

DC/DC CONVERTER

Switch Mode 48V/12V

1A



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.

054812C02 DC/DC Converter

This DC-DC converter delivers a stable 12V output from a 38V-58V input range, with a peak current of 3A. It includes a TYCO/AMP waterproof aerial connector and a robust housing internally sealed with IP67 protection. Custom connector configurations are available upon request, ensuring seamless integration in automotive, mobility, and off-highway applications.

Benefits:

Reliability: Guilera's voltage conversion technology ensures stable performance in demanding conditions.

Energy efficiency: Optimized design reduces energy consumption and operational costs.

Versatility: Wide input voltage range and no minimum load requirement make it suitable for various vehicle types.

Durability: Robust construction to withstand harsh environmental conditions.

Safety: Advanced protections against reverse polarity, overload, short circuits, and overheating.

Environmental compliance: Fully compliant with RoHS and CE standards for sustainability.

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

Technical Data

Nominal Input Voltage	48 Vdc
Input Range Voltage	38-58 Vdc
Output Voltage Range	12,5±0,5 Vdc
Output Voltage Ripple	<500 mVpp
Output Switching Frequency	220 KHz ± 10%
Nominal Current	1A
Peak Current	3A (0,5")
Stand-By Current	< 1 mA (Enable OFF)
Storage Temperature	-40°C to 85°C
Working Temperature	-30°C to 70°C
Efficiency	>85%
Encapsulation	IP65

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, electric trial bikes.

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



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Pin-Out

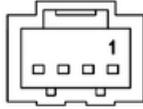
Pin 1 : Vin

Pin 2 : GND

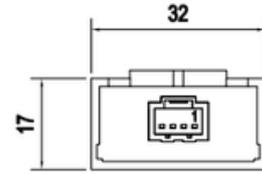
Pin 3 : ENABLE

Pin 4 : Vout2

Connector Type: JST 04T-JWPF-VSLE-S



Dimensions



Order Information

DC/DC 48V/12V 1A: **054812C02**

Protections

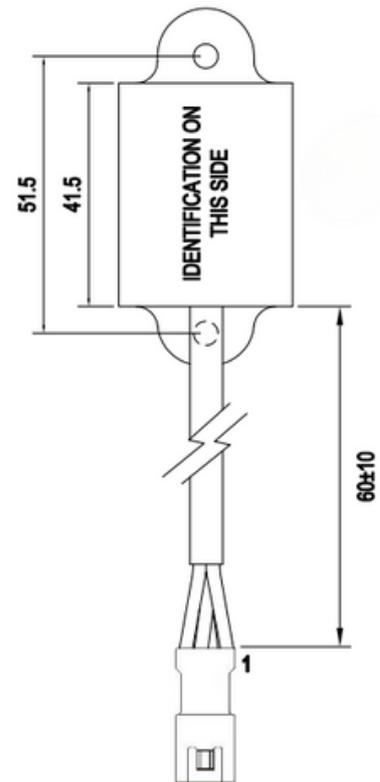
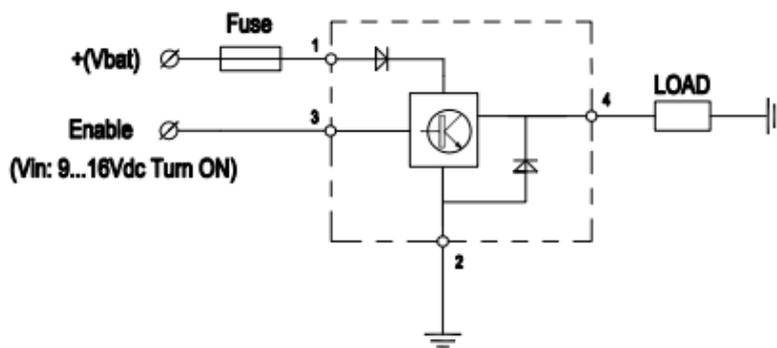
Internal Overheat

electrical Overload

Input Reverse Polarity

IP65

Block Function Diagram



Technical Notice: Images and specifications are for reference only. Guilera reserves the right to modify product design and features without prior notice. The latest validated technical drawing is the only official document certifying product characteristics.

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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