ANHUI-TIGER
Passive Components

AC/DC Converter

TGC10-K/277

Address： Building.E9 & E13, Xingmeng Park Enterprises Mansion, No.198, Mingzhu Avenue, High-tech Zone, Hefei, 230088, China
Fax: 0551-65547975
sale@tiger-transformer.com

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Features

Regulated Converter

- Wide input range 85-305VAC
- Operating temperature range: -40°C to +80°C
- High efficiency over entire load range
- No external components necessary
- Household certification IEC/EN60335
- Overvoltage category OVCIII (IEC62477-1)
- 140% Peak load capability

Description

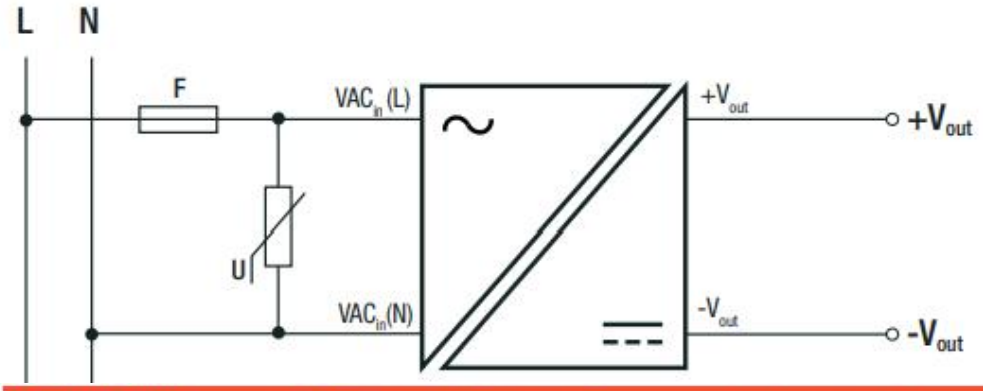
The TGC10-K/277 series are highly efficient PCB-Mount power conversion modules with ultra-low energy losses even in light load conditions. Built for worldwide usage, the AC/DC units cover an enhanced mains input range of 85VAC up to 305VAC and come with international safety certifications for both industrial and household standards. These AC/DC modules offer fully protected single or dual outputs as well as EMC Class B compliance without the need of any external components. The 140% peak power capability makes the TGC10-K/277 series suitable for inductive, high start-up current or nonlinear loads. With a full load temperature range of -40°C to +65°C, they are ideal for always-on and standby mode operations in process automation, IoT and smart building applications.

Specifications (measured @ Ta= 25°C, nom. Vin, full load and after warm-up unless otherwise stated

BASIC CHARACTERISTICS					
Parameter	**Condition**		**Min.**	**Typ.**	**Max.**
Internal Input Filter					Pi Type
Input Voltage Range [2,3]	nom. Vin= 277VAC		85VAC 120VDC	277VAC	305VAC 430VDC
Input Current	115VAC 230VAC 277VAC				250mA 210mA 190mA
Inrush Current	115VAC 230VAC 277VAC				15A 30A 36A
No load Power Consumption				150mW	250mW
ErP Standby Mode Conformity (Output Load Capability)	Input Power=	0.5W 1.0W 2.0W			0.3W 0.7W 1.4W
Input Frequency Range			47Hz		63Hz
Overload Capability	peak duty cycle: 10%; TAMB +50°C max.				140%/10s
Minimum Load	Single Dual		0%	10%	
Power Factor	115VAC 230VAC 277VAC		0.60 0.50 0.45		
Start-up Time				30ms	
Rise Time					25ms
Hold-up time	115VAC 230VAC 277VAC			15ms 90ms 110ms	
Internal Operating Frequency					100kHz
Output Ripple and Noise [4]	20MHz BW	3.3Vout, 5Vout others		60mVp-p	1% of Vout

Notes: Note4: No proper operation with DC input voltage Note5: The products were submitted for safety files at AC-Input operation Note6: Refer to “Line Deratin

Protection Circuitm



Specifications (measured @ Ta= 25°C, nom. Vin, full load and after warm-up unless otherwise stated)

ENVIRONMENTAL			
Parameter	**Condition**		**Value**
Operating Temperature Range	@ natural convection 0.1m/s	full load	-40°C to +65°C
		refer to line derating	-40°C to +80°C
Maximum Case Temperature			+100°C
Temperature Coefficient			0.05%/K
Operating Altitude			3000m
Operating Humidity	non-condensing		20% to 90% RH
Design Lifetime	115VAC/60Hz and full load at +25°C		>194 x 10³ hours
MTBF	according to MIL-HDBK-217F, G.B.	+25°C	>1750 x 10³ hours
		+40°C	>1582 x 10³ hours

Dimension Drawing (mm)