

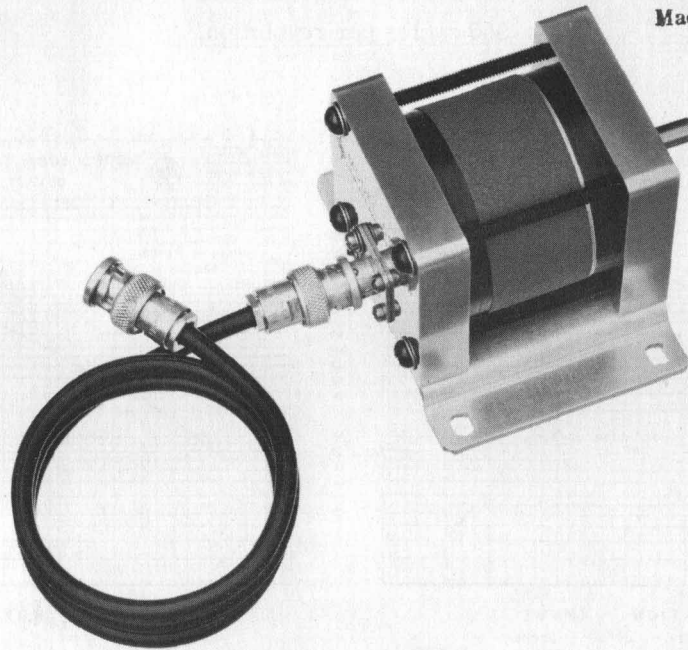


TECHNICAL DATA

HEWLETT-PACKARD COMPANY • 1501 PAGE MILL ROAD • PALO ALTO, CALIFORNIA, U. S. A.
CABLE "HEWPACK" TELEPHONE DAVENPORT 6-7000

MODEL 508A, B, C, D TACHOMETER GENERATORS

STILES ASSOCIATES, INC.
110 - 150th Ave.
Madeira Beach P. O. Box 8457
St. Petersburg 8, Florida



Models 508 are compact, low-torque tachometer generators, especially suited for use with Frequency Counters and Electronic Frequency Meters. With an Electronic Frequency Counter, the Model 508 is capable of providing shaft speed measurements accurate within ± 1 rpm or better.

The Model 508A produces 60 cycles of output for each revolution of its drive shaft. Thus, when it is connected to an instrument, which reads frequency in cycles per second, shaft speed is indicated directly in rpm without the need for a conversion. In a similar manner, the other Model 508 models make possible direct indications in rpm or rps.

The useful shaft speed range for the Model 508A Tachometer Generator is from approximately 40 rpm to 40,000 rpm; so it is entirely suitable for making measurements at all shaft speeds normally encountered. Output voltage increases approximately linearly from a minimum of about 0.2 volt rms at minimum rated speed to a maximum of about 10 volts at 5000 rpm. At shaft speeds above 5000 rpm the output voltage decreases gradually to about 0.2 volt at maximum rated speed. Outside the rated speed range, where output voltage may be insufficient to operate electronic counters or electronic frequency meters, a simple voltage amplifier such as the Model 450A Stabilized Laboratory Amplifier, may

be used to increase the tachometer generator output voltage to a suitable level. The Models 508B, 508C, and 508D have characteristics similar to Model 508A, but their output voltages peak at slower shaft speeds, and they have a different number of output cycles per shaft revolution.

The relationship between output voltage and shaft rpm over the range up to about 5000 rpm provides a very useful auxiliary function for the Tachometer Generator. This relationship makes it possible to present on an oscilloscope screen a curve describing the instantaneous rate of rotation of a shaft as a function of time. Thus, analysis of the instantaneous effect on rotational equipment from the action of clutches, brakes or other mechanical components, is quickly made.

For this application, the output of the Tachometer Generator is connected to the vertical deflection plates of an oscilloscope, while the horizontal deflection is controlled by the internal time base, or by some other appropriate means. Since the data presented on the oscilloscope screen is usually non-repetitive, a photographic record is normally made. Torsional vibration, harmonic-ringing and the action of intermittent motions are shown clearly as a function of time by variations in the height of the oscilloscope trace.

