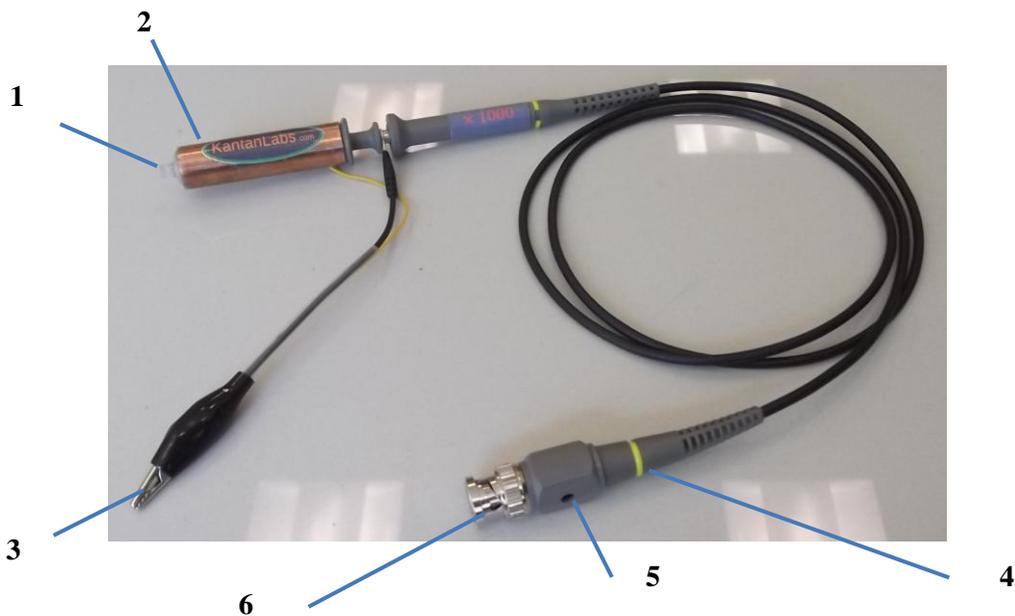


# KTL-PR1 very low input capacitance probe

## Manual



## References

N°	Name	Description
1	Hook Tip	Retractable hook tip
2	High-voltage casing	Connected to ground & protected by a thin plastic layer
3	Ground alligator clip	Enables probe to be connected to ground reference
4	Identifying Ring	Clip color ring onto probe cable for channel identification
5	Trimmer	For voltage calibration
6	BNC connector	Connected to oscilloscope measuring port

## Probe Specification sheet

Attenuation Ratio	x1000
Input capacitance	<0.5pF*
Max input voltage (peak-peak value)	10kV
Minimum frequency (at -1dB)	1kHz
Maximum frequency (at +/-1dB)	>20 MHz
High-voltage casing size	Ø15mm x L65mm
Total probe length	150mm
Cable length	1.1m
Total Weight	60g
Storage Environment	Avoid extreme temperatures and humidity
Operation Environment	Standard conditions

\* Depending on device shape (stray-capacitance between device and probe ground)

## Accessories

Item	Quantity
Colored Rings	4x2sizes
Adjustment Tool	1

## Connection to a scope

Connect the probe to any input channel on our scope by pushing the BNC and twist clockwise to lock the connector. An appropriate colored ring can be chosen to fit the input marking color on the scope channel if any.

## Probe calibration

For the first time usage of the probe, a calibration is highly recommended. It is a good practice to renew calibration every time you remove the probe for instance changing scope input channel or before any measurements are made on a new set-up. It is also recommended to calibrate the probe (and more generally all your equipments) after a long period of rest, after a large variation of ambient temperature,...

For the calibration process, you need first to find a know voltage reference. For instance you may use a signal generator set at 100 kHz with a peak-peak amplitude set to 20V. Note that a lower voltage values will lead to a lower accuracy as the probe is designed to work with large voltages. Note also that you may first need to calibrate your generator signal to be sure that the output swing voltage is accurate enough. This can be done using another known probe already calibrated or an accurate multimeter (check first if the meter is allowed to measure 100kHz signals, if not you may reduce somehow the generator frequency, the same remark also applies to an oscilloscope probe with a large input capacitance).

Then, you may connect your KTL-PR1 probe tip to the signal generator. If the scope indicates a peak-peak voltage value that is different for more than 1% ( $20 \pm 0.2V$ ) of the expected one, you should adjust the probe ratio. To do so, you may use the small plastic tool provided with the probe to adjust the trimmer capacitor through the round opening on top of the BNC connector side of the probe. The typical indicated value on the scope should be  $20 \pm 0.1V$  depending on your scope accuracy.

You are then ready for non-invasive accurate high-voltage AC measurements.

**NOTICE:** Specifications are subjected to change without notice. Contact KantanLabs for the latest specification. All Statements, information and data given herein are believed to be accurate and reliable.