

Endevco®

ReferenceMate portable reference source REF2510 and REF2520 handheld shaker



REF2520



Front panel controls



REF2520R

Key features

- 1 g selectable reference source (61.4 Hz, 100.0 Hz or 159.2 Hz)
- Crossover frequencies designed for easy velocity verification
- Verify and adjust entire systems from transducers to measurement equipment
- Selections are stored in / internal memory for quick recall
- Standard AA battery operation for field use
- Test vibration sensors weighing up to 250 g
- Accessories for every application

The ReferenceMate portable vibration reference source enables users in the field to easily verify sensor performance and the integrity of the cabling between the sensor and the online system. A built-in reference accelerometer assures that a 1 g test level is maintained for sensors weighing up to 250 grams.

Frequency of operation and measurement type (peak/RMS) are push button selected.

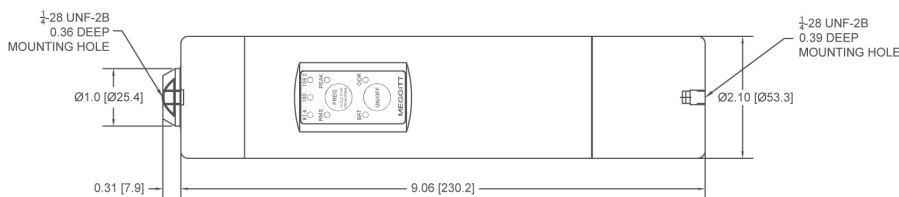
- 61.4 Hz for imperial measurements, where 1 g is equal to 1 inch per second (ips), for verification of acceleration and velocity
- 100.0 Hz to confirm sensor calibration value
- 159.2 Hz for metric measurements, where 1 g is equal to 9.81 m/sec² and 9.81 mm/sec

LEDs notify the user when battery condition falls below operational levels or if the unit is overloaded. For calibration verification, reference test points are provided to verify the output of the internal sensor.

The ReferenceMate is available in two different kits:

- REF2510 Industrial Kit
- REF2520 Measurement kit.

Additionally, ruggedized versions each kit are also available. The REF2510R and REF2520R include a protective, thermoplastic rubber boot to protect the shaker from scratches, scrapes and drops. The unique design allows access to all controls as well as an anti-roll feature to ensure a lasting investment.



Meggitt Sensing Systems

Our measurement product competencies:

Piezoelectric accelerometers | Piezoresistive accelerometers | Isotron accelerometers | Variable capacitance accelerometers | Pressure transducers | Acoustic sensors | Electronic instruments | Calibration systems | Shakers | Modal hammers | Cable assemblies

MEGGITT
smart engineering for
extreme environments

Endevco®

ReferenceMate portable reference source

REF2510 and REF2520 handheld shaker

Specifications

| | | | | |
|--|------------------|---|---------------------------------|---------------------------------|
| Operating frequency | ± 1% | 61.4 Hz | 100.0 Hz | 159.2 Hz |
| Acceleration output¹ | ± 3% | 1.00 g (9.81 m/s ²) | 1.00 g (9.81 m/s ²) | 1.00 g (9.81 m/s ²) |
| Velocity output¹ | | 1.00 ips (25.4 mm/s) | 0.61 ips (15.6 mm/s) | 0.39 ips (9.8 mm/s) |
| Displacement output¹ | | 2.6 mils (65.9 μm) | 0.98 mils (24.8 μm) | 0.39 mils (9.8 μm) |
| Operating cycles, 250 gram load² | | 1,280 | 320 | 240 |
| Mounting thread | | 1/4-28 female | | |
| Mounting torque, maximum | | 10 in-lb (112 N-cm) | | |
| Distortion, 100-250 gram load | | ≤3% | | |
| Load, min - max | | none - 8.8 oz (250 g) | | |
| Automatic switch off time | | approximately 90 ±10 sec defeatable | | |
| Temperature range | operating | +15 to +130° F (-10 to +55° C) | | |
| | storage | -40 to +185° F (-40 to +85° C) | | |
| Ramp-up time | | ≤3 sec | | |
| Internal battery | | 4x AA alkaline batteries | | |
| DC power | | 6 VDC ±5%, 1A, center positive | | |
| Dimensions | | diameter: 2.10 in (5.33 cm), height: 9.25 in (23.50) | | |
| Weight, with batteries | | 32 oz (900 g) | | |
| Case material | | 6061 aluminum, black hard-coat anodized | | |
| IP rating | | IP54 | | |
| Boot Material (REF2510R and REF2520R) | | Thermoplastic rubber | | |

