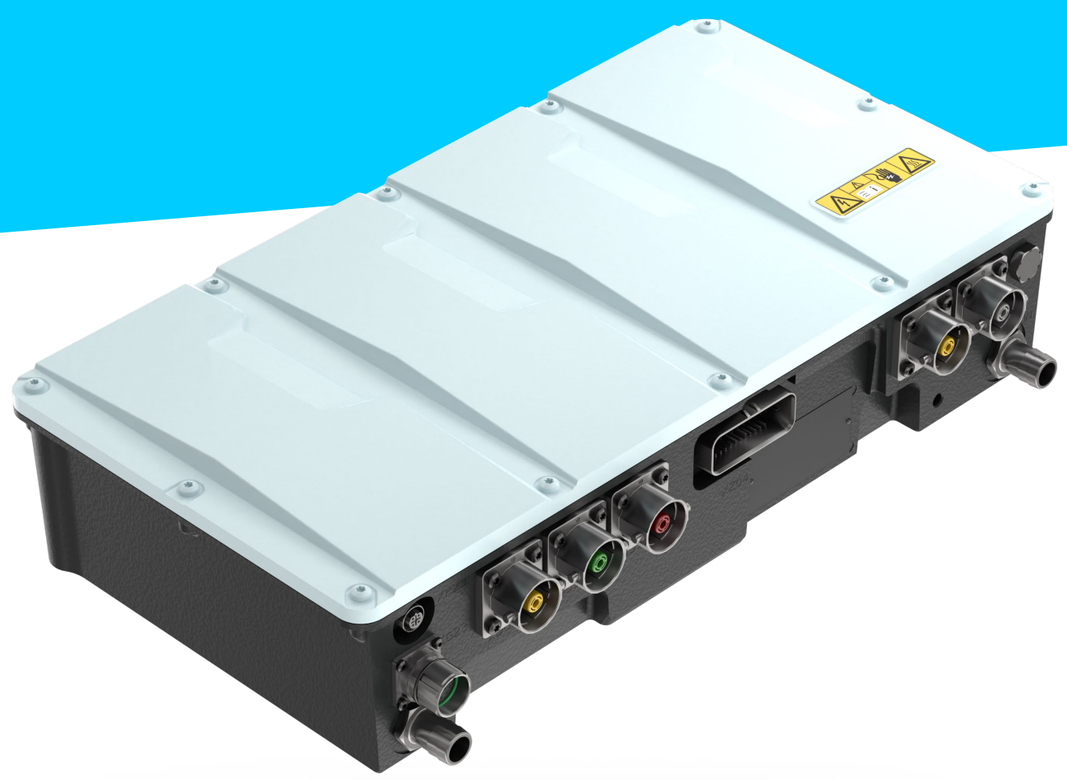
eLION Inverter EDS1

Heavy duty design for off-highway applications

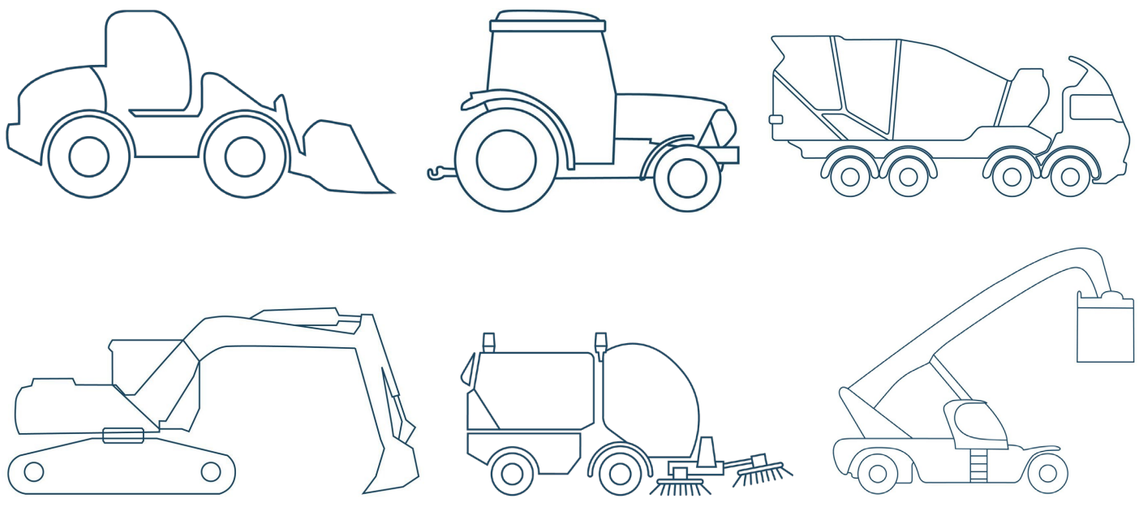


While keeping environmental sustainability at the forefront, Bosch Rexroth has developed its eLION high voltage solution portfolio for the off-highway market. In doing so, additional requirements for enhanced productivity and performance, as well as improved efficiency and reduced exhaust emissions are met. With an already strong position as an engineering partner in the hydraulic world, Bosch Rexroth has reinforced its position with off-highway vehicle manufacturers with this addition. Through the expansion into electrification, the Rexroth eLION portfolio provides easily integrated electric solutions for various functions in off-highway vehicles, whether they be diesel-electric, hybrid, or fully-electric.

CUSTOMER BENEFITS

- Durable and robust design to endure off-highway conditions
- CAN J1939 communication
- Quick connectors for simplified assembly
- High overload capability
- Safety functions according to ISO 13849 and 25119
- Sustainable mobile machine solutions and designs

APPLICATIONS



FUNCTION AND BENEFITS

Durable and robust design to endure off-highway conditions
By equipping the components with a protection rating of up to IP6K9K, which includes a 50g shock and 8g vibration resistance, the Rexroth eLION inverter can withstand even the most rugged and harsh environments. In addition, the inverter has been designed to incorporate safety functionalities enabling machine functional safety according to ISO 13849 and 25119 up to PL d.

CAN J1939 Communication
The eLION solution portfolio benefits from a CAN 2.0 J1939 high-speed and reliable communication bus designed for off-highway applications worldwide. As a result of its built-in error detection, robust design , the CAN 2.0 J1939 system creates seamless communication channels between components using only a single multiplex wire.

Quick connectors for simplified assembly
To guarantee correct and efficient cable connection to the power and control interfaces each time, the Rexroth eLION inverter is complemented with quick connectors. All interfaces are therefore supported by a quick-locking connector possible as a straight or right angle. In addition, the 1-pole connectors consist of a color-coded poka-yoke principle, removing any risk of incorrect installation.

