SynQor® Releases a Mil-Grade DC Output, Power Conditioner (MPC-1250) for MIL-STD-1275 Applications

- ***Connects Directly to 28 V Power System Defined by MIL-STD-1275***
- ***1250 W 28 Vdc Isolated Output***
- ***Programmable Lead Acid Battery Charging Feature***
- ***Constant Current Overload Protection***
- ***Fixed 47 A Current Limit***
- ***Universal Input and Wide Frequency Range***
- ***Parallelable Output***
- ***Sealed, Shock-Proof, Weather-Proof Construction***
- ***1U Rack Unit, Ultra-Low Weight (22 lbs.)***

Boxborough, MA – 3/29/2022 – SynQor®, Inc., a leading supplier of power conversion solutions, announces a new "Constant Current Overload Protection" output model for the DC output Shallow Rack Military Field-Grade Power Conditioner. The feature allows the output to be directly connected to the terminals of a lead-acid battery used with 28 V vehicle power system as defined by MIL-STD-1275D. This allows vehicle electronics to be powered from an external AC or external DC source. The output voltage is user selectable between 22 and 33 Vdc to match the nominal voltage of the vehicle lead-acid battery. The unit automatically detects if the vehicle lead-acid battery has been deep-discharged, and will enter a Constant Current Constant Voltage (CCCV) charge sequence. The current limit is fixed at 47 A, making it capable of charging high amp-hour batteries typically used in military vehicles. The "Top Off Voltage" and "Top Off Time" can be adjusted to match the CCCV profile of the vehicle battery. When the output is disabled, the MPC-1250 will draw less than 2 uA from the vehicle battery to prevent self-discharge. The output is protected from all spikes and surges defined by MIL-STD-1275D. The output is also reverse polarity protected to -60 V. The unit is able to operate in current limit indefinitely. While the current demand exceeds 47 A, the unit behaves as a constant current source. The current limit feature can be used to charge near infinite capacitive loads.

Multiple units can be paralleled to deliver a higher power, fully regulated DC output voltage. An inter-unit communication link allows multiple units to behave as a single system while delivering higher combined power or providing a fully N+M redundant system.

The MPC system includes features that allow remote tracking of the unit's systems via the industry standard SNMP or an intuitive GUI driven web interface. The users can track various operational parameters like the output and input parameters, temperature, fan speed and much more.

The Shallow Rack MPCs have been designed to meet several of the most demanding electrical military standards, including MIL-STD-1275D, MIL-STD-704F, MIL-STD-1399-300B and MIL-STD-461F. The MPC has electrically superior characteristics to many power supplies of its kind and has been designed to comply with the harshest environmental conditions as required by MIL-STD-810G while remaining compact and ultra-light.

Features

- 1250 W isolated full power DC output (28 Vdc)
- Universal AC input: 80-265 VAC; 47-65 Hz or 47-800 Hz
- Output Voltage range 22-33 Vdc
- Current Limit 0-45 A
- Wide temperature range -40 °C to +70 °C
- Built-in Load Sharing and Redundant (N+M) capabilities
- 1U High Rack-Mount unit (17.00" W x 14.80" D x 1.73" H)
- Real time monitoring via SNMP or Web Interface
- Low Weight 22 lbs.

Specification Compliance

- MIL-STD-461F
- MIL-STD-704F
- MIL-STD-810G
- MIL-STD-1275D
- MIL-STD-1399-300B

Please download the MPC-1250 datasheet and Operator's Guide. Find I/O cables, power cables and replaceable fans for the MPC-1250. For more information on this or for additional power application assistance please explore more at www.synqor.com or contact your local SynQor representative.

About SynQor: Located in Boxborough, MA USA, SynQor is a leading supplier of power conversion solutions to the military, avionics, transportation, medical, industrial, telecommunications and computing markets. SynQor's innovative products are designed to exceed the demanding performance, quality, and reliability requirements of today's power electronic engineers who develop leading-edge infrastructure hardware. SynQor provides all the power conversion modules needed to build a power system, and we also provide complete power systems. SynQor's capabilities include both standard and custom solutions, and we deliver them with industry leading service and support. SynQor's total commitment to quality, customer satisfaction and continuous improvement drives our business processes.