

# AC/DC Converter

## TGCM230-G



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# Features

## Regulated Converter

- 160W baseplate-cooled, fan-less operation
- 230W peak power or forced air rating
- Universal AC input range (80~264VAC)
- Standby power consumption <0.5W
- Wide operating temperature range (-40°C to +80°C)
- Household, ITE and medically 2MOPP certified
- Operating altitude up to 5000m

# TGCM230-G

## Description

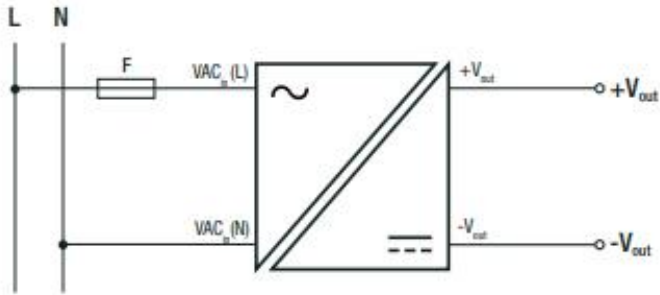
The TGCM230-G Series is designed to support up to 160 watts continuous output power without fan cooling. The compact 4"x2" baseplate design enables direct heat dissipation through metal housings in the application. Up to 230 watts are available to drive dynamic loads for several seconds of peak power or with forced air for even longer time frames. A smart fan output is on board as standard. A wide input range of 80 to 264VAC, up to 5000m operating altitude, 4kVAC isolation and international safety agency certifications make the series worldwide compliant for medical 2 MOPP, household and industrial ITE applications.

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			100VAC		240VAC
Input Voltage Range <sup>(a)</sup>			80VAC 120VDC	230VAC	264VAC 370VDC
Input Current	115VAC 230VAC				3A 1.1A
Inrush Current	115VAC 230VAC				40A 60A
No load Power Consumption				300mW	500mW
Input Frequency Range	AC input		47Hz	50Hz	63Hz
ErP Lot 6 Standby Mode Conformity (Output Load Capability)	Input Power= 1W				300mW
Output Voltage Adjustability <sup>(a)</sup>	12Vout 24Vout 36Vout 48Vout 54Vout		11.4VDC 22.8VDC 34.2VDC 45.6VDC 51.3VDC		12.6VDC 25.2VDC 37.8VDC 50.4VDC 56.0VDC
Minimum Load			0%		
Power Factor	115VAC 230VAC		0.98 0.95	0.99 0.97	
Start-up Time	115/230VAC			0.5s	
Rise Time				10ms	
Hold-up Time	115/230VAC	230W 200W 160W 130W		8ms 10ms 16ms 25ms	
Output Ripple and Noise <sup>(c)</sup>			20MHz BW @ +25°C		1% of Vout nom. max.

**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

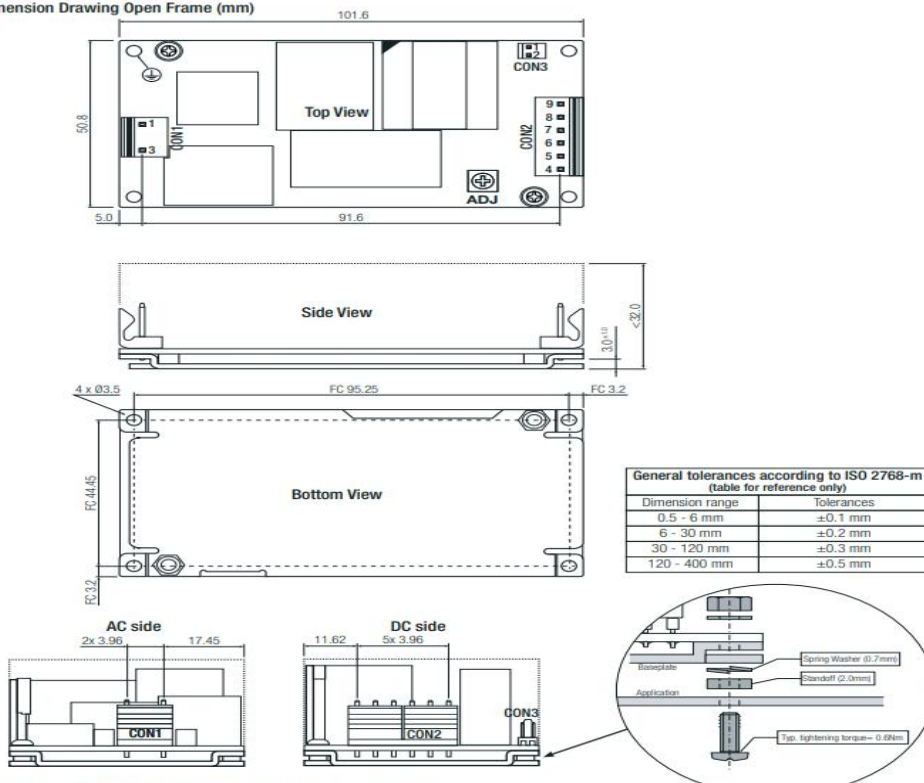


Specifications (measured @ Ta= 25°C, nom. Vin, full load and after warm-up unless otherwise stated)

ENVIRONMENTAL			
Parameter	Condition		Value
Operating Temperature Range	refer to derating graphs		-40°C to +80°C
Temperature Coefficient			±0.05%/K
Operating Altitude <sup>(1)</sup>			5000m
Operating Humidity	non-condensing		5% - 90% RH max.
Pollution Degree			PD2
MTBF	according to MIL-HDBK-217F, G.B.	+25°C (forced air cooling)	200 x 10 <sup>3</sup> hours
		+50°C (forced air cooling)	60 x 10 <sup>3</sup> hours

## Dimension Drawing (mm)

Dimension Drawing Open Frame (mm)



Dimension range	Tolerances
0.5 - 6 mm	±0.1 mm
6 - 30 mm	±0.2 mm
30 - 120 mm	±0.3 mm
120 - 400 mm	±0.5 mm

Compatible Connector (valid for open frame and enclosed version)

AC Input (CON1)			DC Output Connector (CON2)			FAN Connector (CON3)		
#	Function	Connector	#	Function	Connector	#	Function	Connector
1	AC/N	Molex 09-50-3031	7,8,9	+Vout	Molex 09-50-1061	1	-FAN	Molex 22-01-1022
3	ACL	or similar	4,5,6	-Vout	or similar	2	+FAN	or similar

Maximum tightening torque for mounting without standoffs: 0.3Nm  
FC= fixing centers

