ANHUI-TIGER
Passive Components

AC/DC Converter

TGC15-K/480

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TGC5-K/480

Features

Regulated Converter

- OVC III and PD3 up to 5000m altitude
- 85-528VAC input range
- -40°C to +90°C operating temperature
- LPS limited power source
- EN55032 class "B"; floating outputs
- No load power consumption <0.3W

Description

The TGC15-K/480 series AC/DC modules with ultra-wide input range of 100-480 VAC are specially designed for harsh industrial conditions of overvoltage category OVC III and pollution degree PD3 in both single-phase and phase-to-phase power connections of class II. These power supplies are capable of operating over a wide temperature range of -40° to 90°C (up to 60°C without derating) by just adding an external fuse, and offer LPS limited outputs with continuous overcurrent protection and emission class B EMC compliance in potential free configuration of the load. These silicone-free encapsulated modules are built extremely compact to fit on printed circuit boards without compromising board area. Global safety certifications ensure fast time-to-market when integrated into applications for markets such as Smart Grid, Smart Metering, Renewable Energy; Sensors and actuators or IoT applications.

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

BASIC CHARACTERISTICS					
Parameter	**Condition**		**Min.**	**Typ.**	**Max.**
No Load Power Consumption	85-528VAC				300mW
Input Frequency Range	AC Input		47Hz		63Hz
Minimum Load			0%		
Power Factor	115/230VAC		0.4		
	480VAC		0.3		
Start-up Time				150ms	
Rise Time				30ms	
Hold-up Time	230VAC		30ms		
Internal Operating Frequency				50kHz	
Output Ripple and Noise [4]	20MHz BW	V_{OUT}= 5VDC			100mVp-p
		others			1% of V_{OUT}

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

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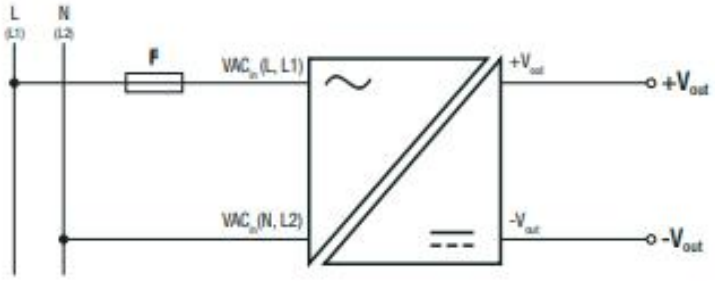
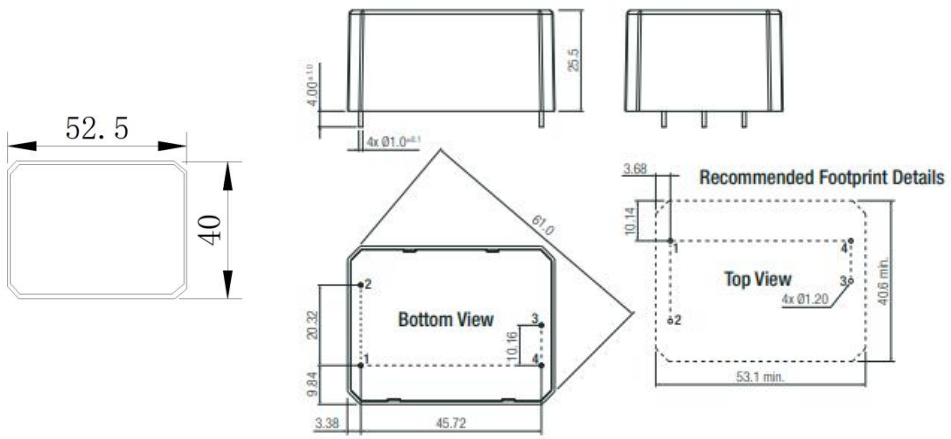
Protection Circuitm



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

ENVIRONMENTAL				
Parameter	**Condition**			**Value**
Operating Temperature Range [7]	refer to ***"Derating Graph [7]"***			-40°C to +90°C
Maximum Case Temperature				+105°C
Temperature Coefficient				0.02%/K
Operating Altitude				5000m
Operating Humidity	non-condensing			95% RH max.
Polution Degree				PD3
Vibration	according to MIL-STD-202G			10-500Hz, 2G 10min./1cycle, 60min. each along x,y,z axes
Design Lifetime	230VAC/50Hz	+50°C		30 x 10^3 hours
MTBF	according to MIL-HDBK-217F, G.B.	V_{OUT}= 5, 12VDC	+25°C	1450 x 10^3 hours
		V_{OUT}= 15, 24VDC		1720 x 10^3 hours
		V_{OUT}= 5, 12VDC	+40°C	1310 x 10^3 hours
		V_{OUT}= 15, 24VDC		1470 x 10^3 hours

Dimension Drawing (mm)



Pinning information

Pin #	Single
1	VAC in (N) (L2)
2	VAC in (L) (L1)
3	-Vout
4	+Vout

Tolerance: xx.x= ±0.5mm
xx.xx= ±0.25mm