

Data Sheet

Frequency Counters  
Models 1823A, 1856D



Model 1823A



Model 1856D

The 1823A and 1856D are reciprocal 2.4 GHz and 3.5 GHz frequency counters that are microprocessor controlled. Their LED displays can provide up to nine digits of resolution using an external time base with a 10 s gate time. The high accuracy, sensitivity, and versatility of these counters make them an extremely valuable instrument to scientists, engineers, and communications technicians for a broad spectrum of laboratory and service applications.

Features and Benefits

- ±1PPM Time base stability
- Trigger level function (1823A only)
- Frequency ratio measurement function (1823A only)
- Time interval measurement function (1823A only)
- RPM measurement function (1856D only)
- External frequency standard input
- Bright LED display
- Attenuator
- Period
- Total
- Low pass filter
- Line filter
- RS232C Interface

| Specifications              | 1823A                                                                                                                                      | 1856D                                                                                                                                        |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Range                       | 0.1 Hz - 2.4 GHz                                                                                                                           | 0.1 Hz - 3.5 GHz                                                                                                                             |
| Frequency                   | √                                                                                                                                          |                                                                                                                                              |
| Totalize                    | √                                                                                                                                          |                                                                                                                                              |
| Period                      | √                                                                                                                                          |                                                                                                                                              |
| Time Base Stability         | ± 1ppm                                                                                                                                     |                                                                                                                                              |
| Best Resolution             | 1 nHz                                                                                                                                      |                                                                                                                                              |
| No. of Digits               | 9                                                                                                                                          |                                                                                                                                              |
| Display Hold                | √                                                                                                                                          |                                                                                                                                              |
| Low Pass Filter             | √                                                                                                                                          |                                                                                                                                              |
| Sensitivity                 | 250 mV (0.1 Hz - 1 Hz),<br>30 mV (1 Hz - 100 MHz),<br>50 mV (80 MHz - 150 MHz),<br>50 mV (150 MHz - 2.0 GHz),<br>60 mV (2.0 GHz - 2.4 GHz) | 30 mV (0.1 Hz - 100 MHz),<br>15 mV (80 MHz - 2 GHz),<br>20 mV (2 GHz - 3.0 GHz),<br>30 mV (3.0 GHz - 3.2 GHz),<br>50 mV (3.2 GHz - 3.5 GHz), |
| Remote Interface            | RS232                                                                                                                                      |                                                                                                                                              |
| Self-Test                   | √                                                                                                                                          |                                                                                                                                              |
| Time Interval Measurement   | √                                                                                                                                          | -                                                                                                                                            |
| Frequency Ratio Measurement | √                                                                                                                                          | -                                                                                                                                            |
| AC Input                    | 115/230 V (50/60 Hz)                                                                                                                       |                                                                                                                                              |
| Weight                      | 5.5 lbs (2.5 kg)                                                                                                                           |                                                                                                                                              |
| Dimensions (W x H x D)      | 9.4" x 3.5" x 10.6" (239 x 89 x 269 mm)                                                                                                    |                                                                                                                                              |
| One-Year Warranty           |                                                                                                                                            |                                                                                                                                              |