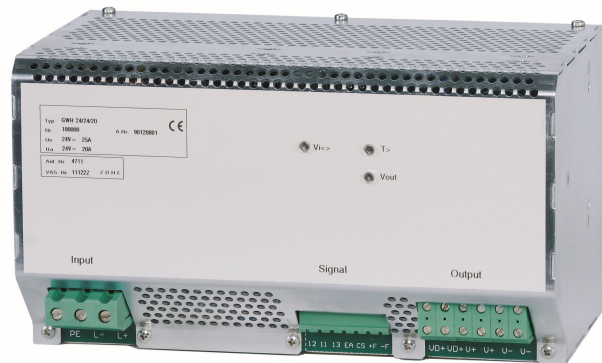


# SERIES GWH 500

## GWH - DC/DC Converter

Single voltage, galvanic isolation

- ✔ Input voltage: 16,8 – 162,5 V DC
- ✔ Power output up to 500 Watt
- ✔ DC/DC converter for wall- or DIN-rail-mounting and for 19"-rack systems
- ✔ Voltage regulated
- ✔ Fan cooling
- ✔ For parallel and n+1 redundant operation
- ✔ Robust housing
- ✔ Optional vibration proof and configured for rail applications



Input	
DC input voltage	16,8 – 39 V, 33,6 – 78 V, 77 – 162,5 V (see table ‚output‘)
Inrush current limitation	$I_{max} < I_{nom}$
Max. permissible superimposed AC voltage of voltage source	$U_{IN} \sim \leq 5\%$
Maximum activation delay (including turn-up)	$T < 2 \text{ s}$
Overcurrent protection	Safety fuse
Overvoltage protection	Varistor
Output	
Output DC voltage	See table
Output current	See table
Ausgangsleistung	500 W
Efficiency	> 85% (type depending)
Control data	
Line regulation (max. $U_{IN}$ tolerance)	$< 0,1\% \times U_{OUT}$
Load regulation	$< 0,1\% \times U_{OUT}$
Superimposed AC voltage (measuring bandwidth 30 MHz)	$\leq 1\%$
Undershoot / overshoot at load changes of 10 - 90%	$\leq 5\%$
Operating parameters	
Operating temperature range	$-25^{\circ} - 70^{\circ}\text{C}$
Power reduction	At $50^{\circ}\text{C}$ with 2% / K
Cooling	Internal fan
Operating and control	
LED front „Vi<math></math>“	Indicating active input voltage
LED front „Vout“	Indicating output voltage within range
LED front „T>math></math>“	Indicating overtemperature
Parallel switching capability	Parallel switching of 3 units for power increase is possible Made possible by an internal current sharing circuit.

Sense line operation	1 V, compensation
External ON / OFF	ON: open (at external ON / OFF 5 V are present) OFF: external ON / OFF connected to zero potential
<b>Electric connectors</b>	
Input, output, signals	Screw terminals 10mm <sup>2</sup> for input and 4mm <sup>2</sup> for output (double) Screw terminals 1,5mm <sup>2</sup> for signalling
<b>Protection</b>	
Overload protection	Current limitation U-I characteristic curve activation point: 1,1 x I <sub>nom</sub>
Overvoltage protection	Standard, 2. regulation circuit: Output voltage limited to to a maximum of 120% of the nominal output voltage.
Overcurrent protection at input	Safety fuse
Reverse polarity protection	Reverse polarity protection relay
Thermal protection	Shutdown with inadmissibly high heating and automatic reclosure with temperature reduction. Varistor in the output as additional overvoltage protection. Monitoring the output voltage for under and over voltage.
Decoupling diode	Standard at the output
Signal relay	Signal relay at the output with potential free switch.
Sense line operation	If the sensor cables are connected incorrectly, no damage will be done to the sense line.
<b>Safety</b>	
Electrical safety	EN 60950-1
Test voltage: primary – secondary	3 kV <sub>eff</sub> , 50 Hz
Test voltage: primary – frame	2 kV <sub>eff</sub> , 50 Hz
Test voltage: secondary – frame	2 kV <sub>eff</sub> , 50 Hz
Safety calss	I
<b>EMC</b>	
Input EMI filter	EN 61000-6-1
Input immunity	EN 61000-6-4

