We power freedom.

MAGNET-MOTOR
A RENK GROUP COMPANY

ELECTRIFICATION

Charge Converter Pro

/ High Performance Electronic Converter for Hybrid Vehicles.



The Charge Converter Pro is an innovative and efficient, military qualified HV to 28V converter for hybrid vehices. It replaces the conventional alternator with a highly reliable and rugged modern system component.

The Charge Converter Pro includes CC/CV battery charging for lead acid and lithium batteries as well as redundant stand alone 28V bus supply. HV Input voltage ranges from 500 to 800V, output voltage complies with MIL Std. 1275. The converter can be integrated into the vehicle communication by J1939 CAN bus, includes self protection, status monitoring and communication.

The converter is rated at 10kW continuous power, and features modern technology like water cooling, silicon carbide semiconductors, active freewheeling to achieve high efficiency. It is fully filtered for military EMI requirements. For higher power demands, units can be switched parallel to achieve 28VDC power up to and beyond 30kW.

Features

- Continuous power 10kW
- Input voltage 500 to 800VDC
- Output voltage 28VDC
- Output voltage quality MIL Std 1275
- Applicable for PM motors and generators
- Ruggedized for military vehicles
- Power outputs are short-circuit protected
- Compact and lightweight
- Diagnosis and software download via CAN bus interfacefielded at this power rating

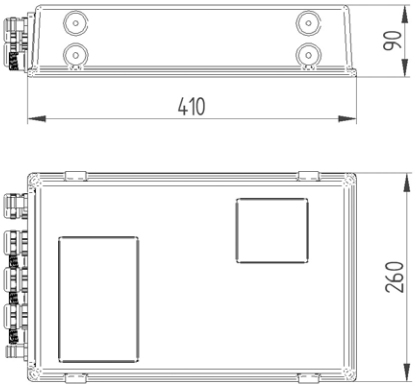
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Technical Information (typical application in light-to medium-weight wheeled vehicles)

General	
Environmental temeperature (operational)	-32 to 63 °C
Type of Protection	IP 66/67
Dimensions	540 x 340 x 90 mm
Weight	19 kg
Electrical data	
Continuous power	10 kW
Input voltage	500 to 800 VDC
Output voltage	28 VDC
Output voltage quality	MIL Std 1275
Interfaces	
HV/LV connections	Lugs + cable glands Connectors on request
Signal connectors	acc to MIL DTL 38999
Cooling	70 °C W/G
Environmental conditions	MIL Std 810 G
EMI	MIL Std 461 F
Features	Silicon carbide Mosfets, active freewheeling rectifier, high efficiency, over current + short + overvoltage protection
Reliability	MTBF beyond 30000hrs
Functionality	Battery charging, CC-CV characteristics, Generator only mode (single onboard supply), One-directional (downconvert), Galvanic isolation, Parameter setting and status messages by J1939
SOP	12/2023



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