

Mechanical Phase Shifters: Model 980 Coaxial Phase Shifters

SMA Connectors

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

Incremental Phase Shift (Typical):

- Model 980-1 & 980-1K: 140° @ 3.0GHz
- Model 980-2 & 980-2K: 330° @ 3.0GHz
- Model 980-3 & 980-3K: 170° @ 7.0GHz
- Model 980-4 & 980-4K: 290° @ 12.0GHz

Incremental phase shift is adjustable phase range over and above it's insertion phase

Insertion Phase:

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

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	1.50 dB	2.00 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



dc to 3.0/7.0/12.0 GHz
10 Watts



Maximum SWR:

Frequency Range (GHz)	Model No.			
	980-1/1K	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.

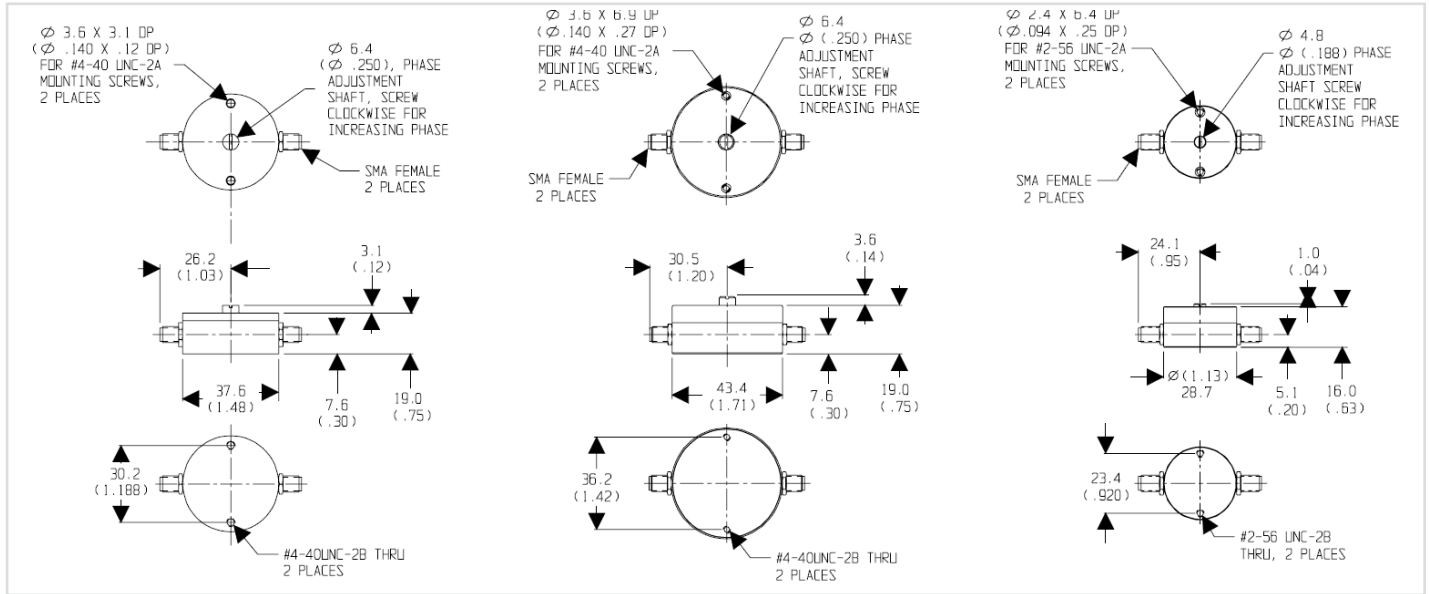
Weight:

- Models 980-1 & 980-2:** 65g (2.29 oz)
- Models 980-1K & 980-2K:** 78g (2.75 oz)
- Models 980-3 & 980-3K:** 35g (1.24 oz)
- Models 980-4 & 980-4K:** 48g (1.69 oz)

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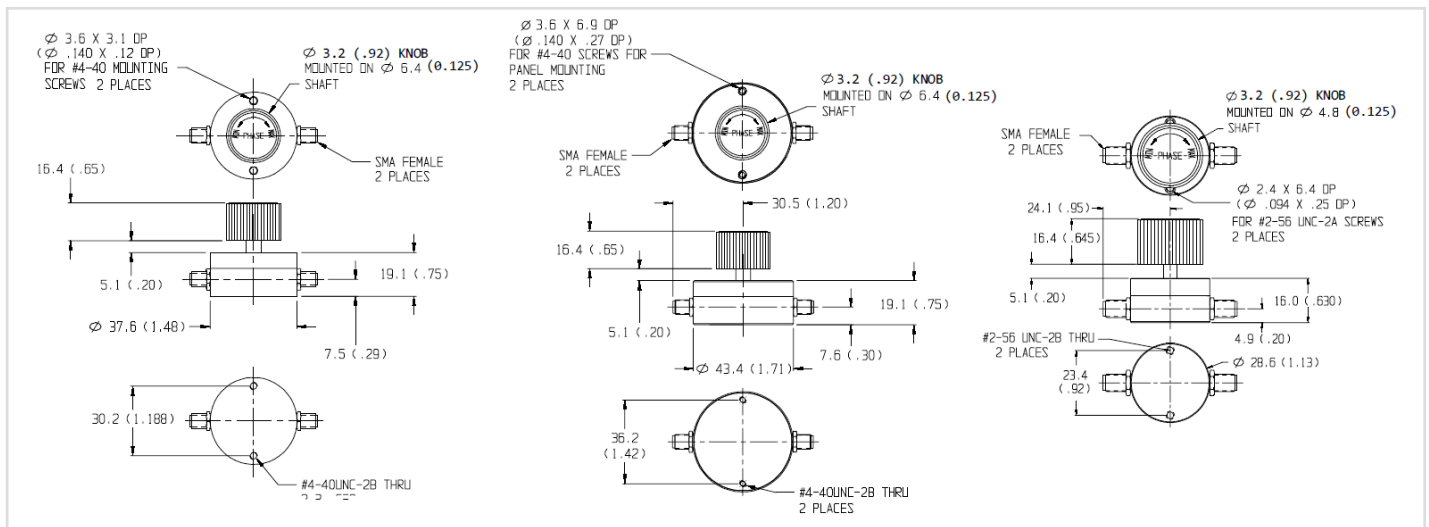
Physical Dimensions:



Model 980-1

Model 980-2

Models 980-3 & 980-4



Model 980-1K

Model 980-2K

Models 980-3K & 980-4K

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