

Series PCI and PIT

Type [VDC]	PCI1628 U _{IN} 20 – 32	PIT1638 / PIT3638 U _{IN} 40 – 64	PIT1648 / PIT3648 U _{IN} 50 – 80	PIT1658 U _{IN} 80 – 160	PIT1678 U _{IN} 160-320
Power	500 VA	400 VA / 500 VA	400 VA / 500 VA	500 VA	500 VA

Serie [VDC]	PCI3628 U _{IN} 20 – 32	PCI3638 U _{IN} 40 – 64	PCI3648 U _{IN} 50 – 80	PIT3658 / PIT3858 U _{IN} 80 – 160	PIT3678 / PIT3878 U _{IN} 160-320
Leistung	1000 VA	1200 VA	1200 VA	1000 VA / 1200 VA	1000 VA / 1600 VA

Type [VDC]	PCI4828 U _{IN} 20 – 32	PCI4838 U _{IN} 40 – 64	PCI4848 U _{IN} 50 – 80	PIT4858 U _{IN} 80 – 160	PIT4878 U _{IN} 160-320
Power	1400 VA	1800 VA	1800 VA	2000 VA	2500 VA

19"- rack (BGT)



Pluggable installed Inverter in a 19"- norm rack.

19"- rack for wall mount (BGW)



Pluggable installed inverter in a 19"- rack for wall mount. Easier exchangeability compare to a standard mounting plate. Available in 42U (s. figure), 56U and 84U.

Type designation example for:

- Inverter PCI1628 installed in a 19"- rack (Option BGT)
BGT / 1 x PCI1628
- Inverter PIT3658 installed in a 19"- rack 42U for wall mount (Option BGW42)
BGW42 / 1 x PIT3658

Technical data

Input

Voltage	s. tabulation on top
Input fuse	external required ¹⁾
Ripple allowed	5% rms
EMC- Surges	acc. EN 61000-4-5 gradient 3
EMC- Bursts	acc. EN 61000-4-4 gradient 3

Softstart 0,5s typ.
 Ripple feed back <2 mV pschoometrical CISPR
 RFI acc. EN 55011

Output
 Voltage 230VAC single phase, sinusoidal (115VAC, 240VAC possible)
 Voltage range 210 - 240VAC adjustable, front panel trimmer

Regulation static±2%
 dynamic±5% / 2ms 0<->100% load step

Frequency 50 Hz ±0,1% crystal stabilized (60Hz, 400Hz on request)

Power s. tabulation on top

Over load 100% for 1s

Inrush current limiting NTC's optional

Distortion < 5% at cosφ 1

Crest factor 3 permitted

Power factor 0,8 ind.to 0,9 cap. permitted

Over load-/ short circuit prot. electronic
 RFI acc. EN 55011 class A

Indicators, Alarm
 LED - Indicator green = operation
 External Alarm potential free change over contact with 30VDC / 2A
 for alarm: output voltage <200VAC

Control elements
 Inhibit external, remote ON / OFF
 Output voltage trimmer on front panel

Construction
 Option BGT 19"- norm rack
 Dimensions 19"(483mmW) x 6u (266mmH) x max. 340mmD
 Connectionterminal on rear side

Option BGW 19"- rack for wall mount
 Dimensions 42TE**Series PCI + PIT 1600 / 3600**
 275mmW x 6u (266mmH) x 340mmD

Dimensions 56TE**Series PCI + PIT 4800**
 340mmW x 6u (266mmH) x 340mmD
 Connectionterminals on the side

Dimension 84TE**all Series**
 481mmW x 6u (266mmH) x 340mm D
 Connectionterminals on bottom side

General
 Operating temperature -10 °C to +45 °C
 Storage temperature -30 °C to +70 °C
 Relative humidity 75%, without condensation
 Cooling unhindered natural convection
 Mechanical protection IP20
 Efficiency app. 85%
 EMC acc. EN 61000-6-4 / EN 61000-6-2
 Isolation Input / Output 3500VDC for 1 min.
 Input / Output / Case 2100VDC for 1 min.

¹⁾ Value of input fuses (extern required):

Type	PCI1628	PIT1638 / PIT3638	PIT1648 / PIT3648	PIT1658	PIT1678
ext. Fuse	63AT	50AT / 50AT	35AT / 35AT	16AT	10AT
Type	PCI3628	PCI3638	PCI3648	PIT3658 / PIT3858	PIT3678 / PIT3878
ext. Fuse	125AT	50AT	35AT	25AT / 25AT	12AT / 12AT
Type	PCI4828	PCI4838	PCI4848	PIT4858	PIT4878
ext. Fuse	150AT	125AT	100AT	63AT	35AT

General Description

PCI- Series

Figure 1 shows the connection of a DC/DC converter with a switch-mode inverter.

The DC/DC converter transforms the normally low battery voltage to the high intermediate circuit voltage at the input of the inverter and provides the required electrical isolation between the AC-output and the battery. The intermediate circuit voltage must be higher than the value peak of the output voltage of the inverter and is thus fixed to approximately 400V at a requested output voltage of 220 / 240V.

