

Series PCI and PIT for Wall Mounting or in 19" Cabinet

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

Type [VDC]	PCI3628 U _{IN} 20 – 32	PCI3638 U _{IN} 40 – 64	PCI3648 U _{IN} 50 – 80	PIT3658 / PIT3858¹⁾ U _{IN} 80 – 160	PIT3678 / PIT3878¹⁾ U _{IN} 160 - 320
Power	1000 VA	1200 VA	1200 VA	1000 VA / 1200 VA	1000 VA / 1600 VA

Type [VDC]	PCI4828¹⁾ U _{IN} 20 – 32	PCI4838¹⁾ U _{IN} 40 – 64	PCI4848¹⁾ U _{IN} 50 – 80	PIT4858¹⁾ U _{IN} 80 – 160	PIT4878¹⁾ U _{IN} 160 - 320
Power	1400 VA	1800 VA	1800 VA	2000 VA	2500 VA

¹⁾Type only available with option W (mounting plate)



Option G UW

Pluggable installed inverter in a 19"-cabinet for wall mount. Connection via internal terminals



Option W

Wall mounting plate incl. terminals

Option GU

Same as GUW but with sockets on rear side in addition. Stand alone solution example for control system PC's



Type designation example for Inverter PCI1628
incl. wall mounting plate:
PCI1628-W

Technical data

Input

Voltage	s. tabulation on top
Input fuse	external required ²⁾
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
GU 19"- cabinet	ON / OFF switch on rear side

Construction / Option W

Dimensions / Weight	PCI / PIT1600	360mmH x 220mmW x 175mmD / app. 18 kg
	PCI / PIT3600	360mmH x 220mmW x 230mmD / app. 20 kg
	PCI / PIT3800 + 4800	360mmH x 220mmW x 310mmD / app. 28 kg
	ConnectionTerminals	

Construction / Option GUW

Cabinet for wall mount (**for PIT4800 not available**)
 Dimensions290mmH x 235mmW x 340mmD
 Weight PCI / PIT1600 app. 21kg
 PCI / PIT3600 app. 23kg
 Connectioninternal terminals

Construction / Option GU

19"- stand alone cabinet (**for PIT4800 not available**)
 Dimensions290mmH x 235mmW x 340mmD
 Weight PCI / PIT1600 app. 21kg
 PCI /PIT3600 app. 23kg
 ConnectionInput + Alarminternal terminals
 Outputsockets on rear 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.

2) 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	16AT / 20AT
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 inter-mediate 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

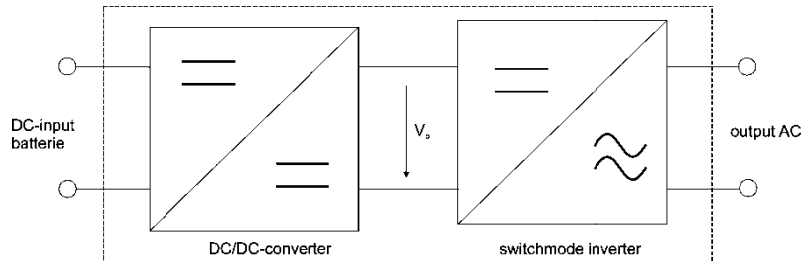
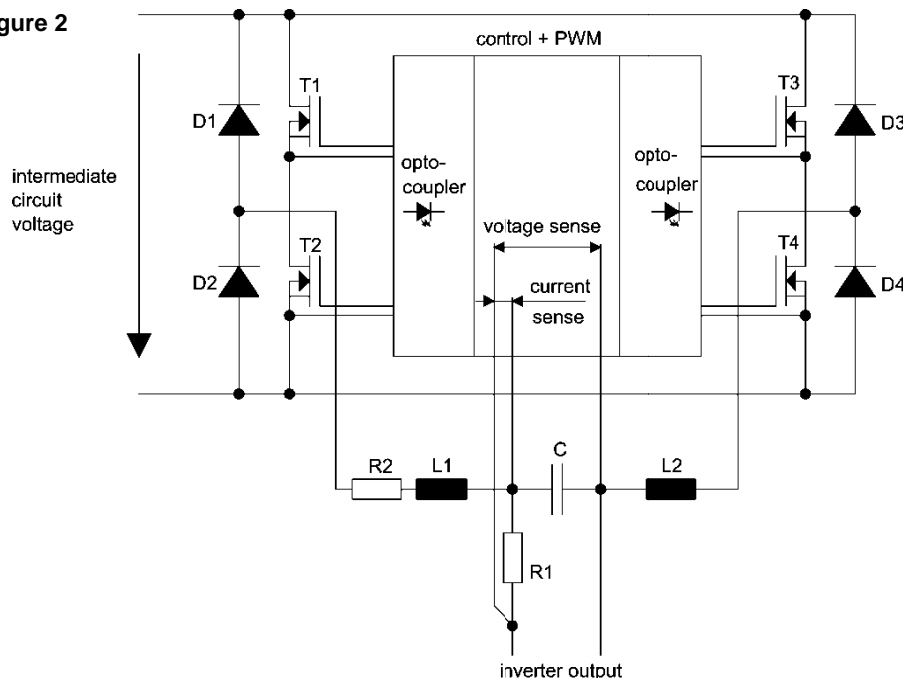


Figure 2 shows the circuit of the inverter:

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.

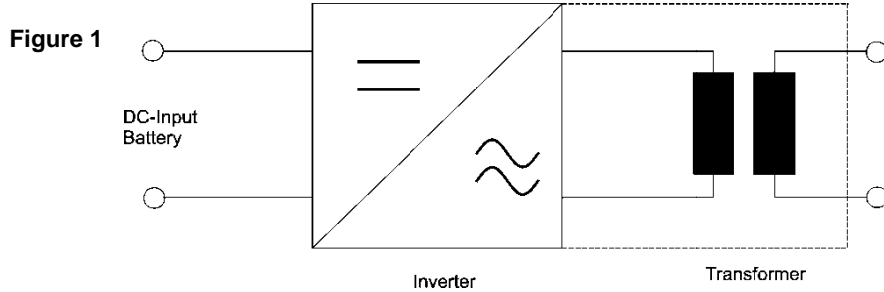


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Alternating voltage at the output of the inverter is transformed by means of a transformer to the requested output voltage with galvanic isolation.

