

eLION Inverter EDL1

Heavy duty design for off-highway applications

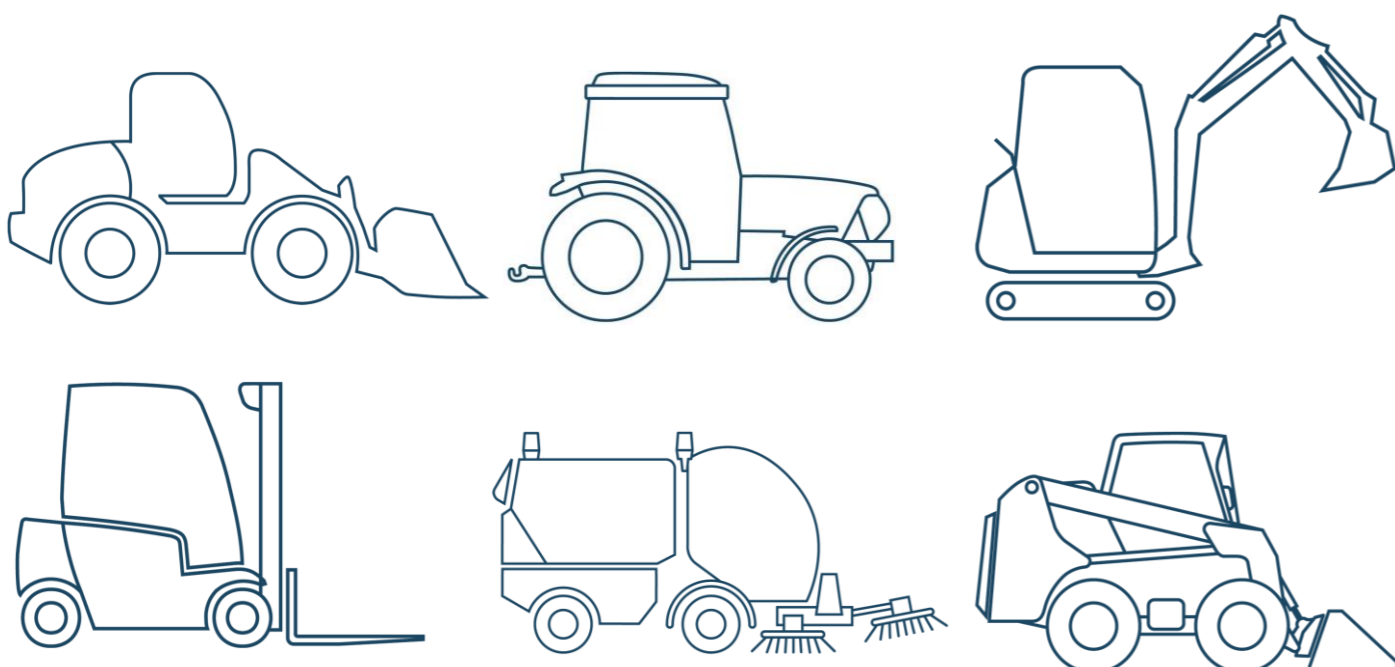


Specifically designed for the off-highway market, Bosch Rexroth has developed its eLION solution portfolio to be robust and scalable with an integrated functional safety. It fulfills demanding customer requirements for enhanced productivity and performance, as well as improved efficiency and reduced exhaust emissions. With an already strong position as an engineering partner in the hydraulic world, Bosch Rexroth has a strong position with off-highway vehicle manufacturers. The 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

- Robust design to endure off-highway conditions
- CAN J1939 communication
- High overload capability
- Functional Safety
- Sustainable mobile machine solutions and designs

APPLICATIONS



FUNCTION AND BENEFITS

Robust design to endure off-highway conditions

To withstand the harsh off-highway environments, the eLION inverter has a rating of up to IP65, protecting it against 40 g shock and 6.0 g vibration. In addition, the inverter has been designed with functional safety according to ISO 13849 and EN 1175 up to PL d to ensure safety on the entire machine.

