

# 24S2 100 W Power Supply

24  
VDC

Dimmable/non-dimmable damp/dry-rated 100 Watt power supplies

**24S2**  
Non-dimming

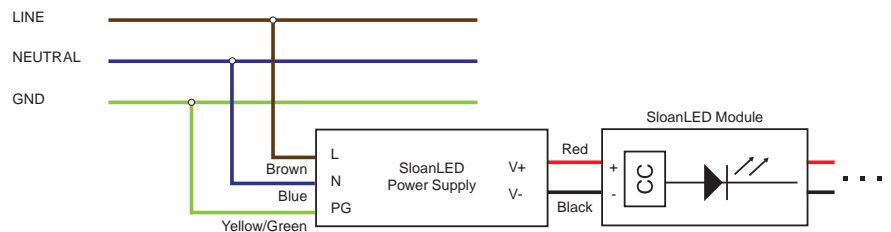


**24S2D**  
Dimming

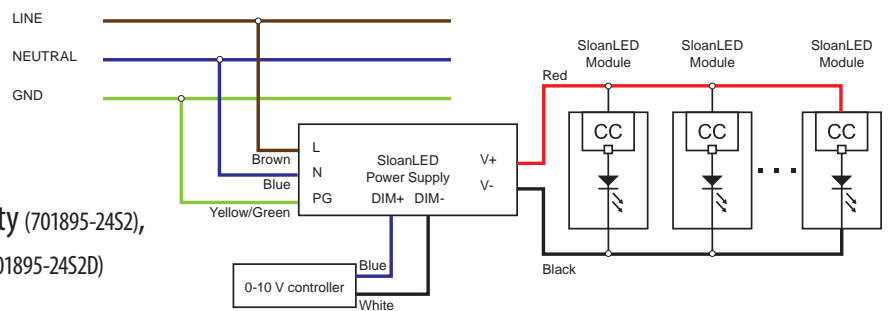
- Universal input voltage – 108-240 VAC (277 VAC North America only), 50-60 Hz
- Constant voltage output at 24 V and 96 W
- Auto-resetting – No fuses to replace or circuit breaker to reset – Short circuit protection automatically resets when short condition is corrected
- 3-Way dimming controls (0-10 V, PWM, resistance), PWM dimming output (701895-24S2D only)
- Simple secondary hook-ups – No minimum load or load balancing required
- 10-year product/5-year limited labor warranty (701895-24S2), 5-year product and limited labor warranty (701895-24S2D)
- Rugged and compact

## Wiring diagram

701895-24S2



701895-24S2D



In the end application, the maximum case temperature ( $T_c$ ) shall not be exceeded 90° C.

The product is intended for dry and damp environment.



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## Specifications

**Part number**.....701895-24S2 (Non-dimmable)  
701895-24S2D (Dimmable)

### INPUT

**Rated input voltage** .....108-240 VAC, 277 VAC (North America only)  
**Max. input voltage** .....**24S2**..... 108-240 VAC  
.....**24S2D**..... 108-305 VAC  
**Frequency**.....50-60 Hz  
**Rated input current**.....1.2 A max.  
**Inrush current**.....<80 A max. @ 277 VAC, 60 Hz  
**Efficiency**.....**24S2**..... >85% minimum @ 120 VAC (full-load)  
.....**24S2D**..... >87% @ 120 VAC  
.....>89% @ 240 VAC  
.....>89% @ 277 VAC  
**Power factor**.....**24S2**..... >0.90 @ 120-277 VAC (full-load)  
.....**24S2D**..... >0.95 @ 120-277 VAC (full-load)  
.....>0.90 @ 277 VAC (65% load)  
**THD**.....<20% @ 120-277 VAC (full-load)  
.....<20% @ 277 VAC (65% load)

### OUTPUT

**Rated output voltage** .....24 VDC  
**Rated output current**.....4 ADC  
**Max. output power**.....96 W  
**Line regulation**.....< 1%  
**Load regulation**.....< 3%

### PROTECTION

**Over current**.....Yes, auto-recovery  
**Over temperature**.....Yes, 100° C to 110° C case, auto-recovery  
**Short circuit**.....Yes, auto-recovery  
**Surge immunity**.....Line – Earth → 4 kV  
.....Line – Neutral → 2 kV

### DIMMING (701895-24S2D only)

**Dimming method** .....0-10 V, PWM and resistor  
**Min. dimming level** .....1%  
**Current consumption**.....0.1 mA sourcing

### ENVIRONMENT

**Operating ambient temp**.....-40° C to +60° C, derated up to 65° C with 50% of load  
**Maximum case temp**.....90° C  
**Storage temp**.....-40° C to +85° C  
**IP rating**.....IP54, dry and damp locations only  
**Lifetime**.....25,000 hours @ +60° C ambient with 100 % load