Figure 1

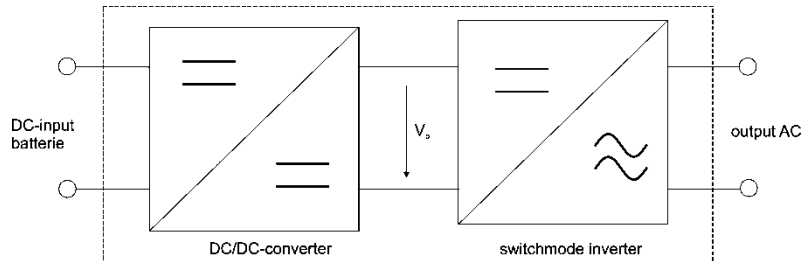
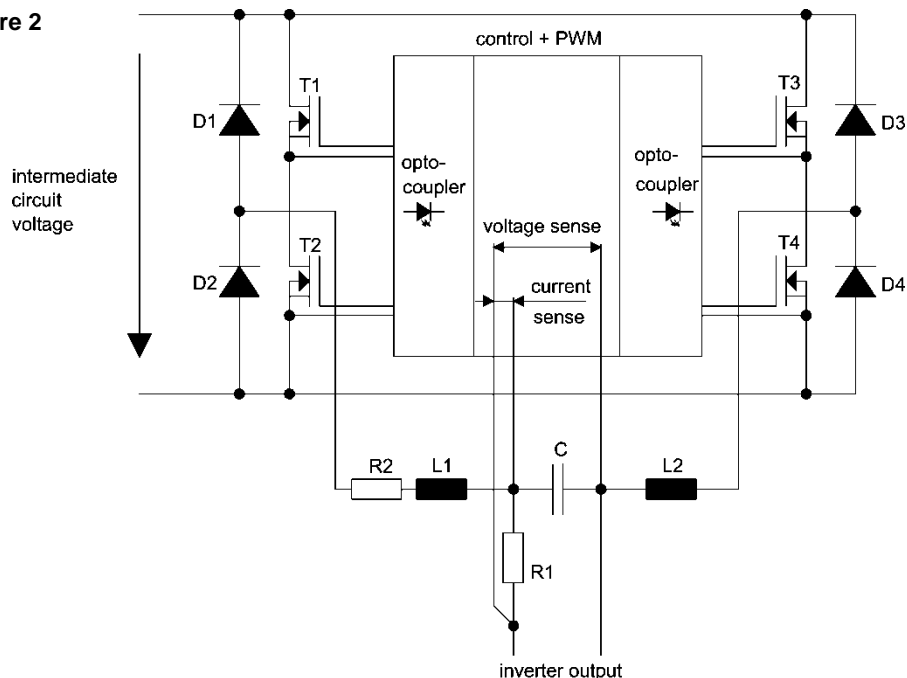


Figure 2 shows the circuit of the inverter:

The intermediate circuit voltage (DC-input voltage) is transformed by the power transistors T1-T4 with the parallel inverse diodes D1-D4 in a pulse-width square-wave voltage. The choke with the windings L1 and L2 integrates this voltage, and at the capacitor C there is a sinusoidal output voltage. The power transistors are controlled by opto-coupler, making sure, that not both transistors of one branch are switched on at the same time by the control pulses. The output voltage is connected via sense leads to the control circuit and controls after a comparison with a reference the control pulses for the power transistors. The voltage drop of the output current at shunt R1 is also supplied to the control circuit and serves for current limiting.

Figure 2



General Description

PIT- Series

Figure 1 shows the connection of a switchmode inverter and a transformer.

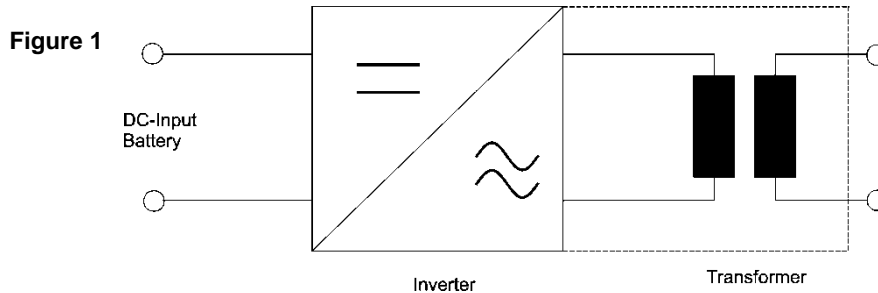


Figure 2 shows the circuit of the inverter:

The intermediate circuit voltage (DC-input voltage) is transformed by the power transistor T1-T4 with the parallel inverse diodes D1-D4 in a pulse - width square-wave voltage. The choke with the windings L1 and L2 integrates this voltage, and at the capacitor C there is a sinusoidal output voltage.

The power transistors are controlled by the opto-coupler, making sure, that not both transistors of one branch are switched on at the same time by the control pulses. The output voltage is connected via sense leads to the control circuit and controls, after a comparison with a reference, the control pulses for the power transistors. The voltage drop of the output current at shunt R1 is also supplied to the control circuit and serves for current limiting.

Alternating voltage at the output of the inverter is transformed by means of a transformer to the requested output voltage with galvanic isolation.

