



Horizon Electronics Ltd  
Power Systems

# Titan 3G Series

## DC Harsh Environment Power Supply



... May The **POWER** Be With You ...



## Powerful Performance, Effortless Flexibility Simple Integration for harsh environment

The Titan 3G Power System series, with its ruggedized constructions, is best suited for use in harsh environments.

It's waterproof (IP 67/68) housing, high performance, and superb reliability, make the Titan 3G the ideal DC power source for use in outdoor, vehicular, avionic, naval and field applications.

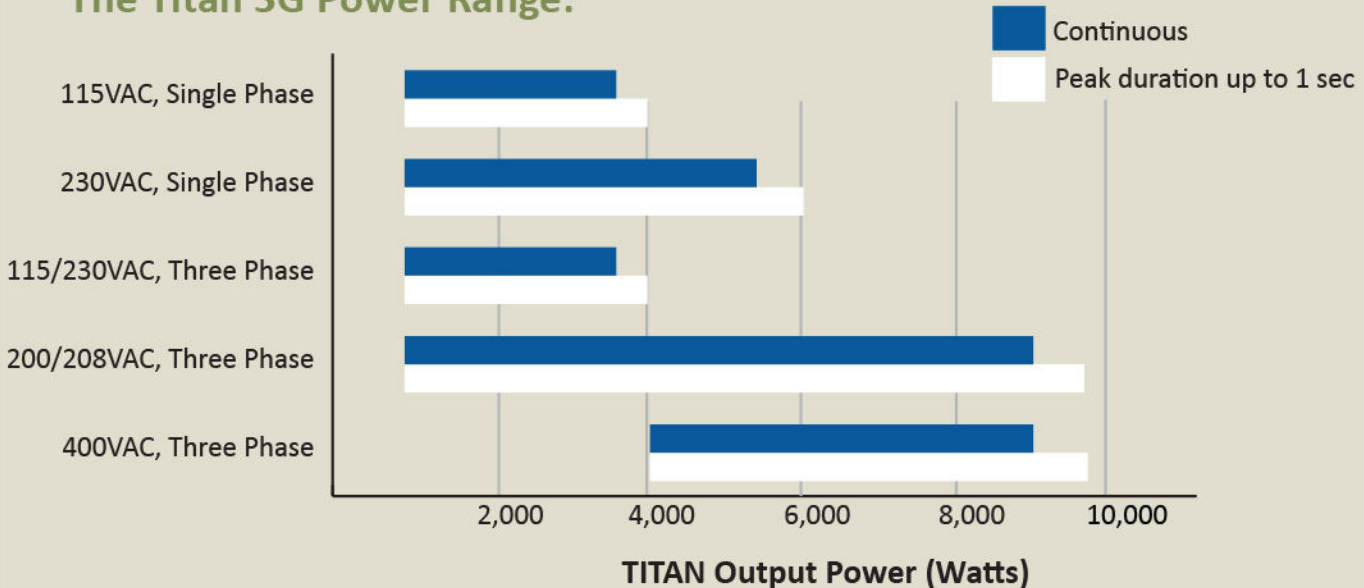
The standard Titan 3G products can be tailored to meet specific projects requirements.

