Product description

Tel.: 49 2162 40025
Fax: 49 2162 40035
info@dsl-electronic.de
www.dsl-electronic.de

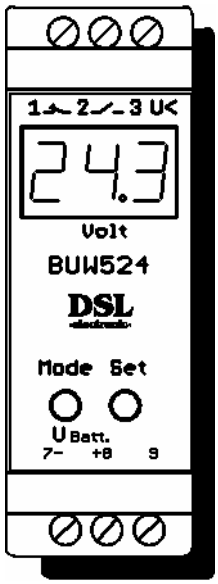
DSL electronic® GmbH

DC Voltage Monitor BUW524

(Battery Undervoltage Monitor)

Display and monitoring unit for DC voltage supplies and batteries

Other voltages and undervoltage / overvoltage monitoring on request !



- **Permanent voltage measurement and display**
- **Customer-friendly menu for setting the parameters**
- **Storage of the parameters in the internal memory**
- **Switching threshold, hysteresis and switching delay adjustable**
- **Optical display for voltages below the switching threshold set**
- **Optical display of relay energization after expiry of the delay time**
- **Simultaneous display of the voltage when the unit is energized**
- **Potential-free change-over contacts 5A / 250V~**
- **Narrow top-hat rail housing**

Applications:

The DC voltage monitor BUW524 is used for monitoring the lower limit of a low DC voltage in the 10 – 33V range, for example the starter battery voltage in the genset field or the DC voltage supply of connected controls or systems.

BUW524 does not require a separate auxiliary voltage, instead being supplied directly from the measuring voltage.The DC voltage measured is displayed constantly on the digital display. The relay with change-over contact on the output side switches off when the voltage falls below the specified voltage and the time delay expires.

The undervoltage threshold value, the hysteresis and the time delay can be changed with the help of a userfriendly operating menu (see below).

When an undervoltage occurs, display ***L-1*** initially alternates with the instantaneous voltage. After expiry of the delay time, display ***L-2*** alternates with the instantaneous voltage and the output relay is de-energized. If the voltage goes beyond the hysteresis and reaches the normal range again, the relay is energized immediately. The output terminals with potential separation can be evaluated by the user as desired.

Relay function:

DC voltage in the normal range:	**Relay energized**	**Contacts: 1 – 2 open, 2 – 3 closed**
DC voltage in undervoltage:	**Relay is de-energized**	**Contacts: 2 – 3 open, 1 – 2 closed**
(Voltage error)	**(After time delay)**	
Above undervoltage + Hyster.:	**Relay is energized**	**Contacts: 1 – 2 open, 2 – 3 closed**
(Switches back)	**(No time delay)**	

Parameterization:

The „**Mode**“ and „**Set**“ keys are used to set the undervoltage threshold value, the hysteresis and the delay time for de-energization of the relay.

Each key must be pressed for approx. 1 second before data are taken over. The menu must be called up again for each value to be set.

If, during the setting process, no key is pressed after approx. 20 seconds, the program switches back to normal mode automatically. The unit does not react to changes to the measuring voltage occuring while settings are being made via the menu! When parameterization values falling outside of the valid range are saved, the unit reacts by displaying Er3. The value must be re-entered and can be saved if valid.

1. Setting the threshold value for the undervoltage „*U*“

To open the setting menu:	1 x „***Mode***“ and 2 x „***Set***“ (public password = 2).
To set the undervoltage:	2 x „Mode“, set the flashing digit via „***Set***“ and go to the next digit via „***Mode***“.
	After the last digit has been set, the decimal place is set and confirm via “**Mode**”
To cancel	Display = „***A***“ confirm with „***Mode***“ if desired (no save command).
To save	Press „***Set***“, display = „***S***“, confirm via „***Mode***“. The change is now saved.

