# Keysight 11716A/C/D/E/F Interconnection Kit

Operating Guide



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### **Manual Part Number**

11716-90009

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Keysight Technologies Phase 3, Bayan Lepas Free Industrial Zone Bayan Lepas, Penang 11900 Malaysia

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Keysight Technologies certified that this product met its published specifications at the time of shipment from the factory. Keysight Technologies further certifies that its calibration measurements are traceable to the United States National Institute of Standards and Technology (NIST, formerly NBS), to the extent allowed by the Institute's calibration facilities of other International Standards Organization members.

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The affixed product label is as shown below.



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for more information.

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# 1 Introduction

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This chapter introduces the 11716A/C/D/E/F interconnection kit and its available parts.



### **General Information**

This document contains information on the 11716A/C/D/E/F Interconnection Kit. Included in the note is a list of parts with part numbers and instructions for using the kit.

### **Description**

The 11716A/C/D/E/F Interconnection Kit provides the necessary parts to connect various attenuators in series. See Table 1-4 to Table 1-7-2 for possible combinations.

The 11716A/C/D/E/F interconnection ridged cable has the following connector types:

**Table 1-1** 11716A/C/D/E/F connector type

Model	Connector type
11716A	Type-N
11716C	SMA
11716D	2.92 mm
11716E	3.5 mm
11716F	2.4 mm

The overall height with attenuators is as follows:

**Table 1-2** 11716A/C/D/E/F overall height with attenuators

Model	Overall height with attenuators
11716A/C	3.235 in.
11716D/E/F	3.780 in.

The typical return loss of the cable is as follows:

Table 1-3 11716A/C/D/E/F typical return loss

Connector type	Interconnection ridged cable	Typical return loss
Type-N	11716A	$\leq$ 20 dB
SMA	11716C	≤ 20 dB
2.92 mm	11716D	≤ 14 dB
3.5 mm	11716E	≤ 18 dB
2.4 mm	11716F	≤ 21 dB

### Interconnection kit matrix

Table 1-4 Interconnection kit parts for 11716A/C

	8494	8495	8496	
8494	Yes	Yes	Yes	
8495	Yes	No	Yes	
8496	Yes	Yes	Yes	

Table 1-5 Interconnection kit parts for 11716D

	84904L <sup>[1]</sup>	84906L <sup>[1]</sup>
84904L <sup>[1]</sup>	Yes	Yes
84906L <sup>[1]</sup>	Yes	Yes

<sup>[1]</sup> Applicable for Option 006, 106

 Table 1-6
 Interconnection kit parts for 11716E

	84904K	84906K
84904K	Yes	Yes
84906K	Yes	Yes

Table 1-7-1 Interconnection kit parts for 11716F

	84904M	84908M	
84904M	Yes	Yes	
84908M	Yes	Yes	

Table 1-7-2 Interconnection kit parts for 11716F

	84904L <sup>[1]</sup>	84906L <sup>[1]</sup>
84904L <sup>[1]</sup>	Yes	Yes
84906L <sup>[1]</sup>	Yes	Yes

<sup>[1]</sup> Applicable for Option 101, 100

### Items supplied

Parts included in the interconnection kits are listed in the following tables.

Table 1-8 Interconnection kit parts for 11716A/C

Description	<b>Q</b> ty	Part Number
Combining bracket	1	11716-00001
Base	1	11716-00002
Interconnect rigid cable		
<ul> <li>Type-N male connectors 11716A</li> </ul>	1	11716-20001
<ul> <li>SMA connectors 11716C</li> </ul>	1	11716-20003
Felt feet	4	0403-0309
Screw 4-40 × 7.9 mm (0.312 inch)	4	2200-0105
Screw 4-40 × 9.5 mm (0.375 inch)	2	2200-0769

**Table 1-9** Interconnection kit parts for 11716D/E/F

Description	Oty	Part Number
Bracket, attenuator mount	1	11716-60003
Interconnect rigid cable		
<ul> <li>2.92 mm male connectors 11716D</li> </ul>	1	11716-20006
<ul> <li>2.4 mm male connectors 11716F</li> </ul>	1	11716-20007
<ul> <li>3.5 mm male connectors 11716E</li> </ul>	1	11716-20008
Felt feet bumper foot - adhesive mounting	4	0403-0309
Screw M3 × 0.5 8 mm	4	0515-2145

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## Keysight 11716A/C/D/E/F Interconnection Kit Operating Guide

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This chapter describes the procedures for installing the 11716A/C/D/E/F interconnection kit.



### Installation

### **Initial inspection**

Inspect the shipping container for damage. Inspect the kit for any mechanical damage incurred in transit. If the shipping container or cushioning material is damaged, it should be kept until the contents of the shipment have been checked for completeness and the kit has been checked mechanically and electrically.

If the contents of this shipment are incomplete, or if there is mechanical damage or defect, notify the nearest Keysight Technologies Office. If the shipping container is damaged, or the cushioning material shows signs of stress, notify the carrier as well as the Keysight Technologies office. At Keysight's option, the office will arrange for a repair or replacement without waiting for claim settlement.

### Installing the interconnection kit

CAUTION

Do not allow the connectors on the interconnection kit to bear torque or support weight.

### Interconnection kit 11716A/C

To connect two attenuators using the kit:

- **1** Remove the pedestal bases of both attenuators.
- **2** Select the attenuator to be located on top and connect it to the outer bracket surface that has the three small holes. Use two of the  $4\text{-}40 \times 7.9 \text{ mm}$  (0.312 inch) screws supplied.

NOTE

If one of the two attenuators is an 8495 70 dB attenuator, this physically shorter unit should be selected for the top location.

**3** Fasten the remaining attenuator to the inside of the bracket, with or without the sheet metal base. The screws should pass through the two elongated holes. Do not tighten these screws at this time.

### NOTE

The 4-40  $\times$  9.5 mm (0.375 inch) screws are for fastening to a plastic attenuator pedestal base. The 4-40  $\times$  7.9 mm (0.312 inch) are for fastening to the bracket.

- **4** Connect the rigid cable between the two attenuators. The lower attenuator should be adjusted laterally so that the rigid cable connects easily without strain.
- **5** Firmly tighten the two screws holding the lower attenuator to the bracket.
- **6** If no sheet metal base is being used, the adhesive-backed felt feet that are supplied may be attached to the underside of the bracket to prevent marring the surface on which the combined attenuators are set. Figure 2-1 shows how the interconnection kit is typically used.
- **7** When using the sheet metal base, use the .375 long screws to connect the attenuator bracket to the sheet metal base.

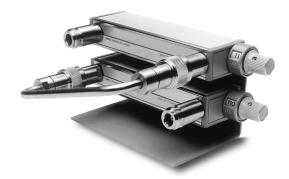


Figure 2-1 Typical installation for 11716A/C

### Interconnection kit 11716D/E/F

To connect two attenuators using the kit:

- **1** Remove the pedestal bases of both attenuators.
- **2** Fasten the attenuator to the inside of the bracket. The M3  $\times$  0.5 (8 mm) screws should pass through the two elongated holes.
- **3** Firmly tighten the two screws holding the lower attenuator to the bracket.
- **4** Connect the rigid cable between the two attenuators. The rigid cable should be connected to the RF port at the edge of the drive cable end.
- **5** If no sheet metal base is being used, the adhesive-backed felt feet that are supplied may be attached to the underside of the bracket to prevent marring the surface on which the combined attenuators are set. Figure 2-2 shows how the interconnection kit is typically used.



Figure 2-2 Typical installation for 11716D/E/F

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