### The Titan 3G Series:



### 3rd Generation of standard products with 500 standard options

#### The Titan 3G Power Range:



## Specifications

Continuous Output Power (watts)	1,200	1,500	1,800	2,400	3,000	3,600	4,200	4,500	5,400	8,400	Junction Box
Description	Single	Single	Single	Dual	Dual	Dual	Single	Triple	Triple	Dual	
Circuit Breaker	Built in	Built in	Built in	Built in (1)	Built in (1)	Built in (1)	Built in	Built in (1)	Built in (1)	Built in	
Junction box				Optional	Optional	Optional		Optional	Optional		
Input Voltage (3) /	Input Connector (Part Number)										
115VAC Single phase	MS3102E-16-10P	MS3102E-16-10P	MS3102E-16-10P	MS3102E-16-10P	MS3102E-16-10P	MS3102E-16-10P		MS3102E-16-10P	MS3102E-16-10P		
230VAC Single phase	MS3102E-16-10P	MS3102E-16-10P	MS3102E-16-10P	MS3102E-16-10P	MS3102E-16-10P	MS3102E-16-10P	MS3102E-24-11P	MS3102E-16-10P	MS3102E-16-10P		
115/230VAC Single phase	MS3102E-16S-1P	MS3102E-16S-1P	MS3102E-16S-1P	MS3102E-16S-1P	MS3102E-16S-1P	MS3102E-16S-1P					MS3102E-32-1S
200/208 VAC three phase	MS3102E-16S-8P	MS3102E-16S-8P	MS3102E-16S-8P	MS3102E-16S-8P	MS3102E-16S-8P	MS3102E-16S-8P	MS3102E-24-11P	MS3102E-16S-8P	MS3102E-16S-8P	MS3102E-24-11P	
400VAC three Phase							MS3102E-24-11P			MS3102E-24-11P	
Output Connector (PN) (3)	MS3102E-24-12S	MS3102E-24-12S	MS3102E-24-12S	MS3102E-24-12S	MS3102E-24-12S	MS3102E-24-12S	MS3102E-32-1S			MS3102E-32-1S	MS3102E-24-11P
Output Voltage /	Maximum Output Current (A)										
12V	100			200							
24V	50	63	75	100	125	150	175	188	225	350	
28V	43	54	64	86	107	129	150	161	193	300	
36V	33	42	50	67	83	100	117	125	150	233	
48V	25	31	38	50	63	75	88	94	113	175	
60V	20	25	30	40	50	60	70	75	90	140	
Ingress Protection (IP)											
67	V	V	V	V	V	V	V	V	V	V	V
68	(2)	(2)	(2)	w/o JB	w/o JB	w/o JB		w/o JB	w/o JB		
Width (mm) (4)	180	180	200	370	370	410	280	560	620	570	154
Height (mm) (4)	270	270	280	270	270	280	280	270	280	280	330
Depth (mm) (4)	377	377	377	377	377	377	745	377	377	745	330
Weight (Kg) (4)	13	13	16	26	26	32	38	39	48	76	12

(1) Circuit Breaker is not required when using Junction Box

(2) Width: 200mm, Height: 275mm, Depth: 400mm, Junction Box will be IP67

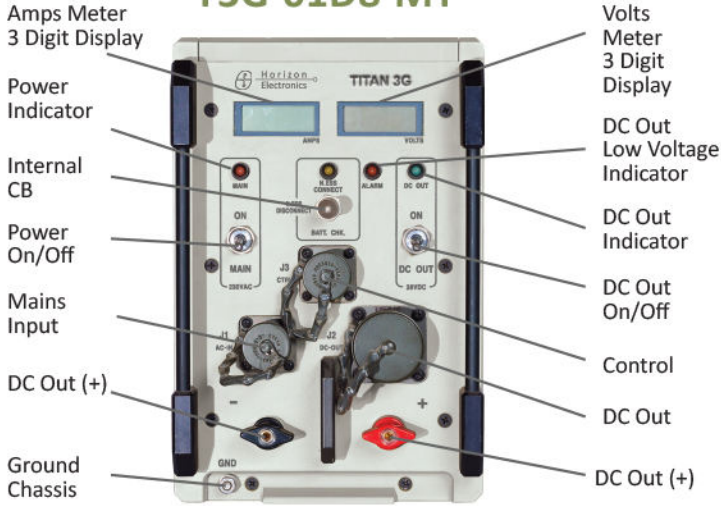
(3) Available with D38999 connector upon request

(4) All dimensions refer to Circuit Breaker and Meter Options (Not including Junction Box)

