

# MS-156 Plug Connectors and SMA Conversion Adapters

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## Test Fixture Manual



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Part Number	CL No.
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Part Number	CL No.
MS-156-HRMJ-9	358-0180-6

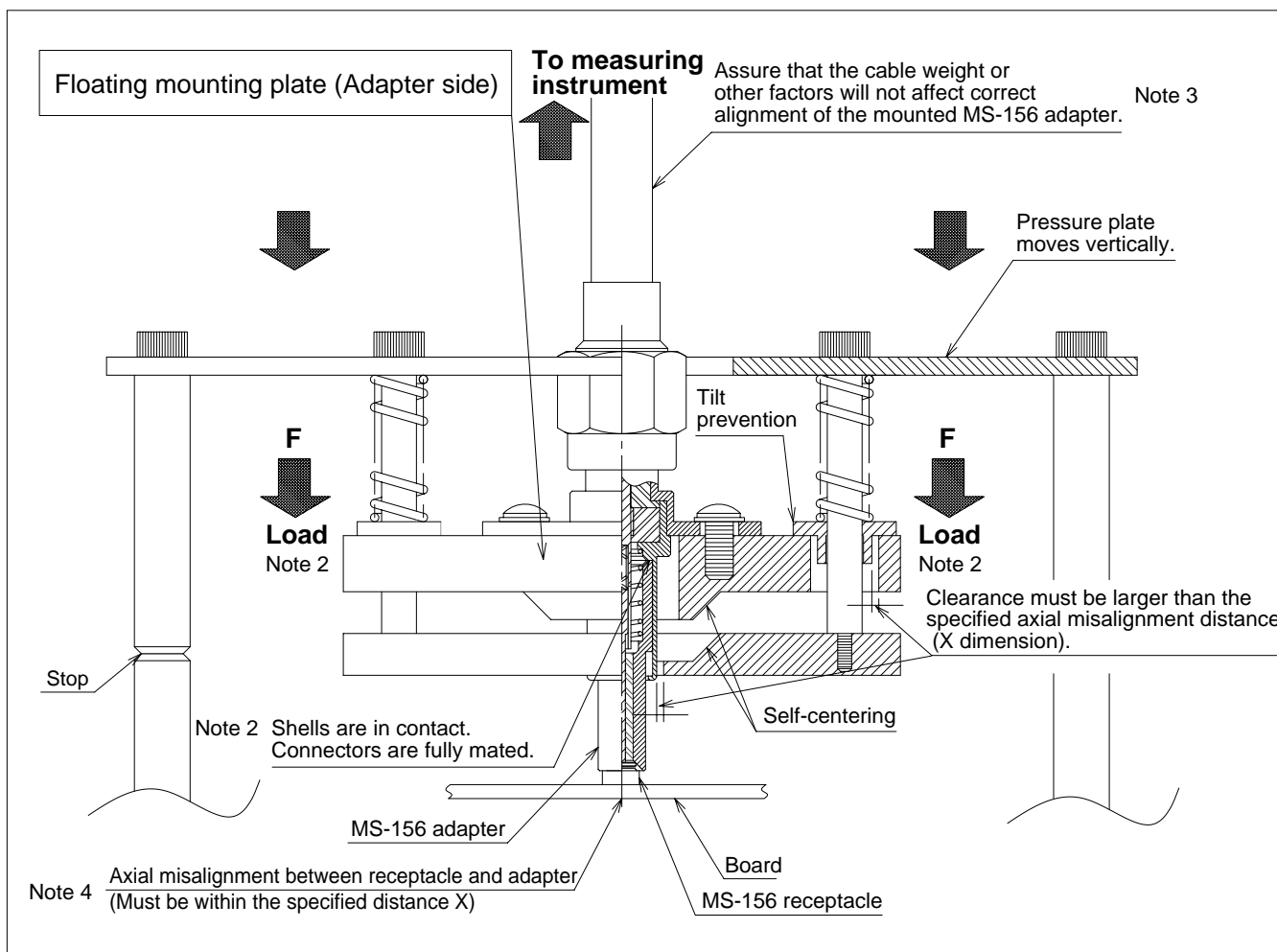
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## 5. **Precautions and Recommendations** **All MS-156 Plugs & SMA conversion adapters**..... 5

1. This document is applicable when using the MS-156 plug connectors and SMA conversion adapter.
2. Evaluation of the actual test fixture should establish operation procedures.
3. The plug connectors and SMA conversion adapter listed in this document are current as of April 2005.  
 Contact Hirose sales representative when using plug connector not listed in this document.
4. See specifications for information about the detailed characteristics of the various plugs and SMA conversion adapters.

