

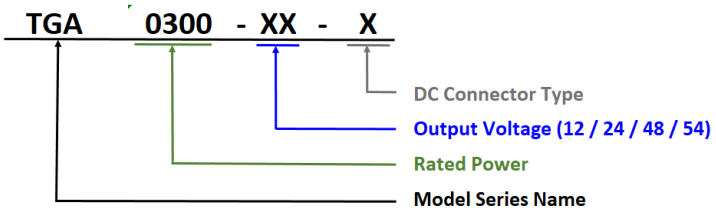
FEATURES

- Wide AC Input Range: 85Vac to 264Vac, suitable for global applications.
- High Efficiency: Up to 94% conversion efficiency for optimized energy savings.
- Low Standby Power Consumption: <0.5W, energy efficiency regulations (CEC level VI compliant).
- Active Power Factor Correction (PFC): Ensures efficient power utilization and reduced harmonic distortion.
- Comprehensive Protection Features: OCP (Over Current Protection), OVP (Over Voltage Protection), SCP (Short Circuit Protection).
- Wide Operating Temperature Range: -10°C to +60°C for industrial and commercial environments.
- Compact Design: 203mm (L) x 86.5mm (W) x 51.5mm (H).
- Safety according to IEC 62368-1, IEC 60601-1, IEC 61558-1, IEC 61558-2-16.

Models & Ratings

Model No.	Output Power (W)	Output Voltage/ Current	Output Voltage Range (V)	Efficiency (%) Typ.
TGA0300-12	240	12V / 20A	11.4 - 12.6	92
TGA0300-24	300	24V / 12.5A	22.8 – 25.2	93
TGA0300-48	300	48V / 6.25A	45.6 – 50.4	94
TGA0300-54	300	54V / 5.56A	51.3 – 56.7	94

Model No.



Efficiency

Efficiency is measured under the following conditions: 50% load, 230VAC input, 25°C ambient temperature, after a 20-minute warm-up period.

No-load power consumption ≦0.5W.

Input Specifications

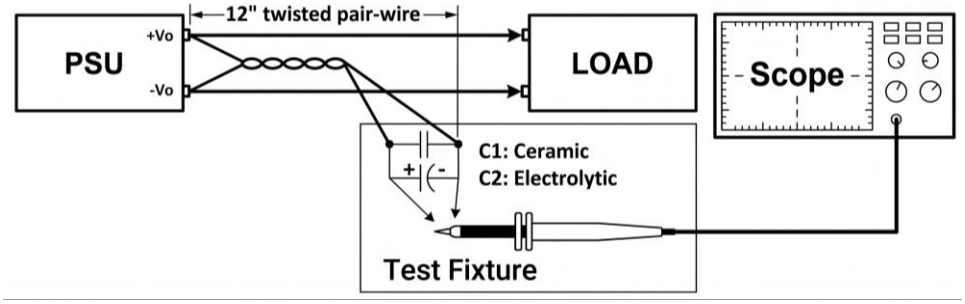
Item	Operating Conditions		Min.	Typ.	Max.	Unit
Input Voltage Range	AC input		85	100 - 240	264	VAC
Input Frequency	-		47	50 - 60	63	Hz
Input Current	115VAC		-	-	3.5	Arms
	230VAC		-	-	1.75	
Inrush Current	100VAC	At 25°C, Cold start	-	-	70	A peak
	200VAC		-	-	140	
Power Factor	115VAC & 100% load		0.95	-	-	-
Earth Leakage Current	264VAC		-	-	500	uA
Patient Leakage Current	264VAC				100	uA

Output Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Output Voltage	See Models and Ratings table	12	-	54	VDC
Minimum Load	-	0	-	-	A
Line Regulation	100% load	-	±1	-	%
Load Regulation	Output from 0 - 100% load	-	±3	-	%
Ripple & Noise	20MHz bandwidth	-	-	1	%
Overshoot	Output from 0 - 100% load			10	%
Turn On Time	115VAC/60Hz maximum load from input AC turn on	-	-	2	S
Hold Up Time	230VAC/50Hz maximum load from input AC turn off	12	-	-	mS
Short Circuit Protection	Output shut down and auto recovery	-	-	-	-
Over Current Protection	Output shut down and auto recovery	105	-	145	%
Over Voltage Protection	Output shut down and latch off, manual reset (Re-power on)	110	-	130	%

