

## 3-Phase Voltage and Current Measurement

## Features

- Measurement and storage of voltages and currents in A.C. power systems
- Programmable internal storage of measurements
- RS232 interface for data transfer
- Bimetallic function and peak value storage
- Up to 16 measuring channels

## Description

**NETPROZESS** is a programmable instrument for measurement, display, and limit detection of voltages and currents in A.C. power systems. It records current values and voltage fluctuations in internal non-volatile memory.

The instrument is housed in a standard 96 x 96 mm panel mounting enclosure and is available in various configurations, with 3 voltage inputs and up to 16 current inputs (see Ordering Codes). The current transformer ratio can be selected individually for each current measuring input, from 32 pre-programmed standard current transformer ratios. 5A (or optionally 1A) shunts are integrated into the instrument for current measurements.

Current measurements are displayed sequentially as 15-minute average values, and are stored in non-volatile memory at user-programmable intervals of 1-60 minutes. Limit values for monitoring under- and over-voltage can be set in the range of +/-20% of the nominal voltage. The date and time for every under- or over-voltage occurrence is automatically recorded.

An additional feature of the instrument is the monitoring of transformer load factor and overload occurrences. The user can program the rated transformer power capacity. The actual load is recorded at regular intervals, and also date and time each time the actual load exceeds 100% of rated load.

The instrument can also monitor transformer temperature, using the Model KTY Temperature Sensor. The temperature limit value can be programmed by the user in the range +10 ° to +130 °C. The instrument automatically records each over-temperature occurrence. The stored measurements and over-limit occurrences can be transferred to a

computer via the instrument's RS-232 interface. An optional software package enables the host computer to communicate with the instrument, download the recorded data, and display it on the screen, after performing the required calculations.

The measured values can be displayed sequentially by the instrument, either by pressing the key-switches, or by automatic stepping at a user-programmed display interval.

The user can manually jump to a channel out of sequence, by rapid tapping of the key-switch, which causes the intervening channels to be skipped.

## Models and Ordering Data

NETPROZESS	
Model; Input channels	Order No.
LZM 3x voltage, 5x current	082 00135
LZM 3x voltage, 13x current	082 00141
LZM 8x current	082 00163
LZM 16x current	082 00136
TSW 3x voltage, 3x current	082 00164
Accessories:	
Reading software (3½" diskette)	999 00008
DIN rail mounting adaptor EN 50022-35x7.5	953 00026



## Technical Features

- Measurement and internal data recording of up to 16 channels
- Any of 32 standard current transformer ratios individually selectable for each channel
- Monitors transformer load factor and records overload occurrences
- Monitors transformer temperature and records over-temperature occurrences
- Simple 3- key programming
- Automatically sequenced display at 5 second intervals
- Large digital 7-segment LED display; red
- Digit height 14 mm
- Current measurements averaged over 15 minute periods
- DIN 43700 standard panel mounting enclosure
- Two versions are available, which respectively record long time average values (-LZM) or daily peak values (-TSW)

