

Constant Voltage LED Driver

SE20-12VF

SE20-24VF



Product description

The SE20-12/24VF is an ultra-thin, constant-voltage indoor LED driver with an input voltage range of 200-240Vac and up to 85% conversion efficiency. Featuring a fanless design and an operating temperature range of -20°C to +45°C with natural cooling, it offers an ultra-high power factor, low standby power consumption, and comprehensive protection features, significantly enhancing product reliability and ensuring a long product lifecycle. This series is specifically designed for LED lighting applications, specifically for indoor lighting. Complying with global lighting safety regulations, it ensures the safety of both users and lighting systems during installation.

Standards

EN61347-1
EN61347-2-13
EN61547
EN55015
EN61000-3-2
EN61000-3-3

Characteristics

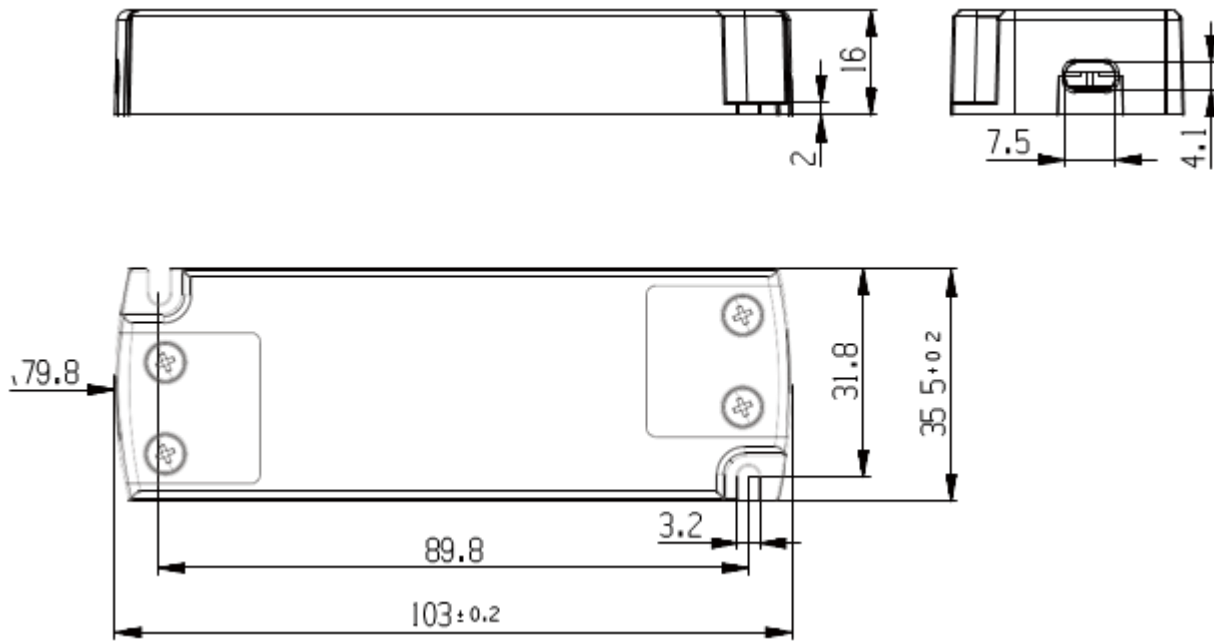
- Input voltage range (180-264VAC)
- IP20
- Suitable for indoor environments
- Protection types: Short circuit, overload, and overvoltage
- Complies with European lighting safety regulations
- 5-year warranty

