

# Schaffner Automotive Solutions

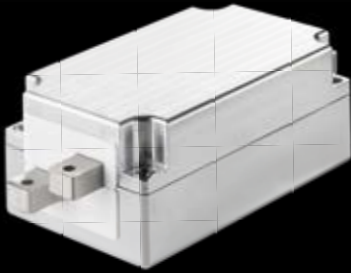
EMI filters, magnetic components, keyless entry systems

Schaffner solutions for e-mobility can be found in automotive electronic systems, battery packs and EV powertrains: EMI filters, common mode chokes and power inductors.

LFA and immobilizer antennas round off our product portfolio for safety and convenience in automotive applications.

## HV-DC Filters

Reduce EMI and meet the stringent automotive standards



HV-DC filters provide EMI suppression along the DC Powertrain of the EV.

The compact and modular design allows size, weight and cost reduction opportunities.

### Features

- | Maximum operation voltage: 600 V<sub>DC</sub>
- | Rated current: 150 A, 250 A, 500 A
- | High attenuation for common and differential mode between 10 kHz up to 300 MHz
- | Temperature range: -40°C to +110°C
- | Dimensions: 120 × 95 × 56 mm (150 A, 250 A), 146 × 90 × 60 mm (500 A)
- | Weight: 750 g (150 A, 250 A), 1140 g (500 A)
- | Customization to customer's design is available upon request

## Active EMI-Filter

A new technology for EMI suppression. High performance and small volume



### Features

- | Rated Voltage: 630 V<sub>DC</sub>
- | Rated Current: from 35 A @ 85°C up to 200 A @ 85°C
- | Attenuation from 30 to 40 dB from 10 kHz up to 100 MHz
- | Power supply: 12 V<sub>DC</sub>

## High Current Common Mode Chokes

High Current capabilities



Schaffner provides high current common mode chokes with high performance, compact size and good thermal behavior. Designed for EMI filtering along the EV's powertrain.

### Features

- | Inductance range: 3 mH–0.5 mH
- | Maximum operation voltage: 600 V<sub>DC</sub>
- | Current range: 80 A–400 A
- | Temperature operation: -40°C to +150°C
- | Compact design
- | Customization to customer's design is available upon request



## Compact Common Mode Chokes

### 6 A–50 A

Small size and excellent attenuation



Schaffner provides vertical common mode chokes for automotive application with rated current from 6 A to 50 A and good thermal behavior. The PCB mounting design allows easy integration in customer systems.

#### Features

- | Inductance range: 17 mH–0.5 mH
- | Maximum operation voltage: 600 V<sub>DC</sub>
- | Current range: 6 A–50 A
- | Temperature operation: –40 °C to +125 °C
- | Multiple PCB mounting options
- | Compact design
- | Customization to customer's design is available upon request

## Inductors

Innovative winding design with carefully selected core materials



Schaffner provides inductors for automotive DC-DC converters for various range of power. The innovative winding design allows maximal power density, low losses and robust mechanical design.

#### Features

- | Inductance range: 10 uH–1.5 mH
- | Current range: 5 A–300 A
- | Switching frequency: 5 kHz–200 kHz
- | Temperature operation: –40 °C to +180 °C
- | Low power losses
- | High temperature stability
- | Low level of audible noise
- | Mechanical robustness
- | Customization to customer's design is available upon request

## LFA Antennas

Long range and compact design



LFA antenna, is placed in door handle or inside a car. Schaffner keyless antennas provide a long range of operation, compact design and best quality.

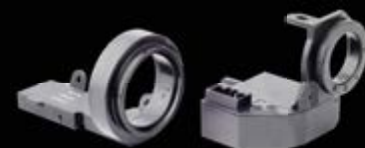
The main function of Schaffner's keyless antennas is to create a low frequency magnetic field that allows to detect and wake-up the key Fob. Schaffner antennas can be offered with door handle switch and door handle LED light.

#### Capabilities

- | Resonance frequency of antenna: 20 kHz, 125 kHz, 134.5 kHz
- | Inductance range: 160 uH–850 uH
- | Magnetic Field strength: up to 95 dBuA/m
- | Maximum current: 4 A
- | Temperature range: –40 °C to +85 °C
- | Mechanical robustness
- | Over molded
- | Customization to customer's design is available upon request

## Immobilizer Antennas

Prevent an unwanted startup of a car



Immobilizer antennas, also called keylock cylinder antennas, are placed in the ignition switch lock cylinder, inside a car. The system with an immobilizer antenna aims to prevent an unwanted startup of a car.

The immobilizer antenna emit a low frequency magnetic field that allows to wake up and identify the key fob.

#### Capabilities

- | Resonance frequency of antenna: 125 kHz, 134.5 kHz
- | Inductance range: 300 uH–1 mH
- | Maximum current: 1 A
- | Mechanical robustness
- | Over molded with IP 67 classifications
- | Customization to customer's design is available upon request





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