

Features

Standard power supply unit for SwitcherGear controllers

Universal AC mains input

Regulated 24 VDC output

Maximum output power 50 W

Maximum load current 2.1 A

Isolated from AC mains

Fully protected

Over-voltage

Over-current

Short-circuit

General Description

The PSU001 Accessory is an AC-DC power supply for the SwitcherGear controller. The power supply will operate from world-wide mains voltages. The output is isolated from the AC mains and provides 24 VDC to operate the SwitcherGear controller.

Ordering Information

| Order Code | Description |
|------------|---|
| PSU001 | SwitcherGear accessory, power supply 24 VDC 2 A, Australian power cord |

Standard Interfaces

AC Input Connectors

The power supply unit has a standard 3-pin IEC AC power inlet. The unit is supplied with an IEC power cord – see the ordering information for cables suited to your region.

DC Output

The power supply units has a cord for the DC output voltage. The cord is a black twin-wire cable with a length of 1.5 m. The positive wire is marked with a white stripe along its length.



Figure 1: Photo of the power supply unit.

Applications Information

This power supply has a high power rating that is enough for most SwitcherGear controller systems.

The SwitcherGear system is designed to operate from a single power supply. The SwitcherGear controller has internal power supplies that distribute power to accessories that are connected to the controller, e.g. gate drivers, voltage and current sensors, incremental encoders, etc. You should make sure that the total power consumed by the controller and connected accessories is within the rating of this power supply.

If you experience unexpected loss of power to the SwitcherGear controller, the total power of the SwitcherGear system may be higher than the rating of the power supply.

Electrical Characteristics

The following specifications apply for $T_A = 25^\circ\text{C}$, unless otherwise noted.

| Parameter | Conditions | Min | Typ | Max | Unit |
|------------------|------------|-----|-----|---------|------|
| AC INPUT | | | | | |
| Voltage | | 90 | | 264 | VRMS |
| Frequency | | 47 | | 63 | Hz |
| Current | | | | 1.2 | A |
| DC OUTPUT | | | | | |
| Voltage | | | 24 | | V |
| Regulation | | | | ± 5 | % |
| Ripple And Noise | | | 250 | | mVpp |
| Load current | | | | 2.1 | A |

Electrical Safety

| Parameter | Conditions | Min | Typ | Max | Unit |
|-----------------------------------|-----------------------|-----|------|-----|------|
| Isolation Voltage, Input – Output | AC 50 Hz, 10 mA, 60 s | | 3000 | | VRMS |

Environmental

| Parameter | Conditions | | | Unit |
|-----------------------|------------|-----|----|------|
| Operating Temperature | | 0 | 40 | °C |
| Storage Temperature | | -20 | 80 | °C |

Mechanical Characteristics

| Parameter | Conditions | | | Unit |
|------------------------|-----------------|---------------|--|------|
| Dimensions (W x L x H) | | 53 x 115 x 38 | | mm |
| Mass | Without AC cord | 310 | | g |

Revision History

| Revision | Date | Changes From Previous Release |
|-----------------|-------------|--------------------------------------|
| 1 | 11 Nov 2018 | ▪ Original release. |