TM4’s vast expertise and cutting-edge technologies have both been integral contributors to the design of one of the world’s most advanced electric drivetrains. More than 100 breakthrough patents combine to deliver unmatched efficiency, power density and quality in a unit that is compact, and affordable. TM4 is recognized as an expert in thermal management, coil winding, outer rotor topology, and motor & inverter control algorithms, all contributing to producing the highest possible energy conversion efficiencies.

The LSM280 motor technology uses permanent magnets to offer high efficiency. The motor topology is based on an outer rotor technology that maximizes the use of the magnets and reduces the amount of rare earth materials. This high torque/low speed system is designed to interface with standard rear differentials without the need for an intermediate gearbox. The CO300HV controller utilizes the latest technology of automotive grade insulated-gate bipolar transistors (IGBT) to deliver the industry’s highest specific power and current densities.

**KEY BENEFITS**

**INDUSTRY-LEADING EFFICIENCY**
Brushless permanent-magnet technology ensures exceptional performance over a wide range of speeds.

**BEST-IN-CLASS POWER DENSITY**
Delivers more power with its unmatched power-to-weight ratio, takes up less valuable space, and requires fewer raw materials to produce.

**ADHERENCE TO AUTOMOTIVE STANDARDS**
99% of our electronic components are automotive-certified, assuring compliance with current industry best practices throughout the entire development cycle.

**RELIABLE SYSTEM PERFORMANCE**
Built to endure demanding real-world road conditions and backed by a first-rate warranty.

**EXCEPTIONAL EASE OF INTEGRATION**
Allows for a plug and play integration and a significantly reduced time-to-market.

**PATENT PENDING INNOVATION**
The Reflex™ gate driver technology increases efficiency and operating voltage range while limiting overshoot and commutation losses.
**LSM280 and CO300HV**

**FEATURES**
- Outer rotor topology for maximum torque density
- Reflex™ gate driver technology
- Four-quadrant operation
- Low electro-magnetic audible noise
- Low-cogging torque for better NVH
- EMI filter

**SYSTEM SPECIFICATIONS**
- Operational speed: 0-3250 rpm
- Max* / continuous power: 230 kW / 155 kW
- Peak efficiency: 94%
- Max / continuous torque: 2700 Nm / 1400 Nm
- Performance voltage: 500 Vdc - 600 Vdc
- Communication: CAN 2.0B
- Weight: Inverter: 35 kg, Motor: 348 kg

**ENVIRONMENT AND COOLING CHARACTERISTICS**
- System protection: IP 6K9K
- Max coolant temperature: 65°C
- Coolant type: 40/60 water-glycol
- Toxic materials and flammability: ROHS, ELV, UL94-V0
- External corrosion resistance: Salt spray, gravel bombardment, chemical products

**APPLICATIONS**
- Electric heavy duty trucks and busses

**STANDARDS**
- Automotive components: AEC-Q100 / Q101 /Q200
- Electromagnetic compatibility (EMC): Main European standards
- Road vehicles - functional safety: Based on ISO/DIS 26262 principles

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*All specifications are subject to change.*

*Power can be increased to 280 kW.*