

V12-120.4/V12-240.1

Supply Modules for SMT Systems for Operation with an On-Board Electrical System or Battery Supply



Based on a nominal 12 V input voltage, the modules provide a power for SMT systems with a maximum power consumption of 120 W (V12-120.4) or 240 W (V12-240.1).



Areas of Application

- Power supply for use in vehicles
- Power supply for battery-operated measurement tests
- Power supply for additional components

Advantages

- Optimal voltage range for use in vehicles
- Reliable measuring due to uninterrupted power supply
- High level of automation due to intelligent supply module control (wakeup and shutdown functions)

Input Voltage

The supply voltage ranges of the modules were designed to tolerate the fluctuations in voltage typically experienced in vehicles. If the primary supply breaks down entirely, the system automatically switches to a connected backup supply thus ensuring uninterrupted operation.

Security

The monitoring of input voltages, load currents and module temperature means the components have extensive self-protection functions. A sophisticated power on/off mechanism as well as the power outputs, which are galvanically

isolated from each other and from the input voltages, provide extra protection against operating errors.

Additional Functions

A freely usable supply output makes it possible to power additional external components, such as vehicle displays or separate measurement and data acquisition systems. A large number of wakeup sources (voltage inputs, CAN nodes and timer functions) and a signal output are available to ensure intelligent supply module control.



Technical Data

Power Input

Input voltage	9 V ... 18 V 6 V ... 9 V (short-term, <3 s)
Standby current consumption	≤1 mA (with 12 V input voltage, Sleep Mode) ≤120 mA (with 12 V input voltage, CAN active)
Power consumption in operation	6 W base load plus system supply plus Power Output
Galvanic isolation	No

Backup Battery

Input voltage	11 V ... 18 V
Quiescent current consumption	See Power Input
Power consumption in operation	See Power Input
Galvanic isolation	No

System Supply

Output voltage	48 V (DC)
Power output	≤120 W (V12-120.4), ≤240 W (V12-240.1)
Efficiency	85 % (V12-120.4), 83 % (V12-240.1)
Galvanic isolation	Yes

Power Output

Output voltage	12 V (DC)
Power output	≤20 W (precondition: Power Input ≥9 V)
Galvanic isolation	Yes

CAN

Physical layer	Highspeed CAN (Lowspeed CAN as an option on request)
Bit rate	100 kBit/s, 125 kBit/s, 250 kBit/s, 500 kBit/s, 1 MBit/s
Specification	CAN 2.0A
Termination	1,2 kΩ, permanent
Galvanic isolation	No

Environmental Conditions

Storage	-30 °C ... +85 °C, 10 % ... 90 % rel. humidity, non-condensing
Operation	-30 °C ... +70 °C, 10 % ... 90 % rel. humidity, non-condensing

Order Numbers

V12-120.4	Supply module for SMT systems for operation with an on-board electrical system or battery supply (120 W)
V12-240.1	Supply module for SMT systems for operation with an on-board electrical system or battery supply (240 W)