

Data Sheet no. 5.83/3e

High AC Current Measurement, Types WMI 31/32

Application

High current test sets e. g. for heating tests on power cables and other conductors containing measurement systems for high AC currents and temperature. The current and temperature measuring units can be applied within the test set as well as single measuring and recording devices. (For more information regarding temperature measurement, see Data Sheet 5.72).

Generally, two different versions of high AC current measurement are available, a single channel stand-alone system (see Fig. 1), well suited for easy stationary and on-site measuring tasks, and a comfortable measuring system (see Fig. 2), well suited for complex stationary single- or multi channel current measuring tasks. Both versions of AC current measuring systems comply to the requirements of IEC 60044-1. For high voltage applications the required current transformer can be connected to the earth lead of the voltage source or of the test object (see date sheet no. 1.58/2).

System description

The standard (stand-alone) system (Type WMI 31) requires only two measuring components, one current transformer special adapted to the measuring task and one measuring device. The optimum measuring device for is a modified AC/DC peak voltmeter, type MU, (see Data Sheet 5.56), which can measure the RMS value too.

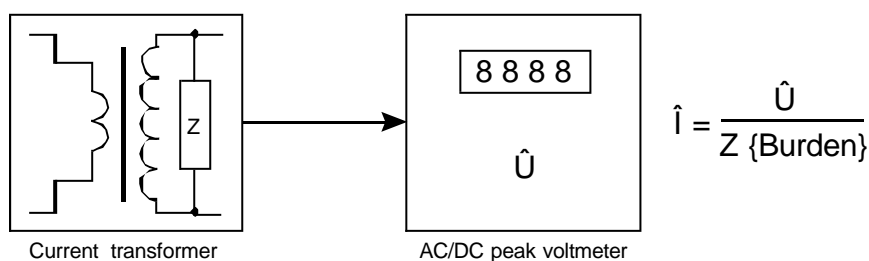


Fig. 1: Principal circuit diagram of the standard High AC Current Measuring System (Type WMI 31)

The complex system (Type WMI 32) for integration to computer control and measuring systems is shown in Fig. 2. This system is preferred if measurement, evaluation and storage of data is required. It consists of four components, one special adapted current transformer, one transducer for the adaption of the measured voltage level to the voltage level of PLC. The evaluation and storage task is covered by two further components, one PLC, type Simatic S7 in interaction with the industrial PC of the computer control (see Data Sheet 1.51). (see Fig. 2).

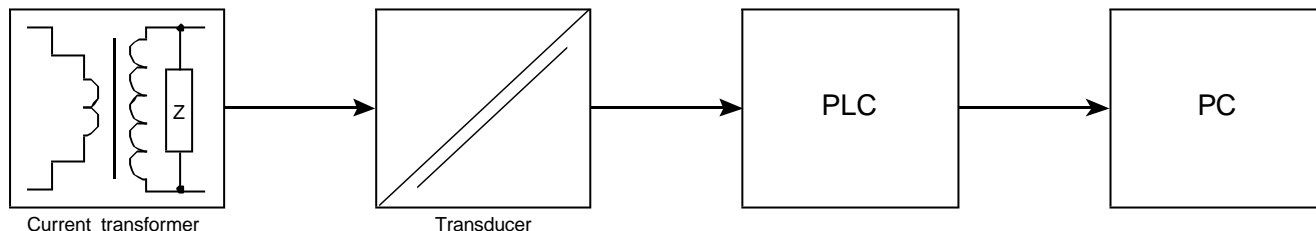


Fig. 2: Principal circuit diagram of a complex High AC Current Measuring System (WMI 32)

Ratings

HIGHVOLT delivers AC current measuring systems for many different applications in both versions for the following standardized primary rated currents (in A rms):

100 - 150 - 200 - 250 - 400 - 600 - 1000 - 1500.

Type designation

WMI 31/1500 means the type and the related current in Amp's.

Special application

On special customer's request HIGHVOLT is also able to design high AC current measuring systems for primary rated currents up to 20000 A rms, single- or multi channel and rated frequencies from 16.66 Hz to 400 Hz. For such application, HIGHVOLT's main task is the adaption of a consisting AC current measuring system to the customer's current and frequency range.

Order information

When you want to order an AC current measuring system you are asked to mention the type including the rated current as well as the required frequency.

For further information please contact:

or our local representative:

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