


## Description of Accessories



**Concept** The portable oscilloscopes in this range use **ProbiX intelligent probes and adapters**, offering users active safety.

When connected to an oscilloscope input, a safety message in English concerning the probe or adapter used indicates:

- its maximum input voltage according to the category
- its maximum voltage in relation to the earth, according to the category
- its maximum voltage between channels, according to the category
- its type
- its basic specifications
- the use of suitable safety leads.

 *For user and instrument safety, this information must be respected.*

Some probes are equipped with buttons whose assignment can be programmed.

The color of the signal measured with a particular accessory is parameterized in the "Green" → "chX" → "ProbiX" menu. An interchangeable elastic band or plastic ID markers can be used to match the probe color to the curve color.

The scaling and the units are managed automatically by the ProbiX system, thus allowing fast measurements and without risk of error.

The oscilloscope provides the power supply for the probes and adapters.



**Recommendations for use: see p. 39.**

## Description of Accessories (cont'd)

### HX0030

(Cat. #2124.73)

#### Probix 1/10 probe

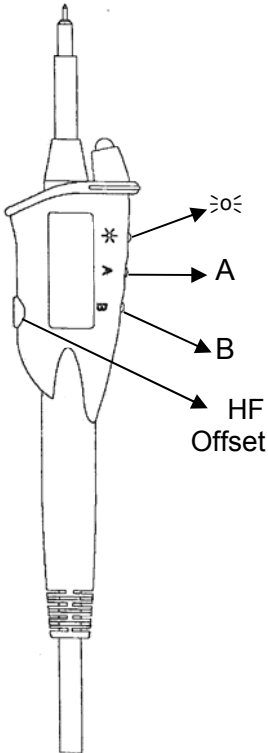
The HX0030 accessory is a 1/10 probe equipped with a LED and pushbuttons (A and B), the action of which can be programmed via the menu: "Green" → "chX" → "PROBIX".

This adapter is a PLUG and PLAY element. Its internal electronics are powered by the oscilloscope.

The measurement output is totally insulated.

When the HX0030 probe is connected to the OSCILLOSCOPE, the following information is displayed.

This information may be different if other PROBIX probes are connected.

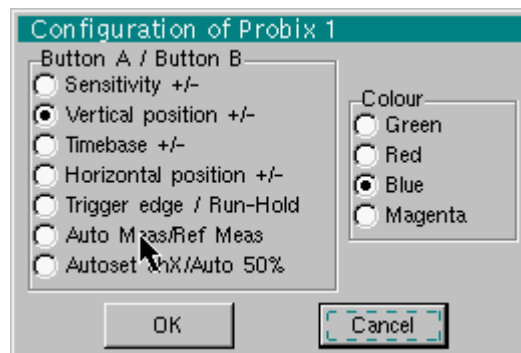


ch1: PROBIX event

! HX30 - 1/10 Probe  
250MHz Bandwidth, +/- 1%(DCV)

	Input:	Floating:	Between Channel:
Ch1	1000V CAT II	600V CAT III	600V CAT III
HX30	600V CAT III		
Ch2	-	600V CAT III	600V CAT III
-	-		
Ch3	-	600V CAT III	600V CAT III
-	-		
Ch4	-	600V CAT III	600V CAT III
-	-		

☞ The positive input is indicated by a + sign.



The " ⚡ " button controls the lighting of the area measured.

## Description of Accessories (cont'd)

### HX0031

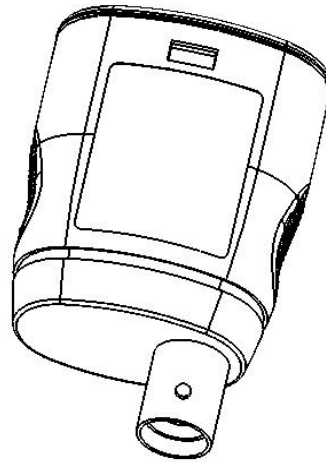
(Cat. #2124.74)

#### *Probix BNC adapter*

The HX0031 accessory is a BNC adapter, connected via a BNC lead to a measuring signal.