# 1 Example of Implementation of the Standard Type-SMA conversion adapters



**Note 4** Allowable axial misalignment distance for MS-156 mating

**Note 3** Allowable Angular misalignment for mating

**(Shown for reference only)**

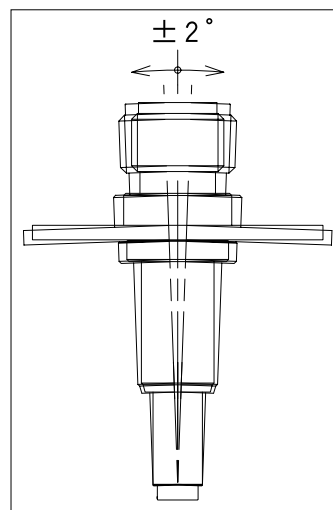
Axial misalignment distance = X

**MS-156 adapter**

**MS-156 receptacle**

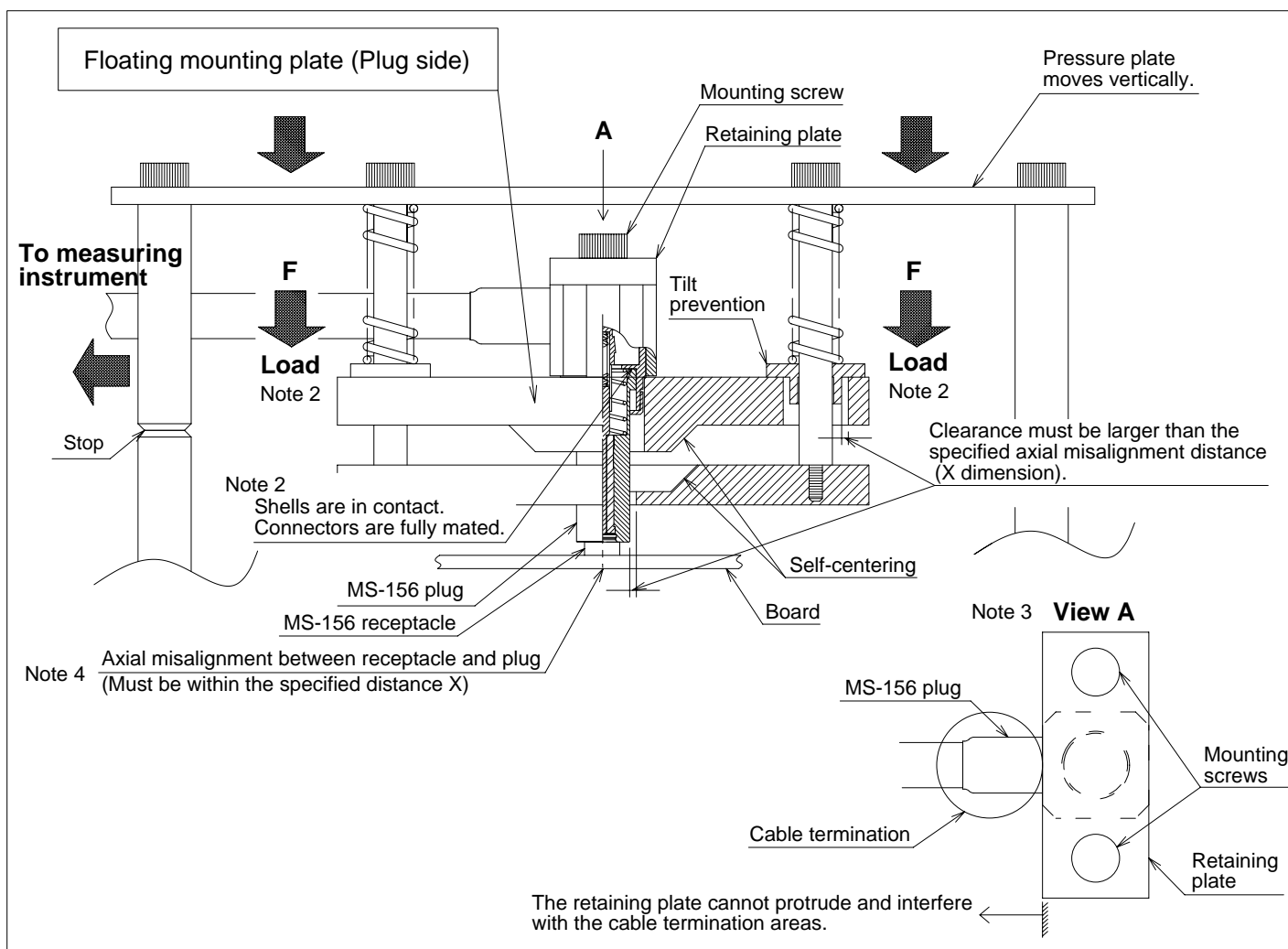
**Axial misalignment distances**

Part Number	X
MS-156-HRMJ-3	0.5mm
MS-156-HRMJ-6	0.75mm
MS-156-HRMJ-11	0.75mm
MS-156-HRMJ-13	0.5mm
MS-156-HRMJ-14	0.5mm



- Note 1** When mounting the MS-156 adapter make sure that the floating and spring operation remains fully functional.
