

## Heavy Duty Traction Inverter

# ELFA3 V3.2

accelerate the shift™



Highly flexible inverter for a wide range of applications, compatible with induction and permanent magnet motors, in a compact and robust design for heavy duty on- and off-road vehicles

### Features



#### High performance

- Operating voltage 300 – 850 VDC
- Continuous power 240 kVA
- AUTOSAR base software

#### Designed for heavy duty vehicles

- Water-cooling
- Safe Pulse Off (disable gate driver)
- Diagnosis with UDS and XCP
- HV plugs for AC and DC connections
- Galvanic isolation between LV and HV
- Compact integration in IP6K9K housing
- Operation of double winding motor
- Certified according to automotive EMC norm UN-ECE R10
- Cyber security ready
- ISO 26262 - ASIL C
- Warranty up to 3 years (300.000 km)

#### Selectable converter control strategy

- Vehicle drive control unit (DCU) with support of regenerative braking and HV energy management based on J1939 CAN interface
- Torque-speed-interface (TSI)

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## General Data



## Mechanical data

Volume	15L
Dimensions	328 x 350 x 118 mm
Weight	15 kg

## Cooling

Cooling Media	Water-Glycol
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## HV input

DC input voltage	300 – 850 V
Rated DC voltage	800 V
Rated DC current	350 A

## AC output

Rated output power	240 kVA (460 V AC)
Rated output current	300 A
Max output current	550 A

## Ambient conditions

Operating Temperature	-40°C to 70°C
Ingress protection class	IPX7, IP6K9K, IPX6K

## integrated Voltage Protection Function (iVPF)

Variable DC trigger threshold	950 V
Max. AC short circuit current	330 A (< 2 min)

## Interfaces



## Vehicle signal interfaces

- 9 – 36 VDC control voltage range
- 2 x CAN interface
- Terminal 15 digital input
- Safe Pulse Off digital input
- Safe torque off input signal via CAN
- 2 x Digital inputs
- 2 x Digital outputs
- 2 x Analog inputs
- 2 x External temp. measurement PT1000
- LV connector with single wire sealing

## Motor signal interfaces

- Resolver
- 2 x PT1000

## HV connection

- passive HV Interlock
- Touch-proof HV plug-in connector
- Coded AC plugs
- Dual DC plug