

# PSDG-48 Series

**48W integrated power supply**  
**24 & 28VDC input,**  
**multi-outputs board mount module**

February 2024



SWaP-C optimized low profile module: 3.6" x 2.1" x 0.35" (91 x 54 x 9 mm)

## INPUT SPECIFICATIONS

- Permanent voltage : **16 - 60 Vdc**
- High voltage transients: **up to 100Vdc/50ms** (MIL-STD-1275), **80V/100ms** (DO160, MIL-STD-704)
- Low voltage transients: **down to 12V / 1s** (MIL-STD-1275 Initial engagement surge).
- UVLO: **12.2Vdc** (turn on), **10.0Vdc** (turn off)
- **EMI**: built in differential and common mode filtering to comply with MIL-STD-461, DO160...

## OUTPUT SPECIFICATIONS

- **48W total output Power** : 20W+20W+8W triple or 40W+0W+8W dual independent outputs, pre-configured as single ended or symmetrical voltages:

Config	20-20-8	40-0-8	Voltage (each output)
Output 1	20W	40W	3.3V, 5V, 12V, 15V, 24V single ended (Vo & Go) or +/- symmetrical (Vo & -Vo, Go).
Output 2	20W	N/A	
Output 3	8W	8W	

Detailed part numbering scheme described in datasheet.

- Regulation (line + load + thermal):  $\pm 2\%$
- Trim range : 80% to 110% (output 1)
- 1500 Vdc primary - secondary isolation
- Full protections: output short circuit & over voltage

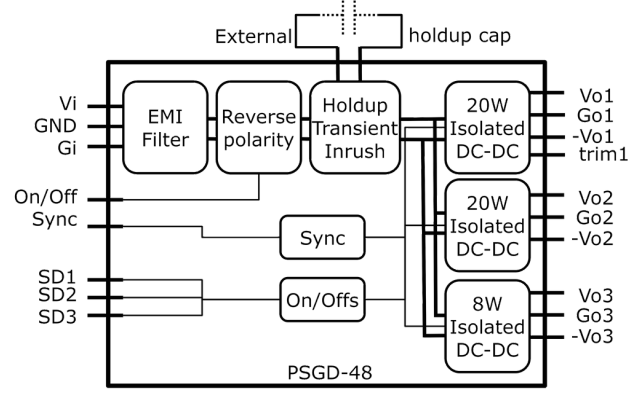
## CASE DIMENSIONS

- Black anodized machined aluminum case
- 3.6" x 2.1" x 0.35" ( 91 x 54 x 9 mm )
- Four mounting screw holes 0.122" (3.1mm)

Note that technical product specifications may be modified as presented on the datasheet

## HI-REL STANDARD COMPLIANCE MADE EASY

PSDG-48 simplified block diagram:



The **PSDG-48 series** is a **fully integrated COTS multi-output 48W** isolated power supply board mount module. Dedicated to **24 & 28VDC military and High Reliability** applications, **MIL-STD-461, MIL-STD-704, MIL-STD-1275, ABD100** and **DO160** power supply requirements are all built into this unique module:

- Integrated **EMI filter**,
- **Reverse polarity protection**,
- **Hold-up** function (50ms transparency timing managed with external capacitor),
- **High & low input voltage** transients and **inrush current limit**,
- **Short circuit and over-voltage protected outputs**,
- **-40°C to +105°C** full load case operating temperature range,
- Ideal for all **rugged applications** complying with **MIL-STD-202 & 810** for altitude, humidity, temperature shocks & cycles, mechanical vibrations and shocks.

The **PSDG series** use a **fixed high frequency switching topology** providing a high power density, a low pro-file package and excellent reliability. It is also **fully encapsulated** with thermally conductive resin for optimal power dissipation in harsh environments.

- Complete power supply efficiency up to 87%

## AUXILIARY FEATURES

- General On/Off
- Individual outputs On/Off (optional)
- Switching frequency Sync input (optional)
- -55°C startup operating temperature (optional)
- Screening and serialization (optional)