

USV6-H DC Controller

Product description

The USV6-H DC Controller can be used to control and monitor our range of MT rectifiers, DC-DC converters and inverter modules via the CAN communication bus. The USV6-H can be used with a wide variety of power supplies and batteries as a programmable monitoring device with multiple thresholds.

The unit can measure up to 3 different voltage points and 3 different current values, and these can be shown on the USV14 LCD display. The 9 digital inputs are individually programmable, as are the 4 relay outputs available for remote signaling of thresholds or alarms.

With the USV14 display, several LED's indicate the state of a number of system parameters. The functionality of the basic module can be upgraded further with optional extension boards.

Applications

The USV6 DC Controller can be used with a wide array of power supplies and battery chargers in applications such as:

- Power supply for all types of DC loads
- Rectifiers in DC systems with battery backup
- Telecommunication power systems
- Industrial control systems
- Charging and buffering of stationary batteries in electrical power plants
- DC UPS applications



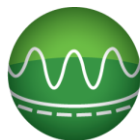
Key features

- Wide measuring and supply voltage range from 18 to 300Vdc
- Easy programming via RS232-interface with free of charge PC software
- Wide range of monitoring and signaling functions
- Temperature compensation of the charge voltage for MT rectifiers
- CAN-Bus interface

The USV6 DC controller is a module suitable for front panel mounting in all types of DC power supply / DC UPS & battery monitoring applications. The units are easy to use and are programmable via keys on the USV14 LCD display or via the RS232 interface and PC Software.



USV14 Display (Optional)



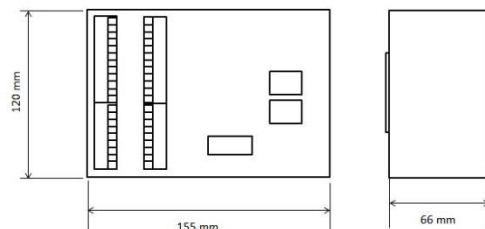
Product Specification

Type	USV6H-LV	USV6H-HV
Supply voltage range	18-80VDC	80-300VDC
Voltage measuring range	0-100VDC	0-300VDC
Input power consumption	approx. 3W	
Voltage measuring inputs	3, accuracy 1%; 3 x mains voltage and frequency only with optional monitoring board	
Current measuring inputs	3 (1 x ± 60 mV for battery charge / discharge current measurement; (2 x + 60mV) 3 x mains current (option: Battery monitoring board)	
Temperature measuring input	1 (for optional temperature sensor)	
PE-connector	1 (isolation fault)	
Digital measuring inputs	8 (free programmable)	
Alphanumeric display	LCD, 2x16 characters, with backlight (Only with USV14)	
LED indications	Operating, information and alert, only when used with USV14. Indication is set using the USV6H.	
Relay outputs	4 relay contacts, error messages free programmable, extension to 10 free programmable relays (with optional relay board)	
Configuration/interfaces	RS232 interface, CAN interface	
Communication	CAN-bus interface for communication with MT rectifier modules, RS232 interface for external communication external modem control (optional) and programming of all functions and parameters via PC	
Functions	Boost charge control (current, voltage and time dependent); battery test (voltage- and time dependent); controlling of voltage drop-down diodes; battery low protection; battery midpoint voltage monitoring; isolation fault monitoring	
Microprocessor controlling	Programmable monitoring functions with history function, real time clock, device parameters via front keys and alphanumeric display (only with USV14)	
Languages	German, English, Swedish, Italian, Russian, Czech, French	
Ambient temperature	Operation: -20°C to +55°C, storage: -40°C to +85°C	
Climatic conditions	IEC 721-3-3 class 3K3/3Z1/3B1/3C2/3S2/3M2	
Max installation altitude	≤ 1500 m	
Audible noise	≤ 30 dB (A) in 1m distance	
Construction	Built-in module for front panel mounting, rear side connectors	
Dimensions (W/H/D)	155/120/66mm	
Weight	approx. 1.2kg	
Type of enclosure/Protection class	IP20 (mech.); 1 acc. to EN 60950 (electr.)	
Colour	RAL 7035	
CE conformity	Yes	
Compliance to safety standards	EN 60950-1; VDE 0100 part 410; VDE 0110, EN 50178, EN 60146	
Compliance to EMC standards	EN 55022 class „B“, EN 61000-4 part 2-5	

