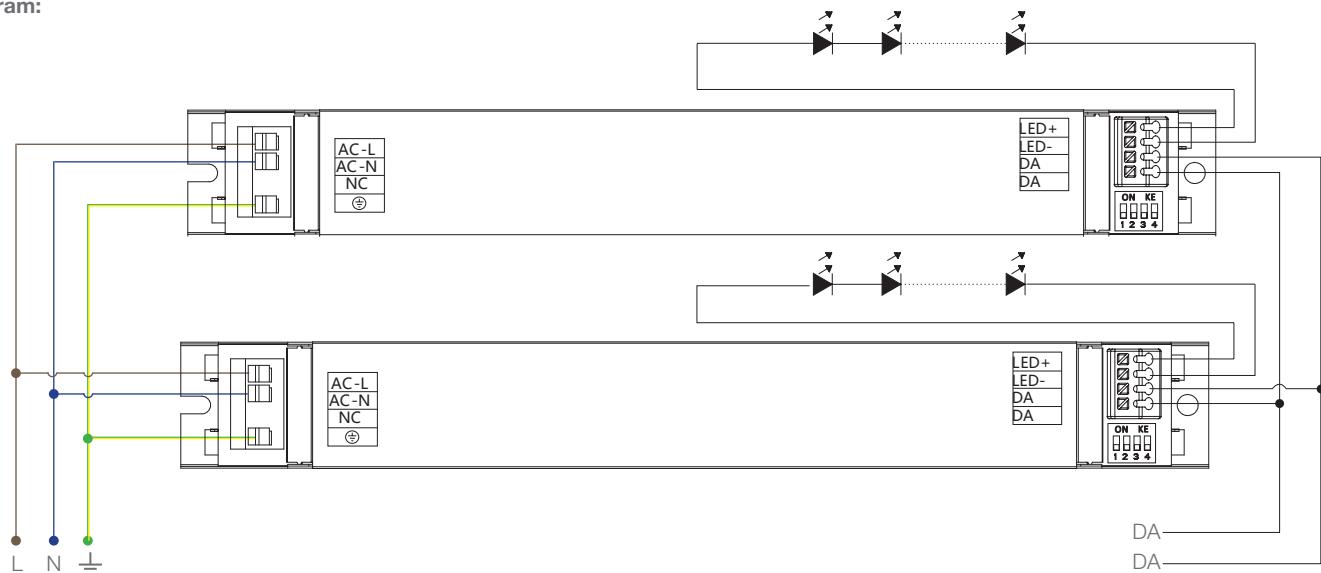


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**Measurements:**



**Diagram:**



**Note:**

- Standard DALI control line voltage range: 9.5V to 22.5V, type 16V.
- The two DALI control lines are polarity-reversible.
- Max. 64 DALI drivers per DALI control line.
- The maximum distance length of the DALI control line is 300m at 2x1.5mm<sup>2</sup>.
- DALI bus can be wired together with any mains voltage cables, but separate wiring is recommended.

Please refer to the table below

Cable size	Distance
2x0.50mm <sup>2</sup>	max.100m
2x0.75mm <sup>2</sup>	max.150m
2x1.00mm <sup>2</sup>	max.200m
2x1.50mm <sup>2</sup>	max.300m

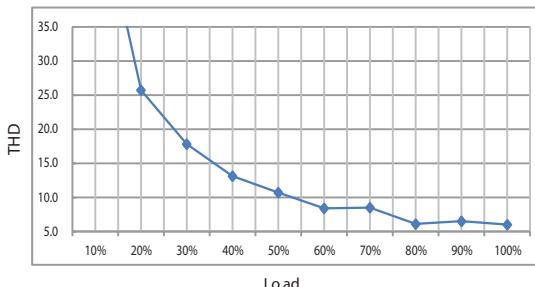
**Hot plug-in protection function:**

- In the following two cases, the led driver will automatically turn off the output to protect the led:
  1. When the driver is powered on first and the led is connected later.
  2. When the driver is powered on, disconnect and connect again.
- The led can be activated in two ways:
  1. Through the AC input port: disconnect the AC from the driver and power it again.
  2. Through DALI interface: send "OFF" command first, then send "MAX" command.

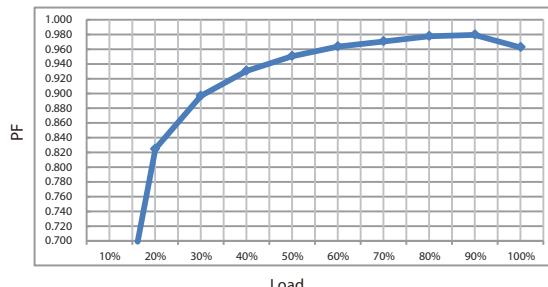
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## Electrical characteristics

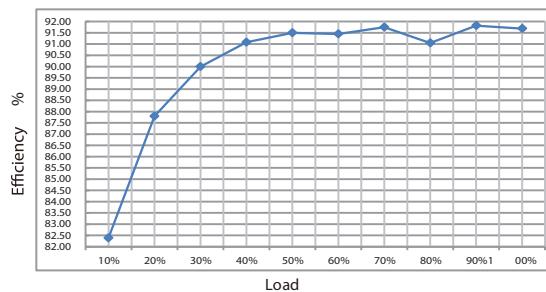
### THD vs. load



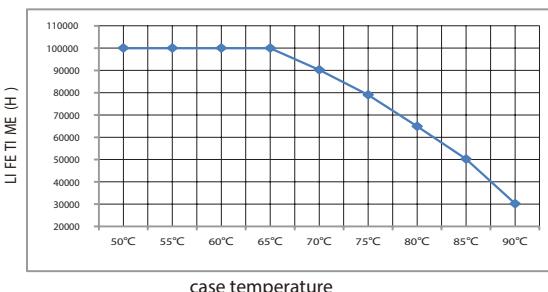
### Power factor vs. load



### Efficiency vs. load



### Lifespan vs. case temperature



## Assembly and safety information

### Applied standards EMC:      Applied standards SAFETY:

- EN55015
  - GB17743
  - EN61000-3-2
  - EN61000-3-3
  - EN61000-4-2
  - EN61000-4-3
  - EN61000-4-4
  - EN61000-4-5
  - EN61000-4-6
  - EN61000-4-8
  - EN61000-4-1
- EN61347-1/2-13
  - GB19510.1/14
  - EN62384
  - IEEE1789
  - IEC62386-101
  - IEC62386-102
  - IEC62386-207