### Output

Input voltage (V DC)	Input voltage (V DC)	Input voltage (V DC)
16.8 – 39	24/20.8	GWH24/24/20,8
16.8 – 39	48/10.4	GWH24/48/10,4
16.8 – 39	60/8.3	GWH24/60/8,3
33.6 – 78	24/20.8	GWH48/24/20,8
33.6 – 78	48/10.4	GWH48/48/10,4
33.6 – 78	60/8.3	GWH48/60/8,3
77 – 162,5	24/20.8	GWH110/24/20,8
77 – 162,5	48/10.4	GWH110/48/10,4
77 – 162,5	60/8.3	GWH110/60/8,3

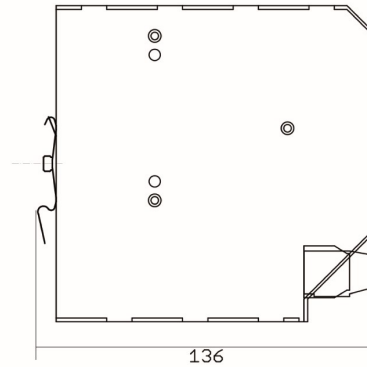
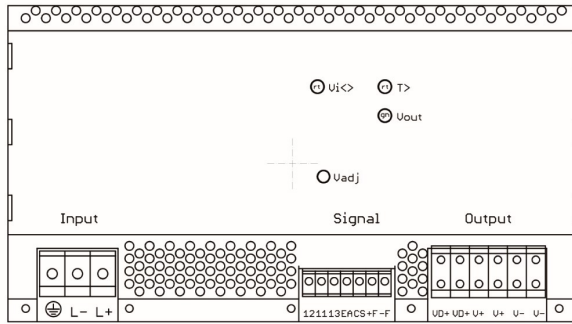
### Options

- Mounting plate for wall mounting
- Vibration proof
- Available for railway applications, in accordance with EN50155/EN50121

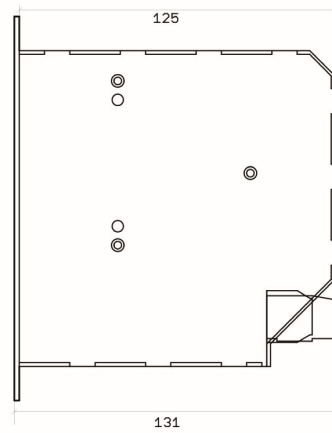
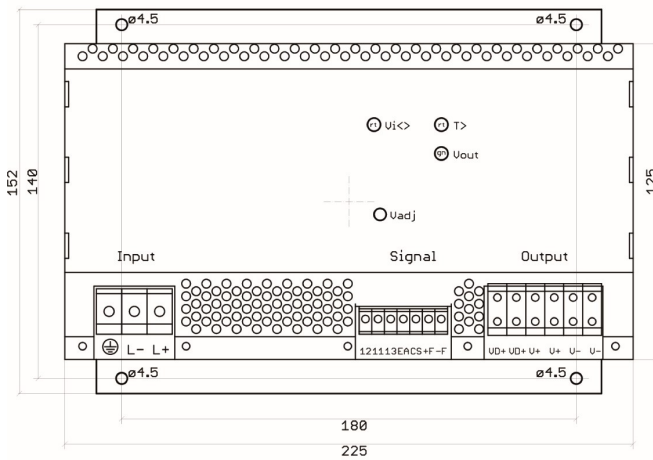
## Dimensions (mm)

weight ca. 2,7 kg

### DIN-rail mounting



### Wall mounting with mounting plate



## Pin assignment

Screw terminal X1 input	
Ground	$\ominus$
Input	L -
Input	L +
Screw terminal X2 output	
Output +with decoupling diode	VD + 2x
Output +	V +
Output +	V +
Output -	V -
Output -	V -
Screw terminal X3 signal	
Signal Relay COC	11 12 13
External ON / OFF	EA
Current share	CS
Sense +	'+F
Sense -	'-F

Information and data in this data sheet are correct at the time of publication.  
No liability is - taken for errors, printing errors and changes. The specification can be changed without further notice.