- Note 2** After the mating of the adapter and receptacle is completed, adjust the fixture stop and the load force to within 6 to 10 N.
- Note 3** When fully mated, angular misalignment larger than specified may affect accuracy of measurements and cause damage to the connectors.
- Note 4** Axial misalignment exceeding the recommended distance (X) may damage the connectors or the test fixture.

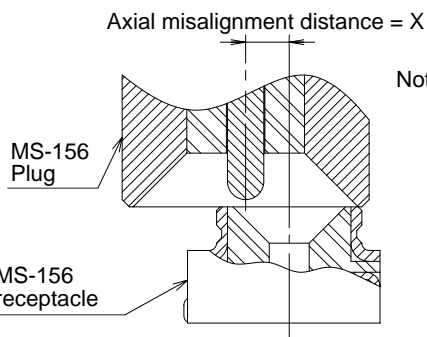
## 2 Example of Implementation of the Cable Type-Plugs



Note 4 Allowable Lead Amount for MS-156 Coupling

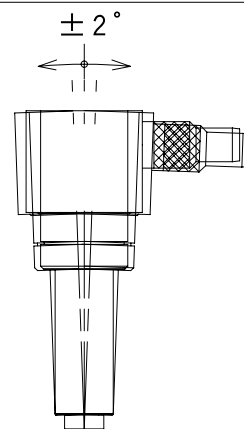
Note 3 Allowable Angular misalignment for mating