This adapter is a PLUG and PLAY element. Its internal electronics are powered by the oscilloscope.

The measurement output is totally insulated.



When the HX0031 probe is connected to the OSCILLOSCOPE, the following information is displayed.

This information may be different if other PROBIX probes are connected.

- ch1: PROBIX event			
 HX31 - BNC Adapter >30V CAT I, Use isolated rated BNC leads			
	Input:	Floating:	Between Channel:
Ch1	600V CAT III	600V CAT III	600V CAT III
HX31			
Ch2	-	600V CAT III	600V CAT III
-	-		
Ch3	-	600V CAT III	600V CAT III
-	-		
Ch4	-	600V CAT III	600V CAT III
-	-		

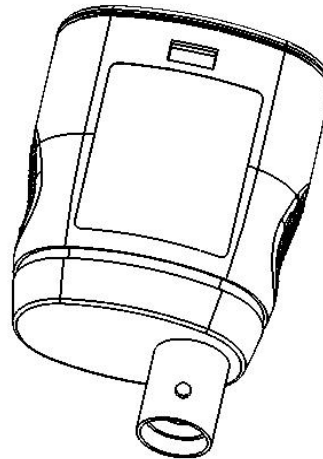
## Description of Accessories (cont'd)

### HX0032 (Cat. #2124.75)

#### Probix BNC 50Ω adapter

The HX0032 accessory is an adapter with a 50Ω load, connected via a BNC lead to a measuring signal.

This adapter is a PLUG and PLAY element. Its internal electronics are powered by the oscilloscope.




To distinguish between this adapter and the HX0031, the measuring signal unit via an HX0032 adapter is "VΩ"; this unit can be modified via the menu: "Green" → "chX" → "Vertical scale".

 **The maximum input voltage to the HX0032 is 10Vrms.**

When the HX0032 probe is connected to the OSCILLOSCOPE, the following information is displayed.

This information may be different if other PROBIX probes are connected.

- ch1: PROBIX event			
 HX32 - 50Ω BNC Adapter 2Wmax >30V CAT I, Use safety rated leads			
	Input:	Floating:	Between Channel:
Ch1	10Vrms MAX	600V CAT III	600V CAT III
HX32			
Ch2	-	600V CAT III	600V CAT III
-	-		
Ch3	-	600V CAT III	600V CAT III
-	-		
Ch4	-	600V CAT III	600V CAT III
-	-		

## Description of Accessories (cont'd)

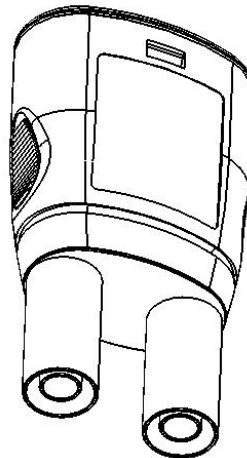
### HX0033 (Cat. #2124.76)

*Probix banana  
adapter  
Ø4 mm:*

The HX0033 accessory is an adapter used to connect leads with banana plugs.


This adapter is a PLUG and PLAY element. Its internal electronics are powered by the oscilloscope.

The measurement output is totally insulated.



When the HX0033 probe is connected to the OSCILLOSCOPE, the following information is displayed.

This information may be different if other PROBIX probes are connected.

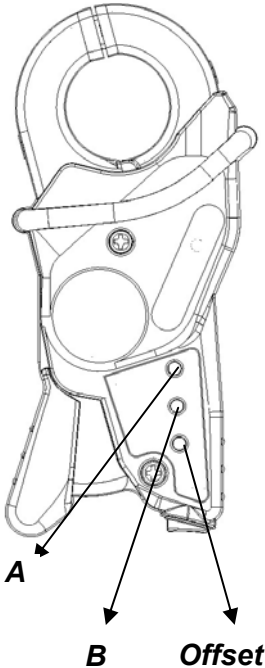
- ch1: PROBIX event			
 DERATING -20dB/decade from 100kHz Use safety leads			
	Input:	Floating:	Between Channel:
Ch1	600V CAT III	600V CAT III	600V CAT III
HX33			
Ch2	-	600V CAT III	600V CAT III
-			
Ch3	-	600V CAT III	600V CAT III
-	-		
Ch4	-	600V CAT III	600V CAT III
-	-		

## Description of Accessories (cont'd)

### HX0034

(Cat. #2124.77)

#### Probix current clamp adapter



The HX0034 accessory is a current clamp using a Hall-effect cell to measure DC or AC currents up to 80A peak, without any intervention on the electrical installation (cutting off the current to be measured).

