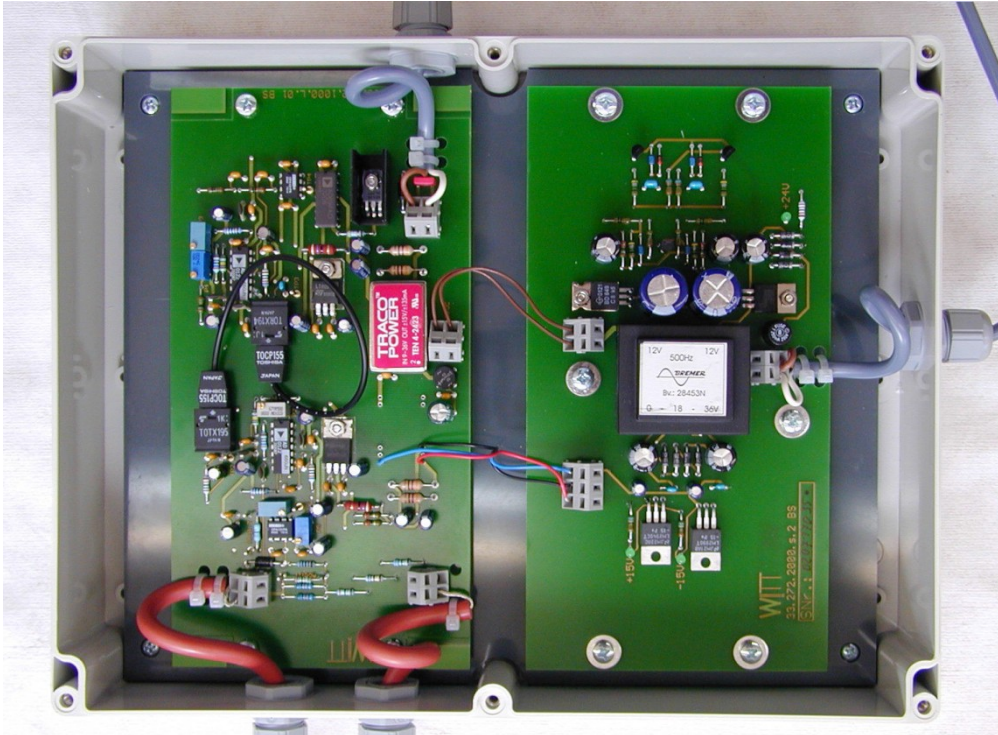


WITT TD1A01 – Transducer



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Application

The Witt Solutions GmbH transducers enable a very accurate measurement of driving voltages and currents electrically insulated.

The transducers are used in DC-powered vehicles as well as in stationary facilities. The voltage that falls off an external shunt is transmitted potential-free. Thus, it is possible to measure on the "hot" side of the traction power supply.

This way it is possible to measure the available voltage in the railway engine after the pantograph. WITT TD1A01 can also measure the voltage delivered by a substation.

Description

The entire electronic is placed in a fully isolated plastic housing. The 4- 20 mA outlet is wired in a way that in case of a fault 0 mA will flow and such the following stages can detect an error.

Function

The voltage drop that is delivered by the shunt is limited (transient protection) and filtered by the device. In the subsequent stage this voltage is converted into a high proportional frequency (60 - 800 kHz) and transferred by a optic fibre cable which is completely galvanically isolated. A subsequent frequency/voltage converter generates a proportional voltage that will - after a filtering in a final stage - be converted into electricity.

The necessary auxiliary voltage is provided in two separate transducers of the primary and the secondary side.

General Data

Supply voltage.....	24 V DC
Operating temperature.....	-20 - 70 °C
Storage temperature.....	-20 - 85 °C
Weight.....	approx. 0,8 kg
Dimensions.....	(H x W x D) 30 * 12 * 22 cm

Frequency Response

Transmission ratio.....	0 – 60mV is proportional to 4- 20 mA
Accuracy.....	up to 1 kHz (-3dB) +/- 1 % of the final value

Isolation

Electric shock protection	12 kV
Input to output.....	8 kV
Input to auxiliary voltage.....	8 kV
Output to auxiliary voltage.....	2 kV

Options

- different transfer ratios
- different auxiliary voltages

Circuit Diagram

