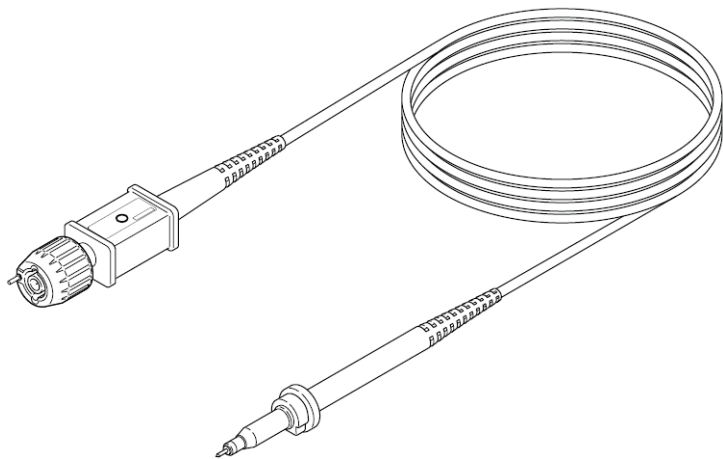




TELEDYNE LECROY
Everywhereyoulook™



PP006C

Passive Probe

Operator's Manual



TELEDYNE LECROY
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PP006C Passive Probe Operator's Manual

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924498-00 v2
August, 2014

Introduction

The Teledyne LeCroy PP006C is a passive probe with a wide range of probing accessories. It is designed to give high-impedance probing capability to a circuit when attached to a Teledyne LeCroy oscilloscope.

Specifications

System Attenuation	Input Impedance		B/W (MHz)	Cable Length (m)	Compensation Range (pF)
	R(M Ω)	C(pF)			
10x \pm 2%	10	12	500	1.2	13 - 23

Attenuation Ratio10:1 \pm 2%

Max. Rated Input Voltage ⁽¹⁾

Measurement Category I: 350 Vrms
 1400 V transient overvoltage

Measurement Category II: 300 Vrms

Pollution Degree ⁽¹⁾2

Operating AltitudeUp to 3000 meters

Max. Operating Temp5° C to 40° C (41° F to 104° F)

Humidity< 80% non-condensing
 RH not controlled below 10° C

(1) As defined in IEC/EN 61010-031. Also see definitions below.

Definitions:

Measurement Category I (CAT I): measurements performed on circuits not directly connected to mains.

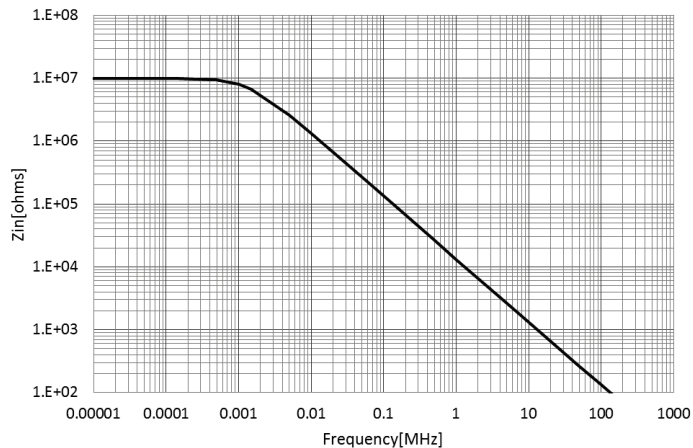
Measurement Category II (CAT II): measurements performed on circuits directly connected to the low-voltage installation.

Pollution Degree 2: operating environment where normally only dry, non-conductive pollution occurs.