### (Shown for reference only)



### Axial misalignment distances

Part Number	X
MS-156-C(LP)-1	0.5mm
MS-156-C(LP)-6	0.5mm
MS-156-C(LP)-8	0.5mm



**Note 1** When mounting the MS-156 plug make sure that the floating and spring operation remains fully functional.

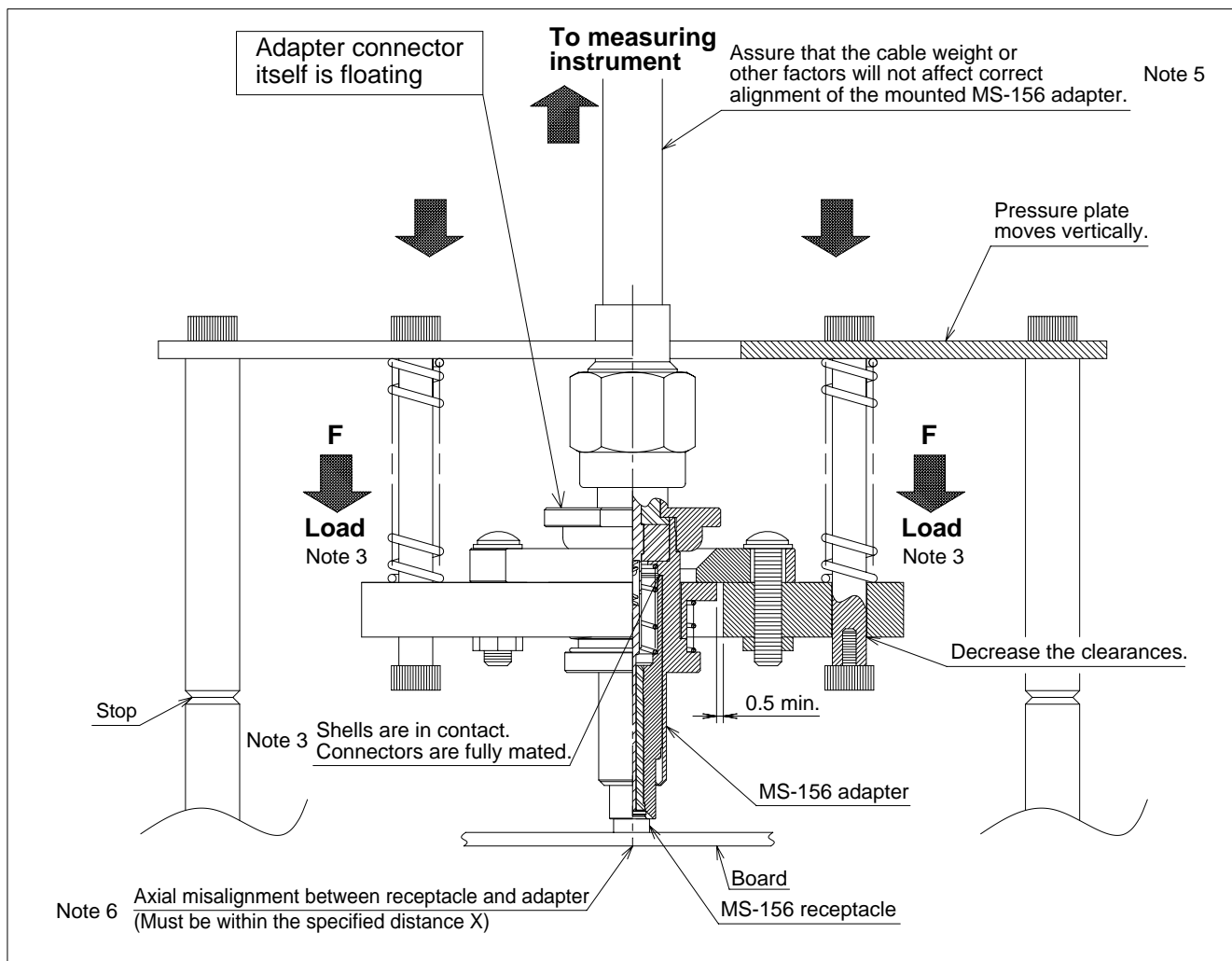
**Note 2** After the mating of the plug and receptacle is completed, adjust the fixture stop and the load force to within 6 to 10 N.

**Note 3** When fully mated, angular misalignment larger than specified may affect accuracy of measurements and cause damage to the connectors.

**Note 4** Axial misalignment exceeding the recommended distance (X) may damage the connectors or the test fixture.

**Note 5** When mounting the MS-156-C(LP)-6 plug retaining plate is not required. The connector's flanges should be used.

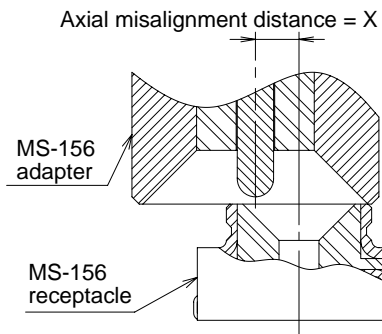
### 3 Example of Implementation of the Floating Type-SMA conversion adapter



Note 6 Allowable axial misalignment distance for MS-156 mating

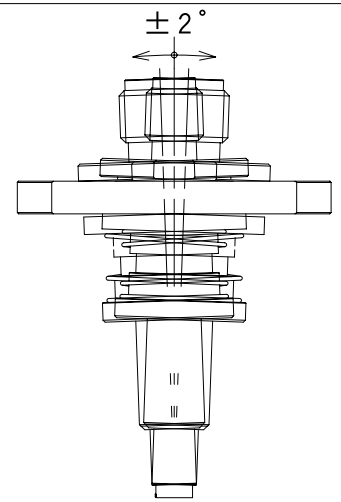
Note 3 Allowable Angular misalignment for mating

(Shown for reference only)



Axial misalignment distances

Part Number	X
MS-156-HRMJ-9	0.5mm



**Note 1** Connector incorporates the self-centering feature.

When un-mated the adapter will self-center after un-mating.

