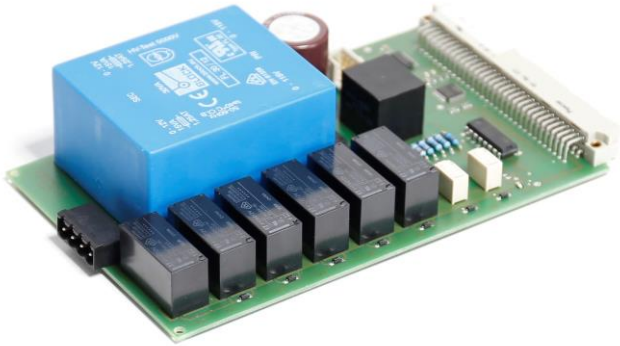
GTS TEST SOLUTIONS GUARDIAN TEST SYSTEM Item no. 21239

TRF

Features

- AC voltages up to 260V_{rms}
- DC voltages up to 320 VDC
- Switchable transmission ratio
- Measurement of output voltage and current
- Power max. 20W



The transformer board, TRF board, was developed in order to provide voltage to DUTs with a supply voltage up to 20W. The input of the transformer board is connected to the output of the PSU board in the test adapter, which is capable of generating a sine wave AC voltage from 0 to 17Vrms (see PSU data sheet). As the input of the transformer board is connected to the secondary windings of the installed transformer, the PSU voltage is stepped up and voltages up to 260Vrms may be generated Three transmission ratios with various voltage and current ranges are available when the two primary and secondary windings are connected in series or parallel.

The board also offers a DC mode in which the AC voltage is rectified and smoothed by an electrolytic capacitor. A solid-state relay allows the high DC voltage to be connected without causing any wear to the relay contacts.

The output voltage and indicated power are measured, whereby the corresponding signal is connected to the input of the ADX measurement board.

Application

- AC voltages up to 260V_{rms}
- Supply of DUTs with supply voltage input
- Testing protective circuits for surges and undervoltage with variable voltage
- Generation of country-specific supply voltages from 110V to 240V with 50 or 60 Hz

Addressing

The standard base address to TRF boards is [23, 24, 33, 34]. The addresses are configured by the software. WinGuard software supports up to 4 boards.

Pinout

X1

Pin	Signal
1	Out+
2	Out-
3	In+
4	In-

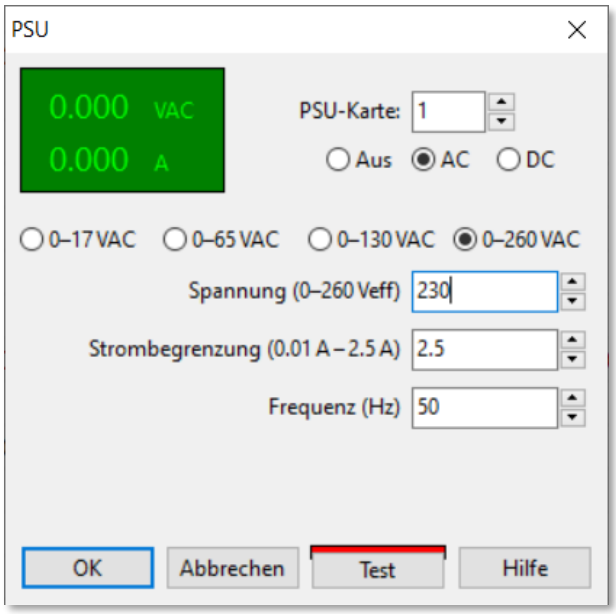
X2 connector

Pin	Signal
AC1	5 V
A2	GND
C2	RXD +
A3	RXD -
C3	GND
A4	TXD +
C4	TXD -
AC5	GND
AC17	ADX +
AC19	ADX -

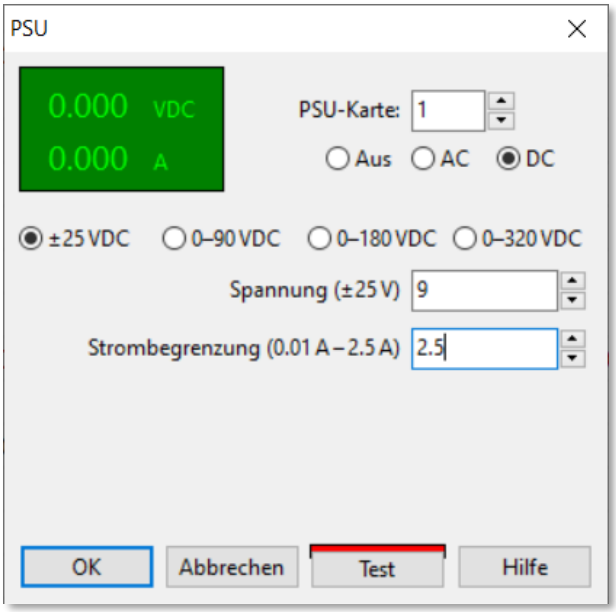
Specification

Operating voltage	5.0V ± 0.25V, max. 300mA
Dimensions	160 x 100 mm (total height incl. transformer 40mm)
Weight	0.85Kg
Interface	RS-422 Guardian log
X1 connector	4-pin male connector RM 5 mm angled, RIA CONNECT 31176104
X2 connector	64-pin multipole connector DIN 41612
Transformer	2x 115V / 2x 12V, power 30VA
Voltage ranges	65 VAC / 320mA, 125 VAC / 160mA, 260 VAC / 80mA 90 VDC / 320mA, 180 VDC / 160mA, 320 VDC / 80mA
Functions	- Bypass (input voltage passes through) - Parallel or series switching of primary windings - Parallel or series switching of secondary windings - Switching to AC/DC mode - Switching on/off DC voltage via solid-state relay - Connecting output voltage to measurement board (3:1 division rate) - Connecting current sensor to measurement board

WinGuard



If a transformer board is configured in the Guardian hardware configuration, this dialog box controls both the PSU board and the TRF board. In AC mode, a selection of 4 voltage ranges is displayed. The variable for the current limit relates to the PSU board. This extension is included in WinGuard Version 6.10 and above.



This figure displays the dialog box in DC mode. When the range ±25VDC is selected, the PSU voltage only passes through the TRF board. For other ranges, the rectified transformer output is output. More information on this process can be found in the WinGuard manual.