



AC/DC Converter

TGC20E-K/277



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TGC20E-K/277

Features

- **Wide input range 85-305VAC**
- **5000m operating altitude**
- **OVCIII up to 2000m altitude**
- **4KVAC Isolation rated/60sec.**
- **EMC compliant without external components**
- **No load power consumption <200mW**

Regulated Converter



Description

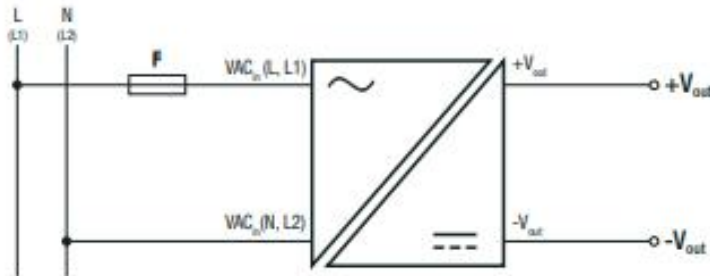
TGC20E-K/277, the economy “E-K” series of compact 20 Watt AC/DC modules, is designed to meet general purpose requirements for a wide variety of equipment for the IoT, ITE and industrial markets. These encapsulated power supplies feature 4kVac isolation and over voltage category OVCIII, as well as 100-277VAC nominal input voltages. At OVC II usage, the operating altitude is rated for up to 5000m. For EMC compatibility in floating output configurations, EN55032 limits for class “B” are met without any external components. The outputs are protected against over current and short circuits and input protection by internal fuse is provided. All these features make the product one of the easiest integrated modular power solutions for lowest total cost of ownership in the industry.

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

BASIC CHARACTERISTICS					
Parameter	Condition		Min.	Typ.	Max.
Input Frequency Range	AC Input		47Hz		63Hz
Minimum Load			0%		
Power Factor	115VAC			0.6	
	230VAC			0.5	
	277VAC			0.45	
Start-up Time					150ms
Rise Time					25ms
Hold-up Time	115VAC		25ms	10ms	
	230VAC			40ms	
	277VAC			60ms	
Internal Operating Frequency	100% load at nominal Vin			120kHz	
Output Ripple and Noise ¹⁶	20MHz BW	5Vout			150mVp-p
		others			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



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ENVIRONMENTAL			
Parameter	Condition		Value
Operating Temperature Range	@ natural convection 0.1m/s	refer to "Derating Graph"	-40°C to +90°C
Maximum Case Temperature			+95°C
Temperature Coefficient			±0.02%/K
Operating Altitude			5000m (OVCII) 2000m (OVCIII)
Operating Humidity	non-condensing		20% - 90% RH max.
Pollution Degree			PD2
Vibration			10-500Hz, 2G 10min./1cycle, period 60min. each along x,y,z axes
MTBF	according to MIL-HDBK-217F, G.B.	+25°C	830 x 10 ³ hours
		+40°C	700 x 10 ³ hours

Dimension Drawing (mm)