**Note 2** When mounted, the connector's built-in spring pressure is used.

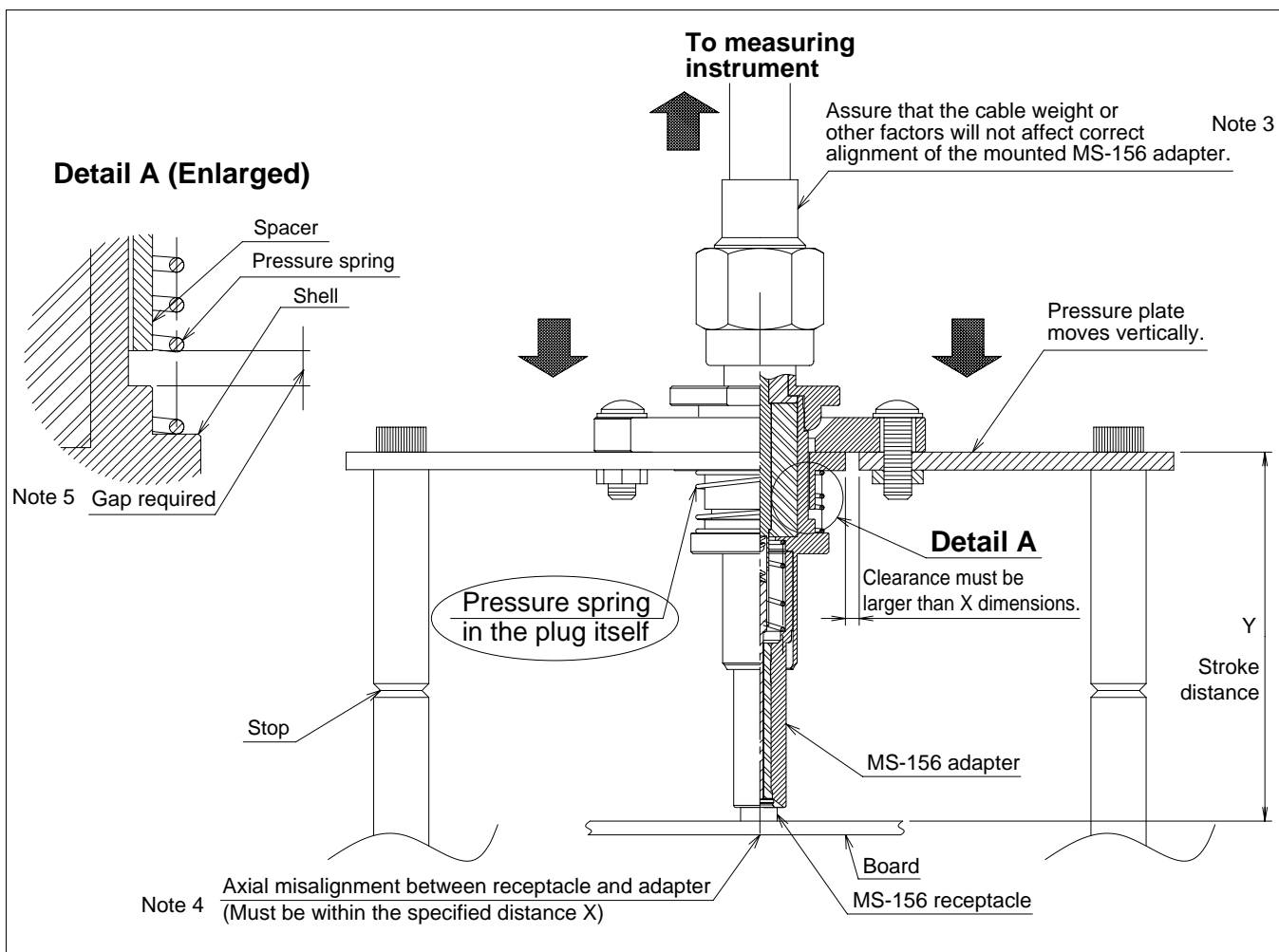
**Note 3** After the mating of the adapter and receptacle is completed, adjust the fixture stop and the load force to within 6 to 10 N.

