

A2000 Multifunctional Power Meter

with either
PROFIBUS DP,
MODBUS or
LONWORKS Interface



A2000

– The New Multifunctional Power Meter

Measurement of:

Current and voltage, active, reactive and apparent power, power factor, line frequency, and active and reactive energy. Measurement via all 4 quadrants for energy import and export.

Power Supply

230 V / 115 V AC,
20...72 V DC / 20...69 V AC or
73...276 V DC / 73...264 V AC

Communication via:

RS 232 and RS 485 serial interfaces,
alternatively via Profibus DP or LonWORKS
Interface

Measurement Value Recording

with high performance data memory for
up to 63,000 values, free selection of
up to 10 measured quantities

Monitoring of Important Quantities

with two freely adjustable limit values

Function

The measuring instrument is Y-connected in 3-phase systems and acquires instantaneous voltage and current values.

The speed at which values are acquired is dependent upon line frequency.

Each measured quantity is measured 32 times per period.

Signals up to the 15th harmonic can thus be acquired and taken into consideration for the calculation of all values.

All values can be read out to the display, the serial interface and the analog outputs, and can be made available for limit monitoring as well.

High Performance Data Memory

Up to 10 measured quantities can be selected for recording.

The power meter acquires all of the selected values in a cyclical fashion within a period of 300 ms, and saves them first to intermediate memory. Mean values for these quantities are calculated and stored to data memory in accordance with the selected sampling time. Sampling time can be adjusted from 300 ms to 30 minutes. Recording is triggered by internal limit values. The duration of the recording can be defined by the user in order to take full advantage of the 63,000 value memory capacity.

If the action which lead to the event also needs to be recorded, the trigger level is simply moved into the window to be recorded. Continuous recording is possible as an alternative. The data memory is read out with METRAwin10/A2000 software via the RS 232 serial interface.

e.g. Phase-to-Phase Voltage – L1



e.g. Current – L1



e.g. Active Power – L1



e.g. Energy Measurement (alternative) – L1

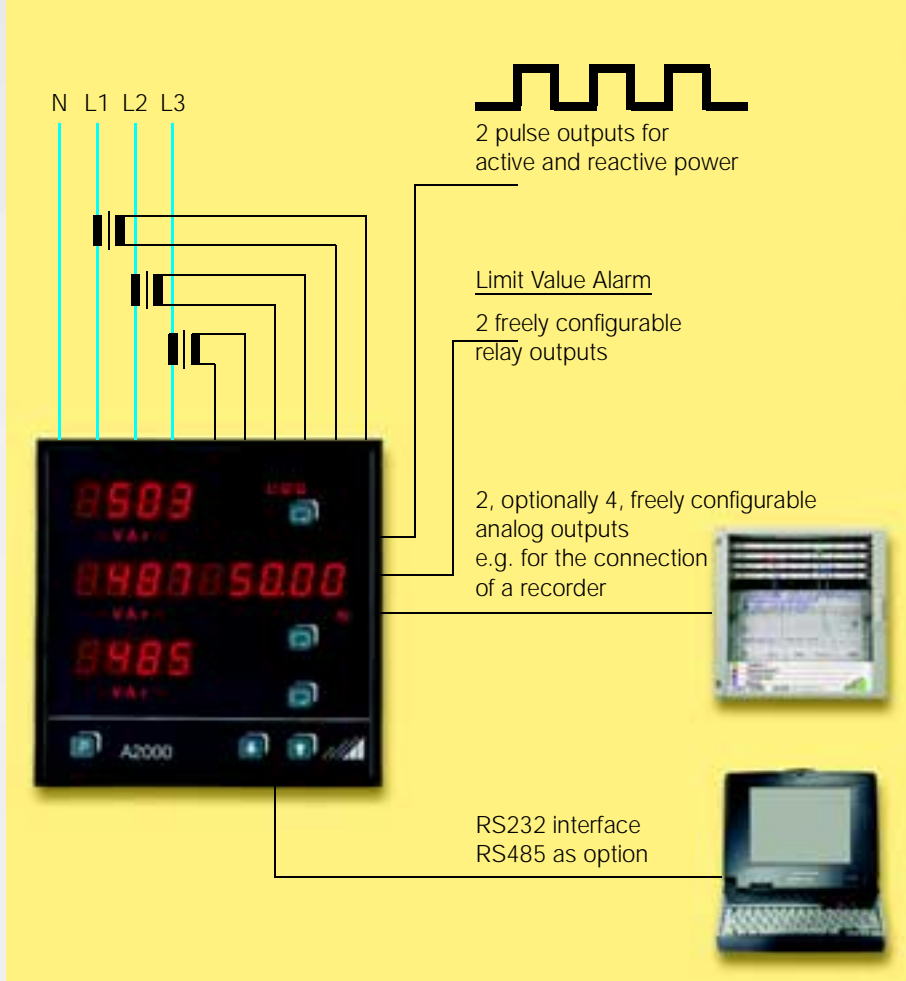


e.g. Power Factor, $\cos \varphi$ – L1



This is only one example which has been selected from approx. 100 different display combinations.





The Advantages

- Practically unrestricted freedom in the selection of parameters to be displayed
- All measurement values include direct display of unit symbol
- 9 place energy display with ¼ hour synchronization or a freely selectable interval
- Extremely high accuracy class rating
- Minimal installation depth of only 60 mm
- Faster, more reliable connection with plug-on screw terminals (except for power connections)
- Automatic error message in the event of incorrect connection
- Adjustable transformation ratio
- 1 A or 5 A current transformer terminals
- Display of mean current and averaged max. current (non-return pointer function)



Reliable Operation

- Separate keys for operation and configuration
- Protection of configuration data files

Configuration Level

- Alarm outputs
- Analog outputs
- Transformation ratio
- Interface

Operation Level

- Selection of display combinations

60 mm
Installation Depth

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Variants with:

LONWORKS Interface

- 2 limit values
- 2 analog outputs
- 2 pulse outputs
- Data logger (functions with RS 232 only)

Profibus DP

- With 2 limit values
- 2 pulse outputs
- Data logger (functions with RS 232 only)

RS 485 Standard

- With 2 limit values
- Max. 4 analog outputs
- 2 pulse outputs
- Data logger

All measuring instruments equipped with one of the following aux. voltage options:

115 V / 230 V AC
20 V ... 72 V DC / 20 ... 69 V AC
73 V ... 276 V DC / 73 ... 264 V AC

METRAWin10/A2000 Software

METRAWin10/A2000 software is used for reading out and processing current measurement values, or values from the data memory. It is also used for the configuration of device parameters for the A2000.

- Reads out values from data memory
- Continuous recording of measurement values over a given period of time
- Measurement value display as a function of time in recorder display format or in tabular form, or individual values in digital form, or in analog form as a bar graph
- Freely selectable time intervals
- Curves are identified for the recognition of individual measurement value sequences
- Simple, clear-cut setting of parameters for the A2000
- Parameters can be saved to memory for frequently used settings
- Measurement values can be exported to other Windows programs
- Mathematical functions

The A2000 power meter with PROFIBUS DP has successfully completed conformity testing for PROFIBUS DP slave devices and has been certified with ID number Z00546.



GOSSEN-METRAWATT panel meters fulfill European requirements as set for in EMC directives without restriction.

You receive products of uniform quality, which are continuously monitored by means of strict quality assurance.

Of course our plants are certified in accordance with ISO 9001 as well.

