AMPROBE®

Data Sheet

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)

CAT III 600V

C UL US N10140

CE

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

Voltage measurement	3 input channels with common reference point "N"	
Measurement range	0 to 600 Vrms	
Display range	0 to 999.9 Vrms	
Resolution	0.1V	
Accuracy	± (1% rdg + 10D) for voltage > 80 V	
Mains frequency	50 Hz	
Input impedance	2 MOhm	
Overload protection	1000 Vrms	
Current measurement		
Measurement range	Input I1, I2, I3	3 A to 999.9 A
	Input I4	3 A to 250 A
Display range	0 A to 999.9 A	
Resolution	0.1 A	
Accuracy	± (2.5 % rdg +15 D)	
Reduction ratio of current clamp	0.35 mV/A	
Clamp opening	40 mm	
Admissible overload	10% (for sinusoidal wave form); max. 30 seconds	
Active power P Display of active power of individual input or total value, as desired		
Display range	0 to 999.9 kW A negative active power can be recognised by the sign "-".	
Resolution	0.1 kW	
Accuracy (for PF ≥ 0,5)	± (3.5 % rdg + 20 D)	
Accuracy (for PF < 0,5)	± (4.5 % rdg + 40 D)	
Apparent power S (calculation from the rms values of voltage and current) Display of apparent power of an individual input or the total value, as desired		
Display range	0 – 999.9 kVA	
Resolution	0.1 kVA	
Type of connection 1P2W	Accuracy (for PF ≥ 0,5)	± (3.5 % rdg + 20 D)
	Accuracy (for PF < 0,5)	± (4.5 % rdg + 40 D)
Type of connection 1P3W, 3P3W, 3P4W		
	Accuracy (for PF ≥ 0,5)	± (3.5 % rdg + 20 D)
	Accuracy (for PF < 0,5)	± (7.5 % rdg + 40 D)
Idle power Q (calculation out of active and apparent power) Display of idle power of an individual input or the total value, as desired		
Display range	0 to 999.9 kVAr A negative sign "-" shows a leading current.	
Resolution	0.1 kVAr	
Formula	$Q=\sqrt{S^2-P^2}$	
Power factor PF (cos (f) (calculation out of active and apparent power) Display of power factor of an individual input or the total value, as desired		
Measurement range	0 ... +1 A negative sign "-" shows a leading current.	
Resolution	0.001	
Accuracy	± (1 % rdg + 25 D)	
Phase angle (f) (calculation out of power factor) Display of phase angle of an individual input or the total value, as desired		
Measurement range	0° to 90° A negative sign "-" shows a leading current.	
Resolution	0.1°	
Accuracy	± 4°	
Frequency measurement (for voltage range > 80 V)		
Measurement range	45 to 80 Hz	
Resolution	0.1 Hz	
Accuracy	± (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 max. 21 000 measurement values, max. 10 measurement series 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

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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 Current clamp	235 x 117 x 54 mm 193 x 88 x 40 mm
Weight	Measurement instrument (incl. Batteries) Current clamp	approx. 730 g approx. 335 g
Height above sea level	up to 2000 m	
Service temperature range	0°C to +50°C/ max. 80% rel. humidity, 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)

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