

# DC/DC CONVERTER

Step-Down (Buck) 24V/12V  
10A / 20A / 25A



**DC/DC converters** are electronic devices that adapt electrical power between different DC voltage levels. In automotive applications, they ensure compatibility between high-voltage systems and low-voltage components, enabling efficient power distribution and stable operation of vehicle electronics.

## 052412C10/C20/C25 DC/DC Converter Family

This converter family delivers 12V power from a 24V input with output options of 10A, 20A or 25A. Equipped with a sealed connector and IP67-rated housing, these converters of this family ensure reliable performance in automotive, mobility, and off-highway environments.

### Benefits:

**Enhanced reliability:** Stable voltage conversion ensures consistent performance.

**Energy efficiency:** Optimized power usage reduces energy consumption and operating costs.

**Versatility:** Wide input voltage range and no minimum load requirement, suitable for diverse vehicle types.

**High performance:** Delivers reliable output power up to 85°C.

**Durability:** Sealed design and robust construction withstand harsh environmental conditions.

**Safety:** Advanced protection features, including reverse polarity, overcurrent, overvoltage, short circuit, and thermal shutdown.

**Environmental compliance:** Meets RoHS and CE standards for sustainability.

**EMC compliance:** Meets ECE R10 standards, ensuring electromagnetic compatibility.

### Technical Data

Nominal Input Voltage	24 Vdc
Input Range Voltage	16-32 Vdc
Crank Input Voltage	<12 Vdc
Input Turn ON Voltage	<7 Vdc
Input Overvoltage Turn OFF	<37 Vdc
Nominal Output Voltage	13,5±0,5 Vdc
Output Switching Frequency	200 kHz ± 10%
Nominal Current	10A / 20A / 25A
Peak Current	15A / 25A / 30A (0,5")
Stand-By Current	< 1 mA < 0,1 mA Enable/Key OFF
Storage Temperature	-40°C to 85°C
Working Temperature	-40°C to 85°C (with derating)
Efficiency	>95%
Encapsulation	IP67

### Applications:

**Industrial vehicles:** Forklifts, pallet stackers, automated guided vehicles (AGVs).

**Agricultural vehicles:** Tractors, sprayers, lawn mowers and utility vehicles.

**Transportation:** Buses, trucks, delivery vans.

**Construction vehicles:** Excavators, wheel loaders, bulldozers.

**Light mobility vehicles:** E-scooters, e-bikes, golf carts, go-karts.

**Specialized vehicles:** Police cars, fire trucks, ambulances and municipal service cars.



# DC/DC CONVERTER

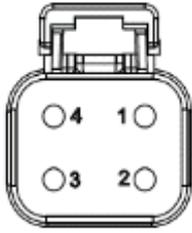
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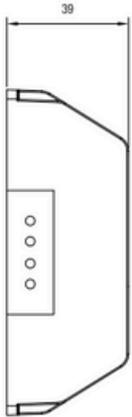
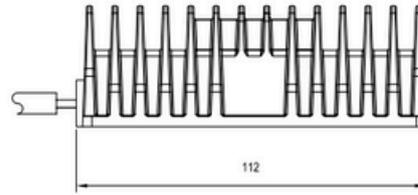
## Pin-Out

Connector: AMPHENOL AT04-4P

- PIN 1/4: V input
- PIN 2/4: GND
- PIN 3/4: V output
- PIN 4/4: Enable

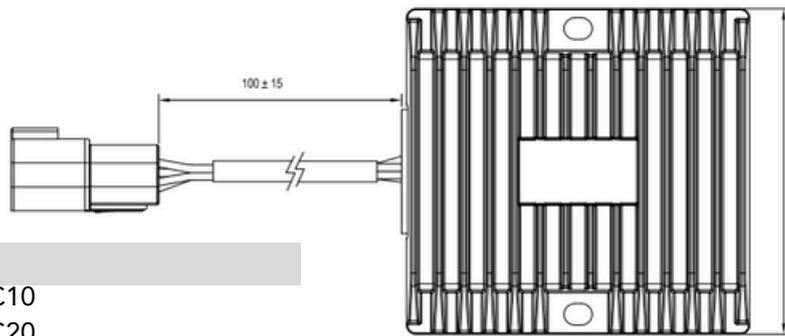


## Dimensions



## Protections

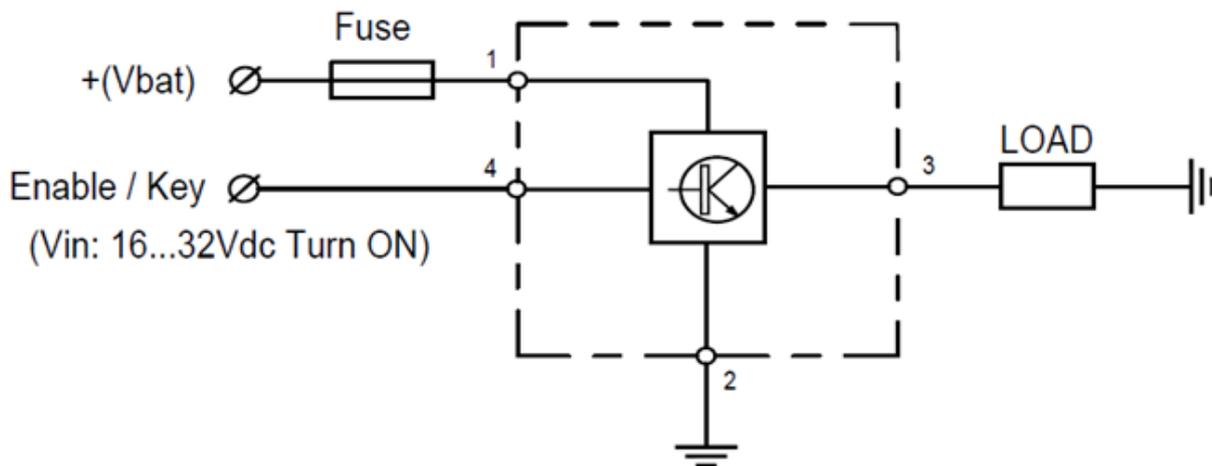
- Internal Overheat
- Input Reverse Polarity
- Input Overvoltage
- Output Overvoltage
- Overload
- Short circuit



## Order Information

DC/DC 24V/12V 10A:	052412C10
DC/DC 24V/12V 20A:	052412C20
DC/DC 24V/12V 25A:	052412C25

## Block Function Diagram



## GUILERA S.A.

Founded in 1953, Guilera S.A. specializes in advanced electronic and electromechanical systems for the automotive, off-highway, and mobility sectors.

Our products include reliable DC-DC converters, electronic power control systems for traction, advanced flasher units, and solid-state electronics.

Guilera is committed to sustainability and social responsibility, integrating eco-friendly practices and pursuing CSR certifications. Serving OEMs and Tier 1 suppliers, we continuously innovate to shape the future of transportation and mobility.

 <https://www.linkedin.com/company/guilera>

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