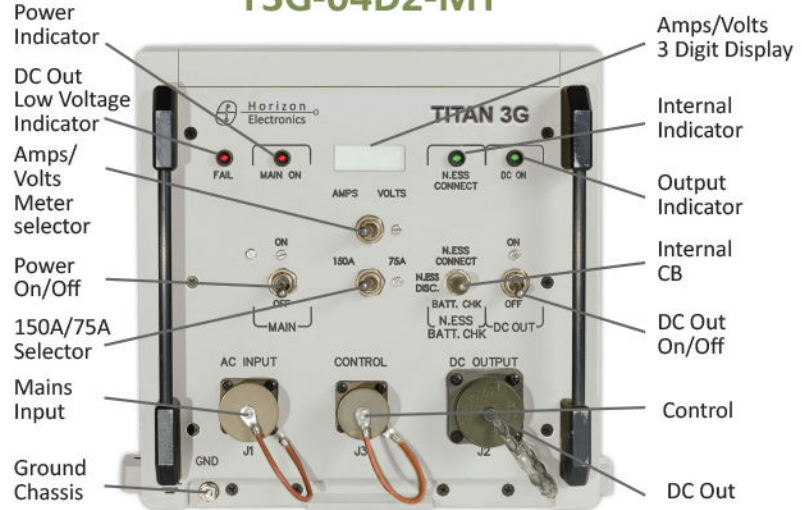
JB - Junction Box



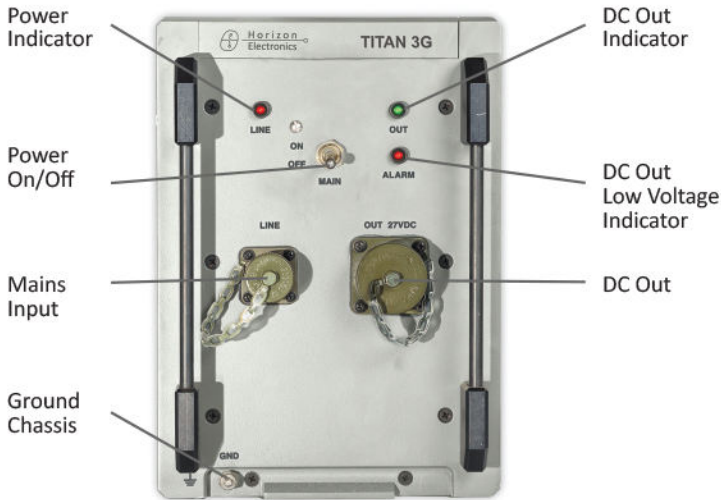
### T3G-01D8-MT



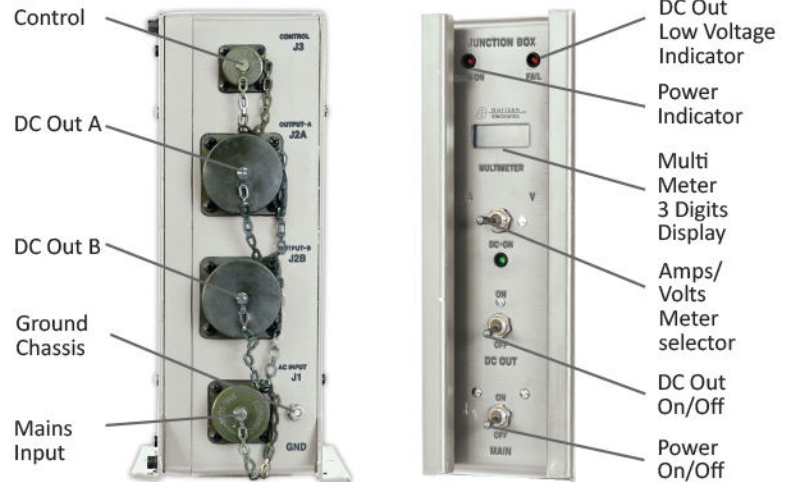
### T3G-04D2-MT



### T3G-01D5-CB



### T3G-JBX-01



## T3G - 01D2 - CB - 115 - 24 - 7 - 0

**T3G**  
Titan  
3rd  
Generation  
Series

**Output Power  
Continuous/Peak  
(Kw )**

- 01D2.....1.2/1.3
- 01D5.....1.5/1.7
- 01D8.....1.8/2.0
- 02D4.....2.4/2.6
- 03D0.....3.0/3.3
- 03D6.....3.6/4.0
- 04D2.....4.2/4.6
- 04D5.....4.5/5.0
- 05D4.....5.4/5.9
- 08D4.....8.4/9.2

**Circuit Breaker  
/ Meter**

- CB - Circuit Breaker
- MT - CB & Meter
- JB - Include Junction  
Box

**Input Voltage**

- 115 - 115V Single Phase
- 230 - 230V Single Phase
- 231 - 115/230V Single Phase
- 208 - 200/208V Three Phase
- 400 - 400V Three Phase

**Output Voltage**

- 12 - 12V
- 24 - 24V
- 28 - 28V
- 36 - 36V
- 48 - 48V
- 60 - 60V

**IP**  
7 - 67  
8 - 68

**Color**

Your power supply solution for **EXTREME** conditions

## ⊕ Main Input Specifications

- Operating Frequency: 45 - 440 Hz
- Efficiency: 85% typical
- Power Factor: > 0.98 at nominal load for 230VAC single phase and 208VAC three phase  
> 0.95 at nominal load for 115/230VAC
- Soft Start: Initial inrush current limit up to 250%

## ⊕ DC Output Specifications

- Operating Mode: Constant voltage or constant current with automatic crossover
- Polarity: Floating voltage - positive or negative pole may be grounded
- Stabilization due to line fluctuations: 50mV for specified extremes of line voltage
- Stabilization due to load fluctuations:  $\pm 0.3V$  over no-load/full-load range
- Ripple and Noise: 300mVp-p Max., 30mV RMS max
- Operating Temperature: - 40°C to + 70°C
- Derating 1% per 1°C: + 40°C to + 70°C
- Cooling: Natural convection