¹ User selectable: peak or rms

² Using supplied alkaline batteries

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REF2510 and REF2520 handheld shaker

Ordering information

REF2510 industrial kit

| | |
|--------------------------------|-------------------|
| Handheld shaker | REF2500 |
| AA batteries (4x) | A69203 |
| Calibration sheet | 94511 |
| Belt clip | A61164 |
| Wrench | A61088 |
| Carrying case with foam insert | 80315-01/80311-01 |
| 1/4-28 to 1/4-28 mounting stud | SF6 |

REF2510R industrial kit, ruggedized

| | |
|--------------------------------|-------------------|
| Handheld shaker | REF2500R |
| AA batteries (4x) | A69203 |
| Calibration sheet | 94511 |
| Belt clip | A61164 |
| Wrench | A61088 |
| Carrying case with foam insert | 80315-01/80311-03 |
| 1/4-28 to 1/4-28 mounting stud | SF6 |

REF2520 measurement kit

| | |
|--------------------------------|-------------------|
| Handheld shaker | REF2500 |
| AA batteries (4x) | A69203 |
| Calibration sheet | 94511 |
| Belt clip | A61164 |
| Wrench | A61088 |
| Carrying case with foam insert | 80315-01/80311-01 |
| 1/4-28 to 1/4-28 mounting stud | SF6 |
| 1/4-28 to 10-32 adaptor stud | SF3 |
| 1/4-28 to flat plate | 42974 |
| 1/4-28 to 2-56 mounting stud | 42976-1 |
| 1/4-28 to 6-32 mounting stud | 42976-3 |

REF2520R measurement kit, ruggedized

| | |
|--------------------------------|-------------------|
| Handheld shaker | REF2500R |
| AA batteries (4x) | A69203 |
| Calibration sheet | 94511 |
| Belt clip | A61164 |
| Wrench | A61088 |
| Carrying case with foam insert | 80315-01/80311-03 |
| 1/4-28 to 1/4-28 mounting stud | SF6 |
| 1/4-28 to 10-32 adaptor stud | SF3 |
| 1/4-28 to flat plate | 42974 |
| 1/4-28 to 2-56 mounting stud | 42976-1 |
| 1/4-28 to 6-32 mounting stud | 42976-3 |
| 1/4-28 to 10-32 mounting stud | 42975-1 |

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Optional accessories

REF001 universal mounting kit

| | |
|--|----------|
| 1/4-28 to 10-32 adaptor stud | SF3 |
| 1/4-28 to 8-32 adaptor plate for 997 and 712 sensors | 13249-01 |
| 1/4-28 to 10-32 adaptor plate | 13249-02 |
| 90° adaptor plate for 993 series sensors | 13267-01 |

REF002 metric mounting kit

| | |
|--|----------|
| 1/4-28 to M6 adaptor stud | SF6M-1 |
| 1/4-28 to M8 adaptor stud | SF6M |
| 1/4-28 to M4 adaptor plate for 997 and 712 sensors | 13249-03 |
| 1/4-28 to M6 adaptor plate for captive screw sensors | 13249-04 |
| 1/4-28 to M8 adaptor plate for captive screw sensors | 13249-05 |

Universal AC adaptor, international compatibility REF003

2 pole magnet MD055

1/4-28 to M2.5 adaptor stud 43274

1/4-28 to 4-40 mounting base 43235

Contact

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Notes

1. Maintain high levels of precision and accuracy using Meggitt's factory calibration services. Call Meggitt's inside sales force at 800-982-6732 for recommended intervals, pricing and turn-around time for these services as well as for quotations on our standard products.



Continued product improvement necessitates that Meggitt reserve the right to modify these specifications without notice. Meggitt maintains a program of constant surveillance over all products to ensure a high level of reliability. This program includes attention to reliability factors during product design, the support of stringent Quality Control requirements, and compulsory corrective action procedures. These measures, together with conservative specifications have made the name Endevco synonymous with reliability. 082415

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