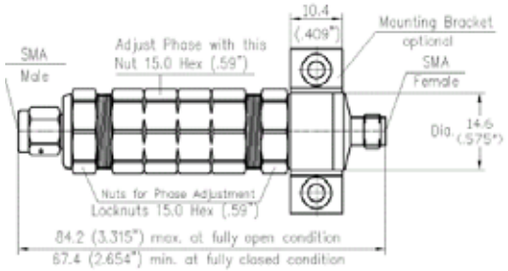
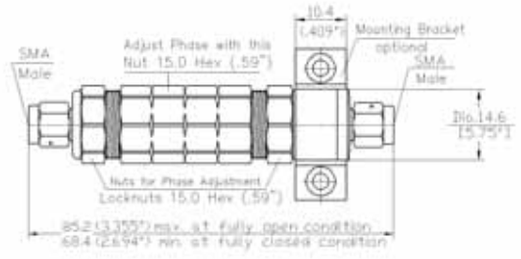
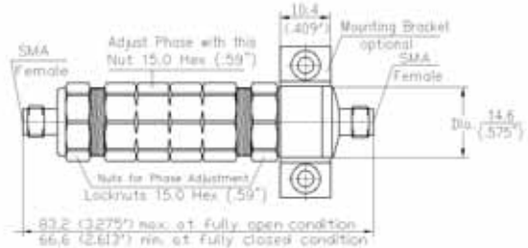


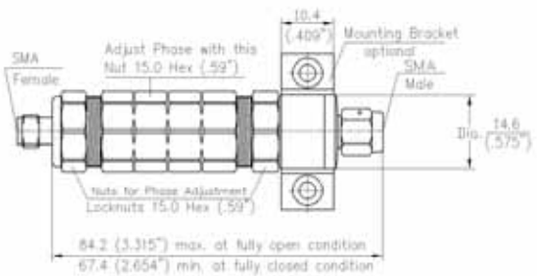
SMA Male to SMA Female		
Part Number	**Frequency Range**	**Material**
LS-0112-1121	DC - 12.0 GHz	Stainless Steel Body
LS-0118-1121	DC - 18.0 GHz	
LS-0121-1121	DC - 26.0 GHz	
LS-A112-1121	DC - 12.0 GHz	Aluminum Body
LS-A118-1121	DC - 18.0 GHz	
LS-A121-1121	DC - 26.0 GHz	



SMA Male to SMA Male		
Part Number	**Frequency Range**	**Material**
LS-0112-1111	DC - 12.0 GHz	Stainless Steel Body
LS-0118-1111	DC - 18.0 GHz	
LS-0121-1111	DC - 26.0 GHz	
LS-A112-1111	DC - 12.0 GHz	Aluminum Body
LS-A118-1111	DC - 18.0 GHz	
LS-A121-1111	DC - 26.0 GHz	



SMA Female to SMA Female		
Part Number	**Frequency Range**	**Material**
LS-0112-2121	DC - 12.0 GHz	Stainless Steel Body
LS-0118-2121	DC - 18.0 GHz	
LS-0121-2121	DC - 26.0 GHz	
LS-A112-2121	DC - 12.0 GHz	Aluminum Body
LS-A118-2121	DC - 18.0 GHz	
LS-A121-2121	DC - 26.0 GHz	



SMA Female to SMA Male		
Part Number	**Frequency Range**	**Material**
LS-0212-1121	DC - 12.0 GHz	Stainless Steel Body
LS-0218-1121	DC - 18.0 GHz	
LS-0221-1121	DC - 26.0 GHz	
LS-A212-1121	DC - 12.0 GHz	Aluminum Body
LS-A218-1121	DC - 18.0 GHz	
LS-A221-1121	DC - 26.0 GHz	

Phase Adjustable Adapters, DC-12,18 & 26 GHz

- Precision phase adjustable adapters, DC to 12.0,18.0 and 26.0 GHz.
- Impedance of 50 Ohms is maintained over the full adjustment range.
- Positive resettable locking mechanism.
- Smooth continuous phase adjustment
- Physical length change of the unit equals the electrical length change.
- Rugged construction, housing and outer conductors are made from stainless steel.
- Light weight components are available, using aluminum for the housing, but for physical endurance connector outer shells are still supplied in stainless steel.
- Capitvated center contacts.
- Spring fingers and center contacts are made from beryllium copper, heat treated and gold plated per ASTM-B-488; Type III, Code C
- SMA connector interface specification per MIL-STD-348A
- Four different connector configurations can be obtained, as shown in the drawings: SMAm - SMAf, SMAm - SMAm, SMAf - SMAf, SMAf - SMAm
- Operating temperature range: -54°C to +115°C, units with extended temperature range are available on request.
- Mounting Brackets are optional and are shown on the drawings on the next page.
- Diagram Phase Shift (°) vers. Frequency Range (GHz), please refer to page D4.

Table for Phase Adjustable Adapters, as shown on the left.

