

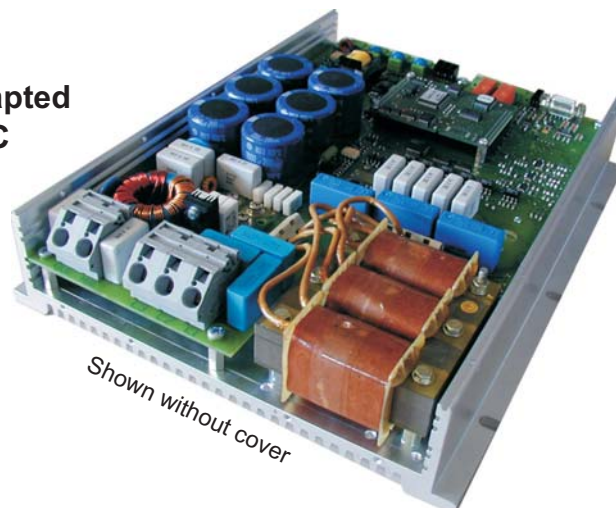
3-phase output
550 up to 1500VA

3Ph-Sine Wave inverter
on 72/110VDC battery networks



for mobile applications, special technology, building machinery

- Use on mobile battery networks
- Synthetic 3-Ph sine wave output
- With f/U-control and I²t-monitoring
- Input and Output radio interference adapted
- Low rated air ventilation from TU > 50°C
- Efficiency typ. 85% (110V)
- Auxiliary voltage not necessary
- Robust 50/60Hz-transformer solution
- RS 232 / 485 interface for changes of parameters and data check



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Series DRR 50

with low-frequency transformer

Main points:

Input:

- Input voltage range up to >1 : 2,5
- External fuse (emergency protection)
- Disturbance proof EN61000-4-4/5 level 3
- Input filter in acc. to EN55011.A+20db
- Reverse polarity protection
- Soft start / internal pre-charging (semiconductor)
- Inrush current limiting
- Integral power run-up (df/dt)
- Defined switch-on/switch-off point
- Stand-by power on request
- Input plug
WAGO power spring clamps 745-602

Output

- 3Ph-sine voltage
- Low voltage intermediate circuit for output sided Low frequency-transformer
- Internal output EMC-filter
- f/U-characteristic curve (zero up to max)
- I²t-over load protection of dynamical loads
- No-load proof, short circuit proof dynamically and statically
- Tolerance ± 6% = f(U_{in}/I_{out}/TU)
- Response time ΔI=50% < 2 ms
- Distortion factor <3%
- Under voltage control
- Output connector
WAGO power spring clamps 745-603

In general:

- Signal connector: Phoenix MSTBV 2,5
- On/Off remote (Inhibit)
- Failure signal U_{out}
- Status display LED UH okay
- Temperature control
- Integrated Fan
- 3-Phase-bridge with re-feeding
- Clock frequency >10 kHz
- Isolation test voltage:
Input/Output - ground: 2,5 KV_{AC} 1 min
- Ambient temperature -25°C / +70°C
- Short term 85°C / Derating 1%/°C >60°C (ventilation to be clarified)
- MTBF On request
- Shock/vibration in acc. to EN50155
- Weight (without transformer): approx. 5,5 kg
- Dimension: (340 x 250 x 70)mm without transformer, without fan
- CE-Conformity on request

Input	Output UZK	Trans former ¹⁾	Power	Model number
<u>U_{in}</u>	<u>U_{out}</u> / 3Ph	<u>U_{in}</u> / <u>U_{out}</u>	<u>P_{out}</u> stat./dyn.	
V DC	Vrms 50Hz	Vrms 50Hz	VA	
50 - 101	30	30/230	550/700	DRR50.U72.055/070
43 - 130 dyn.	30	30/230 bzw. 400	800/1000	DRR50.U72.080/100
77 - 154	46	46/230	800/1000	DRR50.U10.080/100
66 - 170 dyn.	51	51/230 bzw. 400	1000/1400	DRR50.U10.100/140

The output voltage can drop up to 10% by U_{in} min

Mechanical adaptation:

On request

One time projecting costs:

