



# AC/DC Converter

TGC10E-K/277



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# TGC10E-K/277

## Features

## Regulated Converter

- Extra wide input range 100/115/240/277VAC
- Overvoltage category OVC III (2000m)
- Operating altitude up to 5000m (OVC II)
- Operating temperature: -40°C to +90°C
- EMC compliant without external components
- No load power consumption <100mW max.



## Description

The economy itemized TGC10E-K/277 series are extra compact 1.8"x1" encapsulated PCB-mount AC/ DC modules with a wide input operating range of 85 to 305Vac and come with international safety certifications for industrial, AV and ITE as well as household standards. These Power Supply modules with certifications to overvoltage category OVC III environments operate in a temperature range of -40°C to +90°C with up to 5000m operating altitude and offer fully protected single outputs as well as EMC class B compliance without the need of any external components.

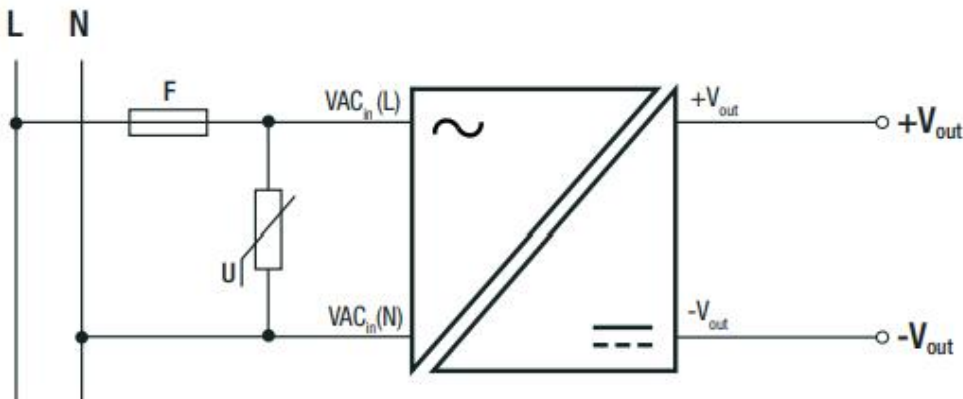
**Specifications (measured @ Ta= 25°C, nom. Vin, full load and after warm-up unless otherwise stated)**

BASIC CHARACTERISTICS				
Parameter	Condition	Min.	Typ.	Max.
Nominal Input Voltage	50/60Hz	100VAC		277VAC
Operating Range <sup>(2,3)</sup>	47-63Hz DC	85VAC 120VDC		305VAC 430VDC
Input Current	115VAC 230VAC 277VAC			200mA 100mA 80mA
Inrush Current	cold start at 25°C	115VAC 230/277VAC		20A 40A
No load Power Consumption			75mW	100mW
ErP Standby Mode Conformity (Output Load Capability)	Input Power=	0.5W 1.0W	0.3W 0.7W	
Input Frequency Range	AC Input	47Hz		63Hz
Minimum Load		0%		

BASIC CHARACTERISTICS				
Parameter	Condition	Min.	Typ.	Max.
Power Factor	115VAC 230VAC		0.6 0.5	
Start-up Time				50ms
Rise Time				40ms
Hold-up Time	115VAC 230VAC 277VAC	5ms 30ms 50ms		
Internal Operating Frequency	100% load at nominal Vin		80kHz	
Output Ripple and Noise <sup>(4)</sup>	20MHz BW			150mVp-p

**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 refer to "Derating Graph"	-40°C to +65°C
Maximum Case Temperature			+110°C
Temperature Coefficient			±0.02%/K
Operating Humidity	non-condensing		95% RH max.
Operating Altitude			5000m (OVCII) 2000m (OVCIII)
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 +40°C	1710 x 10 <sup>3</sup> hours 1460 x 10 <sup>3</sup> hours

## Dimension Drawing (mm)