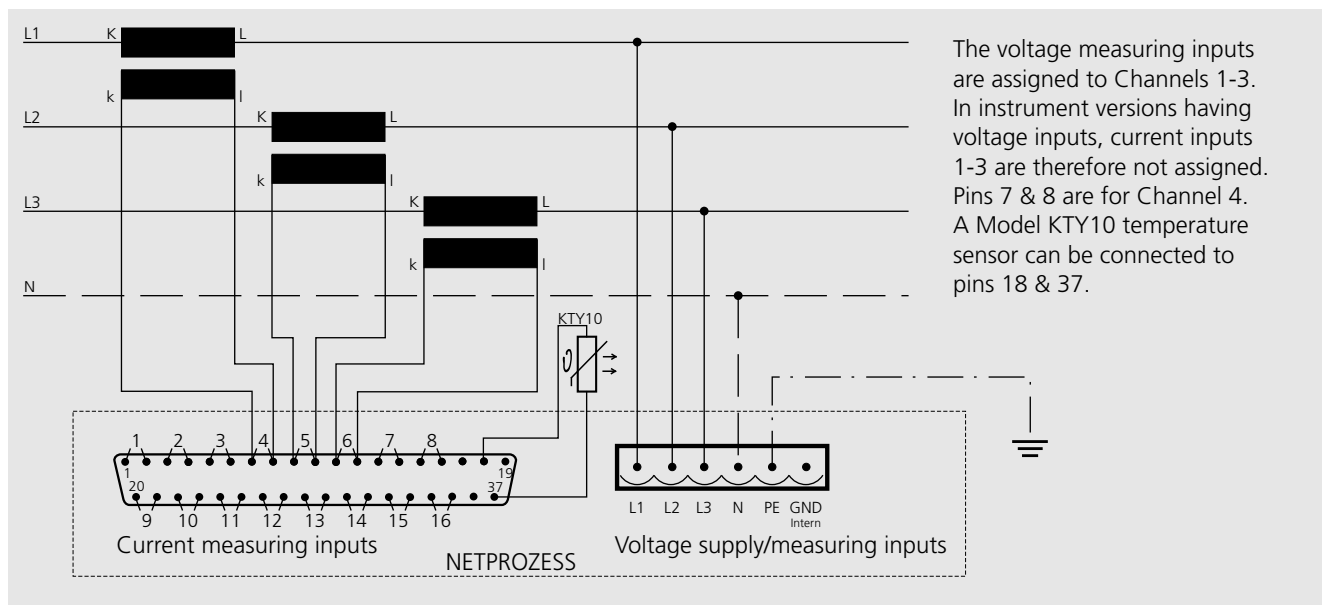
## Technical Data

Voltage range	0.8 x to 1.1x nominal voltage (UN)
Frequency range	50 / 60 Hz
Power consumption	Approx. 3 VA
Input impedance	Voltage inputs: 2 M $\Omega$ Curr. inp. (shunts) 0.01 $\Omega$ or 0.05 $\Omega$
Accuracy	Class 1
Temperature effect	<0,01% / K
Ambient temperature	+5 °C to +50 °C
Storage temperature	-20°C to +70 °C
Isolation voltage	250 V, nominal
Creep and air paths	Group III per VDE 0110 Pollution level 2
Test voltage	2000 V per VDE 0435
Protection class	Front IP 20, Terminals: IP 00 Per DIN VDE 0470-1 (11/92)

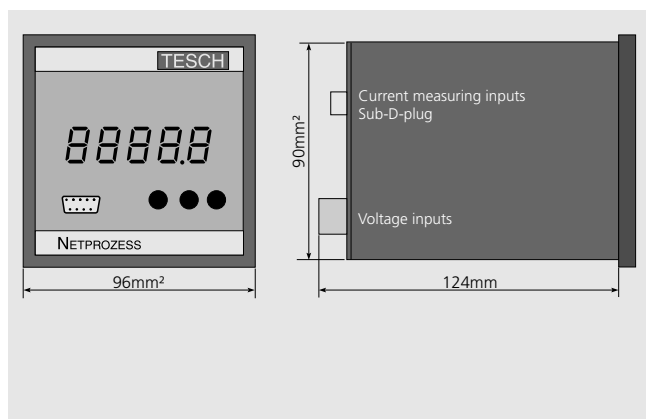
## Measuring ranges:

Voltage	0 to 600 V <sub>AC</sub> (or 0.8 to 1,1 x U <sub>N</sub> )
Current	0 bis 5 A <sub>AC</sub> through 0.01 $\Omega$ shunt 0 bis 1 A <sub>AC</sub> through 0.05 $\Omega$ shunt
Temperature	+10 °C to 130 °C, using KTY 10 sensor
Display range	0 bis 19 999
Digits	7-segment red LED, 14 mm height
Input connections:	
Voltage inputs	Plug-in spring-clamp connector (no screws)
Wire cross section	2.5 mm <sup>2</sup> fine-stranded wire; max. 7.0 mm, stripped
Current inputs	37-pin D-type subminiature connector
RS-232 interface	9-pin D-type subminiature connector
Weight	Approx. 500 g

## Connection Diagram



## Dimensions



## Ordering Guide

The following versions of the instrument can be supplied:  
LZM: for long time recording of average values  
TSW: for storage of daily peak values.

The following transformer values are stored in the instrument and can be set by the user:  
Primary nominal current (A<sub>AC</sub>)  
5 / 10 / 15 / 20 / 25 / 30 / 40 / 50 / 60 / 75 / 80 / 100 / 125 / 150 / 200 / 250 / 300 / 400 / 500 / 600 / 750 / 800 / 1000 / 1200 / 1250 / 1500 / 1600 / 1800 / 2000 / 2500 / 3000 / 4000

Current transformer secondary:  
Standard: 5A. Optional: 1A (on special order)

