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Technical Clamp-On Tester PCE-PA 8300

PCE-PA 8300 3-Phase Power Meter

Three-phase power analyzer with 3 current clamps, LCD graphic display and SD card memory

The easy-to-use PCE-PA 8300 3-phase power meter is the ideal tool for performing power and harmonics analysis as well as for measuring network capacity. The PCE-PA 8300 is a three-phase power analyzer that features:

- Voltage measurement range of 10 ... 600 V AC
- Current measurement range of 20 ... 1,200 A AC (Set 1) or 30 ... 3,000 A AC (Set 2)
- Performance measurement range of 0 kW ... 9,999 MW (VA/VAR)
- SD card memory
- LCD graphic display
- Durable enclosure
- Compatibility with various manufacturers' power clamps
- Adjustable back-up interval, allowing for long-term data collection
- Auto-setting of measurement range (AC V)
- Power efficiency, delay angle and frequency measurement
- Apparent, effective and reactive power measurement
- Harmonic spectrum measurement up to the 50th order

The PCE-PA 8300 is available for purchase in two different configurations:

Set 1: Includes 3 current clamps for measurements up to 1,200 A AC

Set 2: Includes 3 flexible Rogowski coils for measurements up to 3,000 A AC (for an additional fee)

Please choose either Set 1 or Set 2 before adding the PCE-PA 8300 to your cart.

Electrical specifications

Voltage measurement (AC V)

| Measurement range | Resolution | Accuracy |
|-----------------------------------|------------|-------------------|
| 10 V ... 600 V (phase to neutral) | 0.1 V | ± (0.5 % + 0.5 V) |
| 10 V ... 600 V (phase to phase) | 0.1 V | ± (0.5 % + 0.5 V) |

Current measurement (AC A) Set 1

| Measurement range | Resolution | Accuracy |
|-------------------|-------------------------------------|-------------------|
| 20 A | 0.001 A (< 10 A) 0.01 A (≥ 10 A) | ± (0.5 % + 0.1 A) |
| 200 A | 0.01 A (< 100 A) 0.1 A (≥ 100 A) | ± (0.5 % + 0.5 A) |
| 1200 A | 0.1 A (< 1000 A) 1 A (≥ 1000 A) | ± (0.5 A + 5 A) |

Current measurement (AC A) Set 2

| Measurement range | Resolution | Accuracy |
|-------------------|-------------------------------------|-------------------|
| 30 A | 0.001 A (< 10 A) 0.01 A (≥ 10 A) | ± (0.5 % + 0.1 A) |
| 300 A | 0.01 A (< 10 A) 0.1 A (≥ 10 A) | ± (0.5 % + 0.5 A) |
| 3000 A | 0.1 A (< 1000 A) 1 A (≥ 1000 A) | ± (0.5 A + 5 A) |

Effective power

| Measurement range | Resolution | Accuracy |
|---------------------|------------|--------------------|
| 0 KW ... 9.999 KW | 0.001 KW | ± (1 % + 0.008 KW) |
| 10 KW ... 99.99 KW | 0.01 KW | ± (1 % + 0.08 KW) |
| 100 KW ... 999.9 KW | 0.1 KW | ± (1 % + 0.8 KW) |
| 1 MW ... 9.999 MW | 0.001 MW | ± (1 % + 0.008 MW) |

Apparent Power

| Measurement range | Resolution | Accuracy |
|-----------------------|------------|---------------------|
| 0 KVA ... 9.999 KVA | 0.001 KVA | ± (1 % + 0.008 KVA) |
| 10 KVA ... 99.99 KVA | 0.01 KVA | ± (1 % + 0.08 KVA) |
| 100 KVA ... 999.9 KVA | 0.1 KVA | ± (1 % + 0.8 KVA) |
| 1 MVA ... 9.999 MVA | 0.001 MVA | ± (1 % + 0.008 MVA) |

Reactive Power

| Measurement range | Resolution | Accuracy |
|-----------------------|------------|----------------------|
| 0 KVAR ... 9.999 KVAR | 0.001 KVAR | ± (1 % + 0.008 KVAR) |

| | | |
|-------------------------|------------|-----------------------------------|
| 10 KVAR ... 99.99 KVAR | 0.01 KVAR | $\pm (1 \% + 0.08 \text{ KVAR})$ |
| 100 KVAR ... 999.9 KVAR | 0.1 KVAR | $\pm (1 \% + 0.8 \text{ KVAR})$ |
| 1 MVAR ... 9.999 MVAR | 0.001 MVAR | $\pm (1 \% + 0.008 \text{ MVAR})$ |