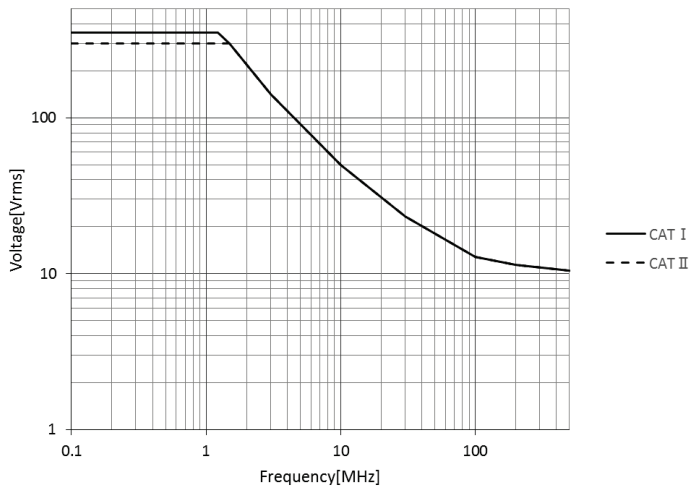
Temporary conductivity caused by condensation must be expected.

PP006C Passive Probe

Input Impedance Profile



Voltage vs. Frequency Derating Curve



PP006C Passive Probe

General Safety Information



Observe generally accepted safety procedures in addition to those listed here to avoid personal injury or damage to equipment. **The overall safety of any system incorporating this accessory is the responsibility of the assembler of the system.**

Connect only to grounded instruments. Use only with compatible Teledyne LeCroy oscilloscopes that have their BNC input connected to an earth ground. Do not connect the probe reference lead to any point which is at a potential other than earth ground.

Connect and disconnect properly. Connect probe to the oscilloscope before connecting it to the test circuit. Disconnect the probe input and reference lead from the test circuit before disconnecting from the oscilloscope. Do not connect or disconnect probes while they are connected to a voltage source.

Do not overload. Do not apply any potential to the probe leads that exceeds the maximum rating of the probe.

Always comply with the Voltage vs. Frequency Derating Curve.

Observe all terminal ratings. Observe all markings on the oscilloscope before connecting. Consult the oscilloscope product manual for further ratings information.

Do not remove probe casing. Touching exposed connections may result in electric shock.

Do not excessively bend cables.

Use indoors only within operational environment listed. Do not use in wet or explosive atmospheres. Keep product surfaces clean and dry.

Handle with care. Probe tips are extremely sharp and may puncture skin or cause other bodily injury if not handled properly.

Keep fingers behind the finger guard of probe body and accessories.

Do not operate with suspected failures. Before each use, inspect the probe and accessories for any potential damage such as tears or other defects in the probe body, cable jacket, accessories, etc. If any part is damaged, cease operation immediately and sequester the probe from inadvertent use.

EC Declaration of Conformity



The product is marked with this symbol to indicate that it conforms to the applicable European Union requirements per Low Voltage Directive (LVD) 2006/95/EC. Compliance was demonstrated to the following specification as listed in the Official Journal of the European Communities:

IEC/EN 61010-031/A1:2008 Safety requirements for electrical equipment for measurement, control and laboratory use – Part 031: Safety requirements for handheld probe assemblies for electrical measurement and test.


EU RoHS Compliance

The probe and its accessories conform to the 2011/65/EU RoHS2 Directive, as they have been classified as Industrial Monitoring and Control Equipment (per Article 3, Paragraph 24) and are exempt from RoHS compliance until 22 July 2017 (per Article 4, Paragraph 3).

Disposal



The probe is marked with this symbol to indicate that it complies with the applicable European Union requirements to Directives 2002/96/EC and 2006/66/EC on Waste Electrical and Electronic Equipment (WEEE) and Batteries.

 This electronic product is subject to disposal and recycling regulations that vary by country and region. Many countries prohibit the disposal of waste electronic equipment in standard waste receptacles. For more information about proper disposal and recycling of your Teledyne LeCroy product, visit teledynelecroy.com/recycle.

PP006C Passive Probe

Probe Compensation

Proper compensation of the probe is required to assure amplitude accuracy of the waveform being measured by matching the probe to the oscilloscope's input capacitance. Compensation should be adjusted whenever the probe is connected to or transferred between oscilloscopes.

1. Connect the sprung hook to the oscilloscope's CAL OUT terminal and the ground lead to the GND terminal. Connect the cable to any input channel.
2. Turn on the input channel and press AUTO SETUP.
3. Adjust the time base and channel Volts/div settings until the signal contains two cycles as shown below.
4. Use the trimmer tool to adjust the low-frequency trimmer located on the BNC Compensation Box until you achieve a flat-topped square wave like the center illustration in the figure below.



