

Model 980 Coaxial Phase Shifters

dc to 3.0/7.0/12.0 GHz
10 Watts

Ruggedized SMA Connector



Features

- /// **Self Locking** - Internal mechanism eliminates the need for a locking nut. Ideal for phase trimming in densely packaged systems with minimum accessibility.
- /// **Linear** - Nominally linear phase over the frequency range.
- /// **Optimized for Wireless OEM Applications.**
- /// **New Models with Adjustment Knobs**
(See Models 980-1K through 980-4K).

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE:

Model 980-1 & 980-1K:	dc to 3.0 GHz
Model 980-2 & 980-2K:	dc to 3.0 GHz
Model 980-3 & 980-3K:	dc to 7.0 GHz
Model 980-4 & 980-4K:	dc to 12.0 GHz

INCREMENTAL PHASE SHIFT:

Model 980-1 & 980-1K:	140° minimum @ 3.0 GHz
Model 980-2 & 980-2K:	170° minimum @ 1.5 GHz
	340° minimum @ 3.0 GHz
Model 980-3 & 980-3K:	85° minimum @ 3.5 GHz
	170° minimum @ 7.0 GHz
Model 980-4 & 980-4K:	290° minimum @ 12.0 GHz

MAXIMUM INSERTION LOSS (dB):

Model No.	Frequency Range (GHz)			
	1.5	3.0	7.0	12.0
980-1 & -1K	0.70 dB	1.20 dB	---	---
980-2 & -2K	1.00 dB	1.70 dB	---	---
980-3 & -3K	0.50 dB	0.50 dB	0.50 dB	---
980-4 & -4K	1.00 dB	1.00 dB	1.00 dB	1.00 dB

INSERTION PHASE:

Model 980-1 & 980-1K:	560° (Typical) @ 3.0 GHz
Model 980-2 & 980-2K:	780° (Typical) @ 3.0 GHz
Model 980-3 & 980-3K:	700° (Typical) @ 7.0 GHz
Model 980-4 & 980-4K:	1200° (Typical) @ 12.0 GHz

PHASE VS FREQUENCY: Nominally linear response

MAXIMUM INSERTION LOSS (dB):

Frequency Range (GHz)	Model No.			
	908-1/1K	980-2/2K	980-3/3K	980-4/4K
dc - 3	1.30	1.35	1.30	1.30
3 - 7	---	---	1.30	1.30
7 - 12	---	---	---	1.60

POWER RATING: 10 watts average

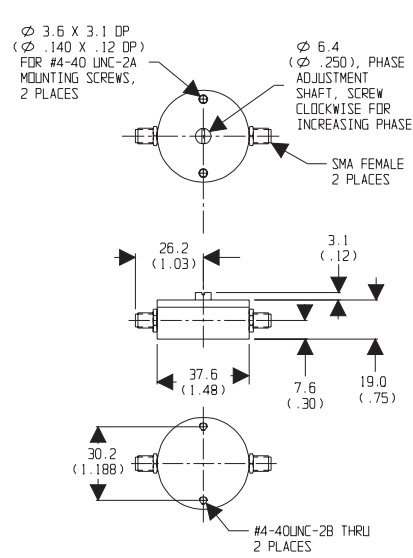
TEMPERATURE RANGE:

Operating:	-50°C to 85°C
Storage:	-50°C to 125°C

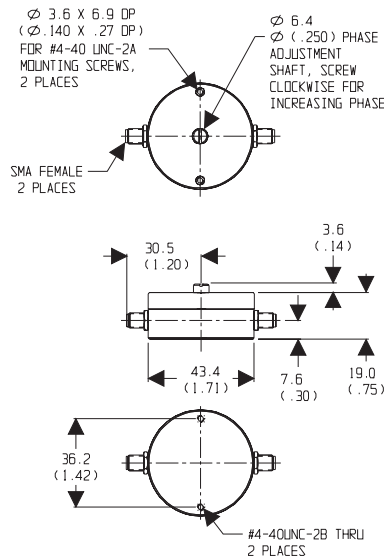
CONNECTOR: SMA female connector per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connector.

WEIGHT: Models 980-1 & 980-2:	50 g (1.80 oz)
Models 980-1K & 980-2K:	60 g (2.14 oz)
Model 980-3 & 980-4:	25 g (0.88 oz)
Model 980-3K & 980-4K:	35 g (1.24 oz)

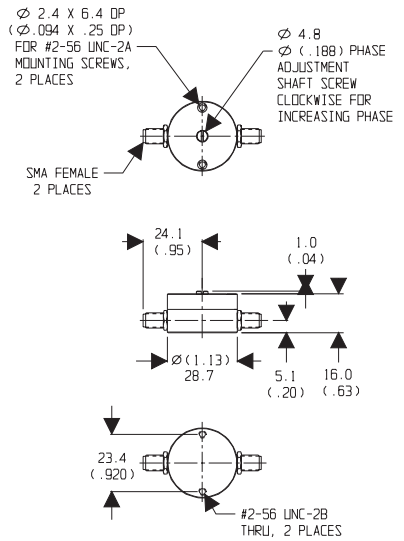
PHYSICAL DIMENSIONS:



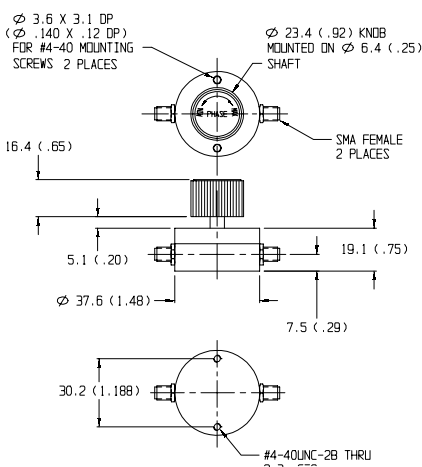
MODEL 980-1



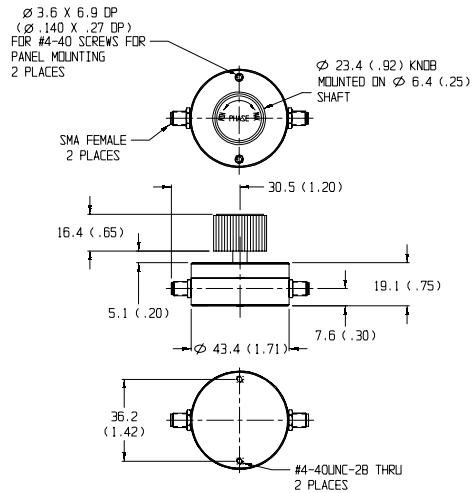
MODEL 980-2



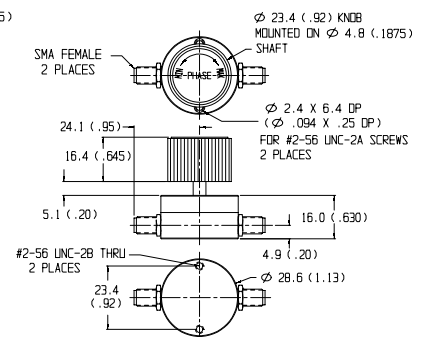
MODELS 980-3 & 980-4



MODEL 980-1K



MODEL 980-2K



MODEL 980-3K & 980-4K

NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.