

AC/DC Converter

TGCM550-G



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Features

Regulated Converter

- 400/450 Watt convection cooled (115/230VAC)
- 600 Watt forced air or peak power
- 5VSB Output
- Redundant operation; active current sharing
- Remote sensing, CTRL ON/OFF, PMBus™
- IEC60601-1 2x MOPP insulation, BF-ready

TGCM600-L

Description

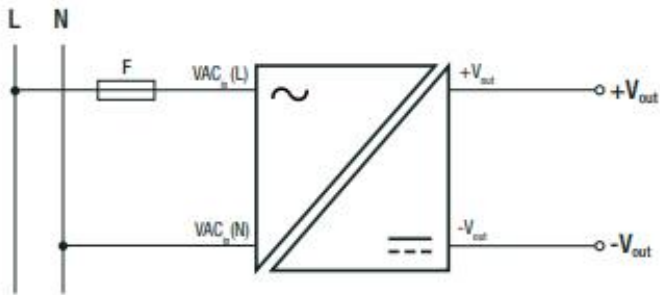
TGCM600-L/OF Series AC/DC power supply units are designed for operation in natural convection and in systems with certain airflow ventilation to deliver 400 to 600Watt output power. Safety approvals to Medical IEC 60601-1-2 and to IT and industrial IEC 62368 standards and operation with worldwide input voltage conditions from 80 to 275Vac in altitudes up to 5000m make these chassis mount units ideal for global use in medical, industrial or IT related automation processes. For enhanced reliability requirements of applications redundant operation is supported with active current sharing. An additional 5V Standby output powers housekeeping circuitry to control remote on/off and monitoring functions which are available via PMBus™ I²C interface. EN55032 class “B” EMC compliance is achieved without any external components which underlines the versatility of these power supplies.

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		240VAC
Operating Range ^(2,3)	47-63Hz DC	80VAC 120VDC		275VAC 300VDC
Input Current	80VAC 120VDC			9A 5.7A
Inrush Current	cold start at 25°C			20A
Input Frequency Range	AC Input	47Hz		63Hz
Minimum Load		0%		
Power Factor	EN61000-3-2, Class A compliant		0.9	
Start-up Time	MAIN ON CTRL ON			2.5s 150ms
Rise Time				150ms
Hold-up Time			20ms	
Periodic and Random Deviation (PARD)	20MHz BW, 10µF Tan. and 1µF MLCC			1%p-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

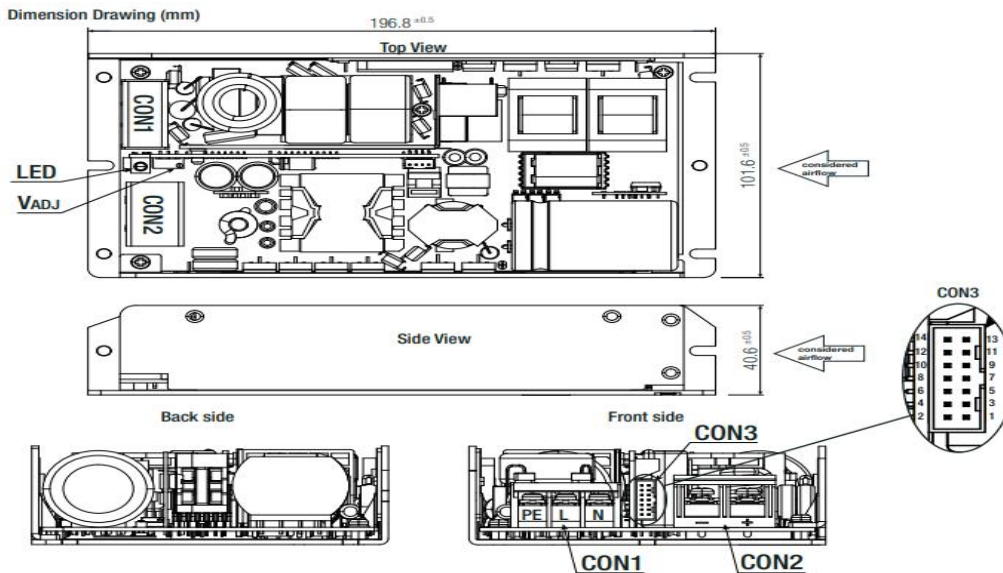
Protection Circuitm



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

ENVIRONMENTAL			
Parameter	Condition		Value
Operating Temperature Range	refer to "Rating Graphs of continuous Operation"	T _{BASE} temperature	-20°C to +70°C
Operating Altitude ^⑨	according to 62368-1		5000m
	according to 60601-1		3000m
Operating Humidity	non-condensing		95% max.
Pollution Degree			PD2
Vibration (non-operating)	2.09Gr.m.s., 5Hz to 500Hz, 20 minutes per side (3 planes)		according to IEC 60068-2-6
Shock (non-operating)	50G, 11ms, 3 shocks for each direction		according to IEC 60068-2-27
MTBF	according to Telcordia SR-332, Issue 3, 25°C ambient, 90% confidence level		500 x 10 ³ hours
Design Lifetime (capacitor)	nom. Vin, 80% load, 45°C ambient		87.6 x 10 ³ hours

Dimension Drawing (mm)



Signal CON3 (Molex PCB Header 87833-1420)			
#	Function	#	Function
14	-Sense	13	+Sense
12	address	11	Current_share_V
10	Remote ON/OFF	9	PSU_GOOD
8	+5VSB	7	5VSB_RTN
6	SDA	5	SCL
4	5VSB_RTN	3	5VSB_RTN
2	+5VSB	1	+5VSB

Compatible Connector CON3	
Housing	
Molex 51110 Series or equivalent	
Crimp Terminal	
Molex 50394 Series or equivalent	

Input Terminal Block CON1 ^⑨ (M3.5 screws) Dinkle: DT-4C-B01W-03-GN	
Function	AWG
PE	12-18
L (line)	12-18
N (neutral)	12-18

wire stripping length: 7-8mm
recommended tightening torque : 1.3Nm

Output Terminal Block CON2 for 24 & 48Vout Version ^⑨ (M4 screws) Dinkle: DT-7C-B01W-0137-02	
Function	AWG
-VOUT	8-12
+VOUT	8-12

wire stripping length: 10-11mm
recommended tightening torque 1.5Nm

Output Terminal Block CON2 for 12Vout Version ^⑨ (M5 screws) Dinkle: 0166-80-S1531802C	
Function	AWG
-VOUT	4-12
+VOUT	4-12

wire stripping length: 14-15mm
recommended tightening torque 2.4Nm

Notes:
Note9: Use flexible cable with below lugs:

