

3 Watts

- 4:1 Input range
- DIP24 Industry standard package
- Single and dual outputs
- Meet EN55032 Class A EMC (No extra components)
- Optional isolation up to 3000VDC
- Plastic case
- 5 Year warranty



The GTW03 series of wide input DC-DC converters come in both single and dual outputs in a DIP24 pin package. Inputs are available in 24 & 48V nominal versions with a 4:1 range and outputs from 3.3 to 24V single and dual. The units operate from -40 to +85°C. The unit meets EN55032 level A with no external components. All models have a FIDUS 5 year warranty.

Dimensions:

1.25 x 0.8 x 0.4" (31.75 x 20.32 x 10.16mm)

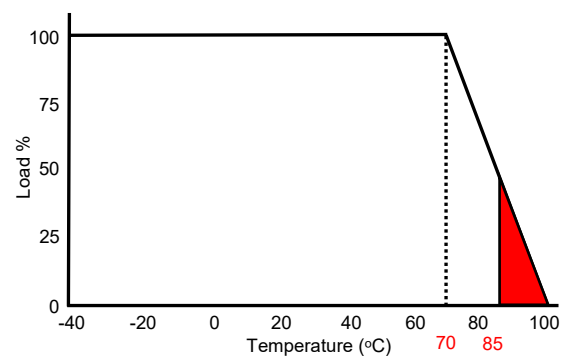
Models & Ratings

Model Number ⁽¹⁾	Input Voltage	Output Voltage	Output Current	Input Current		Maximum Capacitive Load	Efficiency
				No Load	Full Load		
GTW032403	9 -36V	3.3V	900mA	10mA	167mA	470uF	75%
GTW032405		5V	600mA	10mA	160mA	470uF	79%
GTW032412		12V	250mA	10mA	156mA	100uF	81%
GTW032415		15V	200mA	10mA	154mA	100uF	82%
GTW032424		24V	125mA	10mA	154mA	47uF	82%
GTW032403D		±3V	±450mA	10mA	167mA	±220uF	75%
GTW032405D		±5V	±300mA	10mA	160mA	±220uF	79%
GTW032412D		±12V	±125mA	10mA	156mA	±100uF	81%
GTW032415D		±15V	±100mA	15mA	156mA	±100uF	81%
GTW032424D		±24V	±63mA	20mA	159mA	±47uF	80%
GTW034803	18-75V	3.3V	900mA	7mA	84mA	470uF	75%
GTW034805		5V	600mA	7mA	80mA	470uF	79%
GTW034812		12V	250mA	7mA	78mA	100uF	81%
GTW034815		15V	200mA	7mA	77mA	100uF	82%
GTW034824		24V	125mA	7mA	77mA	47uF	82%
GTW034803D		±3V	±450mA	7mA	84mA	±220uF	75%
GTW034805D		±5V	±300mA	7mA	78mA	±220uF	81%
GTW034812D		±12V	±125mA	7mA	78mA	±100uF	81%
GTW034815D		±15V	±100mA	7mA	78mA	±100uF	81%
GTW034824D		±24V	±63mA	10mA	81mA	±47uF	79%

Notes

1. Add 'H' to model number for 3000VDC isolation
2. Under no load conditions the unit may not meet all specifications
3. Do not operate continuously in the red area of the derating curve

Derating curve



Input

Parameter	Rating
Input voltage range	See table
Input reflected ripple current	20mA pk-pk through 12uH inductor and 47uF capacitor
Under voltage lockout	24V Models Module on/off 8.5VDC / 7VDC typ. 48V Models Module on/off 16.5VDC / 14.5VDC typ.
Input surge (100mS max)	24V nom. models 50Vdc, 48V nom. Models 100Vdc
Input filter	Pi type

