



# AC/DC Converter

## TGC04-K/277



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# TGC04-K/277

## Features

## Regulated Converter

- 80 to 305VAC Input voltage range
- 150% peak power capability
- Wide temperature range: -40°C to +90°C
- No load power consumption <150mW
- Household and ITE certified
- 4kVac isolation
- Operating Altitude up to 5000m



## Description

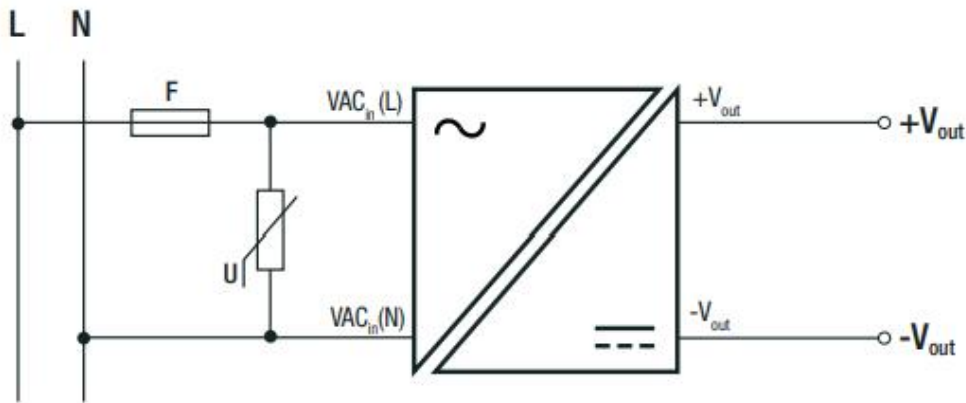
The TGC04-K/277 series delivers an uncompromising 4 watts of continuous output power (6W peak) in harsh industrial and household environments. These modules deliver full load output power from -40°C to 75°C across the entire input range of 80VAC to 305VAC and are certified for operation with power derating up to 90°C air ambient. A peak load capability of up to 150% supports dynamic power demands of applications. This series of fully encapsulated AC/DC modules is a complete solution without the need for external components which supports Ecodesign Lot 6 standby mode operation for worldwide applications in automation, industry 4.0, IoT, household, and home automation. With international safety and EMC certifications for industrial, domestic, ITE, and household applications, these are some of the most versatile power modules on the market. Due to their reinforced class II installation rating for floating outputs and their significantly wide margin to class B emissions compliance without external components and a certified 4kV AC (5.75kV DC) isolation, these are the easiest to use modular power solutions in the industry.

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

BASIC CHARACTERISTICS (continuous)				
Parameter	Condition	Min.	Typ.	Max.
Input Frequency Range	AC input	47Hz		63Hz
Start-up Time			20ms	
Rise Time			10ms	
Hold-up time	115VAC		20ms	
	230VAC		80ms	
Minimum Load		0%		
Power Factor	115VAC	0.6		
	230VAC	0.45		
Internal Operating Frequency	full load		130kHz	
Output Ripple and Noise <sup>19</sup>				1% of nom. 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



### ENVIRONMENTAL

Parameter	Condition		Value
Operating Temperature Range	@ natural convection 0.1m/s	full load	-40°C to +75°C
		refer to "Derating Graph"	-40°C to +90°C
Maximum Case Temperature			+100°C
Temperature Coefficient			±0.02%/K
Operating Altitude <sup>(B)</sup>	according to IEC62368-1 (EN60335-1)		5000m (4000m)
Operating Humidity	non-condensing		20% - 95%, RH max.
Pollution Degree			PD2
Vibration	according to MIL-STD-202G		10-500Hz, 2G 10min. / 1 cycle, periode 60min. each along x, y, z axis
MTBF	according to MIL-HDBK-217F, G.B	+25°C	>2271 x 10 <sup>3</sup> hours
		+40°C	>1696 x 10 <sup>3</sup> hours
Design Lifetime	230VAC	+25°C	125 x 10 <sup>3</sup> hours
		+70°C	51 x 10 <sup>3</sup> hours
	277VAC	+25°C	105 x 10 <sup>3</sup> hours
		+70°C	37 x 10 <sup>3</sup> hours

## Dimension Drawing (mm)