A voltage output transducer, this clamp is a "PLUG and PLAY" element. Its internal electronics are powered by the oscilloscope.

The action generated by the pushbuttons (A and B) can be programmed via the menu "Green" → "chX" → "Probix". Use the third push-button (Offset) to adjust the residual offset (see below).

The measurement output is totally insulated.

#### Utilization

1. Connect the clamp to the oscilloscope: it is recognized by the instrument and the measurement unit is displayed in A/div. on screen.
2. Adjust the offset by pressing the "Offset" button.  
*The offset can only be adjusted when no current is present. However, the presence of a DC current is permitted. In this case, the offset will be obtained in relation to this initial current.*
3. Use the trigger to open the jaws of the clip and then insert the conductor, respecting the current direction.
4. Close the clamp. Make sure that it is properly closed and centered on the conductor for optimum measurement accuracy.

When the HX0034 probe is connected to the OSCILLOSCOPE, the following information is displayed.

This information may be different if other PROBIX probes are connected.

	Input:	Floating:	Between Channel:
Ch1	-	600V CAT II	600V CAT II
HX34	-	600V CAT III	600V CAT II
Ch2	-	600V CAT III	600V CAT II
-	-	-	-
Ch3	-	600V CAT III	600V CAT II
-	-	-	-
Ch4	-	600V CAT III	600V CAT II
-	-	-	-

## Description of Accessories (cont'd)

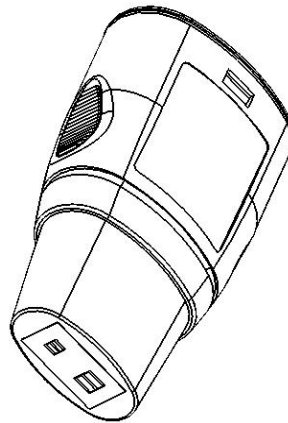
### HX0035 (Cat. #2124.78)

**Probix  
K Thermocouple  
adapter**

The HX0035 accessory is an adapter used to linearize temperature measurements from a K-type thermocouple.

This adapter is a PLUG and PLAY element. Its internal electronics are powered by the oscilloscope.

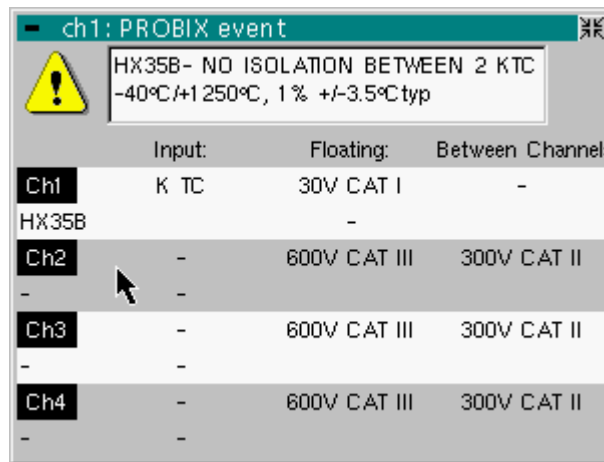
Thermocouple and earth are electrically insulated.



The signal unit measured via an HX0035 is "°C".

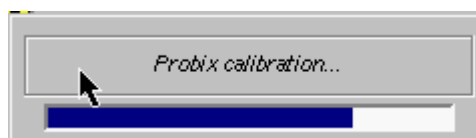
When the HX0035 probe is connected to the OSCILLOSCOPE, the following information is displayed.

