



AC/DC Converter

TGC05E-K



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TGC05E-K

Features

- 100-240VAC Input
- Primary side regulated
- Standard industry pinout
- Full load operation: -25 to 55°C
- No load power consumption <100mW
- Household and ITE certified

Regulated Converter



Description

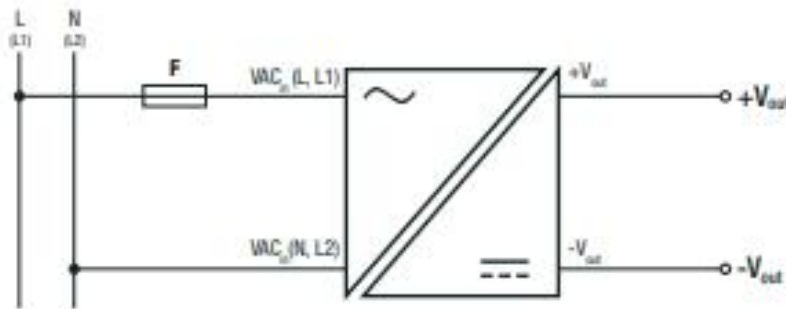
The economically priced TGC05E-K series of primary-side regulated AC/DC converters is designed to meet general purpose requirements for ITE and office use as well as household applications or light industrial automation processes, with less than 0.1W no-load power consumption. The footprint is based on the most common industry standard pinning for AC/DC modules from 3W onwards, with just slightly increased height. The AC/DC modules hold UL and CB certifications to the IEC 62368-1 standard and to EN 60335-1 for household applications. Certified for full load operation from -25°C to +55°C and worldwide input voltage ranges of nominal 100-240VAC, the modules feature semi-regulated outputs with permanent short circuit and over voltage protection. With only a few additional components EN55014 and EN55032 class B limits for electromagnetic compatibility are met.

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
Nominal Input Voltage	50/60Hz		100VAC		240VAC
Operating Range ^(2, 3)	47-63Hz DC		90VAC 130VDC	230VAC	264VAC 370VDC
Input Current	115VAC 230VAC				250mA 100mA
Inrush Current	cold start at 25°C	115VAC 230VAC			20A 10A
No load Power Consumption					100mW
Input Frequency Range	AC Input		47Hz		63Hz
ErP Standby Mode Conformity (Output Load Capability)	Input power= 0.5W 1.0W				0.32 0.68
Minimum Load			0%		
Power Factor	115VAC 230VAC		0.55 0.45		
Start-up Time				20ms	
Rise Time				15ms	
Hold-up Time	115VAC 230VAC		8ms 20ms		
Internal Operating Frequency	100% load at nominal Vin				130kHz
Output Ripple and Noise ⁽⁴⁾	20MHz BW	5Vout others			70mVp-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	full load refer to "Derating Graph"		-25°C to +75°C
Maximum Case Temperature			+90°C
Temperature Coefficient			±0.05%/K
Operating Altitude	according to 60335-1		5000m
Operating Humidity	non-condensing		20% - 95% RH max.
Pollution Degree			PD2
Vibration			10-500Hz, 2G10min./1cycle, period 60min. each along x,y,z axes
MTBF	according to MIL-HDBK-217F, G.B.	+25°C	1680 x 10 ³ hours
		+40°C	1290 x 10 ³ hours

Dimension Drawing (mm)

