

Multilevel highspeed inverter

Control of motors and generators up to 180,000 rpm



High speed kept under control

Speed safely under control – lower system costs



Thanks to drivetek's multilevel technology, motor, and generator speeds up to 180,000 rpm can be safely kept under control. The control technique and high PWM frequencies reached result in considerably lower rotor losses in the electrical machine, thus leading to a significant reduction in system costs. MLI was developed for fuel-cell air compressors and electric turbochargers.



MLI 30

Key features

- DC supply voltage up to 800 V_{DC}
- Nominal phase current up to 30 A_{RMS}
- Stator frequency up to 3,000 Hz
- PWM switching frequency up to 50kHz
- CAN interface
- Field-proven sensorless speed and torque control
- Liquid-cooled, inlet temperature <70°C (under full load conditions)
- IP67 enclosure

MLI 55

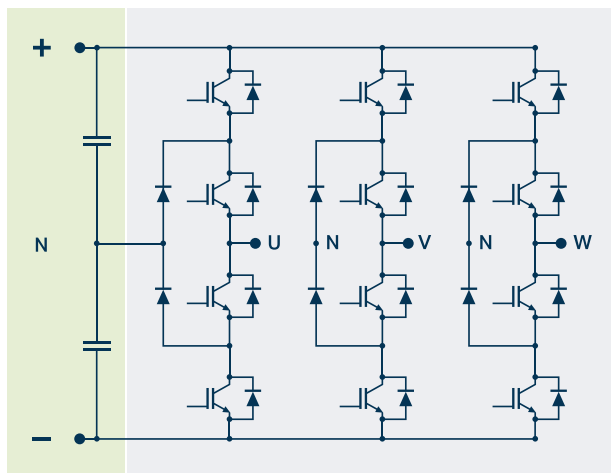
- DC supply voltage up to 800 V_{DC}
- Nominal phase current up to 55 A_{RMS}
- Stator frequency up to 2,500 Hz
- PWM switching frequency up to 40kHz
- CAN interface
- Field-proven sensorless speed and torque control
- Liquid-cooled, inlet temperature < 70°C (under full load conditions)
- IP67 enclosure

MLI 110

- DC supply voltage up to 800 V_{DC}
- Nominal phase current up to 110 A_{RMS}
- Stator frequency up to 2,500 Hz
- PWM switching frequency up to 35kHz
- CAN interface
- Field-proven sensorless speed and torque control
- Liquid-cooled, inlet temperature <60°C (under full load conditions)
- IP67 enclosure



Circuit 3 – Level inverter



Waveform output voltage

