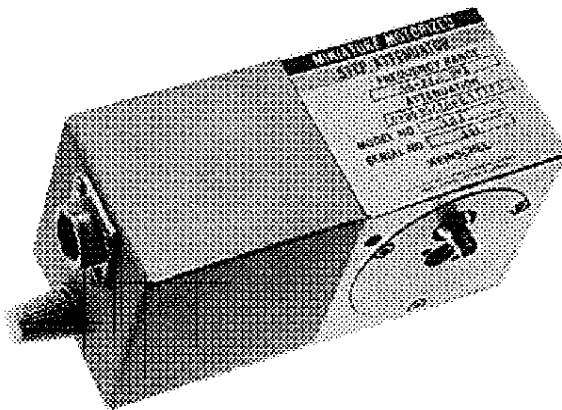


Models 101 & 103 MOTORIZED STEP ATTENUATORS

dc to 26.5 GHz

2 WATTS

3.5mm Connectors



LIFE EXPECTANCY: 1,000,000 steps

MAXIMUM SWR:

Frequency (GHz)	SWR
dc - 18	1.60
18 - 26.5	1.75

CHARACTERISTIC INSERTION LOSS, RESIDUAL:

dc-18 GHz: 1.0 dB maximum
18-26.5 GHz: 1.5 dB maximum

INCREMENTAL PHASE SHIFT WITH CHANGE IN ATTENUATION:

~0.25 per dB x f(GHz)

POWER RATING: 2 watts **average** to 25 °C ambient temperature, derated linearly to 1 watt @ 54 °C.
200 **watts** peak (5 msec pulse width; 0.5 % duty cycle)

POWER COEFFICIENT: <0.005 dB/dB/watt

TEMPERATURE COEFFICIENT: <0.0004 dB/dB/°C

TEMPERATURE RANGE:

Operating: 0 °C to +54 °C
Non-Operating: -54 °C to +54 °C.

CALIBRATION: Insertion loss and SWR data supplied at 0.05, 4.0, 8.0, 12.0, 18.0 and 26.5 GHz. Other test data can be provided at additional cost.

REPEATABILITY: ± 0.05 dB to 60 dB
± 0.1 dB to 90 dB

SWITCHING METHOD: dc gear motor, TTL BCD programming

SWITCHING SPEED:

Shortest Path: 1.25 seconds maximum, 1 second typical, between adjacent positions: 250 milliseconds maximum, 200 milliseconds typical

Non Zero Crossing: 2.5 seconds maximum, 2 seconds typical, between adjacent positions: 250 milliseconds maximum, 200 millisecond typical

On Command Operation: 2.5 seconds maximum, 2 seconds typical, between adjacent positions: 250 milliseconds maximum, 200 millisecond typical

MOTOR POWER: + 28 V (± 10%), 200 mA

FEATURES

- **Choice of Attenuation Ranges and Steps.**
- **Low RF Leakage** - 80 dB below input signal
- **High Reliability** - Contact mechanism which exceeds the requirements of MIL-A-24215 providing useful life beyond 1,000,000 operations
- **Self-Contained Control Circuit** - Both models can be configured for shortest path, non-zero crossing, or on-command operations (Jumper Selected).

SPECIFICATIONS

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 26.5 GHz

INCREMENTAL ATTENUATION RANGE/STEPS:

Model 101: 0-9 dB in 1 dB steps
Model 103: 0-90 dB in 10 dB steps

INCREMENTAL INSERTION LOSS ACCURACY:

MODEL NO.	ACCURACY
101	± 0.75 dB
103	± 1.5 dB or 2 %

RF LEAKAGE: >80 dB below input signal

SPECIFICATIONS (Con't)

CONNECTORS: 3.5mm connectors - mate nondestructively with SMA connectors per MIL-C-39012 and other 3.5mm and 2.92mm connectors. Available connector options are:

Connector Options	Type/Description
1	3.5mm, Female
2	3.5mm, Male

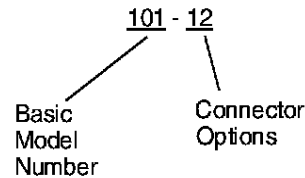
WEIGHT: Net 870 g (1 lb, 13 oz)

ACCESSORIES:

CONTROL CONNECTOR WIRING: Weinschel Corporation offers a 10 ft Interconnect cable (P/N 101-1428) with mating control connector so that the Model 101 or 103 can be wired into any application or user setup. If the interconnect cable is not required a Control Connector Kit can be ordered using P/N 101-1534.

MODEL NUMBER DESCRIPTION:

Example



PHYSICAL DIMENSIONS:

Input Data: Negative Binary Coded Decimal (BCD) on pins 16, 17, 18, and 19.

Unit Operation:

Shortest Path: Connect pin 1 to pin 3.

Non zero crossing: Connector pin 1 to pin 2.

On command operations: As supplied drum will always run in the decreasing attenuation direction to selected position. Connect pin 1 to pin 12 (GND) and drum will always run in increasing attenuation to selected position