Ripple & Noise :

A 0.1uF ceramic (C1) and 100uF ELE capacitors (C2) should be put across output terminals during ripple & noise test. The oscilloscope bandwidth is set at 20MHz and co-axial probe will be used to measure it. The test condition is rated load and nominal line.



Hold-up Time :

When the AC power is removed, the time for the output to drop to 90% should be greater than 12ms at 230Vac/50Hz with rated load and 25°C.

Short circuit protection :

The output short circuit is defined as any output impedance less than 10mΩ.

Over Voltage Protection :

For the 54V model, the OVP threshold is limited to a maximum of 130%.
For other models, the OVP threshold range is 110%~130%.

General Specifications

Item	Operating Conditions		Min.	Typ.	Max.	Unit
Operating Temperature	Refer to Power Derating		-10	-	+60	℃
Storage Temperature	Non-operation		-40	-	+85	
Operating Humidity	Non-condensing		20	-	90	%
Storage Humidity			10	-	95	
Power De-rating	Input Voltage De-rating	85VAC ~ 100VAC	2.489	-	-	%/VAC
		100VAC~114VAC			280	Watt
	Thermal Derating	+35°C to +60°C	2	-	-	%/°C
Altitude	Operating altitude		-	-	2,000	meter
Dielectric Strength Test	Input - Output (2 x MOPP)		4,000	-	-	VAC
	Input - FG (1 x MOPP)		2,000			
	Output - FG (1 x MOPP)		1,500	-	-	
Insulation Resistance	Input– FG, 500VDC, 3 seconds at 25°C and 70% RH		20	-	-	MΩ
	Input–Output, 500VDC, 3 sec at 25°C and 70% RH		20	-	-	MΩ
Mean Time Between Failure	At 230VAC/50Hz, 100% load, 25°C, Telcordia SR332, issue 4.		300,000	-	-	Hrs.
Vibration	Non-Operation：Sine sweep 10–500 Hz at 2G; 10 min/cycle, 30 min each axis (X, Y, Z)					
Shock	Non-operating (package)：20G, 11 ms, 1 shock per direction per axis (X, Y, Z)					

Power Derating :

Input Voltage Derating: The maximum load should be derated from 100% at 115VAC to 56% at 85VAC. (see Fig. B).

