

Duplex- or Triplex-operation  
with DRR100.U

**3Ph High voltage sine inverter**  
on high voltage battery 450V  
on intermediate circuit 600 / 750V



- **Synthetic 3-Ph sine wave outputs**
- **f/U-control for each output**
- **I<sup>2</sup>t-monitoring for each output**
- **Wide input voltage range**
- **Input and output radio interf. adapted**
- **Low rated air ventilation from TU >50°C**
- **Efficiency typ. 90%**
- **Auxiliary voltage not necessary**
- **Additional outputs mechanically added to DRR100.U**

for special technology, railway, building machinery



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## Series DRR 100.B/T

for the use in combination with DRR100.U

### Main points:

#### Input:

- Operation with DRR100.U
- Input voltage range up to >1 : 2,5
- External fuse (emergency protection)
- EMC-filter EN50121-3-2
- Reverse polarity protection
- Disturbance proof with DRR100.U
- Soft start pre-charging over DRR100.U
- Inrush current limiting over DRR100.U
- Integrale run-up with adjusted acceleration df/dt per output
- Defined switch-on/switch-off point
- Input plug X1: Wago-745-203

#### Outputs:

- Choke valuated 3Ph-sine-voltages
- Output-EMC-filter per output
- I<sup>2</sup>t-protection
- f/U-characteristic curve per output
- No-load proof, short circuit proof dynamically and statically
- Tolerance ± 5% = f(U<sub>in</sub>/I<sub>out</sub>/TU)
- Under voltage control
- funktional independent outputs
- Voltage monitoring: f(U<sub>set point</sub>) (2s)
- Separated switchable (10s)
- Not isolated
- Output connector X8: Wago-745-203

#### In general:

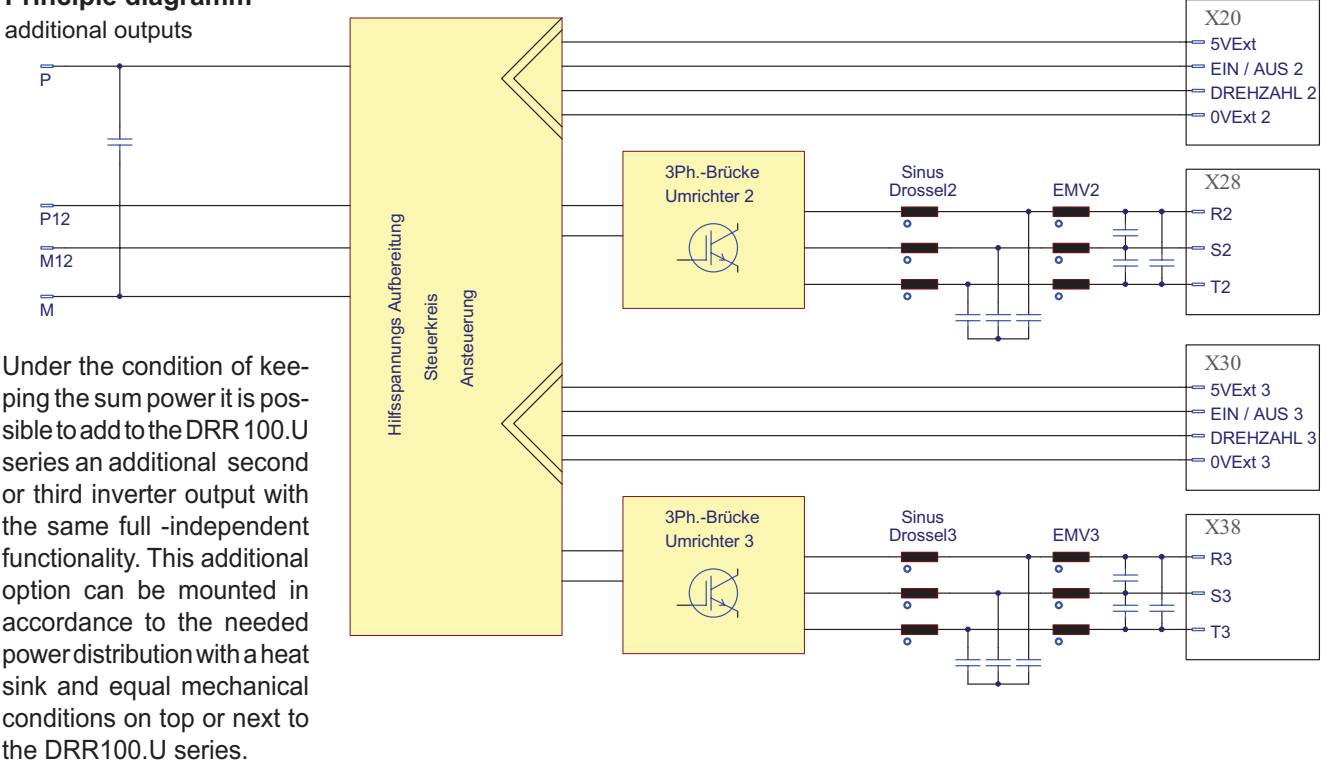
- Signal connector X10: Phoenix MSTB 2,5/8GF
- On/Off remote (Inhibit) per output
- Auxiliary voltage 5V / 40mA for set point value 0-5V analogue per output (5-34)V - 0...100% PWM
- Start/Stop-function per output
- Failure signal U<sub>out</sub>
- Status display LED UH okay
- 3-Ph-bridge with re-feeding
- Isolation test voltage:  
Input/Output - ground: 2,5 KV<sub>AC</sub> 1 min
- Ambient temperature -25°C / +50°C
- Short term 70°C / Derating > 50°C (ventilation to be clarified)
- MTBF on request
- Shock/vibration in acc. to EN50155
- Weight: <10kg (fange mounting)
- Temperature control complete system
- CE-Conformity on request

