



## PQ55A Compact Power Analyzer

A handheld power analyzer for three-phase power system measurements.

The PQ55 offers real time monitoring, recording and analysis of three phase power systems. The complete set includes the handheld mainframe, four current clamp adaptors, test leads with alligator clips, RS232 cable and software CD, large soft carrying case with compartments and users manual.

- Comprehensive real time monitoring, recording and analysis of three phase power systems
- True-rms voltage and current measurement
- Power Factor and phase angle results
- Power Analysis (apparent, active and reactive power)
- Additional current clamp for neutral line monitoring
- Internal memory for 99 single measurement storage
- Opto-isolated RS232 interface for further analysis and charting
- 50 Hertz operation facilities

### No hassle warranty

*No waiting.*

*No shipping  
charges.*



Our commitment to high-quality products and customer service is demonstrated by our industry exclusive "No Hassle" warranty. In the unlikely event that an Amprobe Test Tool requires warranty service, any of our local dealers are authorized to replace it, on the spot.

(note: \$500 MSLP limit)



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### Specifications (valid for 23 °C ± 5 °C, for less than 70 % relative humidity).

|  |   |                      |
|--|---|----------------------|
| <b>Voltage measurement</b>   | 3 input channels with common reference point "N"                                |                      |
| <b>Measurement range</b>   | 0 to 600 Vrms   |                      |
| <b>Display range</b>   | 0 to 999.9 Vrms   |                      |
| <b>Resolution</b>  | 0.1V  |                      |
| <b>Accuracy</b>  | ± (1% rdg + 10D) for voltage > 80 V   |                      |
| <b>Mains frequency</b>   | 50 Hz   |                      |
| <b>Input impedance</b>   | 2 MOhm  |                      |
| <b>Overload protection</b>   | 1000 Vrms   |                      |
| <b>Current measurement</b>   |   |                      |
| <b>Measurement range</b>   | Input I1, I2, I3  | 3 A to 999.9 A       |
|  | Input I4  | 3 A to 250 A         |
| <b>Display range</b>   | 0 A to 999.9 A  |                      |
| <b>Resolution</b>  | 0.1 A   |                      |
| <b>Accuracy</b>  | ± (2.5 % rdg + 15 D)  |                      |
| <b>Reduction ratio of current clamp</b>  | 0.35 mV/A   |                      |
| <b>Clamp opening</b>   | 40 mm   |                      |
| <b>Admissible overload</b>   | 10% (for sinusoidal wave form); max. 30 seconds                                 |                      |
| <b>Active power P</b>  | Display of active power of individual input or total value, as desired          |                      |
| <b>Display range</b>   | 0 to 999.9 kW<br>A negative active power can be recognised by the sign "-".     |                      |
| <b>Resolution</b>  | 0.1 kW  |                      |
| <b>Accuracy (for PF ≥ 0,5)</b>   | ± (3.5 % rdg + 20 D)  |                      |
| <b>Accuracy (for PF &lt; 0,5)</b>  | ± (4.5 % rdg + 40 D)  |                      |
| <b>Apparent power S (calculation from the rms values of voltage and current)</b> | Display of apparent power of an individual input or the total value, as desired |                      |
| <b>Display range</b>   | 0 – 999.9 kVA   |                      |
| <b>Resolution</b>  | 0.1 kVA   |                      |
| <b>Type of connection 1P2W</b>   | Accuracy (for PF ≥ 0,5)   | ± (3.5 % rdg + 20 D) |
|  | Accuracy (for PF < 0,5)   | ± (4.5 % rdg + 40 D) |
| <b>Type of connection 1P3W, 3P3W, 3P4W</b>                                       |   |                      |
|  | Accuracy (for PF ≥ 0,5)   | ± (3.5 % rdg + 20 D) |
|  | Accuracy (for PF < 0,5)   | ± (7.5 % rdg + 40 D) |
| <b>Idle power Q (calculation out of active and apparent power)</b>               | Display of idle power of an individual input or the total value, as desired     |                      |
| <b>Display range</b>   | 0 to 999.9 kVAr<br>A negative sign "-" shows a leading current.                 |                      |
| <b>Resolution</b>  | 0.1 kVAr  |                      |
| <b>Formula</b>   | $Q = \sqrt{S^2 - P^2}$  |                      |
| <b>Power factor PF (cos (f) (calculation out of active and apparent power)</b>   | Display of power factor of an individual input or the total value, as desired   |                      |
| <b>Measurement range</b>   | 0 ... +1<br>A negative sign "-" shows a leading current.                        |                      |
| <b>Resolution</b>  | 0.001   |                      |
| <b>Accuracy</b>  | ± (1 % rdg + 25 D)  |                      |
| <b>Phase angle (f) (calculation out of power factor)</b>                         | Display of phase angle of an individual input or the total value, as desired    |                      |
| <b>Measurement range</b>   | 0° to 90°<br>A negative sign "-" shows a leading current.                       |                      |
| <b>Resolution</b>  | 0.1°  |                      |
| <b>Accuracy</b>  | ± 4°  |                      |
| <b>Frequency measurement (for voltage range &gt; 80 V)</b>                       |   |                      |
| <b>Measurement range</b>   | 45 to 80 Hz   |                      |
| <b>Resolution</b>  | 0.1 Hz  |                      |
| <b>Accuracy</b>  | ± (1 % rdg + 10D) for voltage > 80 V  |                      |

