

Model 8852

FREQUENCY CONVERTER

0.01 to 18 GHz**PLANAR CROWN®
CONNECTOR SYSTEM**

Extends Your VM-7 Capabilities to 18 GHz!!!

The Frequency Converter Model 8852 is a frequency conversion device that is intended for use with any TEGAM Model VM-7 Attenuator and Signal Calibrator over the frequency band of .01 to 18 GHz. The 8852 extends the VM-7's capabilities to measure devices at frequencies other than 30 MHz. Other features include:

- **AUX OUTPUT** - This RF output supplies a 2 to 18 GHz synthesized continuous wave signal in 2 KHz steps at +7 dBm, which can be used as a signal source for other applications.
- **IEEE-88 BUS PROGRAMMABLE:** The Model 8852 operational parameters are controlled over the IEEE-488 compatible bus using an external controller or an upgraded VM-7 with applicable software.
- **10 MHz REF INPUT/OUTPUT** - This instrument will either accept or provide a 10 MHz reference signal for system operation.
- **RACK MOUNTING** - This instrument can be stacked easily with other TEGAM instruments or mounted in any cabinet or rack designed according to MIL-STD-189 or EIA RS-310 using the appropriate rack mounting kit (P/N 187-1007-1).

Weinschel PLANAR CROWN® CONNECTOR SYSTEM

The use of Weinschel PLANAR CROWN® connectors at the two INPUT connectors provides the Model 8852 user with easy exchange of connector types and eliminates the need for adapters and other devices that would create additional insertion loss. This "Torque Free" type of connector also provides quick replacement of defective connectors. All crowns will mate nondestructively with connectors per MIL-STD-39012 (refer to Weinschel PLANAR CROWN® data sheet for more details).

SYSTEM OPERATION: The Model 8852 is easily configured into an attenuation measuring system with the addition of the TEGAM VM-7 and a signal source. This system is capable of performing attenuation measurements from 0.01 to 18 GHz. For detailed specifications and block diagrams of such a system, refer to the Model 8850 Attenuation Measurement System data sheet. The Frequency range can be extended even further to 40 GHz with the addition of the Model 8853 Frequency Converter.

ACCESSORIES

UPGRADE KIT (VM-7/8852), P/N 187-1009: For those customers who own a VM-7 with only one bus connector on the I/O Card, TEGAM offers an upgrade kit to allow your VM-7 to control the Model 8852 without a bus controller.

SPECIFICATIONS

SPECIFICATION	DESCRIPTION
INPUT FREQUENCY RANGE	LOW BAND: 10 MHz to 2 GHz HIGH BAND: 2 GHz to 18 GHz
FREQUENCY RESOLUTION	1 kHz from .01 to 2 GHz 2 kHz above 2 GHz
MAXIMUM INPUT LEVEL	+20 dBm
NOMINAL IMPEDANCE	50 Ω
MIXER COMPRESSION	+1 dBm (1 dB compression)
SWR AT RF INPUT CONNECTOR	LOW BAND (0.01-2 GHz) 3.0 maximum HIGH BAND (2-18 GHz) 3.0 maximum
CONVERSION GAIN (RF IN to 30 MHz)	0 dB nominal from 0.01 to 18 GHz
NOISE FIGURE	12 dB maximum
OUTPUT FREQUENCY	30 \pm 2 MHz
INTERNAL 10 MHz REFERENCE OSCILLATOR	Frequency Stability: \pm 1 ppm @ 0 to 50°C Output Level: + 10 dBm
EXTERNAL 10 MHz REFERENCE OSCILLATOR REQUIREMENTS	Input Impedance: 50 Ω Input Level: +5 dBm
AUX OUTPUT	2 to 18 GHz, +7 dBm \pm 1.5 dB
OPERATION	IEEE-488 bus control or VM-7 Local mode (Note: only if the VM-7 I/O card has been upgraded with two bus ports and applicable software)
REMOTE PROGRAMMABILITY	Compatible with IEEE-488 STD-1987.
CONNECTORS	RF INPUT PLANAR CROWN (female Type N) 10 MHz EXT INPUT female BNC 10 MHz OUTPUT female BNC 30 MHz OUTPUT female Type-N AUX OUTPUT female SMA Digital Interface 24 pin per IEEE-488
INPUT POWER REQUIREMENTS	100, 120, 220, 240 Vac \pm 10% @ 50 to 60 Hz
POWER CONSUMPTION	180 Watts
EMI	Designed to meet MIL-STD-461 for radiated emission and susceptibility.
DESIGN AND CONSTRUCTION	Designed to meet requirements of MIL-STD-28800D TYPE III, CLASS 5, STYLE E
ENVIRONMENTAL	Operating Temperature: 0 to 50°C Storage Temperature: -40 to +75°C Humidity: 95 %
DIMENSIONS	Height: 133.3 mm (5.21 in) Width: 426.7 mm (16.8 in) Depth: 619.8 (24.4 in)
WEIGHT	NET: 27.2 kg (65 lbs)