This information may be different if other PROBIX probes are connected.



Measurements are available 30 sec. after connection of the HX0035, after a calibration phase.

During this phase, the following message is displayed:



## Description of Accessories (cont'd)

### HX0036

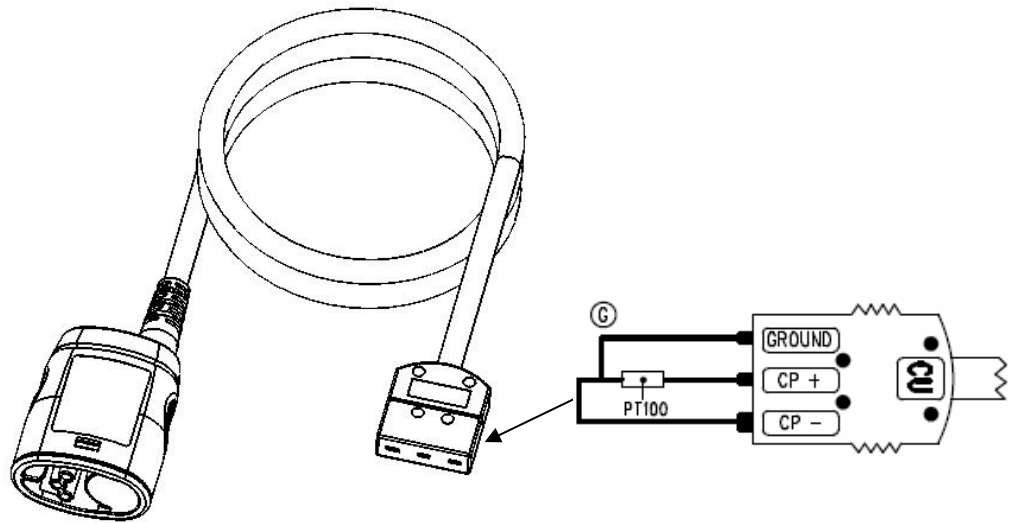
(Cat. #2124.98)

#### Probix RTD100 (PT100) adapter

The HX0036 accessory is an adapter used to linearize temperature measurements from an RTD100.

This adapter is a PLUG and PLAY element. Its internal electronics are powered by the oscilloscope.


RTD100 and earth are electrically insulated.



The signal unit measured via an HX0036 is "°C".

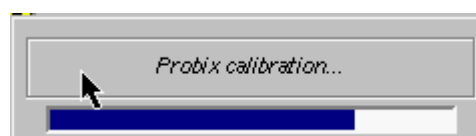
When the HX0036 probe is connected to the OSCILLOSCOPE, the following information is displayed.

This information may be different if other PROBIX probes are connected.

ch1: PROBIX event			
 HX36 -NO ISOLATION BETWEEN 2 PT100 -100°C/+500°C, 1%+/-1.5°C <sub>typ</sub>			
	Input:	Floating:	Between Channel:
Ch1	PT100	30V CAT I	-
HX36		-	
Ch2	-	600V CAT III	300V CAT II
-	-	-	-
Ch3	-	600V CAT III	300V CAT II
-	-	-	-
Ch4	-	600V CAT III	300V CAT II
-	-	-	-

Measurements are available 30 sec. after connection of the HX0036, after a calibration phase.

During this phase, the following message is displayed:



## Description of Accessories (cont'd)

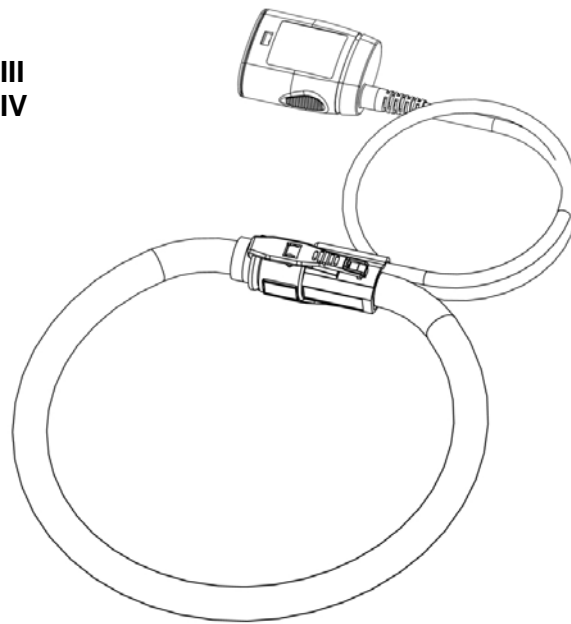
### HX0072 (Cat. #2124.91)