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### Specifications (continued)

#### Rotary field detection (for conductor voltages > 80 V)

Display for clockwise rotary field: , Display for counterclockwise rotary field: 

#### Energy measurement – active power (kWh) Display of the total value of all active power values

|               |                     |
|---------------|---------------------|
| Accuracy      | ± (3.5% rdg. + 20D) |
| Sampling Rate | 1 second            |
| Range         | Resolution          |
| 3.999 kWh     | 0.001 kWh           |
| 39.99 kWh     | 0.01 kWh            |
| 399.9 kWh     | 0.1 kWh             |
| 3.999 MWh     | 0.001 MWh           |
| 39.99 MWh     | 0.01 MWh            |
| 119.3 MWh     | 0.1 MWh             |

#### Energy measurement – apparent power (kVAh) Display of the total value of all apparent power values.

|               |                     |
|---------------|---------------------|
| Accuracy      | ± (3.5% rdg. + 20D) |
| Sampling Rate | 1 second            |
| Range         | Resolution          |
| 3.999 kVAh    | 0.001 kVAh          |
| 39.99 kVAh    | 0.01 kVAh           |
| 399.9 kVAh    | 0.1 kVAh            |
| 3.999 MVAh    | 0.001 MVAh          |
| 39.99 MVAh    | 0.01 MVAh           |
| 119.3 MVAh    | 0.1 MVAh            |

#### Energy measurement – idle power (kvarh) Display of total values of all idle power values.

|               |                     |
|---------------|---------------------|
| Accuracy      | ± (3.5% rdg. + 20D) |
| Sampling Rate | 1 second            |
| Range         | Resolution          |
| 3.999 kvarh   | 0.001 kvarh         |
| 39.99 kvarh   | 0.01 kvarh          |
| 399.9 kvarh   | 0.1 kvarh           |
| 3.999 Mvarh   | 0.001 Mvarh         |
| 39.99 Mvarh   | 0.01 Mvarh          |
| 119.3 Mvarh   | 0.1 Mvarh           |

#### Harmonics measurement This measurement is only possible via a PC.

Measurement up to the 31st harmonics

|                                     |                        |
|-------------------------------------|------------------------|
| Measurement inputs                  | U1, U2, U3, I1, I2, I3 |
| Voltage range                       | > 80 V                 |
| Current range                       | > 50 A                 |
| Sampling range                      | approx. 3 s.           |
| Sampling resolution per measurement | 64 points              |

### Technical Data – General Information

|                            |  |
|----------------------------|--|
| Display                    | multiple function LCD  |
| Refresh rate               | approx. 2 seconds  |
| Backlight                  | automatic-power-off after approx. 30 s   |
| Data logger                | 512 Kb, non-volatile memory<br>max. 21 000 measurement values, max. 10 measurement series<br>0max. 10 000 measurement values for on measurement series |
| Sampling rate (adjustable) | 5 seconds, 30 seconds, 1 min, 2 min  |
| Data transfer              | via optically isolated RS-232 interface  |
| Manual data memory         | Max: 99 measurement  |

## PQ55A Compact Power Analyzer

## Data Sheet

### Technical Data – General Information (continued)

|  |   |                   |
|--|---|-------------------|
| Power supply   | 8 x 1.5V batteries LR6 (Alkaline)   |                   |
| Battery life cycle   | typ. 50 h   |                   |
| Auto-power-off (can be switched off)                                   | after approx. 30 min  |                   |
| Internal memory Speicher   | 1 x 3 V-Lithium battery CR2032  |                   |
| Battery life cycle   | Typ. 2400 h   |                   |
| Mains adapter  | 12 - 15 V/300 mA  |                   |
| Electrical supply voltage  | 230 VAC (+10 %/-20 %)   |                   |
| Frequency range  | 42 to 63 Hz   |                   |
| Power consumption  | approx. 10 VA   |                   |
| Overvoltage class  | CAT III 600 V   |                   |
| Degree of contamination  | 2   |                   |
| Protection   | II  |                   |
| Type of protection   | IP 30   |                   |
| Dimensions (L x W x H)   | Measurement instrument  | 235 x 117 x 54 mm |
|  | Current clamp   | 193 x 88 x 40 mm  |
| Weight   | Measurement instrument (incl. Batteries)  | approx. 730 g     |
|  | Current clamp   | approx. 335 g     |
| Height above sea level   | up to 2000 m  |                   |
| Service temperature range  | 0°C to +50°C/ max. 80% rel. humidity,<br>0°C to +40°C/ max. 80% rel. humidity (mains power supply unit) |                   |
| Storage temperature range  | -10°C to +60°C/ max. 70% rel. humidity  |                   |
| Temperature coefficient for the ranges 0°C to +18°C and +28°C to +50°C | 0.1/K times the specified accuracy  |                   |

### Included Accessories

#### Power Analyzer

- 4 pieces current clamps 1000 A
- 4 pieces alligator clips, isolated
- 4 pieces safety test leads
- 8 pieces 1.5 V batteries LR6
- mains adapter
- RS-232 cable
- large carrying bag
- operation instructions
- PC software (for Windows ME/2000/XP)



### Amprobe® Test Tools

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