

## BRIEF INFORMATION

### DC/DC converter 24 V / 12 V

- › Energy transfer from 24 V to 12-V power supply up to 300 W (passive air cooling)
- › Power supply of conventional 12-V loads e. g. lights, ECUs, sensors, actuators, etc.
- › Hardware-only solution (no CAN / LIN) for easy integration
- › Built-in protection from short circuits and reverse polarity
- › Efficiency up to 90 %

## PRODUCT FEATURES

### Application

With the use of this 24 V / 12 V converter, 12-V loads can be used in a 24 V based E / E-architecture. The DC / DC converter is designed to provide power to conventional 12-V accessories such as fans, lights, navigation and infotainment systems. The output can be provided to standard 12 V cigarette lighter adapters for connecting additional accessories.

### Design and function

The 24 V / 12 V converter is a state-of-the-art switch mode power supply employing high reliability automotive grade components. It can accept wide range input voltages from 18 V to 32 V and provides a stable 13.5 V output power at 20 A rated current. The integration into the vehicle E / E architecture is made as simple as possible as the hardware-only solution does not require software adaptations from other ECUs. The module offers excellent load and line regulation with an efficiency of up to 90 % at rated conditions. To reduce electromagnetic noise, it uses spread spectrum techniques for driving MOSFETs. Protection against reverse polarity of input supply, output short-circuit, over-temperature, over-current etc. is integrated. Passive air cooling ensures extremely low maintenance. It is intended to be used inside the cabin (IP 30) and snaps to the mounting bracket (not included).

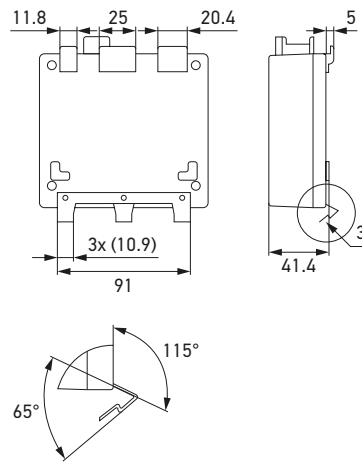
# TECHNICAL DETAILS

## Technical data

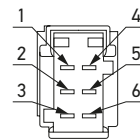
Operating voltage range	Multi-voltage (13.5–32 V)
Rated voltage	24/12 V
Input voltage	18–32 V
Output voltage	13.5 V
No-load current	< 5 mA
Ripple	< 200 mV <sub>pp</sub>
Power consumption	Max. 300 W
PWM Center frequency	200 kHz (with dithering)
Operating temperature	-40 °C to +85 °C
Cooling concept	Air passive
Efficiency	Up to 90%
Protection class	IP 30
Weight	Approx. 600 g
Connector	6-pole Tyco right angle header No. 9-966140-5
Mating connector <sup>1)</sup>	No. 8-968970-02
Data connection	N/A
Compliant	CISPR 25 Class 3

\* This accessory is not included. Available from Tyco.

## Dimensional sketch



## Pinbelegung/elektrischer Anschluss



- Pin 1 Input: GND
- Pin 2 Output: GND
- Pin 3 Output: 13.5 V
- Pin 4 Input: 24 V
- Pin 5 Output: GND
- Pin 6 Output: 13.5 V

# PROGRAM OVERVIEW

## Product picture



## Description

DC/DC, 24 V – 12 V converter

## Part number

On request