180W AC/DC Switching Power Supply
Model : TG16-0180-24



FEATURES

- Universal 90 - 264VAC input voltage.
- Operating ambient temperature range: 0°C to +40°C.
- Built-in active PFC function.
- Output short circuit, over-current, over-voltage protection, over-temperature protection.
- Average Efficiency ≧89% (European CoC Tier 2, Energy efficiency level VI compliant).
- Low Standby Power Consumption: <0.15W (European CoC Tier 2, Energy efficiency level VI compliant).
- Compact Design: 203mm (L) x 86.5mm (W) x 51.5mm (H).
- Operating altitude up to 5000m.
- Safety according to IEC62368-1.

Models & Ratings

Model No.	Peak Power (W) (1)	Output Power (W)	Output Voltage (V)	Output Current (A)	Efficiency (%)
TG16-0180-24	312	180	24	7.5	VI compliant

Notes:

1.The PSU shall able to sustain the below peak load condition at normal input voltage range without trip or damage and the Output voltage shall not sag lower than 20V during these peak load conditions.

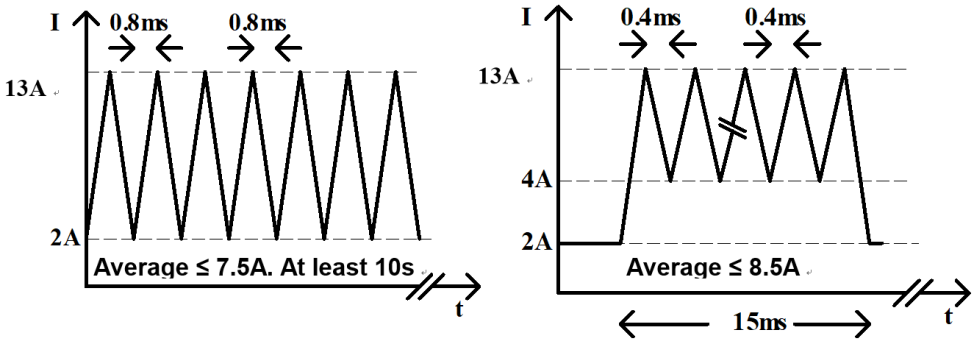


Fig. A

Input Specifications

Item	Operating Conditions		Min.	Typ.	Max.	Unit
Input Voltage Range	AC input		90	100 - 240	264	VAC
Input Frequency	-		47	50 - 60	63	Hz
Input Current	115VAC & Maximum load		-	-	3.0	Arms
	230VAC & Maximum load		-	-	1.5	
Inrush Current	115VAC	At 25°C, Cold start	-	-	60	A peak
	230VAC		-	-	120	
Power Factor	115VAC & Maximum load		0.95	-	-	-
No-load power					0.15	W

consumption					
Leakage Current	264VAC/60Hz			0.5	mA

Output Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Output Voltage		22.8	24	25.2	VDC
Output Load	Output Range	0		7.5	A
Line Regulation	Maximum load	-	±1	-	%
Load Regulation	Output from minimum Load - maximum load	-	±3	-	%
Ripple & Noise (2)	Oscilloscope Bandwidth : 20MHz	-	-	1	%
Peak Load	Refer to peak output condition (Fig. A)			13	A
Overshoot	Output from minimum Load - maximum load			10	%
Turn On Time	115VAC/60Hz maximum load from input AC turn on	-	-	3	S
Hold Up Time	115VAC/60Hz maximum load from input AC turn off	8	-	-	mS
Short Circuit Protection	Output shut down and auto recovery	-	-	-	-
Over Current Protection	Output shut down and auto recovery	-	-	10.5	A
Over Voltage Protection	Output shut down and auto recovery	-	-	33.6	V
Over Temperature Protection	Output shut down and auto recovery	-	-	-	-

Notes:

1.The +24V output is decoupled with 47μF low ESR aluminum electrolytic (C2) and 0.1μF ceramic capacitor (C1).
Measurement is made with a high impedance probe connected across the decoupling capacitance. Measurements shall be made with an oscilloscope with 20MHz bandwidth.

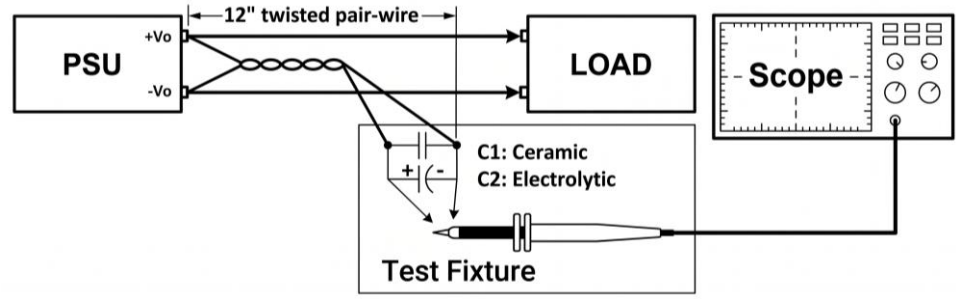


Fig. B

General Specifications

Item	Operating Conditions		Min.	Typ.	Max.	Unit
Operating Temperature	-		0	-	+40	°C
Storage Temperature	Non-operation		-40	-	+85	
Operating Humidity	Non-condensing		10	-	85	%
Storage Humidity			10	-	95	
Altitude	Operating altitude		-	-	5,000	meter
Dielectric Strength Test	Input - Output	Electrical strength test for 1 minute, leakage current is less than 10mA.	3,000	-	-	VAC
	Input - FG		1,800	-	-	
	Output - FG		500	-	-	VDC
Insulation Resistance	Input - Output	25±5°C, 70% RH, non-condensing testing voltage 500VDC.	50			MΩ
	Input - FG		50			
	Output - FG		50			
Mean Time Between Failure	At 115VAC/50Hz, 100% load, 25°C, Telcordia SR332, issue 4.		100,000	-	-	Hrs.
Vibration	Operation：2 G, 10-50Hz, 10 min/cycle, 30 min each axis (X, Y, Z)					
Shock	Non-Operation：5 G, half-sine, 11 ms, 1 shock per direction per axis (X, Y, Z)					

