

AC/DC Converter

TGCM90-K/OF



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Features

- Wide range input: 85-264VAC
- Operating temperature from -40°C to +90°C
- OVC III and LPS rated

Regulated Converter

- 2MOPP medical certified, B and BF compliant
- 4000m operating altitude
- Class B EMC filter built-in

TGCM90-K/OF

Description

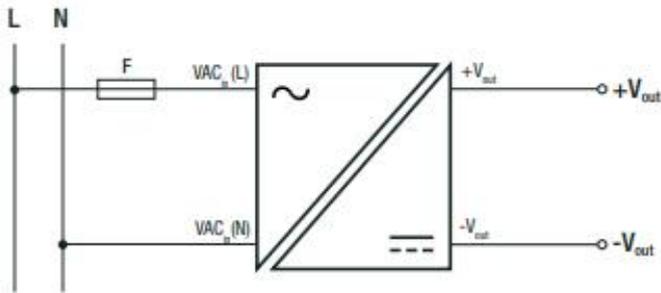
The TGCM90-K AC/DC power supply series provides 90W output and is Limited Power Source (LPS)-rated according to safety standards for medical, ITE, industrial and household markets. With an industry-standard 2"x4" footprint, variants are available as an open card or with an enclosure. Input is wide-range for nominals from 100 to 240Vac, the output is tightly regulated and easy system integration is enabled by a wide compliance margin to EMC standard EN55032 class B. On-board dual fuses are included and the product includes immunity to surges for installation class 3 and over-voltage category OVCIII. Certifications are maintained to 4000m altitude and with a wide operating temperature range, the series is one of the most versatile on the market.

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

BASIC CHARACTERISTICS				
Parameter	Condition	Min.	Typ.	Max.
Nom. Input Voltage	60Hz	90VAC		
	50Hz			240VAC
Operating Range ⁽⁴⁾	47-63Hz	85VAC		264VAC
	DC	120VDC		370VDC
Input Current	115VAC			2A
	230VAC			1.2A
Inrush Current	cold start	115VAC		30A
		230VAC		40A
No load Power Consumption	@230VAC		200mW	
ErP Standby Mode Conformity (Output Load Capability)	115/230VAC	P _N = 0.5W	0.2W	
		P _N = 1W	0.6W	
Input Frequency Range	AC Input	47Hz		63Hz
Minimum Load		0%		
Power Factor	115VAC		0.5	
	230VAC		0.4	
Start-up Time			150ms	
Rise Time			25ms	
Hold-up Time	115VAC		12ms	
	230VAC		70ms	
Internal Operating Frequency	100% load at nominal Vin		65kHz	
Output Ripple and Noise ⁽⁵⁾	20MHz BW			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

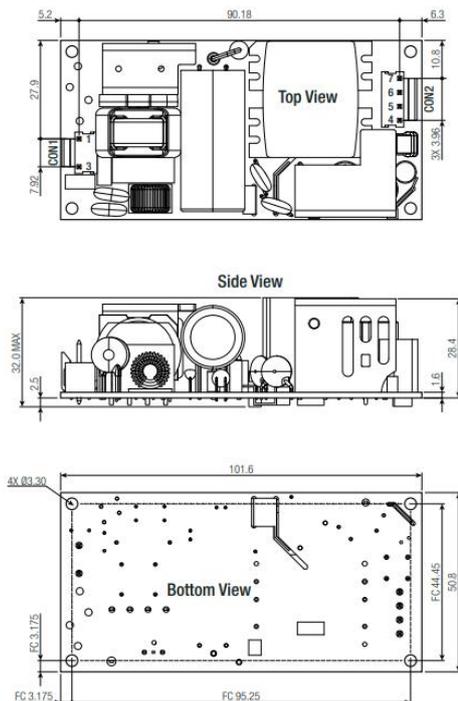
Protection Circuitm



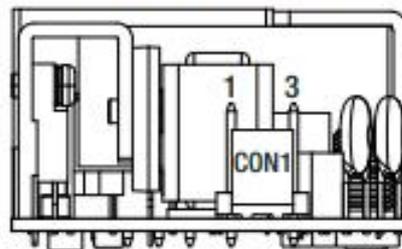
Specifications (measured @ $T_a = 25^\circ\text{C}$, nom. V_{in} , full load and after warm-up unless otherwise stated)

ENVIRONMENTAL			
Parameter	Condition	Value	
Operating Temperature Range	with derating @ natural convection 0.1 m/s	-40°C to $+90^\circ\text{C}$	
Operating Altitude	according to 60601-1	4000m (OVCI I)	
	according to 61558-2-16	2000m (OVCI II)	
Temperature Coefficient		$\pm 0.05\%/K$	
Operating Humidity	non-condensing	5% - 95% RH max.	
Pollution Degree		PD2	
Vibration	according to MIL-STD-202G	10-500Hz, 2G 10min./1cycle, period 60min. along x,y,z axes	
MTBF	according to MIL-HDBK-217F, G.B.	$T_{AMB} = +25^\circ\text{C}$	776×10^3 hours
		$T_{AMB} = +40^\circ\text{C}$	668×10^3 hours
Design Lifetime	$T_{AMB} = +45^\circ\text{C}$	12/15Vout	26×10^3 hours
	$T_{AMB} = +50^\circ\text{C}$	26/36/48Vout	

Dimension Drawing (mm)



AC Input Side View



DC Output Side View