Part Number	Sex	Frequency Range	VSWR max.	Insertion Loss max.	Phase Shift min.	No. of Turns	Nom. Phase Shift Deg./GHz/Turn	Time Delay (psec.) min.	Time Delay (psec.) max.	Material/ Weight max.
LS-0112-1111	**M-M**	DC-12.0 GHz	1.25:1	0.4 dB	230° at 12.0 GHz	16.5	1.2	238	293	Stainless Steel 70 g
LS-0112-1121	**M-F**									
LS-0112-2121	**F-F**									
LS-0212-1121	**F-M**									
LS-A112-1111	**M-M**									Aluminum 47 g
LS-A112-1121	**M-F**									
LS-A112-2121	**F-F**									
LS-A212-1121	**F-M**									
LS-0118-1111	**M-M**	DC-18.0 GHz	1.25:1	0.6 dB	350° at 18.0 GHz	16.5	1.2	238	293	Stainless Steel 70 g
LS-0118-1121	**M-F**									
LS-0118-2121	**F-F**									
LS-0218-1121	**F-M**									
LS-A118-1111	**M-M**									Aluminum 47 g
LS-A118-1121	**M-F**									
LS-A118-2121	**F-F**									
LS-A218-1121	**F-M**									
LS-0121-1111	**M-M**	DC-26.0 GHz	1.30:1	0.8 dB	500° at 26.0 GHz	16.5	1.2	238	293	Stainless Steel 70 g
LS-0121-1121	**M-F**									
LS-0121-2121	**F-F**									
LS-0221-1121	**F-M**									
LS-A121-1111	**M-M**									Aluminum 47 g
LS-A121-1121	**M-F**									
LS-A121-2121	**F-F**									
LS-A221-1121	**F-M**									

Phase Adjustable Adapters, DC-12, 18 & 26 GHz

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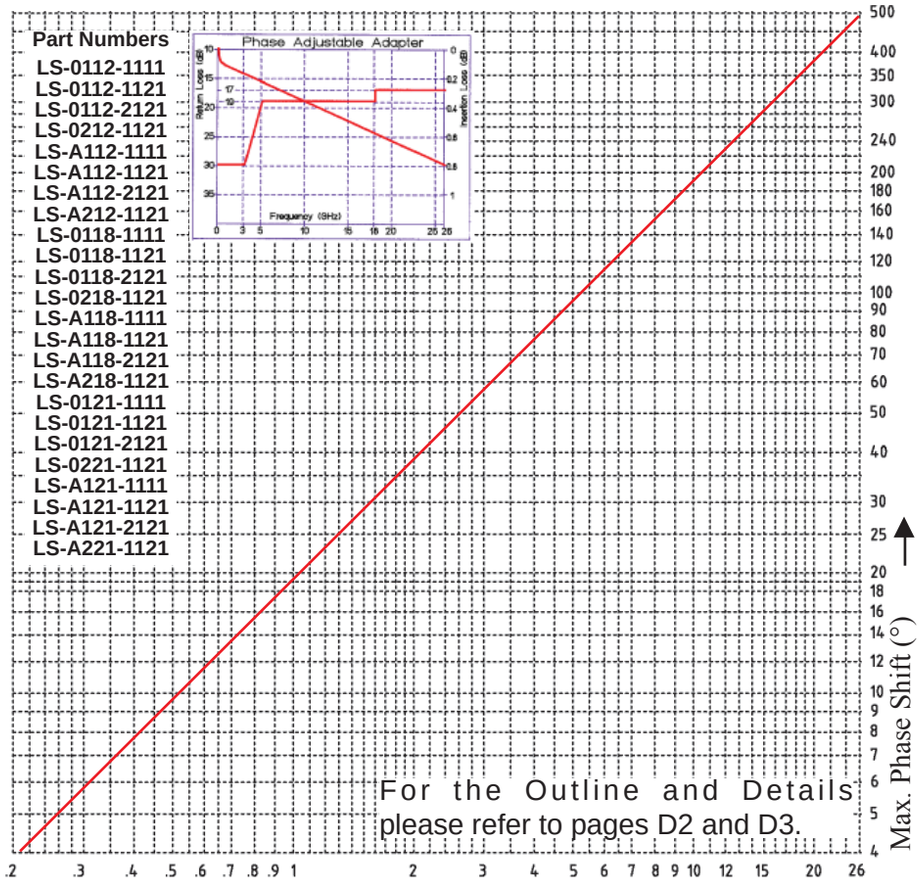
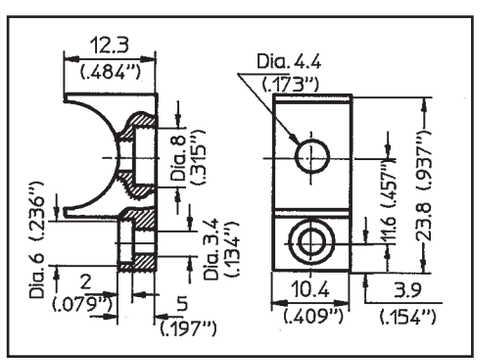