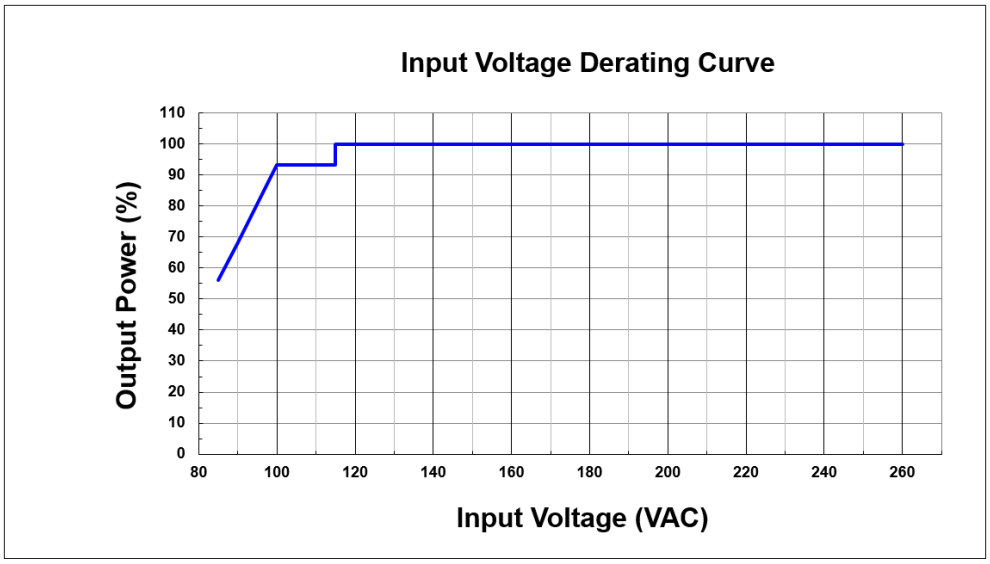


Fig. B

Thermal Derating: The maximum load shall be derated linearly from 100% at 35°C to 60% at 60°C (see Fig. B)
The power supply start at 50% load with input voltage ≥100 VAC when the ambient temperature is below 0 °C.

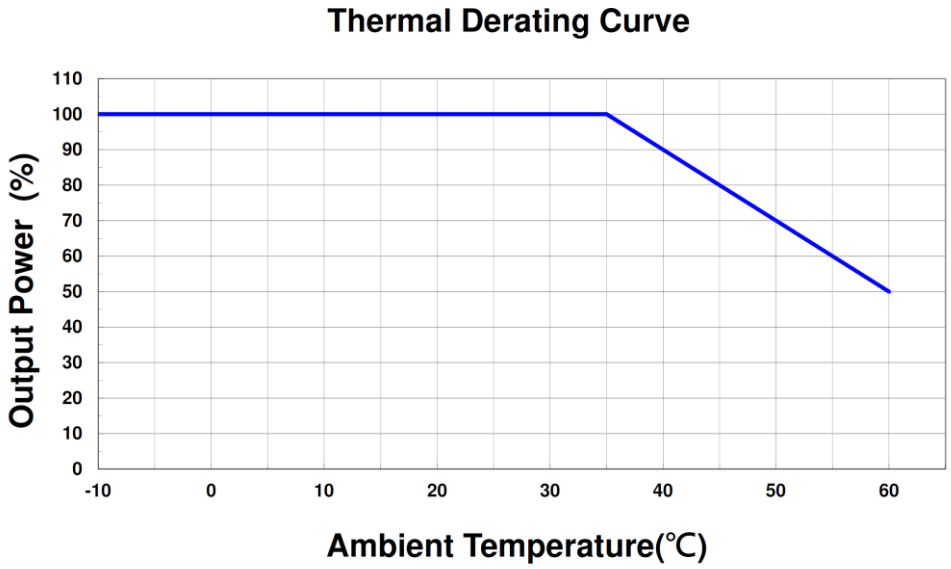


Fig. C

Safety Approvals

Safety Standard	All models	UL/cUL UL 62368-1 CB IEC 62368-1 IEC 60601-1 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, EN55011 (CISPR11) Class B	
	RE	EN55032 (CISPR32) Class B, FCC part 15 Class B, EN55011 (CISPR11) Class B	
	Harmonic Current	IEC/EN61000-3-2 Class D	
	Voltage fluctuation and flicker	IEC/EN61000-3-3	
Immunity	ESD	EN/IEC61000-4-2, level 4, Contact +/- 8KV; Air discharge +/- 15KV	Criteria A
	RS	EN/IEC61000-4-3, level 3, for 80~1000MHz , 10V/m	Criteria A
	EFT	EN/IEC61000-4-4, level 3, +/- 2KV	Criteria A
	Surge	EN/IEC61000-4-5, level 3, Line to Line +/-1KV; Line to Earth +/-2KV	Criteria A
	CS	EN/IEC61000-4-6, level 3	Criteria A
	PFMF	EN/IEC61000-4-8, level 3	Criteria A
	Voltage dips and voltage interruptions immunity	EN/IEC61000-4-11	Criteria B

Dimensions and Recommended Layout

Item	Value	Unit
Weight (Typ.)	1066	g
Size (L x W x H)	203 x 86.5 x 51.5	mm

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

