

20W Single Output Industrial DIN Rail Power Supply (GDR-20)



GDR-20...

Feature

- Universal AC input/Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- NEC class 2 / LPS compliant
- Built in DC OK active signal
- LED indicator for power on
- No load power consumption<0.75W
- 100% full load burn-in test
- 3 years warranty

Notes:

- All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
- Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
- Tolerance : includes set up tolerance, line regulation and load regulation.
- The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.
- Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.

| Model | GDR-20-5 | GDR-20-12 | GDR-20-15 | GDR-20-24 | |
|---------------------|-------------------------|---|--------------|-----------------|-------------|
| Output | DC Voltage | 5V | 12V | 15V | 24V |
| | Rated Current | 3A | 1.67A | 1.34A | 1A |
| | Current Range | 0~3A | 0~1.67A. | 0~1.34A | 0~1A |
| | Rated Power | 15W | 20W | 20W | 24W |
| | Ripple & Noise | 80mVp-p | 120mVp-p | 120mVp-p | 150mVp-p |
| | DC Voltage Adj.Range | 4.75-5.5V | 10.8-13.2V | 13.5-16.5V | 21.6-26.4V |
| | Voltage Tolerance | ±2.0% | ±1.0% | ±1.0% | ±1.0% |
| | Line Regulation | ±1.0% | ±1.0% | ±1.0% | ±1.0% |
| | Load Regulation | ±1.0% | ±1.0% | ±1.0% | ±1.0% |
| | Setup, Rise Time | 500ms, 30ms/230VAC 1000ms, 30ms/115VAC at full load | | | |
| Hold Up Time (Typ.) | 50ms/230VAC 120-370VDC | | | | |
| Input | Voltage Range | 85-264VAC 120-370VDC | | | |
| | Frequency range | 47-63Hz | | | |
| | Efficiency | 76% | 80% | 81% | 84% |
| | AC Current(Typ.) | 0.55A/115VAC 0.35A/230VAC | | | |
| Protection | Inrush current(Typ.) | Cold start 20A/115VAC 40A/230VAC | | | |
| | Over Load | 105%~160% rated output power Protection type: Constant current limiting, recovers automatically after fault condition is removed | | | |
| | Over Voltage | 5.75-6.75V | 13.8-16.2V | 17.25-20.25V | 27.6-32.4V |
| Function | DC OK Active signal | 3.75-6V/50mA | 9-13.5V/40mA | 11.5-16.5V/40mA | 18-27V/20mA |
| | Working temp. | -20~+70°C (Refer to output load derating curve) | | | |
| Environment | Working humidity | 20°C~90°C, RH non-condensing | | | |
| | Storage Temp & Humidity | -40°C~+85°C, 10%~95%RH | | | |
| | Temp. coefficient | ±0.03%/°C(0-55°C) | | | |
| | Vibration | Component:10-500Hz, 2G 10min./1cycle, 60min, each along X,Y,Z axes;Mounting:Compliance to IEC60068 | | | |
| Safety & EMC | Safety standards | UL508, TUV EN60950-1 approved, NEC class 2 / LPS compliant | | | |
| | Withstand Voltage | I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC | | | |
| | Isolation resistance | I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC | | | |
| | EMI conduction | Compliance to EN55011,EN55022 (CISPR22), EN61204-3 Class B | | | |
| | Harmonic current | Compliance to EN61000-3-2,-3 | | | |
| | EMS immunity | Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, ENV50204, EN55024,EN61000-6-1,EN61204-3, light industry level, criteria A | | | |
| Others | Mibf | 236.9k hrs min, MIL-HDBK-217F(25°C) | | | |
| | Dimension | 22.5x90x100mm(WxHxD) | | | |
| | Packing | 0.19kg; 72pcs/14.7kg/0.91cuft | | | |

Outline and dimension

■ Mechanical Specification

■ Derating Curve

■ Output Derating VS Input Voltage

■ Block Diagram

■ Application of DC OK Active Signal

(a) 5V signal:

| Model | R |
|-------|--------|
| 5V | 1.200Ω |
| 12V | 1.8KΩ |
| 15V | 2.2KΩ |
| 24V | 3.9KΩ |

(b) LED:

| Model | R |
|-------|-------|
| 5V | 1.3KΩ |
| 12V | 2.4KΩ |
| 15V | 2.9KΩ |
| 24V | 4.7KΩ |

(c) Relay:

| Model | R _L |
|-------|----------------|
| 5V | 1.100Ω |
| 12V | 2.000Ω |
| 15V | 2.500Ω |
| 24V | 4.1KΩ |