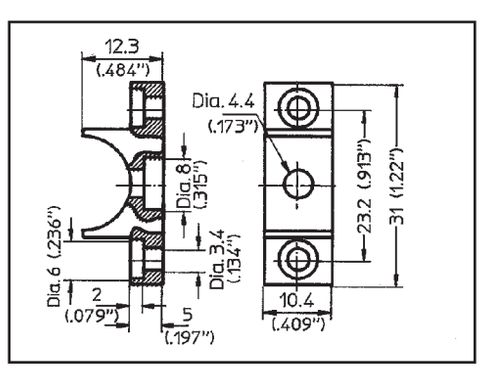
Two different Mounting Brackets are offered. They can easily be added to any Precision Phase Adjuster. Using these standard attachments makes it easy to mount the Phase Shifter in the system or to the test setup and ensures proper operation.

mounting at both sides



Bracket, Part No.: MB-0200-07
Material: Aluminum iridited

mounting at only one side



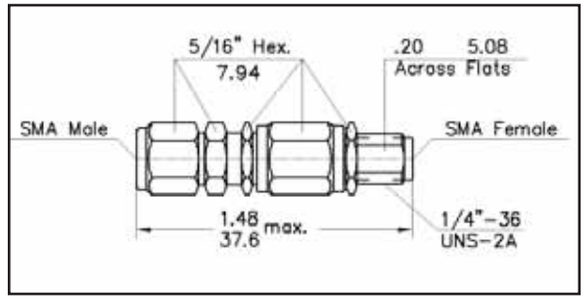
Bracket, Part No.: MB-0100-07
Material: Aluminum iridited

Adjusting Phase indd.2014

DC to 26.0 GHz Phase Adj. Miniature Adapter

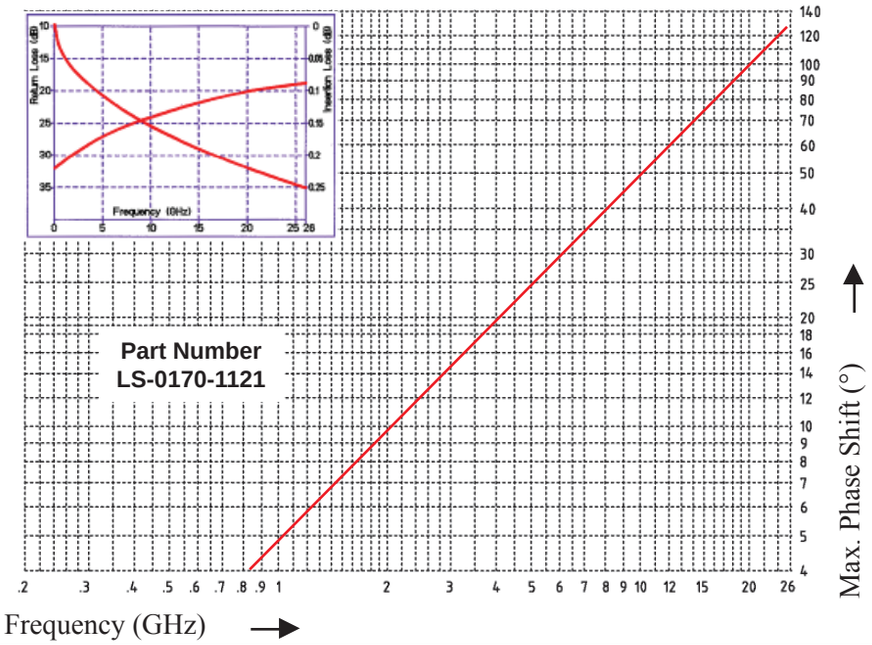
Spectrum Elektrotechnik GmbH

- Precision phase adjustable miniature adapters, DC to 26.0 GHz.
- Impedance of 50 Ohms is maintained over the full adjustment range.
- Positive resettable locking mechanism.
- Smooth continuous phase adjustment.
- Physical length change of the unit equals the electrical length change.
- Rugged construction, housing and outer conductors are made from stainless steel.
- Captivated center contacts.
- Spring fingers and center contacts are made from beryllium copper, heat treated and gold plated per ASTM-B-488; Type III, Code C
- SMA connector interface specification per MIL-STD-348A.
- Operating temperature range: -54°C to +115°C, units with extended temperature range are available on request.
- Physical length change per revolution of adjustment nut: ~ 0.30 mm
- Electrical length change per revolution of adjustment nut: ~ 0.30 mm
- Maximum change in physical length 4.06 +/- 0.25 mm of air



The difference between the adapters is:
The **LS-0170-1121** can be taken apart completely after the max. position and is only available in SMAm/SMAf.
The LS-0070-XXYY cannot be taken apart and is available in SMAm / SMAm; SMAm / SMAf; and SAMf / SMAf.

Part Number	Frequency Range	VSWR max.	Insertion Loss max.	Phase Shift min.	No. of Turns	Nom. Phase Shift Deg./GHz/Turn	Time Delay (psec.) min.	Time Delay (psec.) max.	Weight max.
LS-0070-XXYY **LS-0170-1121**	DC-26.0 GHz	1.06+.009*f(GHz)	0.26 dB	127° at 26.0 GHz	13.5	0.36	109.2	122.8	9 g



Adjusting Phase indd.2014