CAUTION: Do not apply excessive pressure. The tip of the trimmer is made of plastic and can break easily.



Over-compensated, correct, and under-compensated waveforms

Cleaning

- Clean only the exterior of the probe, cables, and accessories. Use a soft cotton cloth moistened with a mild detergent and water solution. Do not allow any portion of the probe to be submerged at any time.
- Dry the probe and accessory thoroughly before attempting to make any voltage measurement.
- Do not subject the probe to solvents or solvent fumes as these can cause deterioration of the probe body, cables, and accessories.

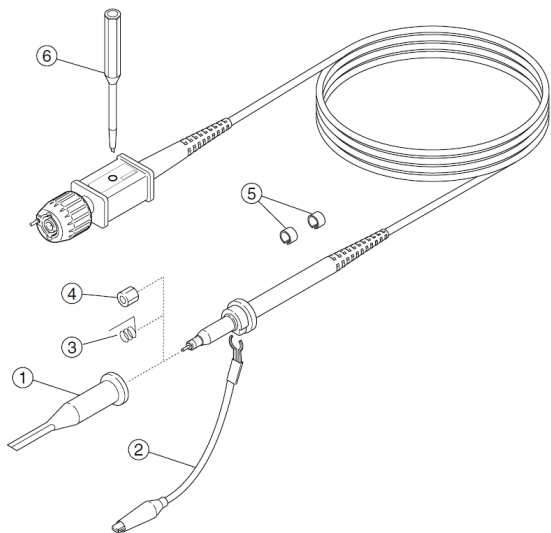
Service

Refer all repairs to qualified service personnel. Contact Teledyne LeCroy at the following address to arrange to return the probe for service:

Teledyne LeCroy, Inc.
700 Chestnut Ridge Road
Chestnut Ridge, NY, 10977-6499
Ph: 800-553-2769 or 845-425-2000
Fax: 845-578-5985
contact.corp@teledynelecroy.com

PP006C Passive Probe

Replaceable Parts



Item	Description	Quantity
1	Sprung Hook	1
2	Ground Lead, 11 cm	1
3	Ground Lead on probe tip	1
4	IC Insulating Tip	1
5	Color Bands (yellow, red, blue, green)	4 x 2
6	Trimmer Tool	1

All replacement parts contained in Standard Accessory Replacement Kit **PK116**.

Warranty

NOTE: THE WARRANTY BELOW REPLACES ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS, OR ADEQUACY FOR ANY PARTICULAR PURPOSE OR USE. TELEDYNE LECROY SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, WHETHER IN CONTRACT OR OTHERWISE. THE CUSTOMER IS RESPONSIBLE FOR THE TRANSPORTATION AND INSURANCE CHARGES FOR THE RETURN OF PRODUCTS TO THE SERVICE FACILITY. TELEDYNE LECROY WILL RETURN ALL PRODUCTS UNDER WARRANTY WITH TRANSPORT PREPAID.

Teledyne LeCroy warrants this oscilloscope accessory for normal use and operation within specification for a period of one year from the date of shipment. Spare parts, replacement parts and repairs are warranted for 90 days.

In exercising its warranty, Teledyne LeCroy, at its option, will either repair or replace any assembly returned within the warranty period to the Customer Service Department of an authorized service center. However, this will be done only if the product is determined by Teledyne LeCroy's examination to be defective because of workmanship or materials, and the defect is not caused by misuse, neglect, accident, abnormal conditions of operation; or, damaged by attempted repair or modifications by a non-authorized service facility.

The customer will be responsible for the transportation and insurance charges for the return of products to the service facility. Teledyne LeCroy will return all products under warranty with transportation charges prepaid.

This warranty replaces all other warranties, expressed or implied, including, but not limited to, any implied warranty of merchantability, fitness, or adequacy for any particular purposes or use. Teledyne LeCroy shall not be liable for any special, incidental, or consequential damages, whether in contract or otherwise.

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