

# PS151

## Power Supply Module in MicroPC format



### Features

- MicroPC form-factor
- Input voltage: 10,5 - 36 V
- Protection against surge overvoltages at input of the primary power supply
- Consumption current in switched-on condition: 5 mA
- Galvanic isolation at input/output: 1000 V
- Protection against overloads and overheating
- Operating temperature range of voltage converters: from  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$
- Operating temperature range of control system: from  $-50^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$
- Vibration/Single shocks/ Multiple shocks resistance: 5 g/ 100 g/ 50g

### Overview

PS151 power supply module is implemented in MicroPC format in is optimized for the use as a part of the devices, intended for operation in:

- non-maintained systems in hard-to-get areas;
- systems self-powered from natural energy sources;
- battery-supplied systems installed in vehicles;
- systems, operated under extreme climatic conditions.

The intelligent power supply control system fulfills the following functions:

- Control of watchdog timer, which switches off system power supply in case of system hanging;
- Monitoring of ambient temperature and control of heater and fan channels within the programmed temperature ranges, from  $-50^{\circ}\text{C}$ ;
- Maintaining of a system event log with a reference to time and date;
- automatic transition to a redundant power-supply channel;
- switching on/switching off the system according to schedule;
- "protection" function of the switched-off system.

### Technical Specifications

- Form-factor: MicroPC
- Input voltage: 10,5 - 36 V
- Protection against surge overvoltages at input of the primary power supply
- Consumption current in switched-on condition: 5 mA
- Galvanic isolation at input/output: 1000 V
- Output voltages / currents:
  - +12 V / 20 W
  - +5 V / 30 W
  - +3,3 V / 5 W; - total power is no more than 30 W
- Protection against overloads and overheating
- Operating temperature range of voltage converters: from  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$
- Operating temperature range of control system: from  $-50^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$
- Vibration/Single shocks/ Multiple shocks resistance: 5 g/ 100 g/ 50g
- Control system:
  - RS-232 or RS-422 (speed up to 38400 bit/sec) control interface with galvanic isolation (1000 V) from input and output
  - Programmable modes of secondary power supply switching on/off
  - WDT, switching off the secondary power supply in case of system hang-up
  - Integrated temperature sensor
  - Integrated RTC with a possibility of power supply from a built-in battery
- Signals of system events on an additional connector: reduction of input power supply voltage below the threshold, switching to the backup power supply etc.
- Possibility of system event signals switching to interrupts IRQ3-IRQ7, IRQ9 of system bus
- Cold start at temperatures lower than  $-40^{\circ}\text{C}$ , heater (external device) will be switched on. When the set temperature is reached, voltage converters are switched on
- Cooling system control: control of an additional external fan depending on the temperature
- Connector of I2C interface for the connection of an external temperature sensor (LM77) or charging unit for backup power supply source
- Input signals of potential-free contact
- UPS function: automatic switching to backup power supply (external power supply source), when primary power supply falls out
- Measuring of input voltage and RTC battery supply
- Board LED indication which is switched off with the help of jumpers; connectors for external LEDs



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## Ordering Information

### PS151 Configuration

#### PS151 - 01

##### Versions

PS151-01

PS151 Power Supply Module:  
5 V / 30 W, 12 V / 20 W, 3,3 V / 5 W.  
Conformal coating is provided  
(option \coated).

#### Delivery checklist:

1. PS151 Power Supply Module
2. Installation kit: cable parts of connectors, jumpers
3. Package

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Product specifications are subject to change without notice

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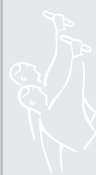
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