



# AC/DC Converter

## TGC05E-KT



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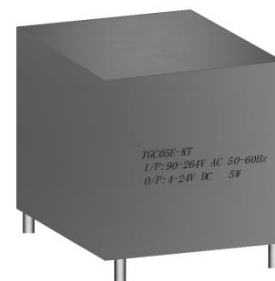
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# TGC05E-KT

## Features

- 100-240VAC Input
- Primary side regulated
- EI-30 transformer pinout
- Full load operation: -25 to 55°C
- No load power consumption <100mW
- Household and ITE certified

## Regulated Converter



## Description

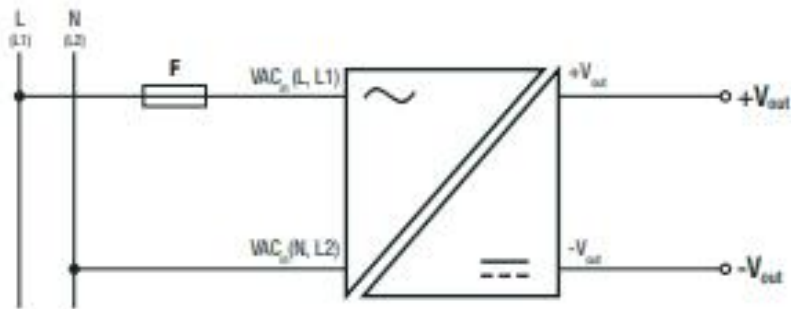
The economically priced TGC05E-KT series of primary side regulated AC/DC converters is designed to meet general purpose requirements for ITE and office use as well as household applications or light industrial automation processes, with less than 0.1W no load power consumption. The footprint is based on the common industry standard pinning for EI30 transformers and AC/DC modules such as the RAC05-K/277 Series for enhanced performance. The RAC05E-KT modules hold UL and CB certifications to 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 a semi regulated output with permanent short circuit and over voltage protection. Without external components the series meets EN 55014, EN 55032 class B and FCC15 limits for worldwide electromagnetic compatibility.

**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 <sup>(2,3)</sup>	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 <sup>(6)</sup>	20MHz BW	4Vout & 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			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	2250 x 10 <sup>3</sup> hours
		+40°C	2140 x 10 <sup>3</sup> hours
Design Lifetime	230VAC/60Hz and full load	+50°C	>40 x 10 <sup>3</sup> hours

## Dimension Drawing (mm)

