



GROW CONTROL
POWER TECH PVT. LTD.

We Provide Solutions....

AN ISO 9001:2015 COMPANY



MILGRADE FREQUENCY CONVERTER

GROW CONTROL is a research-based power electronics organization that blends technology, innovation, and engineering to transform concepts into world class products and solutions.

GROW CONTROL MilGrade Frequency Converter is a specialized electronic device designed to convert electrical power from one frequency to another, typically for military applications. It operates using solid-state technology, which allows for reliable performance with fewer moving parts compared to traditional rotary converters.

GROW CONTROL MilGrade Frequency Converter offers a high-performance solution for a variety of applications requiring efficient and reliable frequency conversion. Utilizing **indigenous technology**, these converters are engineered to meet the demands of industrial, research, and defense sectors, delivering exceptional performance and versatility.

Features

- Main feature of static frequency converter is which converts 28V DC into 1-Ph, 115V, 400Hz AC or 3-Ph, 200VAC, 400Hz.
- **Robustness:** Designed to withstand harsh environments, Mil grade SFCs are built to meet military standards for durability, temperature ranges, shock, and vibration.
- **Efficiency:** These converters typically offer medium efficiency and low distortion, ensuring that the power quality meets stringent requirements.
- **Compact Design:** Solid-state technology allows for a smaller footprint, which is advantageous in space-constrained military applications.
- **Versatility:** They can be used in various applications, from powering radar and communication systems to providing reliable energy for testing and maintenance of military equipment.

Key Advantages

1. Indigenous Technology:

Developed and manufactured in India, tailored to meet local industry needs with accessible support and customization options.

2. Versatile Applications:

Ideal for a wide range of applications, from industrial machinery to renewable energy systems, providing flexibility in usage.

3. High Reliability:

Engineered for durability and stability, ensuring consistent performance in demanding operational environments.

4. Energy Efficient:

Low power losses translate to reduced operational costs and enhanced sustainability, making it an environmentally friendly choice.

5. Comprehensive Customization:

GROW CONTROL offers tailored solutions to meet specific operational requirements, ensuring optimal functionality for every application.

Applications

1. Industrial Drives:

Provides precise frequency control for motor drives, improving efficiency and performance in manufacturing processes.

2. Renewable Energy Systems:

Essential for wind and solar applications, enabling the integration of renewable energy sources into the grid.

3. Telecommunications:

Supports frequency conversion in telecom systems, ensuring reliable transmission and reception of signals.

4. Defense Systems:

Used in various defense applications requiring reliable frequency conversion for radar, communication, and electronic warfare systems.

5. Aerospace Applications:

Ideal for converting frequencies in aerospace systems, enhancing operational reliability and efficiency.

6. Research and Development:

Supports experimental setups in research laboratories requiring precise frequency control and conversion.

Customization Options

GROW CONTROL provides a variety of customization options for the MilGrade Static Frequency Converter to accommodate specific application requirements:

- **Custom Output Frequency Ranges**
- **Enhanced Control Algorithms for Specific Applications**
- **Integrated Monitoring Systems** for real-time feedback
- **Optimized Cooling Solutions** (Air or liquid)
- **Modular Configurations for Scalable Power Ratings**
- **Additional Communication Interfaces** for enhanced integration

Our engineering team works closely with clients to deliver tailored solutions that precisely fit their operational needs, ensuring optimal performance and compatibility.

Why Choose **GROW CONTROL**?

- **Indigenous Expertise:** Tailored to meet Indian industry standards with local support for customization and maintenance.
- **Reliable and Efficient:** Designed for stability and high efficiency, ensuring consistent power delivery for critical applications.
- **Low Maintenance Requirements:** Durable design reduces wear and tear, minimizing downtime and maintenance costs.
- **Energy Efficient and Cost-Effective:** Low energy losses lead to cost savings and enhanced operational efficiency.
- **Customer Support:** From initial design consultation to installation and ongoing support, **GROW CONTROL** offers a full range of services.

Certifications

- **MIL-STD-810 E/F/G** – Environmental Testing Standards
- **MIL-STD-461 E/F/G**– Electromagnetic Compatibility Standards
- **MIL-STD-704 D** – Power Supply Compatibility Test Standards
- **EN 55022** – EMI Compliance
- **ISO 9001:2015** – Quality Management Systems



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*** AS LOADS CONTROLLER ***

Technical Specification

Model No	GCPT13SI	GCPT11SI
Nominal Input Range	(18-36) VDC	(18-36) VDC
Input Voltage (nominal)	28 VDC	28 VDC
Output Voltage	115 VAC (L-N) 200 VAC (L-L)	115 VAC & 26VAC
Output frequency	400 Hz $\pm$ 1%	400 Hz $\pm$ 1%
Output Waveform	3-Phase with Neutral	3-Phase with Neutral
Output Power	1.1kVA	1kVA
Operational temperature of unit	-20°C to +55°C	-40°C to +71°C
Storage temperature of unit	-40°C to +71°C	-55°C to +85°C
Maximum dimensions of the static inverter	350mm (D) x245mm (W) x210mm (H) $\pm$ 1mm	305 mm x 216 mm x 104 mm ($\pm$ 1.5mm)
Weight of inverter	$\leq$ 12 Kgs	$\leq$ 7 Kgs
Total Harmonic Distortion	$\leq$ 5%	$\leq$ 5%
Type of unit	Fully Indigenous Discrete Level System	Fully Indigenous Discrete Level System



OUR CLIENTS



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