

RIGOL

User Guide



PLA2216 Active Logic Probe

General Safety Summary

- ✚ Connect and disconnect the probe properly.
- ✚ Observe all terminals ratings.
- ✚ Do not touch exposed junctions and components when the instrument is powered on.
- ✚ Do not operate with suspected failures.
- ✚ Do not operate without covers.
- ✚ Do not operate in an explosive atmosphere.
- ✚ Do not operate in wet conditions.
- ✚ Keep product surface clean and dry.
- ✚ Handle with caution.

Product Overview

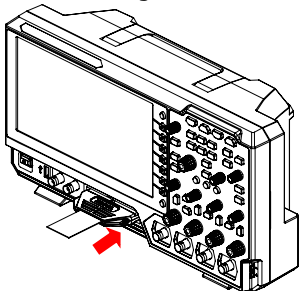
As a high-performance active logic probe, PLA2216 connects the digital signals under test to the MSO5000 and the DHO900/S series digital oscilloscope to realize the logic analyzer function.

The 16 digital channels (D0-D15) of PLA2216 are divided into two channel groups (D0-D7 and D8-D15). 20 input signal leads and 20 grabbers are provided as standard configurations for PLA2216 to realize flexible connection of signals and reference ground.



How to Use the Logic Probe

- 1. Connect PLA2216 to the oscilloscope:** connect the probe output to the digital signal input terminal on the front panel of the oscilloscope, as shown in the figure below.



- 2. Connect the signals under test to PLA2216:** users can connect any number (≤ 16) of the signals under test to PLA2216 probe input

terminal according to the test requirements. Note that the amplitude of the input signal should not exceed the maximum working voltage range of the probe. PLA2216 provides two connection methods to realize convenient and flexible detection.

- ◆ Method 1: users can connect the signals under test through the probe leads separately. You can easily identify the corresponding channel of each signal by the channel label on the probe leads and the label of the probe input, as shown in Figure 1.

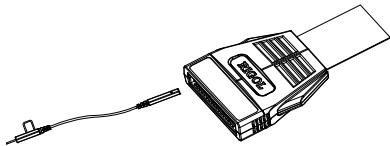


Figure 1

Note: The crosstalk or ground bounce during use may be caused by the fact that the channels share a single ground lead.

Therefore, you are recommended to add one ground wire to the signal line of each channel and twist them, and the ground wire should be as close as possible to the corresponding signal line.

- ◆ Method 2: on the basis of Method 1, you can connect a grabber to each lead and connect it to the device under test as shown in Figure 2.

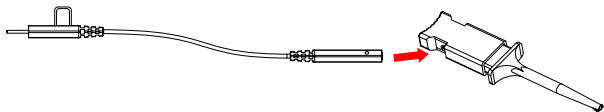


Figure 2

- 3. Set the probe:** press **LA** on the front panel of the oscilloscope to enter the digital channel setting menu. Users can view and set the following parameters under this menu: threshold level (the threshold levels of D7-D0 and D15-D8 can be adjusted independently), waveform size (applicable to all the channels; wherein, Large is only

available when the number of active channels is no more than 8), channel label and so on.

Note: When the probe is connected to the oscilloscope for the first time or the temperature change is more than 5 degrees, you are recommended to calibrate the probe zero using the calibration function in the LA menu (press **LA** → **Threshold** → **Calibration**). Please disconnect all the signals from the PLA2216 input terminal during the calibration.

- 4. Function Inspection:** after finishing the above operations, the signal under test will be displayed on the corresponding digital channel on the oscilloscope screen. If no signal is displayed, please adjust the oscilloscope to select proper general settings (such as the trigger source, trigger level and trigger mode). If the problem still persists, please check the electric connection and parameter settings again or please try to use other probes (such as analog probe) to check the signal state of the test point.

Probe Specifications

Input channels	16
Threshold range	± 15 V
Threshold accuracy	$\pm (100 \text{ mV} + 3\% \text{ of threshold setting})$
Max. input voltage	± 40 V (peak)
Max. input dynamic range	± 10 V + threshold setting
Min. voltage swing	500 mVpp
Min. detectable pulse	5 ns
Input impedance	About 101 k Ω
Input capacitance	About 8 pF
Cable length	About 90 cm
Lead length	About 25 cm
Operation environment	0 $^{\circ}$ C~50 $^{\circ}$ C, 0~80%RH
Storage environment	-20 $^{\circ}$ C~60 $^{\circ}$ C, 0~90%RH

Accessories

Item	Description	Quantity
1	Main Cable	1
2	Lead	20
3	Grabber	20
4	Chinese and English Version of User Guide	1
5	PLA2216 Packing Box	1

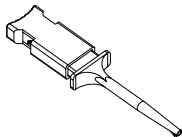
Accessories Sketch Map



Main Cable



Lead



Grabber

Contact Us

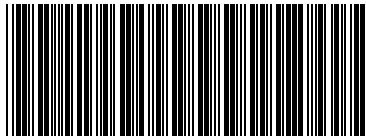
If you have any problem or requirements when using our products or this manual, please contact **RIGOL**.

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