**Note 4** The plug will allow angular floating within specified angle.

**Note 5** When fully mated, angular misalignment larger than specified may affect accuracy of measurements and cause damage to the connectors.

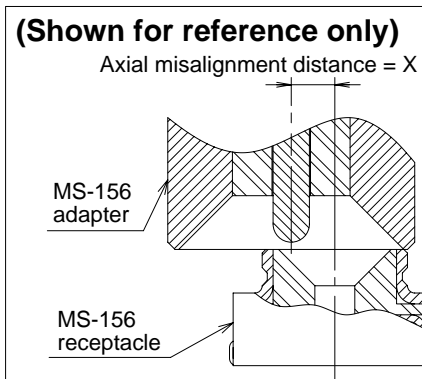
**Note 6** Axial misalignment exceeding the recommended distance (X) may damage the connectors or the test fixture.

## 4 Example of Implementation of the Floating Self-Pressing Type-SMA conversion adapters



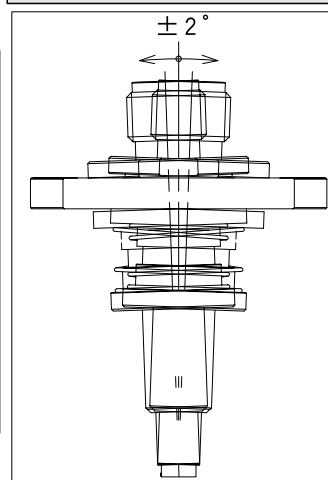
Note 4 Allowable axial misalignment distance for MS-156 mating and stroke dimension

Note 3 Allowable Angular misalignment for mating



Note 5  
**Axial misalignment distance and stroke distance**

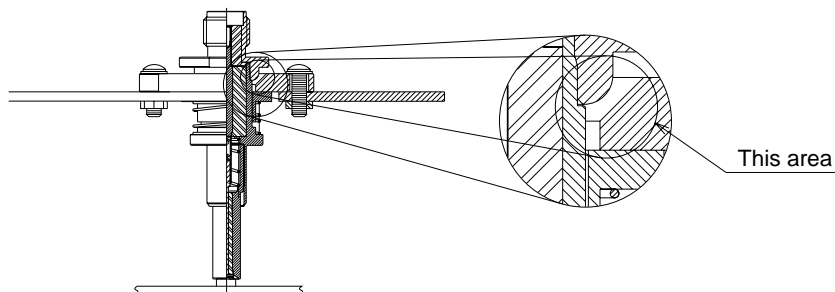
Part Number	X	Y
MS-156-HRMJ-10	0.5mm	26.35±0.25mm
MS-156-HRMJ-12	0.75mm	26.43±1.4mm



- Note 1** The adapter has the built-in pressure spring. The user must adjust the fixture's stroke distance. The fixture will self-align and self-center after un-mating of the connectors.
- Note 2** The adapter has built-in floating feature. It will allow angular mis-alignment within specified angle.
- Note 3** When mating, angular misalignment larger than specified may affect accuracy of measurements and cause damage to the connectors.
- Note 4** Axial misalignment exceeding the recommended distance (X) may damage the connectors or the test fixture.
- Note 5** The stroke control dimension, Y, fluctuates depending on the mounting condition and as such, it is a reference value. At time of use, check that the pressure spring moves free and that there is a gap between the spacer and the shell (View A).

## 5 Precautions and Recommendations-All MS-156 Plugs & SMA conversion adapters

1. Please design the jig set using the examples of implementation as a reference.
2. The product could be damaged when the lead amount of the MS-156 receptacle is exceeded.
3. Spring structures are used widely for product functions. The springs are used for product protection; they are not the pressure springs. (This excludes the self-pressing type.)
4. Pulling the center terminal will cause it to protrude a little, but this is not a problem in terms of product function.
5. Please take measures to prevent foreign matter such as dust from entering the floating structure portion of the floating type and the self-pressing type (as illustrated in the diagram below). The entry of foreign matter could result in the loss of the floating action.



6. Mount so that the load of the measuring instrument cable's own weight and other factors do not result in the tilting of the plug connector.
7. Regularly clean the opening of the plug & SMA conversion adapter connector with air, etc.