Specifications

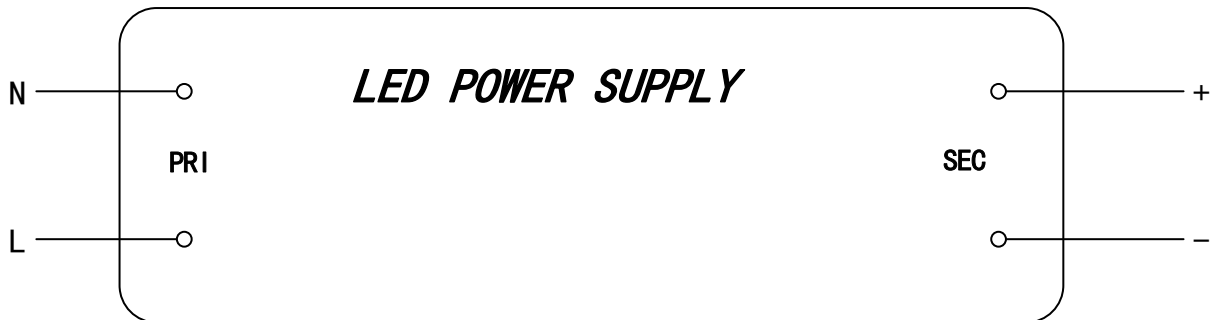
| Model | | SE20-12VF | SE20-24VF |
|-------------------|---------------------------------|--|---------------|
| Output | Turn on time(S) | <0.5 | |
| | Output power(W) | 20 | |
| | Output voltage(V) | 12 | 24 |
| | Output voltage tolerance | ±5% | |
| | Ripple voltage | ≤4% | |
| | Line Regulation | 2% | |
| | Load Regulation | 4% | |
| | Working current range(A) | 0-1.67A | 0-0.833A |
| | SVM | ≤0.4 | |
| | Pst | ≤1 | |
| | Dimming type | - | |
| | Dimming range | - | |
| Input | Rated DC supply voltage(Vdc) | - | |
| | Rated supply voltage(Vac) | 200-240 | |
| | Voltage range(Vac) | 180-264 | |
| | Line frequency(Hz) | 50/60 | |
| | Input current(A) | 0.17 | |
| | Efficiency | 83%@full load | 85%@full load |
| | Average efficiency | 82.9% | 84.9% |
| | No load power consumption(W) | ≤0.5W | |
| | Power factor | 0.84 | |
| | Displacement factor | 0.84 | |
| | Total harmonic distortion(typ.) | 45% | |
| | Inrush current(Ipk) | 22A/75μS | |
| | Leakage current | <0.7mA | |
| Protection | Short circuit protection | hiccup mode ,restart automatically after fault correction. | |
| | Over load protection | exceed maximum rated load times 1.2 hiccup mode ,restart automatically after fault correction | |
| | Over voltage protection | hiccup mode ,restart automatically after fault correction | |

| | | |
|-------------------------|--|-------------------------------|
| | Over temperature protection | - |
| | Surge capacity | L-N: 1KV |
| | Withstand voltage | Input-Output:3000V/5mA/1 min |
| Ambient and Life | Ta(°C) | -20...45 |
| | Tc max.(°C) | max.85 |
| | Storage Temperature(°C) | -40...85 |
| | Ambient humidity range | 5%...85%RH, Not condensing |
| | Nominal life-time(hrs) | 50'000@Ta 35°C |
| Other | Dimensions (L×W×H)(mm) | 103*35.5*16mm |
| | Weight(g) | 65 |
| | Casing material | Plastic |
| | Housing colour | White |
| | Type of protection | IP20 |
| | Protection class | Class II |
| | Certificate | CE,TUV |
| Note | <p>1.Tolerance:includes set up tolerance, line regulation and load regulation. 2.Tested at full load,230Vac.Refer to"Power Factor" and "EFFICIENT"curve graphs. 3.Calculate the model's average efficiency for each test voltage by testing at 100%, 75%, 50%, and 25% of rated current and then computing the simple arithmetic average of these four values. 4.All parameters NOT specially mentioned are measured at nominal voltage input, rated load and 25 of ambient temperature. 5.The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.</p> | |

Dimensions(mm)



Wiring Diagram



| | |
|----|--|
| AC | Terminal block for H03VVH2-F 2×0.75mm ² |
| DC | Terminal block for H03VVH2-F 2×0.75mm ² |

