

**TLA700 Series  
P6417 & P6418  
Probe Accessory  
Instructions**

070-9948-02

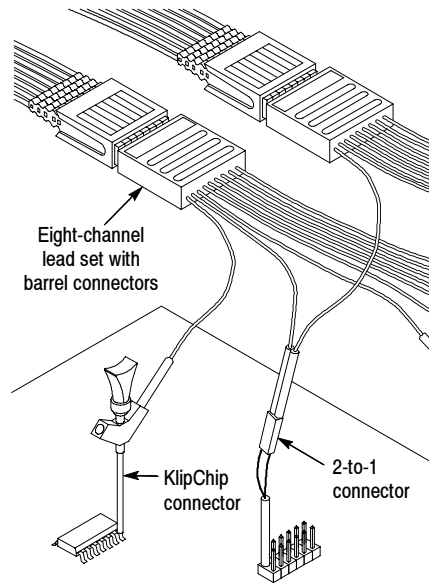
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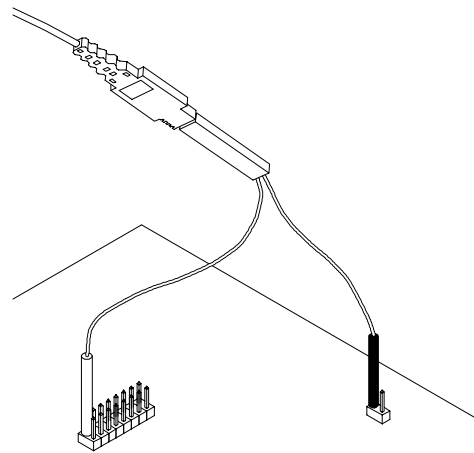
**Lead Set Connectors**

These instructions support several probe accessory kits, which contain lead set connectors for the P6417 and P6418 Probes. The lead set connectors simplify connections between the logic analyzer and your target system. See Figures 1 and 2 for examples.

For further information about connecting the probe to the target system, refer to the TLA700 online help or to the *P6417 & P6418 Logic Analyzer Probe Instructions*.



**Figure 1: Lead set connections (barrel connectors shown)**



**Figure 2: Single-channel lead set connection**

**Lead Sets**

The following lead sets are available for the P6417 and P6418 Probes.

**General Purpose Lead Sets**

196-3431-XX. Eight channel lead set with 100 Ω series termination. Minimum pin spacing of 0.1 in.

196-3432-XX. Single channel lead set with 100 Ω series termination. Minimum pin spacing of 0.1 in.

**Enhanced General Purpose Lead Sets**

196-3476-XX. Eight channel lead set with 100 Ω series termination. Minimum pin spacing of 2 mm (0.079 in).

196-3479-XX. Single channel lead set with 100 Ω series termination. Minimum pin spacing of 2 mm (0.079 in).

**Reduced Bias Voltage Lead Sets**

196-3477-XX. Eight channel lead set with 100 Ω series termination. Minimum pin spacing of 2 mm (0.079 in).

196-3478-XX. Single channel lead set with 100 Ω series termination. Minimum pin spacing of 2 mm (0.079 in).

The reduced bias voltage lead sets contain a 20 kΩ resistor connected between the signal lead and ground. Using these lead sets with the P6417 and P6418 probes and the logic analyzer will reduce the pull-up voltage from 2.2 V to 1.1 V. The loading will change from 20 kΩ to 10 kΩ.

**Accessory Kits**

The following accessory kits are available for the P6417 and P6418 Probes.

**P6417 & P6418 Probe accessories kit (020-2198-XX)**

Use these connectors to connect the lead sets to square pins or KlipChip connectors.

- 2 Eight-channel lead sets (barrel connectors)
- 1 Single-channel lead set (barrel connector)
- 20 SMT KlipChip connectors

**P6417 & P6418 Probe 34-channel probe interface kit barrel connectors (020-2199-XX)**

Use these connectors to connect the lead sets to square pins or KlipChip connectors.

