

# COM5003

3 Phase Reference Standard  
Accuracy 0.005%



- ▶ Full NIST Traceability
- ▶ Highest Accuracy in Its Class
- ▶ Excellent Long-Term Stability



The COM5003 Reference Standard is part of the ZERA/Powermetrix high precision measuring instrument series. With the highest accuracy of 0.005 % (50 ppm), the COM5003 presents its new innovative digital technology and extended features for measurement. As a primary standard, the COM5003 is designed for testing current and voltage meters as well as single- or three-phase power and energy meter testing systems. This precise technology is especially useful in metrological institutes, official utility lab applications, and other environments for energy suppliers or manufacturers of electric meters and designed for integration of existing systems. All operation, measurements and data visualizations can be viewed using by the COM5003's simple user interface and 9" touchscreen.

**A CLASS OF ITS OWN**

# COM5003

Highest Accuracy in its Class (0.005%)

## Direct Inputs:

- **AC Current:**
  - 3 Inputs: 0.5mA to 160A
  - Phase: < 0.001° from 50mA to 100A
  - Measurement Accuracy:
    - 100A to 160A: <0.004%
    - 50mA to 100A: <0.002%
    - 10mA to 50mA: <0.004%
    - 1mA to 10mA: <0.007%
- **AC Voltage:**
  - 4 Inputs: 100mV to 580V AC
  - Phase: < 0.001° from 30V to 480V
  - Measurement Accuracy:
    - 1V to 30V: <0.004%
    - 30V to 480V: <0.001%
- **DC Reference (±10V):**
  - Max input: 10.5V
  - Measurement Accuracy: 0.001%
  - Temp Drift: <  $1 \times 10^6 / C$

## Power & Energy Measurement:

- **W, Whr, VAR, VARhr, VA, VAhr**
  - 100A to 160A: <0.0075%
  - 50mA to 100A: <0.005%
  - 10mA to 50mA: <0.0075%
  - 1mA to 10mA: <0.01%
- **Temp Drift:** <  $1 \times 10^6 / C$
- **Long term stability:** <0.003%/Year

## System Connectivity:

- (1) Meter pulse input: 12V max, 100mA
- (4) Calibration pulse inputs: 10MHz, -0.5V to 20V, user configured
- (4) Calibration pulse outputs: 2MHz max, 13.5V max, user configured
- (4) USB 2.0 ports for keyboard, mouse, memory devices, etc.
- (1) Ethernet port: RJ45 Standard IEEE 802.3
- (1) WLAN port: IEEE 802.11 b/g/n; 2.4 GHz

## Safety:

- Degree of protection IP-40
- CE Certification

## Other:

- Power Supply: 115V/230V, 50-60Hz; internally fused
- Display: 9" full color capacitive touchscreen
- Humidity: 0 % to 95 %, non-condensing
- Operational Range: +5 to 45°C
- Storage Range: -15 to 65°C
- Dimensions (W x H x D): 19" x 8" x 18.5"
- 2-Year Warranty

*\*Please See Detailed Specifications*

## FEATURES

- Operation via capacitive touchscreen or keyboard/mouse
- Graphical displays of vector, waveforms, and harmonics
- Integrated Data recording to SQLite format and storage on external device
- Bi-directional measurements at user defined intervals
- DC voltage standard reference comparison