

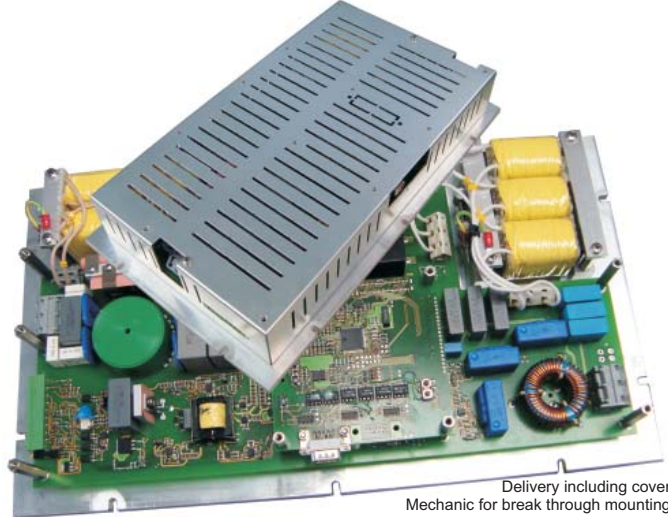
3-phase output  
1800 up to 3100 VA

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



- **Synthetic 3-Ph sine wave output**
- **With f/U-control and I<sup>2</sup>t-monitoring**
- **Without isolation**
- **Wide input voltage range**
- **Input and Output radio interf. adapted**
- **Low rated air ventilation from T<sub>U</sub> >50°C**
- **Efficiency typ. 94%**
- **Auxiliary voltage not necessary**
- **Break through-flange-mounting**
- **RS 232/485 Interface**

for special technology, mobile applications, building machinery



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## Series DRR 100.U

over voltage proof for intermediate circuits

Delivery including cover  
Mechanic for break through mounting

### Main points:

#### Input:

- Input voltage range up to >1 : 2,5
- External fuse (emergency protection)
- Input-EMC-filter EN50121-3-2
- Reverse polarity protection
- Disturbance proof
- Soft start/internal pre-charging
- Inrush current limiting with choke
- Integral power run-up (df/dt)
- No-load current approx. 60mA (750V)
- Defined switch-on/switch-off point
- Input plug X1: Wago-745-203

#### Output

- Choke valuated 3Ph-sine voltage
- Output-EMC-filter
- I<sup>2</sup>t-over load protection
- f/U-characteristic curve
- No-load proof, short circuit proof dynamically and statically
- Tolerance ± 6% = f(U<sub>in</sub>/I<sub>out</sub>/T<sub>U</sub>)
- Under voltage control
- Input-output not isolated
- Output connector X8: Wago-745-203

#### In general:

- Signal connector X10: Phoenix MSTB 2,5/8GF
- On/Off remote (Inhibit)
- Auxiliary output 5V / 40mA
- Set point value 0-5V analogue (5-34)V - 0...100% PWM
- Field direction changeable
- Start/stop-function
- 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
- Temperature control
- Weight: approx. 10kg (Flange mounting)
- Dimension: (440 x 250 x 110,5)mm with KK  
(397 x 218 x 70) without KK
- CE-Conformity on request

Input	Output	Model
<u>U<sub>in</sub></u>	<u>U<sub>out</sub></u> / 3Ph <u>P<sub>out</sub></u> stat./dyn.	<u>number</u>
V	Vrms / 50Hz VA	
<b>330 - 670 V DC</b> 850V dyn. <b>450V-battery</b>	230 2000/3000	DRR100.U450.230.200/300
<b>430 - 1050 V DC</b>	230 2000/3000	DRR100.U750.230.200/300
<b>580 - 1050 V DC</b> <b>600/750V-intermediate circuit</b>	400 2200/3100	DRR100.U750.400.220/310

<b>380 - 880 V DC</b> 1000V / 100ms <b>660V-intermediate circuit</b>	230 2000/3000	DRR100.U660.230.200/300
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The output voltage can drop up to 10% by U<sub>in</sub> min

Mechanical adaptation:

On request

One time projecting costs:

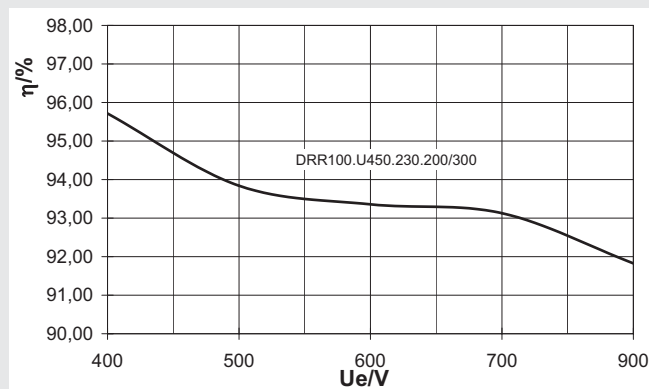
On request

Modification costs for possible changes above values:

On request

An isolation is possible with an external transformer

### Efficiency

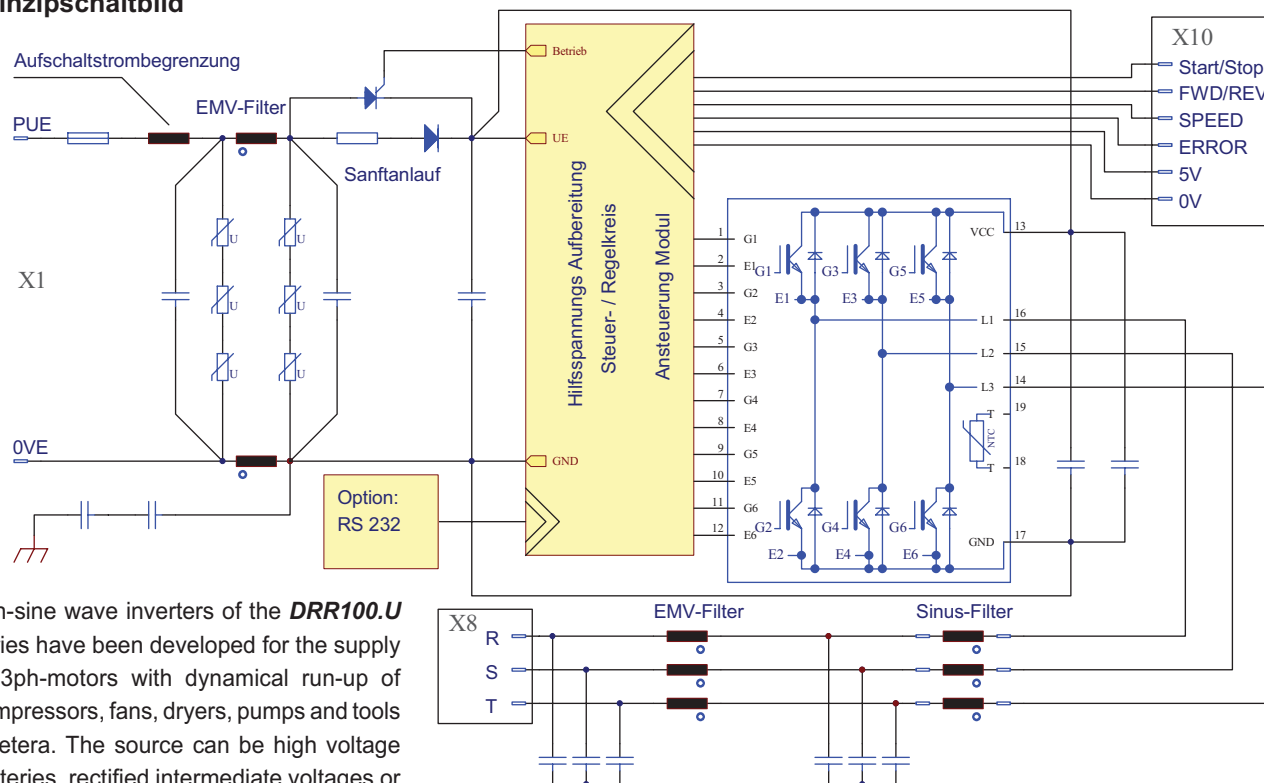


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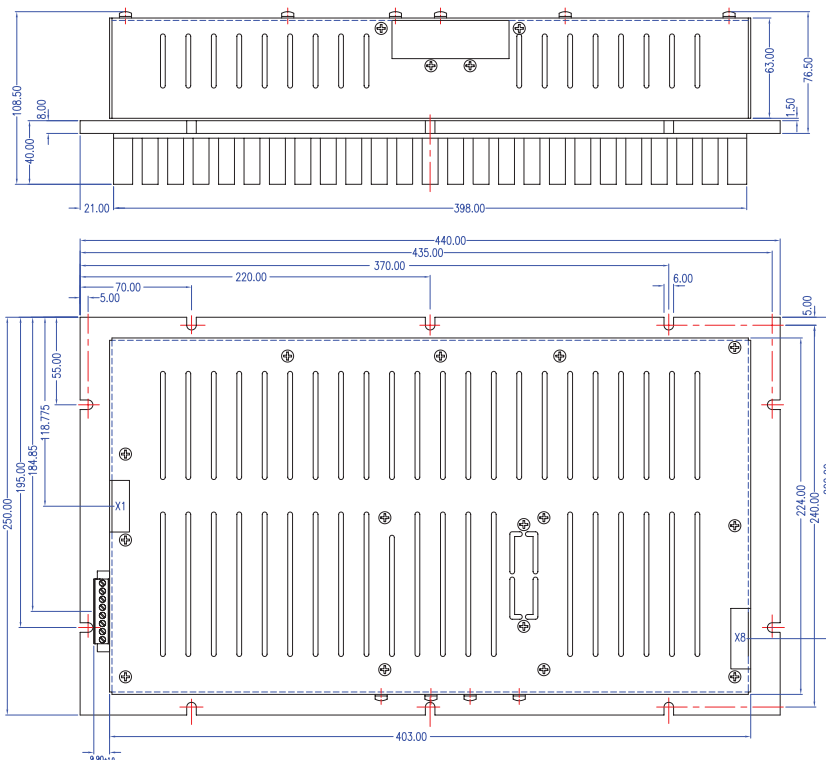
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3ph-sine wave inverters of the **DRR100.U** series have been developed for the supply of 3ph-motors with dynamical run-up of compressors, fans, dryers, pumps and tools etcetera. The source can be high voltage batteries, rectified intermediate voltages or the transient free traction line voltage. For a constant output voltage the minimal input voltage is  $U_{inDC} \geq 1,55 \times U_{out\ rms}$ . The inverter itself works without galvanic isolation. The motor must give the according isolation.

The following points result the inverter's very high functional security: the chosen one-stage topology and components, active and passive inrush current limiting, dU/dt-reduction, soft start, EMC-filters, automatic run-up with supply voltage, I<sup>2</sup>t-monitoring, static and dynamic short circuit protection and the thermal monitoring. The isolated interface X10 allows a simple communication (analogue set point value/PWM, right/left direction, 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** shown: flange adapting for break through mounting



Forced air convection  
necessary