Model 508 EEM 2900

00361-2

SPECIFICATIONS

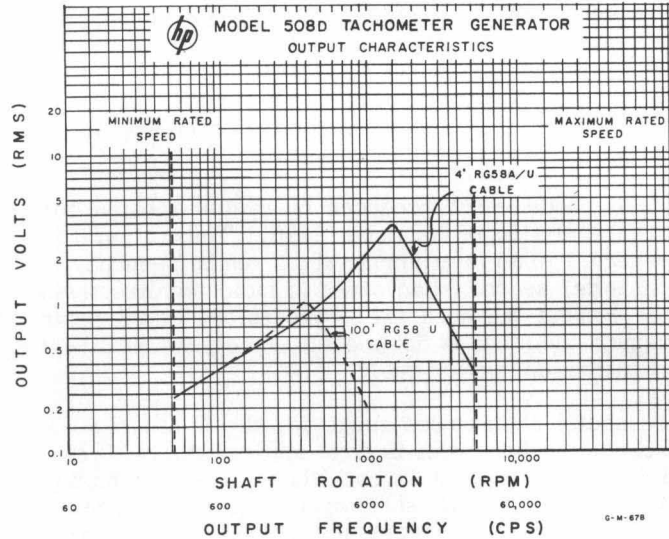
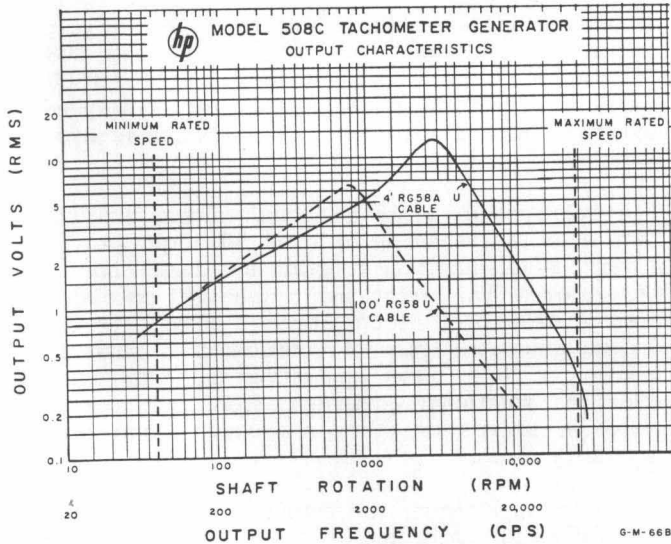
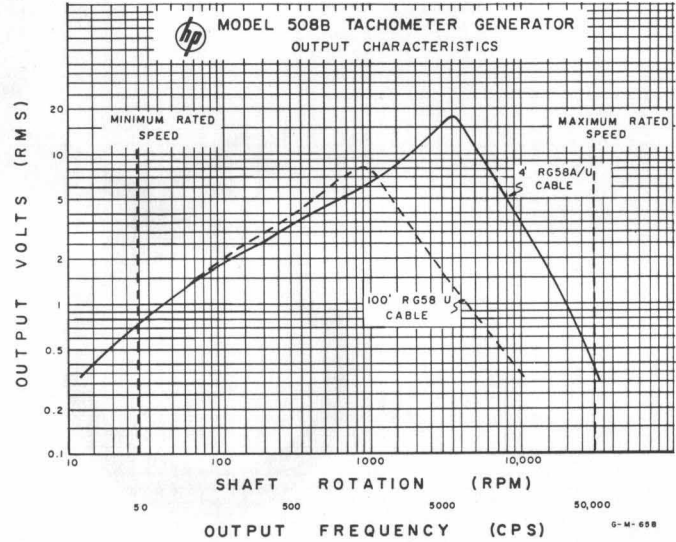
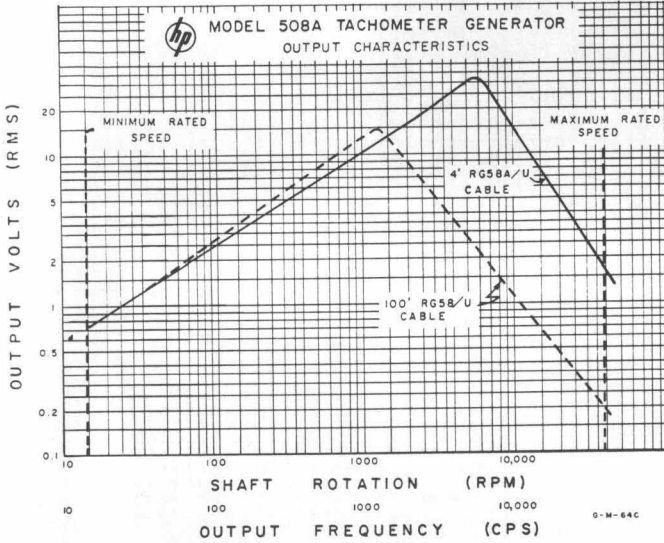
OUTPUT FREQUENCY

SHAFT SPEED RANGE

- Model 508A:
- Model 508B:
- Model 508C:
- Model 508D:

- 60 cycles per revolution.
- 100 cycles per revolution.
- 120 cycles per revolution.
- 360 cycles per revolution.

- 15 rpm to 40,000 rpm.
- 30 rpm to 30,000 rpm.
- 40 rpm to 25,000 rpm.
- 50 rpm to 5000 rpm.



Typical Output Curves of Model 508 Tachometer Generators. Cables terminated by 1 megohm in shunt with 53 μf .

SPECIFICATIONS (cont'd)

Running Torque:
Approximately 0.15 in. -oz.

Peak Starting Torque:
Approximately 4 in. -oz.

Size:
2-7/16 in. high x 3-1/2 in. wide x 3-3/4 in. deep.
(overall)

Mounting Dimensions:
Four 3/16 diameter mounting holes on 2 in. centers
front-to-back, 3 in. centers side-to-side.

Weight:
Approximately 2 lbs. net; 3 lbs. packed.

Accessories Furnished:
Ⓜ AC-16K Cable Assembly, 4 feet of RG-58C/U
50 ohm coaxial cable terminated at each end with
UG88/U Type male BNC connectors.

Price:
Ⓜ Model 508A Tachometer Generator,
60 cycles per rev. \$125.00.
Ⓜ Model 508B Tachometer Generator,
100 cycles per rev. \$125.00.
Ⓜ Model 508C Tachometer Generator,
120 cycles per rev. \$125.00.
Ⓜ Model 508D Tachometer Generator,
360 cycles per rev. \$125.00.

Prices f.o.b. factory

DATA SUBJECT TO CHANGE WITHOUT NOTICE

7/30/60
7/30/61