### COMPLIANCE

**Safety standard** .....UL879 Class 2, UL879A, CE  
.....(EN61347-2-13:2014, EN61347-1:2008)  
**EMI standard**.....FCC part 15 Class B, EN55015  
**Harmonic current emission**.....IEC/EN61000-3-2 Class C  
**Surge**.....IEC/EN61000-4-5

## Wire Gauge Distance Chart for Power Limited Tray Cable (PLTC)

When the distance increases between the secondary side of the power supply and the first LED in a letter or the beginning of a tubing run, the gauge or wire needed will change as follows:

Distance from power supply	Wire gauge
0 m to 4.6 m	1 mm <sup>2</sup> (18)
4.6 m to 15.2 m	2.5 mm <sup>2</sup> (14)
15.2 m to 30.5 m	4 mm <sup>2</sup> (12)
30.5 m to 45.7 m	6 mm <sup>2</sup> (10)

**Power supply output lead length**.....457 mm

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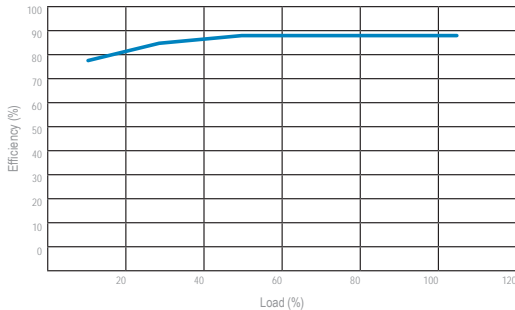
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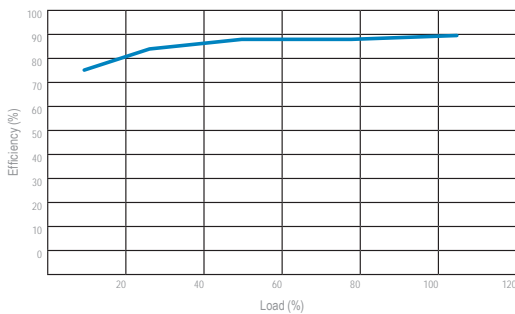
## Efficiency

701895-24S2

Efficiency vs various loads @ 120 VAC

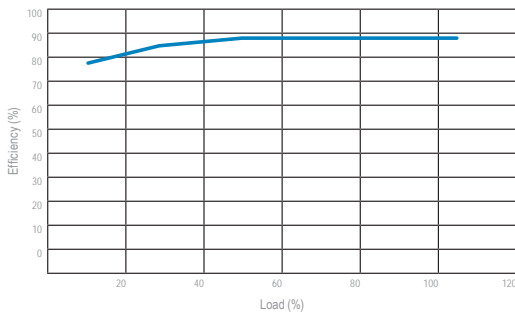


Efficiency vs various loads @ 240 VAC

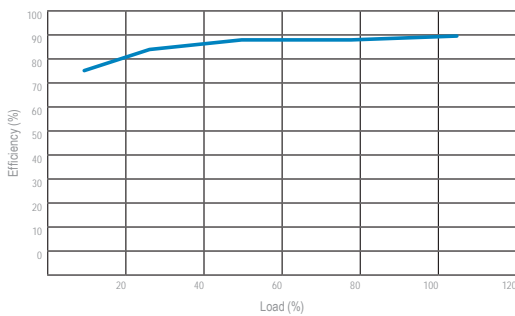


701895-24S2D

Efficiency vs various loads @ 120 VAC



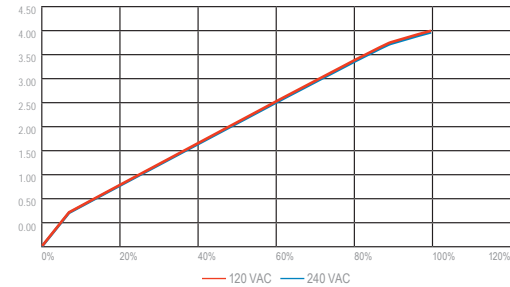
Efficiency vs various loads @ 240 VAC



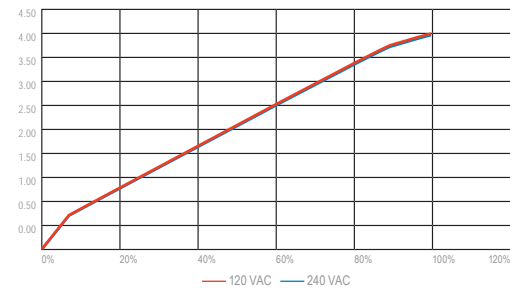
## Dimming

701895-24S2D only

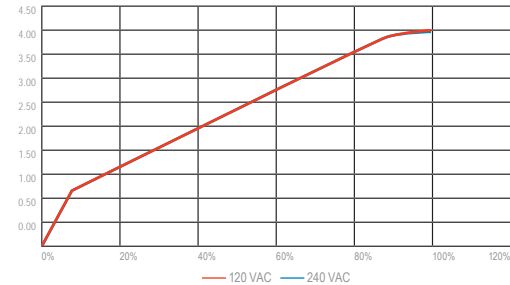
Dimming chart (0-10 V dimming)