On request

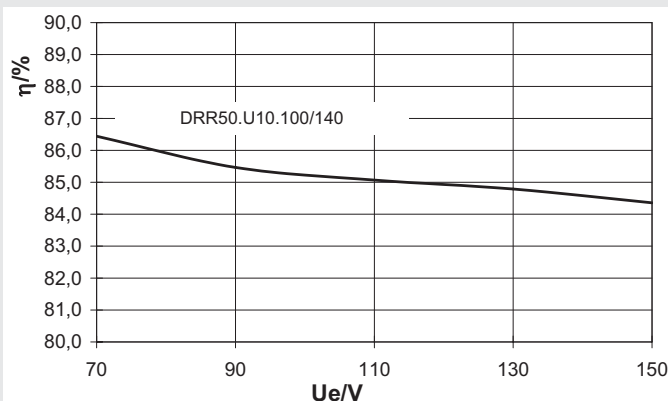
Modification costs for possible changes above values:

On request

1) customized / additional output windings available

1) Transformer prototypes are delivered by SYKO, series by the manufacturer.
SYKO gives a delivery manual.

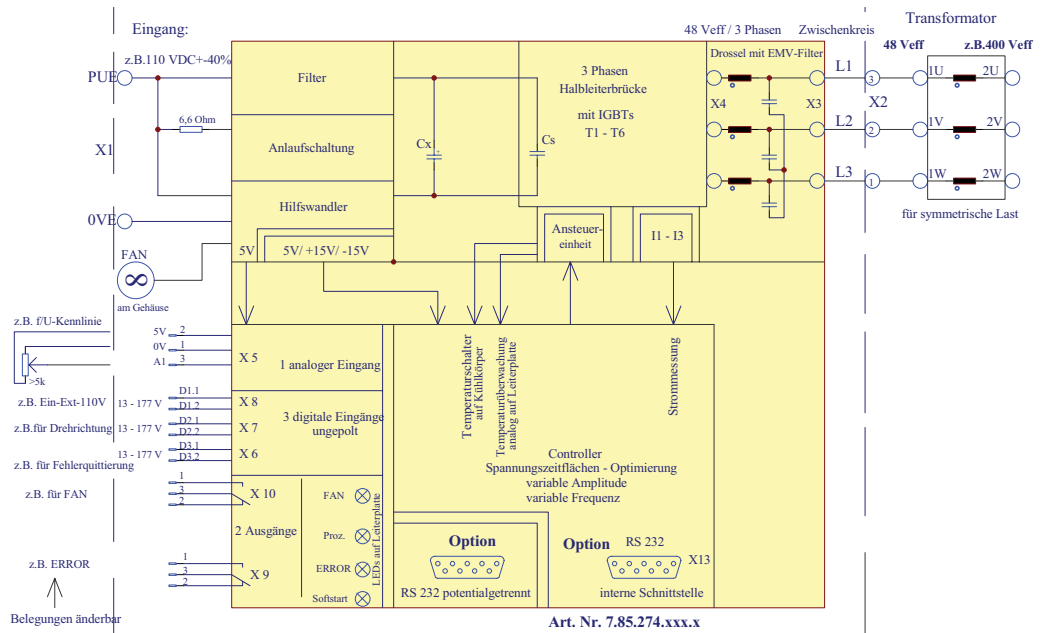
Efficiency



3 phase Inverters of the **DRR50** series have been modified for mobile applications. These inverters are used for the regulated/controlled supply of 3ph-motors with dynamical run-up of compressors, fans, pumps, and tools etcetera. The components can run in air conditioning applications, interior ventilation, emergency ventilation, compressed air generation and lubricant pumps etcetera.

The inverter is build up with a main PCB, which is mounted under the given

shock/vibration conditions in a profile-heat sink with cover. The unit is equipped with a mounting flange and can be adapted with 6 x M6 screws to a chassis. A semiconductor circuit is integrated and responsible for the bridging of the soft start circuit, after the internal capacitors are charged. The switching concept generates a 3ph/50Hz low voltage output. This intermediate voltage $UZK(V_{rms})$ is always lower $(U_{in}-5V) \times 0,707$ as the lowest static input voltage. To be able to result an isolated 3-phase 230/400 V / 50 Hz alternating current, a low frequency transformer (option) is connected output sided in series. A 3ph-sine-choke is connected in between the inverter's output and the transformer to filter the PWM-sine-voltage's HF-interference and to reduce steep dU/dt -values. The external low frequency transformer is a railway capable 3ph special transformer with primary sided delta-connection and secondary sided star connection with $3 \times 400V_{rms}$ (230 V_{rms}). For the normal use the secondary part can be build up as an autotransformer. An unsymmetrical phase load to the neutral point is limited possible.



Mechanics