Active Energy

| Measurement range | Resolution | Accuracy |
|-------------------------|------------|----------------------------------|
| 0 KWH ... 9.999 KWH | 0.001 KWh | $\pm (2 \% + 0.008 \text{ KWh})$ |
| 10.00 KWH ... 99.99 KWH | 0.01 KWh | $\pm (2 \% + 0.08 \text{ KWh})$ |
| 100.0 KWH ... 999.9 KWH | 0.01 KWh | $\pm (2 \% + 0.8 \text{ KWh})$ |
| 1 MWH ... 9.999 MWH | 0.001 MMh | $\pm (2 \% + 0.008 \text{ MWh})$ |

Apparent Energy

| Measurement range | Resolution | Accuracy |
|-----------------------------|-------------|----------------------------------|
| 0 KVARH ... 9.999 KVARH | 0.001 KVARh | $\pm (2 \% + 0.008\text{KVARh})$ |
| 10.00 KVARH ... 99.99 KVARH | 0.01 KVARh | $\pm (2 \% + 0.08\text{KVARh})$ |
| 100.0 KVARH ... 999.9 KVARH | 0.01 KVARh | $\pm (2 \% + 0.8\text{KVARh})$ |
| 1 MVARH ... 9.999 MVARH | 0.001 MVARh | $\pm (2 \% + 0.008\text{MVARh})$ |

Power Factor

| Measurement range | Resolution | Accuracy |
|-------------------|------------|------------|
| 0 ... 1 | 0.01 | ± 0.04 |

Delay Angle

| Measurement range | Resolution | Accuracy |
|-------------------|------------|-----------|
| -180 ° ... +180 ° | 0.1 ° | $\pm 1 °$ |

Frequency

| Measurement range | Resolution | Accuracy |
|-------------------|------------|----------------------|
| 45 Hz ... 65 Hz | 0.1 Hz | $\pm 0.1 \text{ Hz}$ |

Harmonic of AC Voltage at 50 / 60 Hz

| Measurement range | Resolution | Accuracy |
|-------------------|------------|----------|
|-------------------|------------|----------|

| | | |
|-------------------|------------------------|---|
| 1 ... 20th order | 0.001 ... 1 A 0.1 % | $\pm (2 \% + 0.5 \text{ A})$ $\pm (2 \% + 10 \text{ Digit})$ |
| 21 ... 30th order | 0.001 ... 1 A 0.1 % | $\pm (2 \% + 0.5 \text{ A})$ $\pm (2 \% + 10 \text{ Digit})$ |
| 21 ... 50th order | 0.001 ... 1 A 0.1 % | not specified |

General specifications

| | | |
|---|---|--|
| Display | 3.7 " point-matrix LCD (320 * 240 pixel) with LED background lights | |
| Safety standards | IEC1010CAT III 600V | |
| Input resistance AC V | 10 MOhm | |
| Operating frequency of current clamp | 40 Hz ... 1 kHz | |
| Tested operating frequency of current clamp | 45 Hz ... 65 Hz | |
| Overload protection | AC V AC A | 720 V RMS 1300 A with current clamp |
| Data Storage | SD memory card | |
| Recording interval | 1 second | |
| Data logging function | logging with real-time speed on SD memory card | |
| Filing interval | 2 ... 7200 seconds | |
| Data output (only for live display on computer) | per USB or RS232, depending on connection cable | |
| Operating temperature | 0 °C ... +50 °C | |
| Surrounding humidity | < 80 % RH 8 x 1.5 V AA batteries | |
| Voltage supply | 9 V adapter | |
| Current drain | measurement device: 300 mA DC current clamp: 34 mA DC | |
| Maximum wire diameter | 50 mm | |
| Weight | measurement device: 948 g (incl. battery) current clamp: 467 g (incl. cable) | |
| Dimensions | device: 225 x 125 x 64 mm current clamp: 210 x 64 x 33 mm clamp jaw: 86 mm (exterior) | |

Delivery contents

- 1 x PCE-PA 8300 3-phase power meter
- 3 x current clamps (Set 1) or 3 x flexible Rogowski coils (Set 2)
- 4 x insulated alligator clips
- 4 x safety test lines
- 6 x 1.5 V AA batteries
- 1 x 9 V mains adapter
- 1 x SD memory card
- 1 x carrying case
- 1 x user manual