Electrical curves

Fig. 1 Output load-Temperature curve

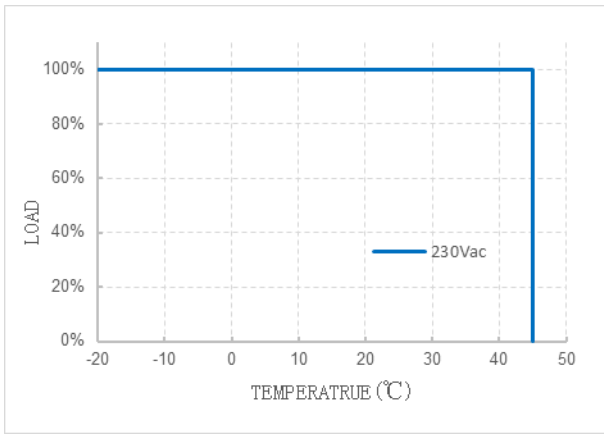


Fig. 2 Static characteristic curve

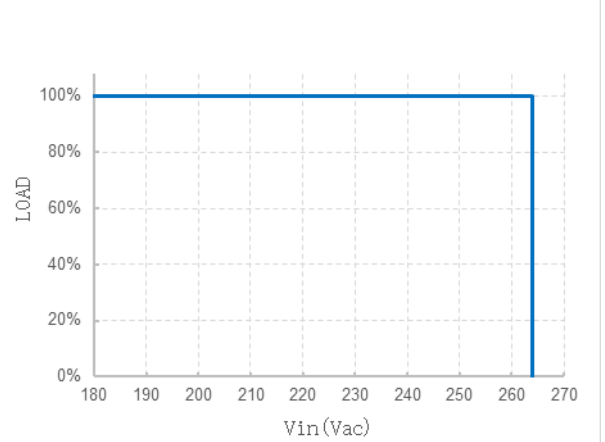


Fig. 3 I-V curve

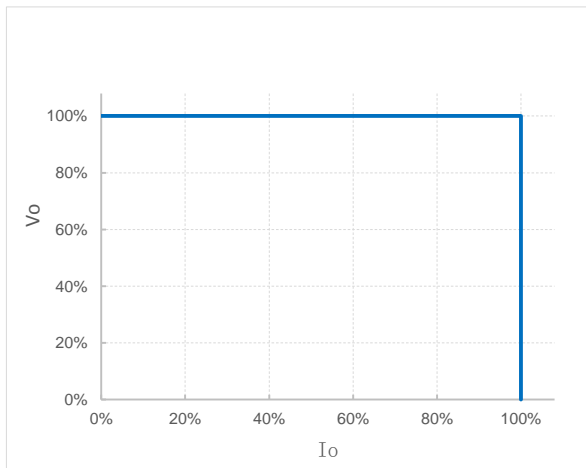


Fig. 4 Power factor characteristic curve

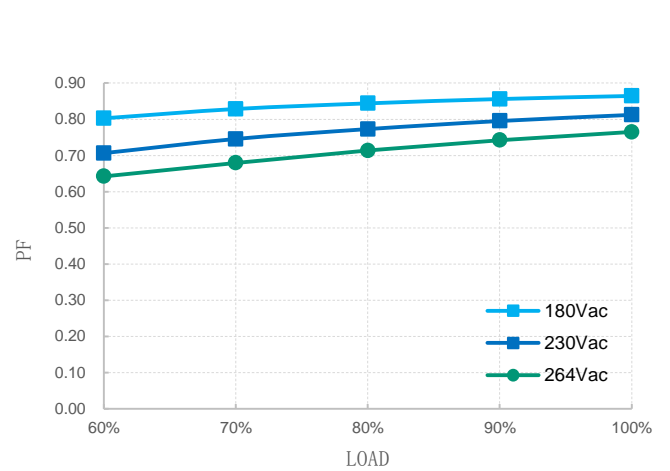


Fig.5 Total harmonic distortion curve

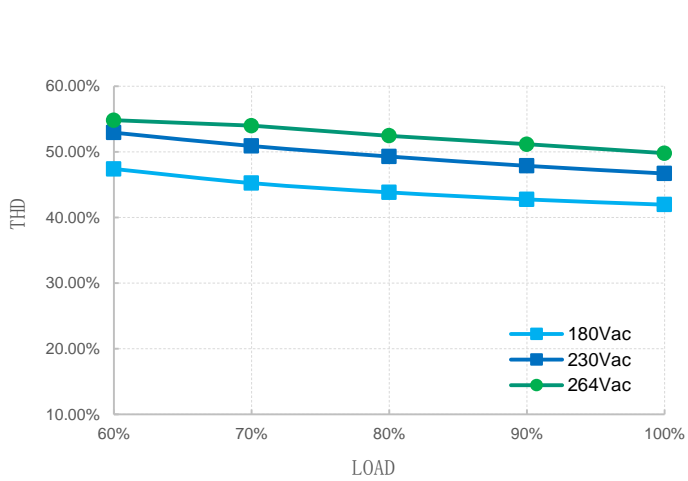
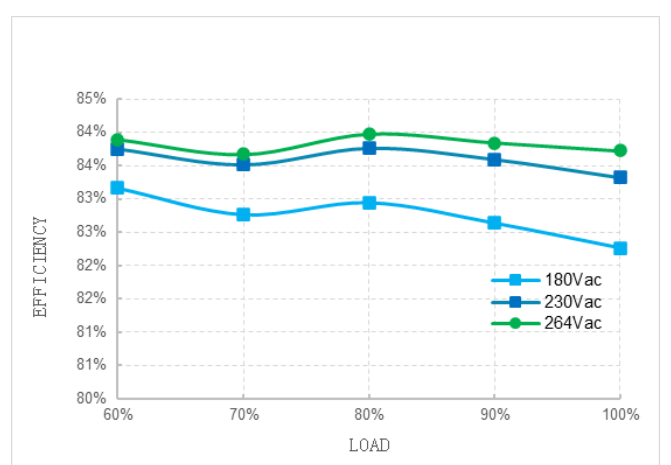


Fig.6 Efficiency-Load curve



MCBS

| Model \ MCBS | B10 | B13 | B16 | B20 | C10 | C13 | C16 | C20 |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|
| SE20-12/24VF | 23 | 30 | 37 | 47 | 29 | 38 | 47 | 58 |
| | | | | | | | | |

Package

| Model | Carton quantity(pcs) | Carton dimension(mm) | G.W./CTN(kg) |
|--------------|----------------------|----------------------|--------------|
| SE20-12/24VF | | | |
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Revision history

| Date | Rev. | Remark |
|------------|------|---------------|
| 2025.10.11 | A2 | Format update |
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