

# Phase Adjusters

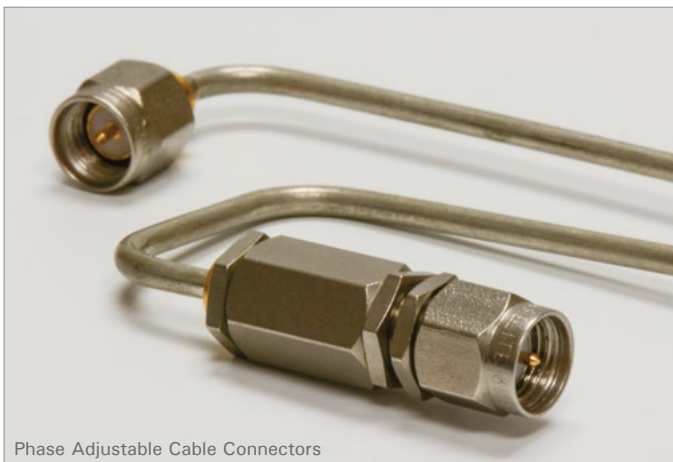
DC to 50 GHz



Block Phase Adjuster



Phase Adjustable Adapter



Phase Adjustable Cable Connectors

## INTRODUCTION

Carlisle Interconnect Technologies offers a line of highly phase stable, low VSWR, precision phase shifters designed for high performance military communications (phased array antennas), and commercial applications. A precision mechanical movement provides continuously varying phase shifts, while maintaining 50 Ohm impedance over the entire frequency range. These phase shifters are available in three different configurations based on the application need. Each of them also incorporates a locking nut to ensure stability of the calibrated phase adjustment.

## BLOCK PHASE ADJUSTERS

- » Up to 18 GHz
- » Low insertion loss
- » Smooth continuous phase adjustment
- » No external length change
- » Rugged compact housing
- » MIL-STD-348 Compliant

## PHASE ADJUSTABLE ADAPTERS

- » Up to 50 GHz
- » Low insertion loss
- » Smooth continuous phase adjustment
- » Positive resettable locking mechanism
- » Different connector options available
- » MIL-STD-348 Compliant

## PHASE ADJUSTABLE CABLE CONNECTORS

- » Up to 26 GHz
- » .141, .085 & .047 OD cable configurations
- » Smooth continuous phase adjustment
- » Positive resettable locking mechanism
- » Different connector options available
- » MIL-STD-348 Compliant

# Phase Adjusters

## CUSTOM SOLUTIONS

In addition to our standard offering, CarlisleIT has also built a vast library of modified designs from the myriad of custom solutions we have delivered to our customers. We offer a variety of customized options for these phase adjusters, which include different mechanical configurations, wide band performance, higher frequency coverage, connector options, higher control limits, etc. Our team of dedicated Engineers can help develop the right solution for your application needs.

### Ordering Information

Product	Part No.	Options	Connectors	Freq. Range	Min. Phase Shift	Max. Insertion Loss	VSWR	Comments
Block Phase Adjusters	5050-X	X* = 2, 12 or 18	SMA(m) - SMA(m)	DC - 18 GHz*	85° at 2 GHz	0.3 dB at 2 GHz	1.15 : 1	* 2 = 2 GHz 12 = 12 GHz 18 = 18GHz See Fig. 1
	5051-X		SMA(m) - SMA(f)		520° at 12 GHz	0.8 dB at 12 GHz	1.25 : 1	
	5052-X		SMA(f) - SMA(f)		770° at 18 GHz	1.0 dB at 18 GHz	1.35 : 1	
Phase Adjustable Adapters	5018		SMA(m) - SMA(f)	DC - 26.5 GHz	450° at 26 GHz	0.8 dB at 26 GHz	1.30 : 1	See Fig. 2 for dimensions
	5117		SMA(f) - SMA(f)					
	5119		2.4mm(m) - 2.4mm(f)	DC - 50 GHz	400° at 50 GHz	0.8 dB	1.30 : 1	See Fig. 3 for dimensions
	5996-X	X* = 1, 2 or 3	SMA(m) - SMA(f)	DC - 26 GHz	260° at 26 GHz	0.35 dB	1.30 : 1	* Different Bracket Options
	5998		SMA(m) - SMA(f)	DC - 18 GHz	90° at 18 GHz	0.25 dB	1.20 : 1	See Fig. 4 for dimensions
	P951		SMP(f) - SMP(f)	DC - 22 GHz	90° at 22 GHz	0.3 dB	1.30 : 1	
Phase Adjustable Cable Connectors	5999-1		SMA(m) - 0.141" cable	DC - 26 GHz	125° at 26 GHz	0.3 dB	1.30 : 1	Cable Connector receptacle on one end
	5999-2		SMA(m) - 0.085" cable					
	3999-1		SSMA(m) - 0.085" cable	DC - 26 GHz	125° at 26 GHz	0.2 dB	1.30 : 1	
	P857		SMP(f) - 0.085" cable	DC - 18 GHz	90° at 18 GHz	0.2 dB	1.30 : 1	

Figure 1

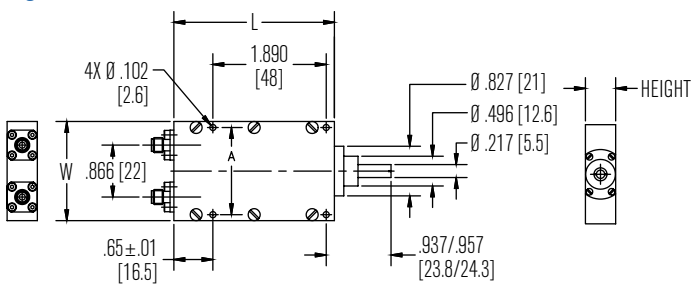


Figure 2

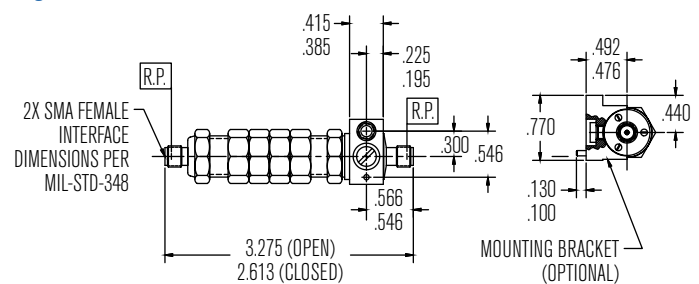


Figure 3

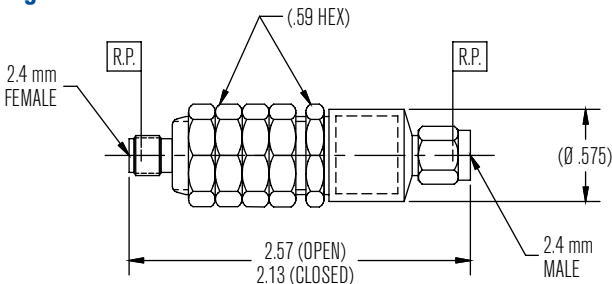


Figure 4

