We power freedom.

MAGNET-MOTOR
A RENK GROUP COMPANY

ELECTRIFICATION

PE31

/ Three-Phase Inverter



Technical Information (dependent on variant)

General	
Ambient temperature range	-32 to +63 °C
Type of protection	IP 66/67
Dimension	441 x 314 x 111 mm³
Volume	15.4 dm³
Weight	19 kg
Electrical data	
Maxium power	300 kW
Continuous power	130 kW
Nominal input voltage	750 VDC
Input voltage range	up to 800 VDC
Power semiconductor	IGBT
Phase current (peak)	450 A
Maximum switching frequemcy	14 kHz
Typical efficiency	97%
Supply voltage range	18 to 36 VDC
Power consumption (idling)	15 W
Electrical / Signal Interfaces	
AC power connection	3x M8 terminals
DC link power connection	2x M8 terminals
Signal and 28 V power supply, CAN J1939, 2 x floating digital outputs, 2 x floating digital inputs, temperature monitoring (for 6 x PT100 sensors) motor, resolver, 10-bit-resolution	MIL DTL connectors
Cooling	
Cooling medium	water/glycol 50/50
Nominal flow rate	13 l/min
Nominal inlet temperature	85°C
Pressure drop	0.9 Bar

Product benefits

- Magnet-Motor's compact automotive power inverter unit features state-of-the-art IGBT technology with efficient liquid cooling and highly sophisti-cated, dense packaging of circuit boards and components. Its compact size and low weight make the PE31 ideal for use as power inverters of drive motors or generators in any medium-to large-category hybrid vehicles.
- The embedded controller features high-speed digital field-oriented control, covers interfaces for various sensors and offers support for a variety of communication standards. It is appropriate for high-torque as well as for high-speed drives up to 800 VDC.



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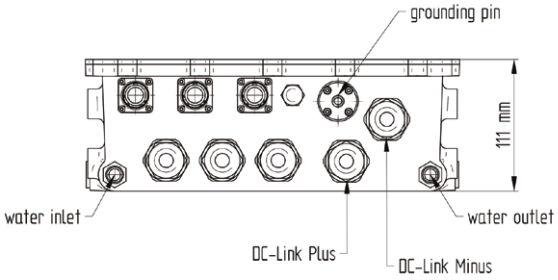
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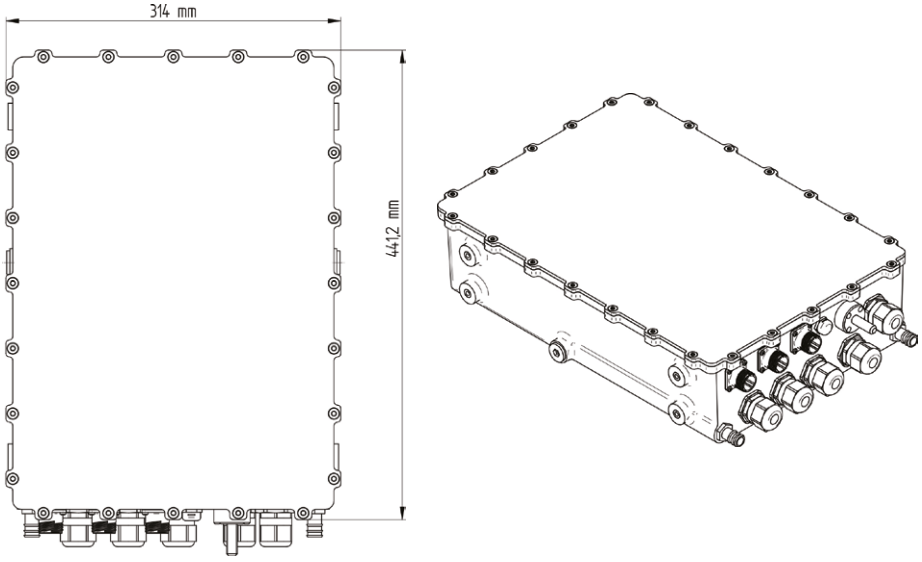
PE31

Technical Characteristics

- Maximum power 300 kW
- Phase current: 450 A (peak)
- Volume 15 dm^3
- CAN J1939 communication
- 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 interface







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