**Probix**  
**AmpFlex® probe**

HX0072 is an AmpFlex® **Probix** probe, to be used to measure AC currents of up to 3000ARMS.

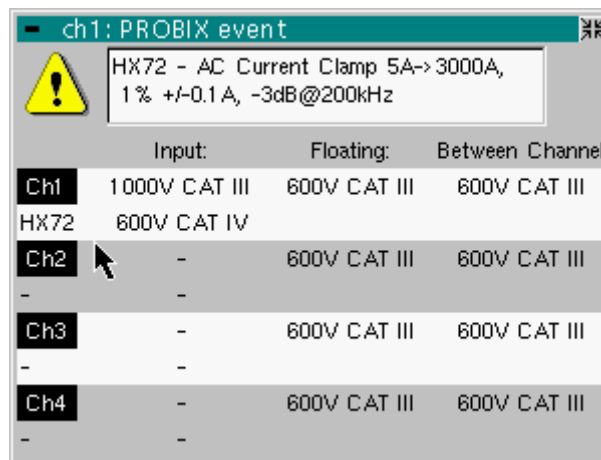
This adapter is a PLUG and PLAY element. Its internal electronics are powered by the oscilloscope.

**3000A~**  
**1000V CAT III**  
**600V CAT IV**



When connecting the HX0072 probe to the **OSCILLOSCOPE**, safety information is displayed.

This information may be different if other **Probix** accessories are connected.



The range of use for weak currents is wider than that indicated in the information window, which corresponds to the specified measuring field.

## Description of Accessories (cont'd)

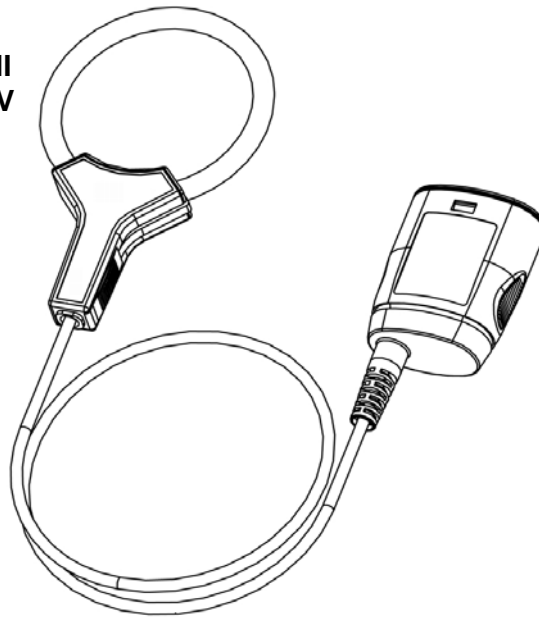
### HX0073 (Cat. #2124.92)

**Probix**  
**MiniFlex®**  
**probe**

HX0073 is an MiniFlex® **Probix** probe, to be used to measure AC currents of up to 300ARMS.


This adapter is a PLUG and PLAY element. Its internal electronics are powered by the oscilloscope.

300 A ~  
1000 V CAT III  
600 V CAT IV



When connecting the HX0073 probe to the **OSCILLOSCOPE**, safety information is displayed.

This information may be different if other **Probix** accessories are connected.

