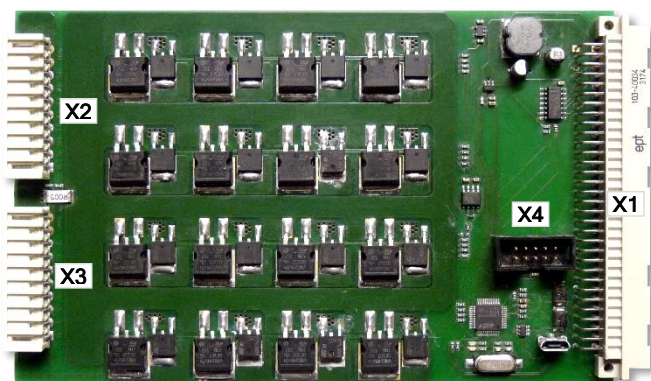


## Features

- Board with 16 semiconductor switches
- Capacity up to 5A for each channel,  
20A total current
- Programmable fuse
- 40VDC dielectric strength
- Clock generator with PWM



The PLD2 board includes 16 N-channel power MOSFETs, type VNB14NV04. The semiconductor switches are equipped with extensive, integrated protective circuits and a low  $R_{DS(ON)}$ . The board is suitable for switching voltages up to 40VDC and loads up to 5A against the GND system. The firmware contains a clock generator and a software-based resettable fuse for the entire current to provide protection against surges.

## Specification

Operating voltage	5V $\pm$ 0.25V
Current consumption	max. 150mA
Number of channels	16
Dialectic strength	40 V
Current carrying capacity	5A for each channel
Electronic fuse	0.1 to 20A, reaction time 32ms
Safety features	Short-circuit, surge, temperature and ESD protection
Clock generator	1 Hz to 12 KHz or $T_{ON} / T_{OFF} \geq 40\mu s$
Interface	RS-422 Guardian log
X1 connector	X2 64-pin multipole connector DIN 41612
X2 connector	10-pin male connector RM 3.5, 90°, Wago 734- 170
X3 connector	10-pin male connector RM 3.5, 90°, Wago 734- 170
X4 connector	10-pin header RM 2.54, API
Dimensions	160 x 100 mm

## Application

- Switching components in the test adapter and relays, displays, etc.
- Switching inductive loads
- Short-circuit simulations
- PWM control of DC solenoids, DC motors, valves, etc.

## Addressing

The standard base address is 19 and is configured by the software. WinGuard supports up to 4 boards.

The PLD2 is backwards compatible to the discontinued predecessor PLD1.

## Pinout

### X1 connector

Pin	Signal
AC1	+5 V
A2	GND
C2	RXD +
A3	RXD -
C3	GND
A4	TXD +
C4	TXD -
AC5	GND
AC32	GND

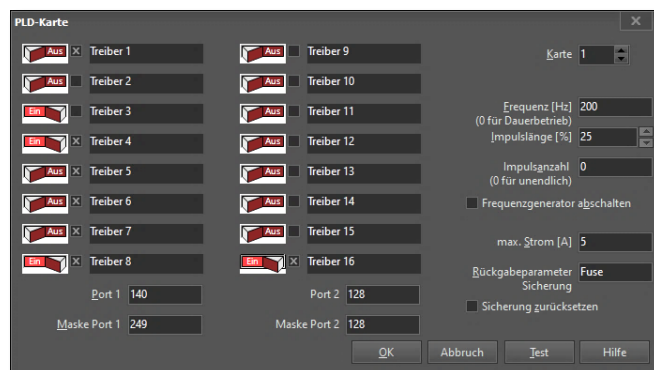
### X2 connector

Pin	Signal
1	Channel 1
2	Channel 2
3	Channel 3
4	Channel 4
5	Channel 5
6	Channel 6
7	Channel 7
8	Channel 8
9	GND
10	GND

### X3 connector

Pin	Signal
1	Channel 9
2	Channel 10
3	Channel 11
4	Channel 12
5	Channel 13
6	Channel 14
7	Channel 15
8	Channel 16
9	GND
10	GND

## WinGuard



WinGuard controls the PLD2 board with this dialog box. On the left-hand side of the dialog box there are two columns with control elements for each of the board's outputs. Descriptions can be added for the outputs in the text fields.

The check boxes are used to select which outputs should be edited and which will remain the same. 'Port' and 'Mask Port' are text fields with numerical values that can be used to apply the values calculated by the programme code. For example, a loop could contain the powers of two from 1 to 128 in order to connect eight outputs consecutively.

In order to directly connect an output, select the channel and place the switch in the desired position. All non-selected outputs will remain unchanged.

In order to use the clock generator function, enter the desired frequency and pulse duration. All selected outputs are controlled with the set frequency. Outputs with switches set to 'Off' are inverted. The clock generator will continue to run until explicitly switched off or the selected number of pulses have been generated.

The PLD board features an electronic fuse. If the specified trip current is exceeded for 32 ms, all drivers will be switched off and a flag will appear, which can be queried using the return parameter.