CAN J1939 communication

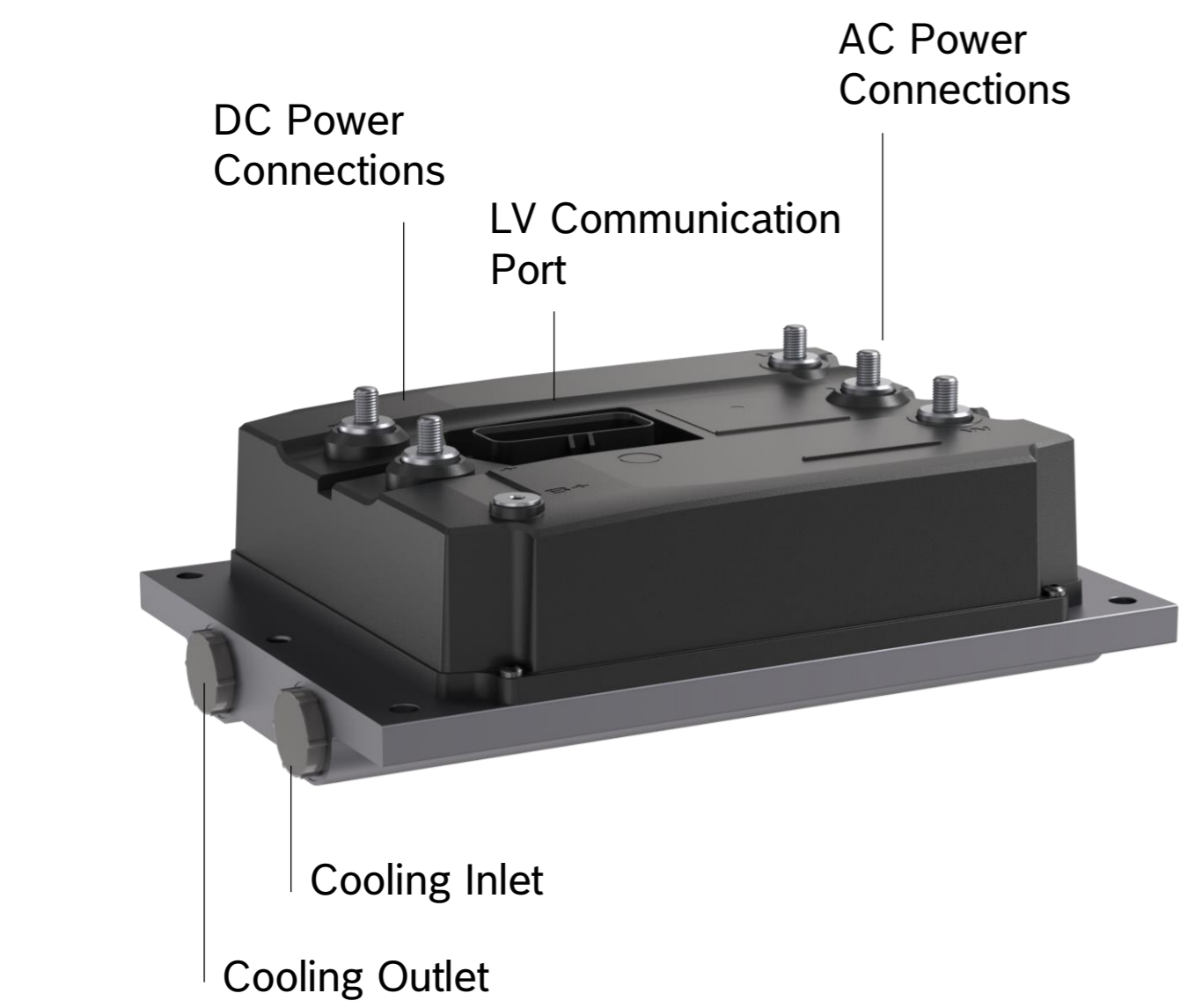
The eLION solution portfolio uses the CAN J1939 (CAN 2.0) communication bus, designed for off-highway applications with integrated UDS services. The system creates efficient communication and diagnostic channels between components.

High overload capability

The eLION inverter has an overload capability of up to 2.0 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.

TECHNICAL DATA

eLION Inverter EDL1	
Nominal operating voltage:	96 V _{DC}
Nominal current:	300, 350, 400 A
Peak current @ 60 s:	600, 700, 900 A
Continuous motor power:	up to 42 kW
Cooling:	50:50 Water-Glycol Mixture
Coolant flow rate (@ 65 °C):	up to 20 L/min
Data sheet:	RE96760



EDL1 Inverter Connections

Functional safety

In accordance with ISO 13849, the eLION inverter has Safe Torque Off integrated with a performance level of up to PL d. In addition, an active motor phase short circuit is applied to the design to protect against overvoltage.

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 the efficiency and performance of the machine through precise control and electrification of machine systems, such as traction or implements.