Dimming chart (PWM dimming)



Dimming chart (Resistor dimming)



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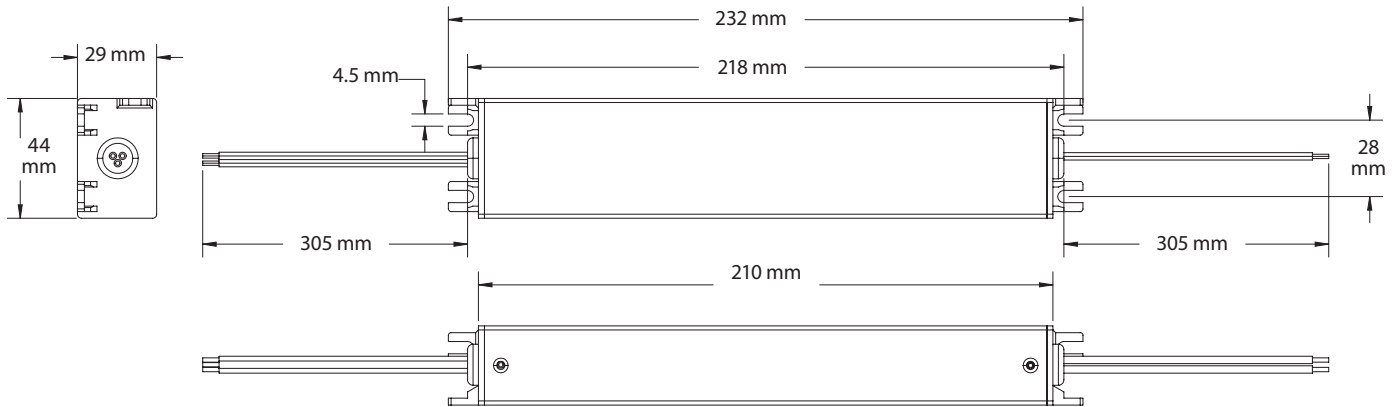
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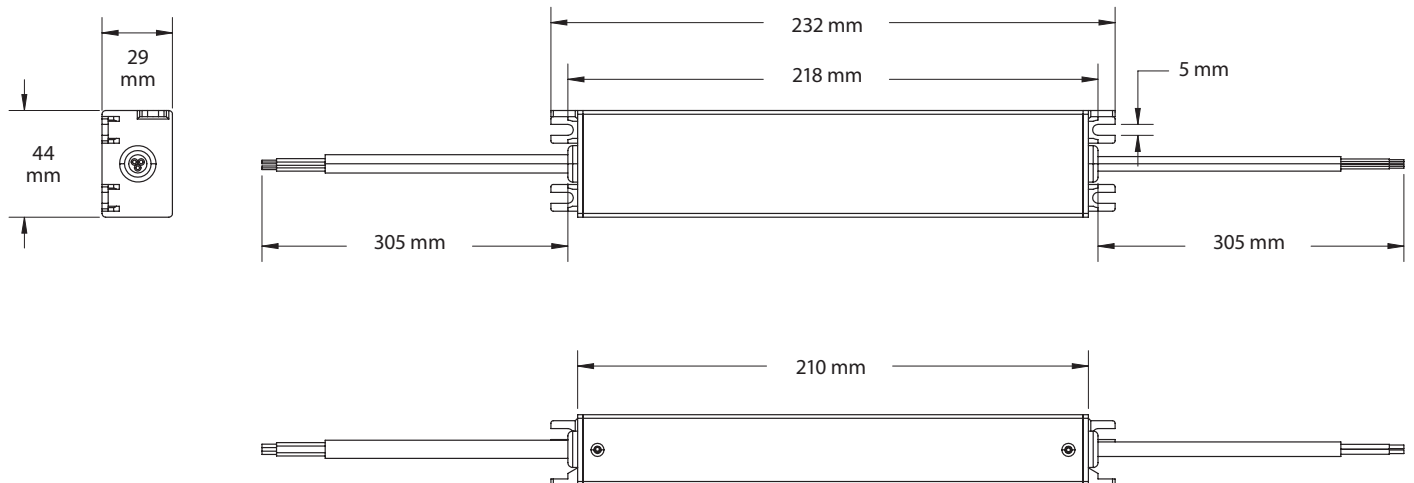
## Dimensions

Weight: 0.53 kg

701895-24S2



701895-24S2D



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