

## 5 W DC-DC CONVERTER

Type	$V_i$	$V_o$	$I_o$
GS5T48-12	38 to 60 V	12 V	420 mA

### DESCRIPTION

The GS5T48-12 is a 5W DC-DC converter designed to provide a 12V/420mA isolated power source.

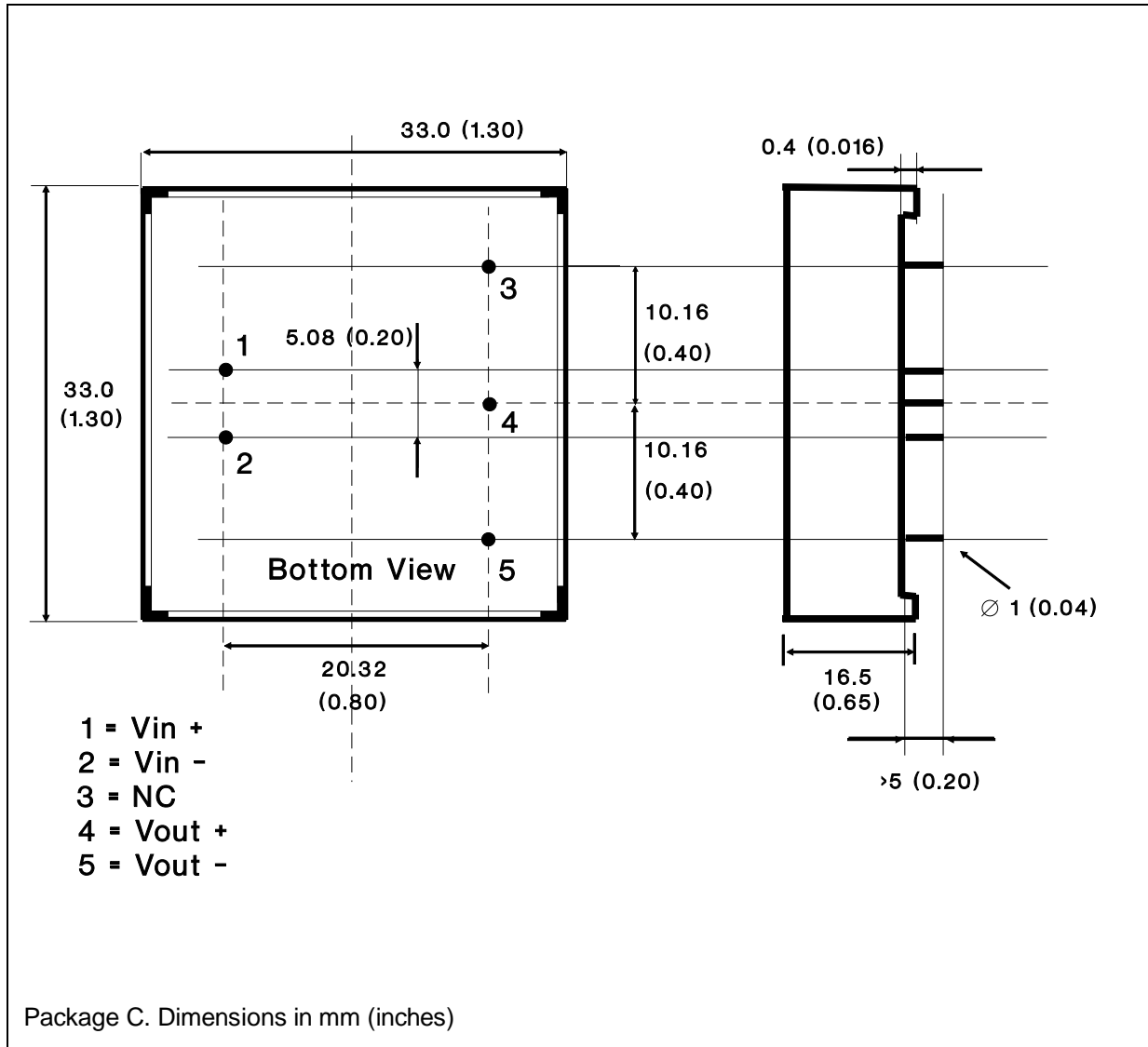
The module features a wide input voltage range (38 to 60V), low reflected input current and continuous short-circuit protection. It is certified by UL, CSA (level 3) and TUV as having SELV output when provided with a SELV input.



### ELECTRICAL CHARACTERISTICS ( $T_{amb.} = 25^\circ \text{C}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
$V_i$	Input Voltage	$V_o = 12\text{V}$ $I_o = 50$ to $420\text{mA}$	38	48	60	V
$I_i$	Input Current	$V_i = 38$ to $60\text{V}$ $I_o = 420\text{mA}$			500	mA
$I_{ir}$	Input Reflected Current	$V_i = 48\text{V}$ $V_o = 12\text{V}$ $I_o = 420\text{mA}$		25	40	mApp
$V_o$	Output Voltage	$V_i = 38$ to $60\text{V}$ $I_o = 50$ to $420\text{mA}$	11.5	12	12.5	V
$V_{or}$	Output Ripple Voltage	$V_i = 48\text{V}$ $I_o = 420\text{mA}$ BW = 5Hz to 20MHz		50	100	mVpp
$\delta V_{OL}$	Line Regulation	$V_i = 38$ to $60\text{V}$ $I_o = 420\text{mA}$		1	2	mV/V
$\delta V_{OO}$	Load Regulation	$V_i = 48\text{V}$ $I_o = 50$ to $420\text{mA}$		100	150	mV/A
$I_o$	Output Current	$V_i = 38$ to $60\text{V}$ $V_o = 12\text{V}$	50		420	mA
$I_{osc}$	Output Short-circuit Current	$V_i = 48\text{V}$			1.8	A
$V_{is}$	Isolation Voltage		500			VDC
$f_s$	Switching Frequency	$V_i = 38$ to $60\text{V}$ $I_o = 50$ to $420\text{mA}$	30		200	kHz
$\eta$	Efficiency	$V_i = 48\text{V}$ $I_o = 420\text{mA}$	78	80		%
$T_{op}$	Operating Ambient Temperature Range	Still air	0		+60	$^\circ\text{C}$
$T_{op}$	Operating Ambient Temperature Range	Forced ventilation, air speed = 100 LFM	0		+70	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range		-40		+85	$^\circ\text{C}$

CONNECTION DIAGRAM AND MECHANICAL DATA



SAFETY APPROVALS

The converter is agency certified to the following safety requirements:

Agency	Requirements	File Number
UL	UL-STD-1950	E141284
CSA	CSA-STD-C22.2 No. 234	LR 99794-3
TUV	EN 60950 DIN VDE 0805	R 9172410

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