- 4 Eight-channel lead sets (barrel connectors)
- 2 Single-channel lead sets (barrel connectors)
- 1 Set of twelve 2-to-1 signal/ground lead sets (barrel connectors)
- 1 Set of four 4-to-1 signal/ground lead sets (barrel connectors)

**P6417 & P6418 Probe 34-channel probe interface kit mini-PV connectors (020-3000-XX)**

Use these connectors to mass-terminate probe lead sets into a mini-PV terminal connector. One 2 × 20 mini-PV terminal connector can accommodate three eight-channel lead sets.

The mini-PV terminal connectors are designed for use with 0.025-inch square pins set on 0.1 in centers.

- 4 Eight-channel lead sets (mini-PV connectors)
- 2 Single-channel lead sets (mini-PV connectors)
- 1 Set of twelve 2-to-1 signal/ground lead sets (mini-PV connectors)
- 1 Set of four 4-to-1 signal/ground lead sets (mini-PV connectors)
- 1 Set of assorted mini-PV terminal connectors

**Safety Summary**

Refer to the *General Safety Summary* in the *Tektronix Logic Analyzer Family User Manual* for applicable safety information.

## Connection Procedure

Use the connection procedure on the next page for the barrel connectors or the mini-PV connectors. Steps that are specific to only one type of connector are noted.

To avoid static discharge damage, use a grounding wrist and foot strap, and follow appropriate antistatic precautions.

1. Power off the target system.
2. Connect the logic analyzer probe lead sets to the accessory lead set connectors. See Figure 3.

**CAUTION.** Be sure that the logic analyzer podlets are connected to the 1 × 8 signal row and not to the ground row. Connecting signals to the ground row can result in damage to the logic analyzer or the system under test.

3. For mini-PV lead set connectors, insert the leads into the mini-PV terminal connector. See Figure 4. A properly inserted lead snaps into place and cannot be withdrawn. An improperly installed lead slides out easily.

If a lead is inserted in the wrong location, the lead can be removed by gently lifting the small plastic tab until the lead can be withdrawn. The tab can be lifted with a small pick or pointed knife tip. Do not lift the tab too far or too often, or the tab will break off or permanently deform.

4. If necessary, use the 2-to-1 or 4-to-1 connectors to connect multiple leads to a single pin on the system under test. Figure 1 on page 1 shows an example of a 2-to-1 connector in use.
5. Insert the lead set connector(s) onto the pins on the system under test.
6. Power on the system under test.

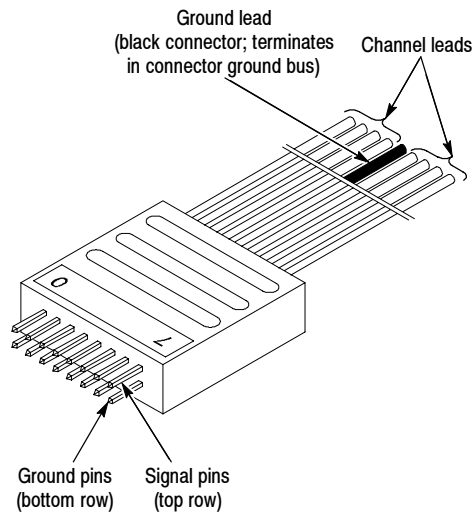


Figure 3: Eight-channel lead set connector

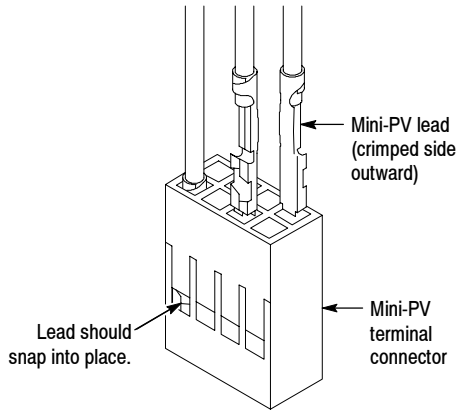


Figure 4: Mini-PV leads and terminal connector

## Characteristics

The characteristics listed below apply to all lead sets and kit connectors unless otherwise noted.