Options

Article code	Designation
USV6_V2_00	USV6 configuration software, Win based PC software (once/customer)
USV-3	Mains monitoring board 1/3 phase; DIN rail module; connection via CAN interface
USV-8	Battery monitoring board (up to 3 additional battery strings; U,U/2,I,T); DIN rail module
USV-5	Signaling board with 8 digital alarm inputs; DIN rail module; connected via CAN interface
USV-4	Relay board with 6 isolated signaling outputs; DIN rail module; connected via CAN interface
USV-TMP	Temperature sensor LM3355 with 4 m connecting cable and cable shoe
USV-2	Thyristor control
USV14	LCD Display for use with USV6H

Dimensions

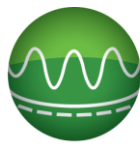


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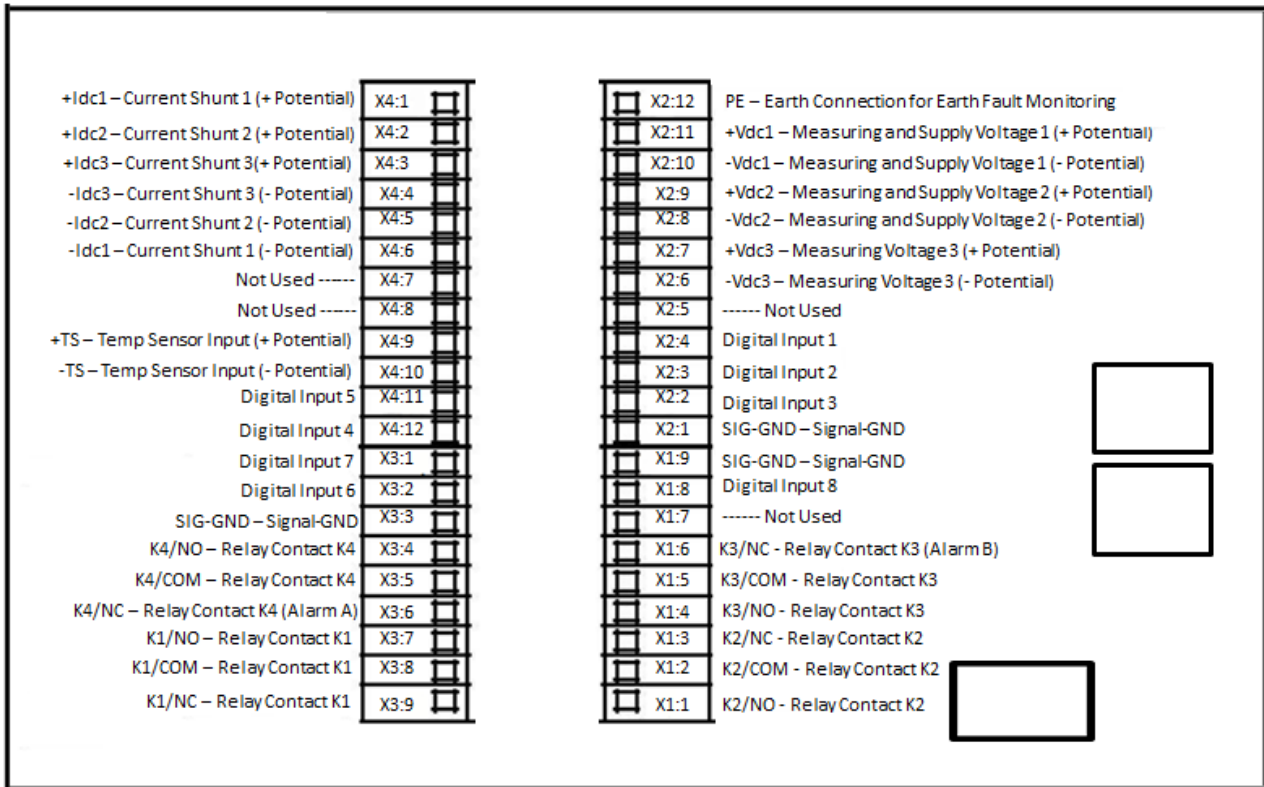
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Pin Output



This diagram shows the rear view of the USV6. On the USV6 the terminals are denoted as X4, X3, X2 and X1 with writing on the side of the green terminals. Take care to ensure the unit is correctly placed before wiring the unit. To check, the green terminals should be on the left, and the RS232 and CAN connections on the right.

- Vdc1 and Vdc 2 can both be used to supply the USV6 with its power supply. Ensure that the supply voltage is connected to one of these sets of terminals.
- The current shunts used with the USV6 are 60mV.
- The compatible temperature sensor type for the USV6 is the LM355 variant.
- The USV6 is programmed using the USV configurator for PC. All parameters can be changed using this software.

Please refer to the USV6 Setup guide for more information on the CAN connection.