Output					
Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Output voltage	3.3		24	VDC	See Model & Ratings table
Set point accuracy			±2	%	
Line regulation			±0.5	%	Low line to High line
Load regulation			±1.2	%	0 to 100% load change
Minimum load	0			%	
Cross regulation			±5	%	On dual output models when one load is varied by 25 to 100% and the other is 100% load.
Ripple & Noise			80	mV pk-pk	All models measured with 1uF ceramic capacitor. 20 MHz bandwidth
			100	mV pk-pk	Dual output 24V
Transient response			±5	% Deviation	Single output 3.3V
			±3		All other outputs. For a 25% load change, recovery to within 3% within 300uS typically.
Short circuit protection					Continuous with automatic recovery
Maximum capacitive load					See Model and Ratings table

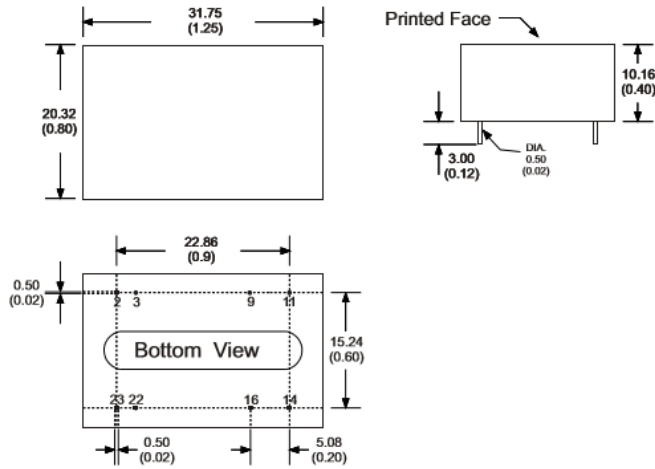
General					
Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Efficiency	75		82	%	See Model & Ratings table
Isolation	1500		3000	VDC	Input to output
Isolation resistance			1000	M Ohm	
Isolation capacitance		1000		pF	
Switching frequency		330		KHz	
Power density			7.5	W/In ³	
MTBF		>800		KHrs	As per MIL-HDBK-217F, 25°C GB

Environmental					
Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Operating temperature	-40		85	°C	100% load to 70°C. 50% at 85°C
Storage temperature	-55		125	°C	
Case temperature			100	°C	
Cooling					Convection cooled
Humidity			95	% RH	Non-condensing
Temperature coefficient			±0.02	%/°C	

EMC: Emissions			
	Standard	Test level	Notes & Conditions
Conducted	EN55032	Class A	
Radiated	EN55032	Class A	

EMC: Immunity				
	Standard	Test level	Criteria	Notes & Conditions
ESD	EN61000-4-2	3	A	8kV air discharge, 6kV contact discharge
Radiated	EN61000-4-3	3	A	80~1000MHz, 10V/m, 80% AM (1kHz)
EFT/Burst	EN61000-4-4	3	A	Requires a 220uF/100V capacitor. Power line : 2kV
Surges	EN61000-4-5	4	A	Requires a 220uF/100V capacitor. 1.2/50 µs Open Circuit Voltage, 8/20 µs Short Circuit Current, DC Port, Line to earth : 1kV
Conducted	EN61000-4-6	3	A	0.15 ~ 80MHz, 80% AM (1kHz)
Magnetic fields	EN61000-4-8	1A/m	A	50Hz

Mechanical Details



Pin Connections		
Pin	Single	Dual
2	-Vin	-Vin
3	-Vin	-Vin
9	N.P	0V
11	N.C	-Vout
14	+Vout	+Vout
16	-Vout	0V
22	+Vin	+Vin
23	+Vin	+Vin

Notes

1. All dimensions shown in millimetres (inches)
2. Pin diameter 0.5 ± 0.05 (0.02 ± 0.002)
3. Case tolerance ± 0.5 (± 0.002)

Physical

Parameter	Rating
Case material	Non-conductive black plastic (UL94V-0)
Pin material	0.5mm Brass solder coated
Potting material	Epoxy (UL94V-0)
Weight	13g
Dimensions	1.25 x 0.8 x 0.4"
Soldering temperature	1.5mm from case, 10s and 260°C max.