- ch1: PROBIX event			
 HX73 - AC Current Clamp 1A->300A, 1% +/-20mA, -3dB@3MHz			
	Input:	Floating:	Between Channel:
Ch1	1000V CAT III	600V CAT III	600V CAT III
HX73	600V CAT IV		
Ch2	-	600V CAT III	600V CAT III
-	-		
Ch3	-	600V CAT III	600V CAT III
-	-		
Ch4	-	600V CAT III	600V CAT III
-	-		

The range of use for weak currents is wider than that indicated in the information window, which corresponds to the specified measuring field.

## Description of Accessories (cont'd)

### Connection Disconnection

A window indicating the safety conditions is displayed when you connect or disconnect a **Probix** to/from one of the instrument channels:

General characteristics of the last adapter connected

	Input:	Floating:	Between Channel:
Ch1 HX31	600V CAT III	600V CAT III	300V CAT II
Ch2 HX30	1000V CAT II	600V CAT III	300V CAT II
Ch3 HX32	10Vrms MAX	600V CAT III	300V CAT II
Ch4 HX35B	K TC	30V CAT I	-

**Input:**  
Maximum voltage of the signal measured by the **Probix** adapter

**Floating input:**  
Maximum voltage permitted on each **Probix** terminal in relation to the earth

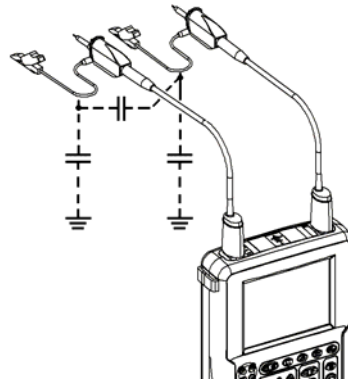
**Between channels:**  
Maximum admissible voltage between channels (this voltage depends on the combination of **Probix** adapters connected)

## Description of Accessories (cont'd)

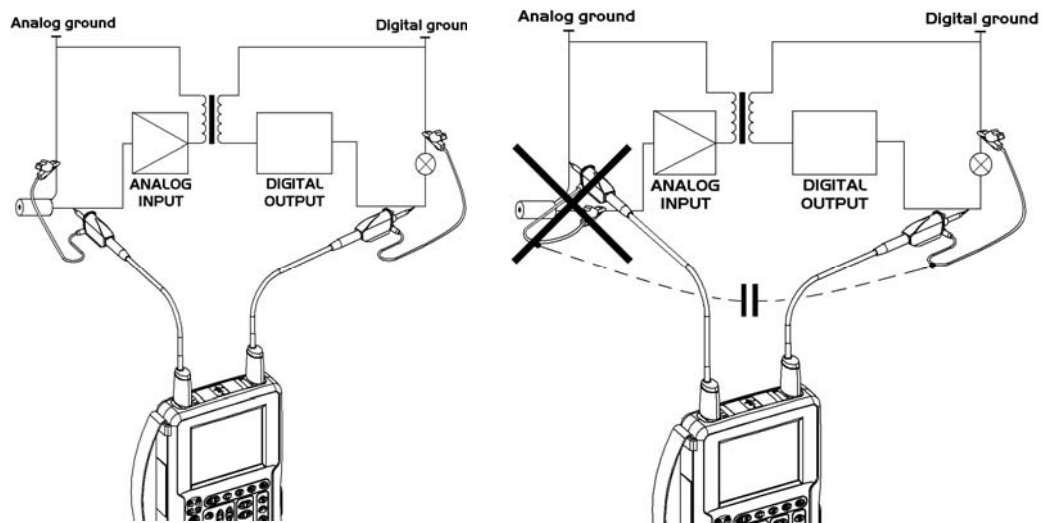
### Recommendations for use

#### Connection of reference conductors for the 1/10 Probix HX0030 probe

Distribution of stray capacitances:



It is essential, given the stray capacitances, to connect properly the reference conductors for each probe. These conductors should preferably be connected to the cold points, to prevent the transmission of noise by the stray capacitance between modes.



The noise of the digital earth is transmitted to the analog input by the stray capacitance.



**To prevent electric shocks or possible fire, never use the "earthing spring" accessory of the 1/10 probe for voltages > 30Vrms in relation to ground.**

