

DC/DC CONVERTER 24/12 V 40 A

Function-specific Modules



DC/DC Converters are electronic devices whose function is to produce a constant output voltage level from a variable input voltage. DC/DC Converters are characterised by their input and output voltage levels and output current.

Würth Elektronik ICS offers standard DC/DC Converters designed and qualified for use in mobile machines and commercial vehicles. We are also able to adapt standard converters to our customers' requirements.

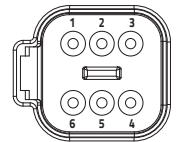
Technical information

General information	
Nominal input voltage	28 V DC
Input voltage range	18 – 32 V DC
Nominal output voltage	13.5 ± 0.5 V DC
Crank input voltage	12 V DC
Input Turn ON voltage	< 8 V DC (with lower output current)
Input over voltage Turn OFF voltage	36 V DC
Nominal output current	40 A (20 A + 20 A)
Max. output current	50 A (25 A + 25 A)
Output switching frequency	200 kHz ± 20 kHz
Output voltage ripple	< 200 mVpp
Working temperature	-40 °C / +75 °C (with derating)
Storage temperature	-40 °C / +85 °C
Stand-by current	< 1 mA (Key OFF) < 2 mA (First key ON) < 70 mA (Second key ON)
Efficiency	> 95 %
EMC compliance	Meets ECE R10 standards

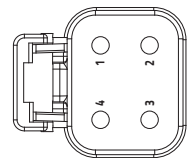
Protections	
Shortcircuit	
Overheat	
Reverse polarity protection	
Overvoltage	
Protection class IP67	

Pin-out

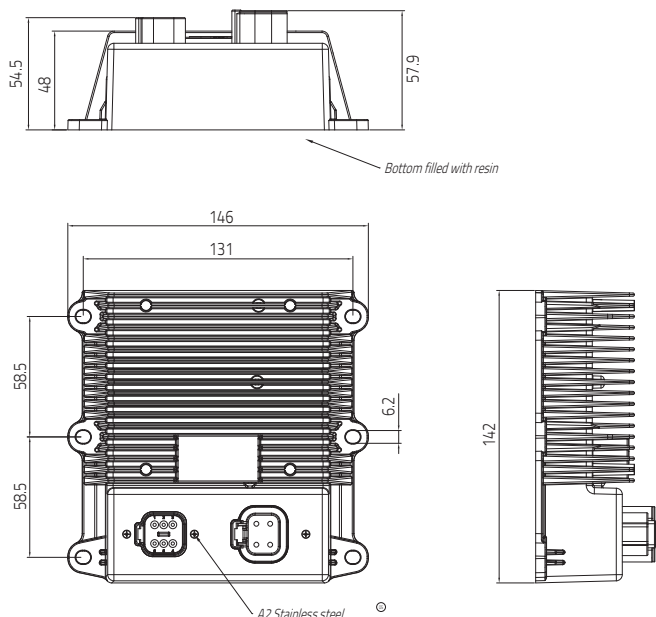
Pin assignment Connector 1: Amphenol AT15-6P	
Pin 1	+24 V input voltage (DC/DC #1)
Pin 2	+24 V input voltage (DC/DC #2)
Pin 3	+24 V ignition input (Switch) (DC/DC#1)
Pin 4	+24 V ignition input (Switch) (DC/DC#2)
Pin 5	Input ground
Pin 6	Input ground



Pin assignment Connector 2: Amphenol AT15-4P	
Pin 1	+12 V switched output (DC/DC #1)
Pin 2	+12 V switched output (DC/DC #2)
Pin 3	Output ground (DC/DC #1)
Pin 4	Output ground (DC/DC #2)



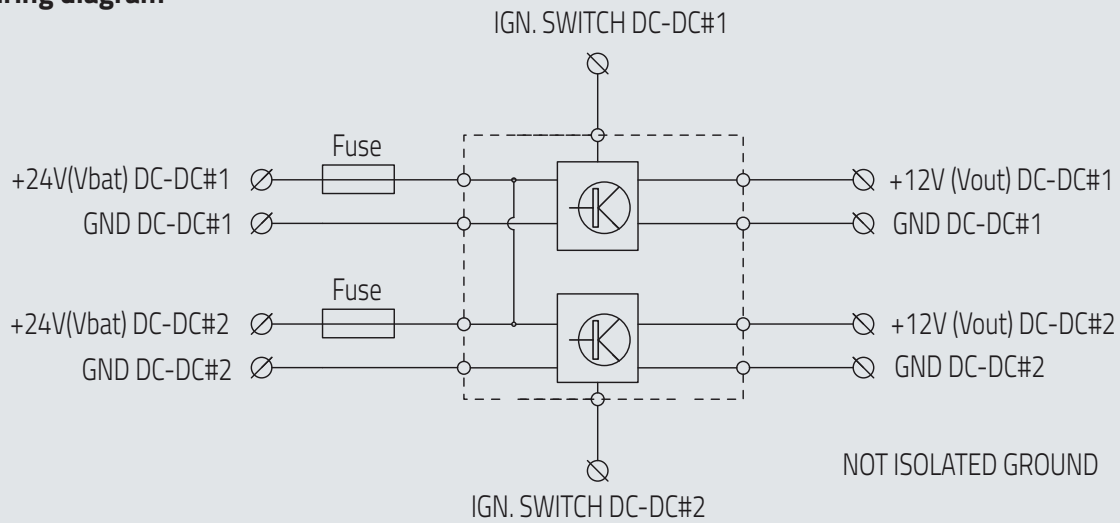
Dimensions



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Wiring diagram



Order information

Product information	
Part No.	X09009
Description	DC/DC Converter 24 V/12 V 40 A
Voltage range	18 – 32 Vdc



This item is a standard product, please consider the relevant datasheet notes. The user is responsible for the product's functionality in its purposed system environment. Technical content may be modified and changed by Würth Elektronik ICS GmbH & Co. KG without any notice.

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