Safety Approvals

Safety Standard	-	UL/cUL UL62368-1, 3rd Edition. TUV EN62368-1, 3rd Edition. CB IEC62368-1, 3rd Edition. PSE, PSB, KC, CCC, BSMI. Design complies with IEC61558-1,IEC61558-2-16
Safety Class	-	Class I

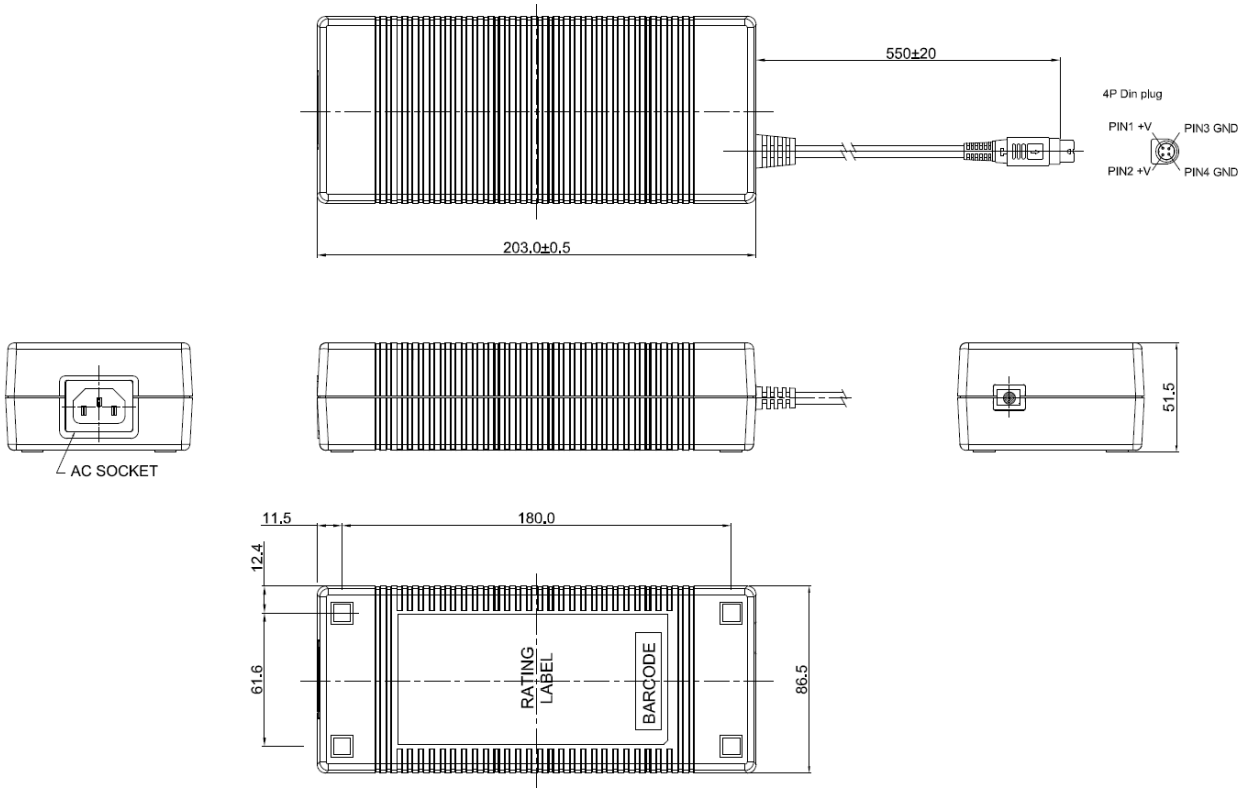
Electromagnetic Compatibility (EMC)

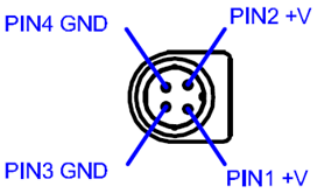
Emissions	CE	EN55032 (CISPR32) Class B, FCC part 15 Class B.	
	RE	EN55032 (CISPR32) Class B, FCC part 15 Class B.	
	Harmonic Current	EN61000-3-2 Class D	
	Voltage fluctuation and flicker	EN61000-3-3	
Immunity	ESD	EN61000-4-2, level 4, Contact +/- 8KV; Air discharge +/- 15KV	Criteria A
	RS	EN61000-4-3, level 3, for 80~1000MHz , 10V/m	Criteria A
	EFT	EN61000-4-4, level 3, +/- 1KV	Criteria A
	Surge	EN61000-4-5, level 3, Line to Line +/-1KV; Line to Earth +/- 2KV	Criteria A
	CS	EN61000-4-6, level 2	Criteria A
	PFMF	EN61000-4-8, level 1	Criteria A
	DIP	EN61000-4-11	Criteria B

Dimensions and Recommended Layout

Item	Value	Unit
Weight (Typ.)	1,003	g
Size (L x W x H)	203 x 86.5 x 51.5	mm

Outline Drawing: (Unit: mm, Tolerance: ±0.5 mm)





Pin	Label
1	+ V
2	+ V
3	GND
4	GND