## ⊕ Protection Features

- Input/Output circuit breaker (Dual pole)
- Output current limit
- Output over voltage protection
- Output low voltage indication
- Over temperature protection
- Mains input voltage protection
- Battery to power supply leakage current < 10mA (Mains power is off)
- Low Voltage Disconnect (LVD) - option
- Reversed battery polarity protection - option

## ⊕ Insulation

- Input-to-Output dielectric voltage strength of 3,000VDC per 1 minute
- Input-to-Chassis and Input-to-Output insulation exceeds 20M $\Omega$  at 1000V
- Output-to-Chassis exceeds 20M $\Omega$  at 100V/250V

## ⊕ Accessories

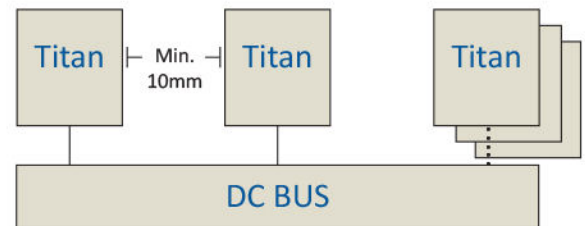
- Power cables are offered with lengths of 3 Meter / 5 Meter
- Trolley cart is available for up to three Titans and one Junction Box

## ⊕ Front Panel

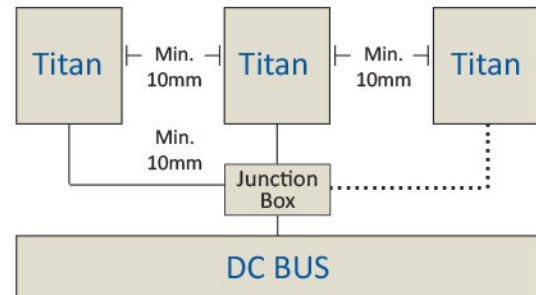
- MAIN Circuit Breaker (Input/Output)
- LINE AC input OK light
- OUT DC output OK light
- ALARM indicator lights when the output voltage is outside the required voltage range
- IN/OUT Connectors

## ⊕ Installation Schematics

Configuration 1 - Parallel Connection:



Configuration 2 - Include Junction Box:



## ⊕ Operational Conditions

### Environment

- Altitude: Up to 10,000 meters from sea level
- Humidity: Up to 95%
- Operating temperature: - 40°C to + 70°C
- Storage temperature: - 40°C to + 85°C
- Mechanical Shock: up to 25G
- Vibrations: 6 Grms at 50-2000Hz
- Ingress Protection (IP): 67 / 68

**Safety:** UL/EN60950

**Power Factor:** EN61000-3-2

### EMC / Immunity

- EN61000-3-3: Flicker & voltage fluctuation
- EN55022: Class B conducted emission
- EN61000-4-2: Electrostatic discharge immunity
- EN61000-4-3: Radiated electromagnetic field
- EN61000-4-4: Fast transients-burst immunity
- EN61000-4-5: Input Surge immunity
- EN61000-4-6: Conducted immunity
- EN61000-4-11: Voltage dips



## About Horizon

Since 1970, Horizon Electronics has been a leading designer and manufacturer of power supply systems, specialized in harsh environmental, industrial, civil and defense.

Horizon offers both standard and custom solutions, ranging from light customization up to fully customized products. The company brings to its customers high-quality, innovative products, and cost effective solutions.

## Our DNA

### Experience

- Ⓢ 45 years of developing and manufacturing of power supply systems
- Ⓢ Hundreds of thousands power supply units delivered
- Ⓢ Hundreds of man-years of Power supply expertise and knowledge
- Ⓢ Leading customer base in diverse vertical markets

### Performance

- Ⓢ State of the art Technologies, industry-leading performance, Innovation driven
- Ⓢ Platforms optimized with experience and know-how gained over multiple platform generations

### Value

- Ⓢ Complete cost-effective power supply systems and components
- Ⓢ Flexibility and fast customization to customer's specific requirements
- Ⓢ Strong Technical support

## Horizon Electronics

3 Bazel St. ,P.O.B 3872 Kiryat Arie,  
Petah Tikva 4951037, ISRAEL  
Tel: +972-3-923-0091  
Fax: +972-3-924-7379  
sales@horizon.co.il

## North America

Tel: +1-224-279-1284

## Europe

Tel: +47-9715-4099



Horizon Electronics Ltd  
Power Systems

[www.horizon.co.il](http://www.horizon.co.il)