Input	Output			Model number
	U <sub>in</sub> V DC	U <sub>out</sub> / 3Ph Vrms / 50Hz	P <sub>out stat./dyn.</sub> VA	
<b>450V-battery</b> 350 - 670 850 dyn.	<i>out1</i>	230	1200/1800	DRR100.B450.230.180/120
	<i>out2</i>	230	500/750	
	<i>out1</i>	230	1200/1800	DRR100.T450.230.180/050
	<i>out2,3</i>	230	330/500	
<b>750V-traction line</b> transient free 580 - 1050	<i>out1</i>	400	1200/1800	DRR100.B750.400.160/110
	<i>out2</i>	400	500/750	
	<i>out1</i>	400	1050/1600	DRR100.T750.400.160/050
	<i>out2,3</i>	400	350/500	
<b>650V-intermediate circuit</b> 580 - 850 1050 dyn.	<i>out1</i>	400	1300/1900	DRR100.B660.400.250/060
	<i>out2</i>	400	500/750	
	<i>out1</i>	400	1300/1900	DRR100.T750.400.190/060
	<i>out2,3</i>	400	450/600	
The output voltage can drop up to 10% by U <sub>in</sub> min				
Mechanical adaptation: On request				
One time projecting costs: On request				
Modification costs for possible changes above values: On request				
An isolation is possible with an external transformer				
<b>Efficiency</b>				
On request				

Stand: 12/09

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**Principle diagramm**  
additional outputs



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3ph-sine wave inverters of the **DRR100.B/100.T** series have been developed for the supply of 3ph-motors with dynamical run-up of compressors, fans, dryers, pumps and tools etcetera. The DRR100.U series supplies this series with the input voltage and the auxiliary voltage. The following points result the inverter's very high functional security: the chosen one-stage switching topology and components, active and passive inrush current limiting, dU/dt-reduction, soft start, EMC-filters, automatic run-up, I<sup>2</sup>t-monitoring, static and dynamic short circuit protection, sine filter and the thermal monitoring. The isolated interfaces allow a simple communication to the additional output (analogue set point value/PWM, start/stop, failure signal). Just the heat sink's ribs must be in an air stream because of the high efficiency and choice of inductivities. The output sided sine-filter and the EMC reducing activities prevent high dU/dt-values.

**Mechanics (DRR100.T)**

Forced air convection/ventilation necessary