Table 1: Characteristics

Recommended usage	TTL and CMOS levels only. Ground leads should be connected to ground of system under test.
Maximum clock speed	50 MHz
AC loading	< 5 pF per channel as seen by the device under test (plus podlet)
DC loading	None (General purpose and enhanced general purpose lead set)
Termination (020-2198-XX and 020-2199-XX only)	10 kΩ (Reduced bias voltage lead set when connected to a P6417 or P6418 probe)
Dimensions	See Figures 5 through 8.

Figures 5 through 8 show the dimensions of the lead set connectors. Both top and side views are shown.

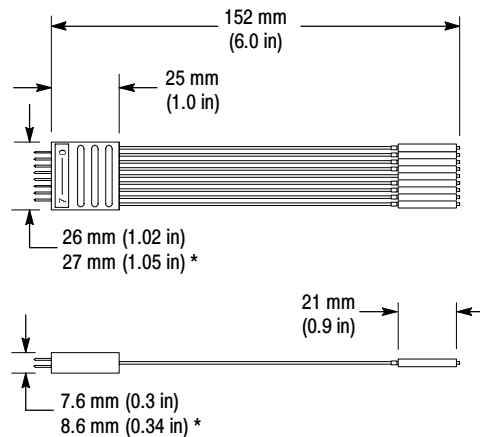


Figure 5: Eight-channel lead set (barrel connectors)

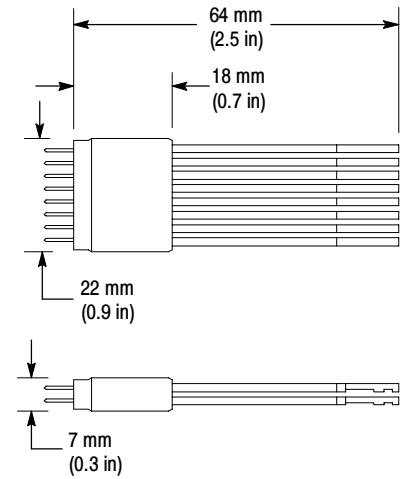


Figure 6: Eight-channel lead set (mini-PV connectors)

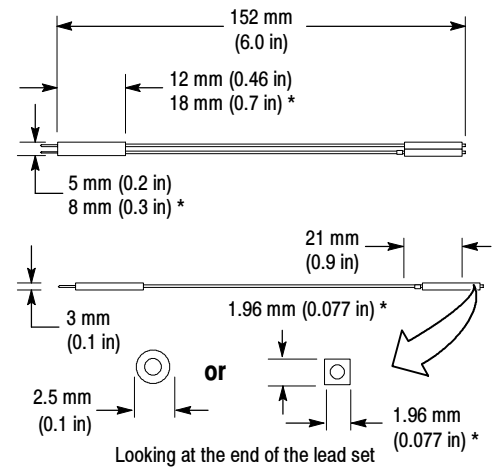


Figure 7: Single-channel lead set (barrel connectors)

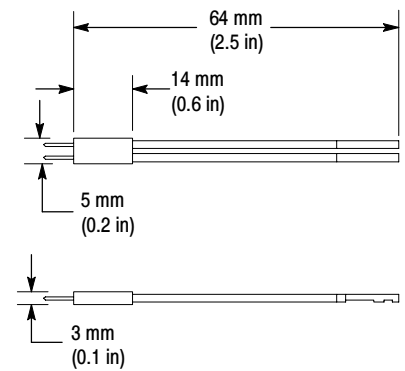


Figure 8: Single-channel lead set (mini-PV connectors)

\* Physical characteristics for enhanced general purpose lead sets and for reduced bias voltage lead sets