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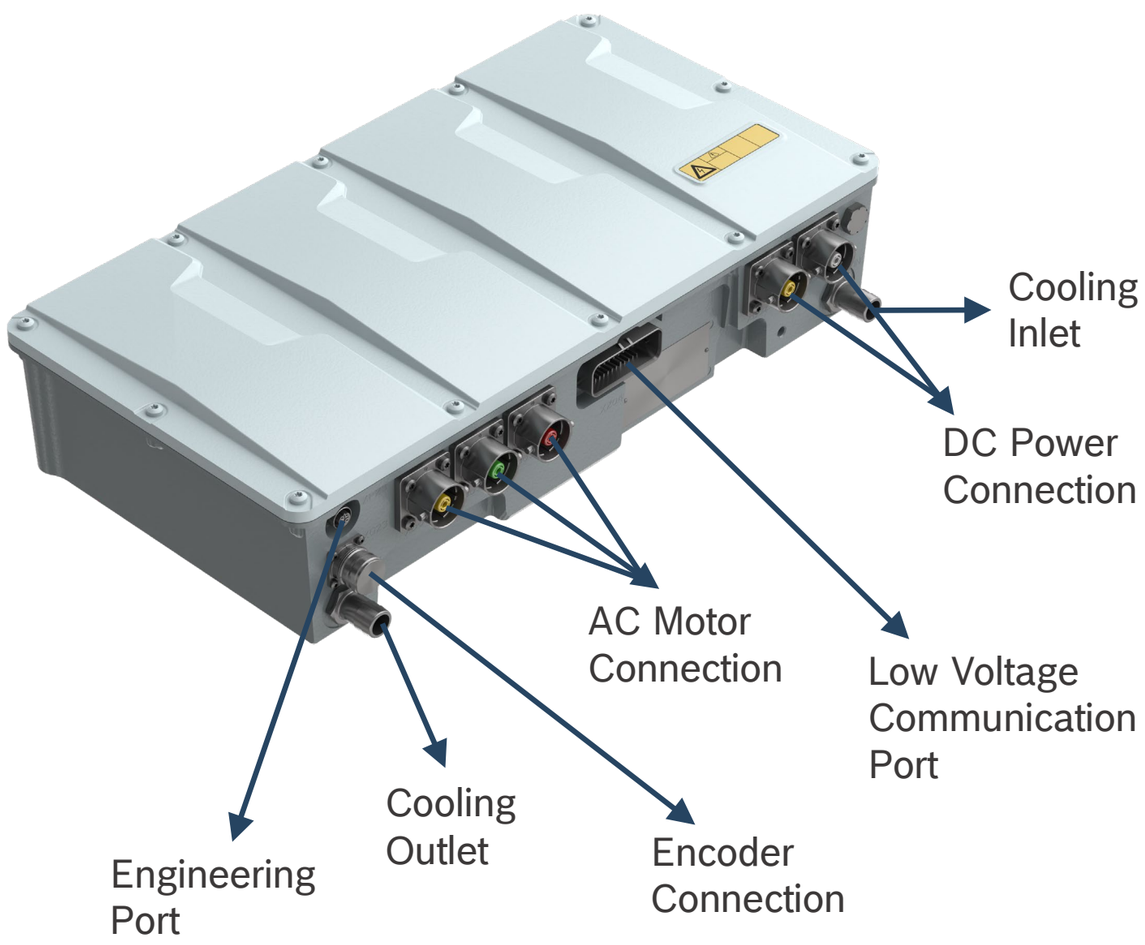
TECHNICAL DATA

eLION Inverter EDS1

Inverter Typen:	EDS1-L0200	EDS1-L0400	EDS1-L0600
Voltage Level:	270 ... 850 VDC		
Nominal Current (A):	80	160	300
Peak Current @ 10s (A):	200	400	600
Peak Current @ 60s (A):	160	320	450
Motor Power (kW):	15 ... 55	55 ... 110	110 ... 200
Weight (kg):	12.5		16.3
Height x Width (mm):	110 x 272		
Length (mm):	387		487
Data sheet:	96750		



Inverter Connections

High overload capability
The eLION inverter has an overload capability of up to 2.5 times the nominal operating current, which is in line with the capabilities of the eLION motor. This is accomplished by the selection of high-performance components together with an advanced cooling concept.

Safety functions according to ISO 13849 and 25119
To enable the utmost of safety with the Rexroth eLION inverters, safety technology has been integrated - specifically for mobile working machines. The safety functions are in accordance with ISO 13849-1 and EN 62061 and allow machine safety functions of up to PL d and SIL-2. Provided functions are Safe Torque Off, Safe Communication, Safe Encoder, Safe (actual) Torque, as well as numerous safety monitoring functions. In addition, an active short circuit is applied to the design to protect against overvoltage, as well as high voltage interlocks to protect against disconnected power cables.

Sustainable mobile machine solutions and designs
Bosch Rexroth contributes mobile machine solutions, which offer a substantial reduction of emissions, or even zero local emissions with an overall reduced machine noise. In addition, these sustainable solutions enhance both the efficiency and performance of the machine through precise control and electrification of machine systems, such as travel drive or implements.

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