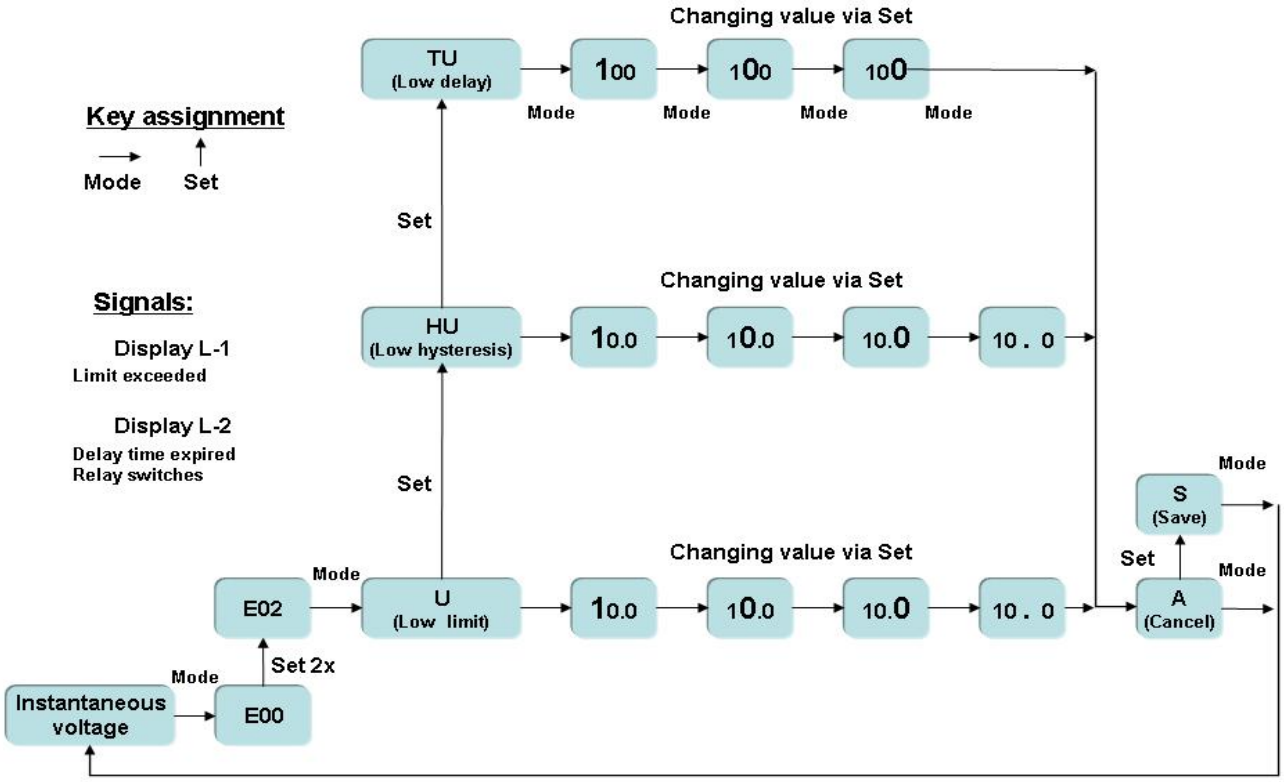
2. Setting the hysteresis „*HU*“

To open the setting menu:	1 x „***Mode***“ and 2 x „***Set***“ (public password = 2)
To set the hysteresis:	1 x „***Mode***“, 2 x „***Set***“ and 1 x „***Mode***“ Set the flashing digit via „***Set***“ and go to the next digit via „***Mode***“. After the last digit has been set, the decimal place is set and confirm via „***Mode***“
To cancel	Display = „***A***“ confirm with „***Mode***“ if desired (no save command).
To save	Press „***Set***“, display = „***S***“, confirm via „***Mode***“. The change is now saved.

3. Setting the delay time „*TU*“

To open the setting menu:	1 x „***Mode***“ and 2 x „***Set***“ (public password = 2)
To set the delay time:	1 x „***Mode***“, 4 x „***Set***“ and 1 x „***Mode***“ Set the flashing digit via „***Set***“ and go to the next digit via „***Mode***“. After the last digit has been set, the decimal place is set and confirm via „***Mode***“
To cancel	Display = „***A***“ confirm with „***Mode***“ if desired (no save command).
To save	Press „***Set***“, display = „***S***“, confirm via „***Mode***“. The change is now saved.

BUW 524 Menu guidance



Factory setting:

Untervoltage (U): 24,0V **Hysteresis** (HU): 0,3V **Delay time** (TU): 1 Sekunde

Error messages:

Er1: Eeprom code does not match program specification.
Er2: ID in Eeprom missing (blank Eeprom).
Er3: Parameter entry falls outside of the valid range. Repeat entry with new parameter.

Technical Data :

Type	Battery undervoltage monitor BUW524
Design	Plastic housing PA on 35 mm hat rail acc. to DIN EN 50022 / DIN 46277
Material of housing	ABS with fire protection UL 94 V-O
Dimensions, weight	26x75x110,8mm (WxHxD), 113g
Auxiliary / measuring voltage	8,5 – 33 VDC, with reverse battery protection
Switching hysteresis	Maximum hysteresis up to 3,3V (10% of Umax)
Switching delay of relay	Adjustable 0 – 120 Sec. in steps of 1 sec.
Repeat accuracy	< 1% +/- 1 Digit
Power consumption	Uin = 12V: ca. 40mA (50mA), Uin = 24V: appr. 20mA (30mA) (in brackets: relay energized)
„On“ period	100 %
On-switching delay	Unit ready after approx. 5 sec. after auxiliary voltage is switched on, display: „dsl“
Contact load	6A permanent/250VAC , Contacts AgSnO , min. switching load 500mW, 12V 10mA,
Proof voltage	4000V (coil-contact), 1000V (open contact)
Connecting terminals	Potentialfree, for connecting 2 wires up to 2,5 mm² each per terminal
Protection class	Housing IP 40 , terminals IP 20 (or VDE 0106T100/VBG4)
Ambient temperature	-40 °C bis +55°C, 95% humidity
General regulations	EN 50 178 (Electronic equipment for use in power installations)
Noise suppression acc. to	EN 55 022/B
EMC acc. to	EN 61000 and EN V 50 140
Installation position	Any position
Maintenance	Maintenancefree

Connection diagram :