TT-HX 212/312

▶ TT-HX 212

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Specifications

Model	Attn.	Bandwidth	Rise Time (ns)	Input Impedance R (MΩ)	Input Impedance C (pF)	Compensation Range (pF)
TT-HX 212	x10	350	1	10	13	8-25
TT-HX 312	x1	10	35	1	47	8-25
	x10	350	1	10	13	

Cable Lenght 1.2 Meter

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To reduce risk of fire or electric shock, do not exceed the voltage or category ratings of the probe. See voltage derating curve

Max Input Voltage Attenuation x1:

.....55Vrms Measurement Category II

Max Input Voltage Attenuation x10:

.....400Vrms Measurement Category II

.....1500V Transient Overvoltage

DC-Accuracy .....±2%

Pollution Degree .....Pollution Degree 2*

Operating Altitude.....Up to 3000 meters

Max. Operating Temp .....0° C to +50° C

Humidity .....5% to 95% RH (10 to 30 °C)

.....5% to 50% RH (above 40 °C)

.....RH not controlled below 10 °C

* As defined in IEC 61010-031. See definitions below.

Definitions

Measurement Category II (CAT II) refers to measurements performed on circuits directly connected to utilization points (socket outlets and similar) of the low-voltage mains installation.

Pollution Degree 2 refers to an operation environment where normally only dry non-conductive pollution occurs. Temporary conductivity caused by condensation should be expected.

Compliance Statements

EC Declaration of Conformity

CE UK CA

The product conforms to the applicable European Union requirements per IEC/EN 61010-031 safety requirements for electrical equipment for measurement, control and laboratory use. Part 31: Safety requirements for hand-held probe assemblies for electrical measurement and test.

EU RoHS Compliance

The probe and accessories conform to the 2011/65/EU RoHS2 directive.

Disposal of Old Electrical & Electronic Equipment

(Applicable in the European Union and other European countries with separate collection systems). This product is subject to directive 2012/19/EU of the European Parliament and the Council of the European Union on waste electrical and electronic equipment (WEEE), and in jurisdictions adopting that directive, is marked as being put on the market after August 13, 2005, and should not be disposed of as unsorted municipal waste. Please utilize your local WEEE collection facilities in the disposition of this product and otherwise observe all applicable requirements.

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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 oscilloscopes that have BNC with 1 MΩ input and 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/disconnect probes while connected to a voltage source

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Do not overload. Do not apply any potential to the probe leads that exceeds the maximum rating of the probe. Observe all terminal ratings on the oscilloscope before connecting. Consult the oscilloscope product manual for further ratings information.

Always comply with the Voltage vs. Frequency Derating Curve.

Do not disassemble. Touching exposed connections may result in electric shock.

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.

Terms and Symbols

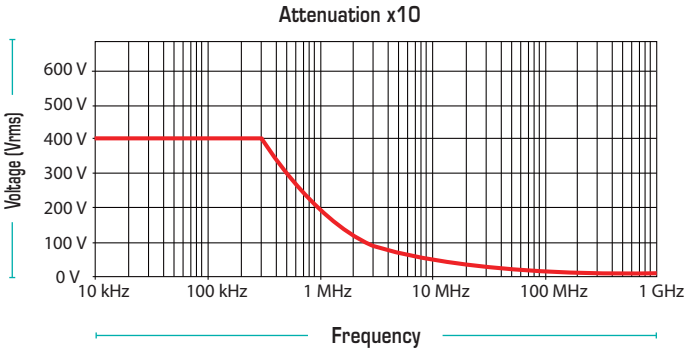
The following terms appear in this manual:

CAUTION of potential damage to equipment, or **WARNING** of potential for bodily injury. Attend to the accompanying information to protect against personal injury or damage. Do not proceed until conditions are fully understood and met. Refer to manual.

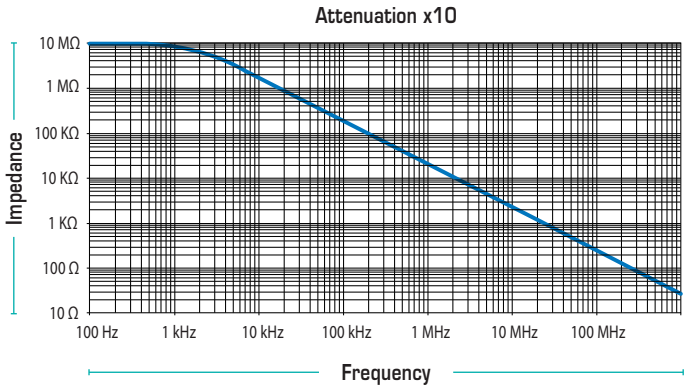
DANGER High Voltage, risk of electric shock or burn.

PROTECTIVE (EARTH) TERMINAL

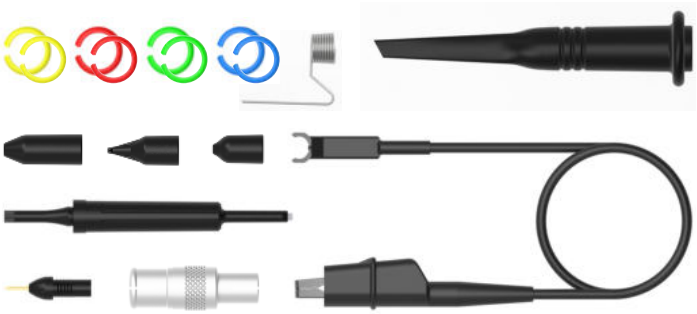
Voltage vs. Frequency Derating Curve TT-HX 212/312



Input Impedance Profile TT-HX 212/312



Accessories Supplied TT-HX 212/312



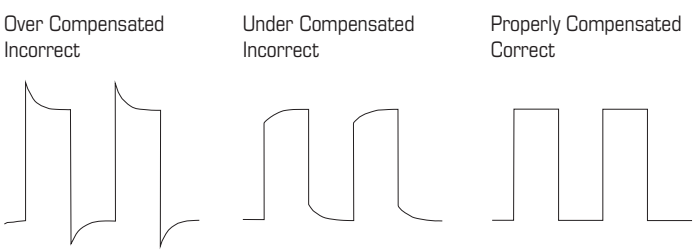
Attenuation x10 Probe Compensation TT-HX 212/312

The following adjustment is required whenever the probe is transferred from one oscilloscope or input channel to another. Proper compensation of the probe is necessary to assure amplitude accuracy of the waveform being measured by matching the probe to the oscilloscopes input capacitance.

Low Frequency Compensation:

1. Apply a 1 kHz square wave to the probe or connect to the oscilloscope's calibrator output.
2. Adjust the trimmer located in the BNC connetor-box for a flat topped square wave.

Waveform Compensation



High Frequency Compensation:

This compensation is not necessarily needed, the waveform is adjusted correctly in the factory.

1. Apply a 1MHz square wave to the probe (waveform generator <1ns).
2. Remove the plastic caps from the two trimmers in the BNC compensation box.
3. Adjust HF2 then HF1 until you achieve a flat-topped square wave (see figure below).

Waveform Compensation