
User's Manual

Model 702928 PBD0200 Differential Probe

User Registration

YOKOGAWA provides registered users with useful information and services. Please allow us to serve you best by completing the user registration form accessible from our website.

<https://tmi.yokogawa.com/support/>



Contact Us

If you want to resolve a technical support issue or need to contact YOKOGAWA, please fill out the inquiry form on our website.

<https://tmi.yokogawa.com/contact/>



Thank you for purchasing the Model 702928 PBD0200 Differential Probe. This user’s manual explains features, usage, specifications, and the handling precautions of the 702928. To ensure correct use, please read this manual thoroughly before beginning operation. After reading this manual, keep it in a safe place.

List of Manuals

The following manuals are provided for the 702928.

Manual Title	Manual No.	Description
Model 702928 PBD0200 Differential Probe User’s Manual	IM 702928-01EN	This manual. Explains features, usage, specifications, and the handling precautions of the 702928.
China RoHS Information	IM CROHS12-92Z1	Document for China
Safety Instruction Manual	IM 00C01C01-01Z1	Safety manual (European languages)

The “EN” and “Z1” in the manual numbers are the language codes.

Contact information of YOKOGAWA offices worldwide is provided on the following sheet.

Document No.	Description
PIM 113-01Z2	Inquiry (List of worldwide contacts)

Notes

- The contents of this manual are subject to change without prior notice as a result of improvements to the product's performance and functionality. Refer to our website to view our latest manuals.
- Every effort has been made in the preparation of this manual to ensure the accuracy of its contents. However, should you have any questions or find any errors, please contact your nearest YOKOGAWA dealer.
- Copying or reproducing all or any part of the contents of this manual without the permission of YOKOGAWA is strictly prohibited.

Trademarks

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- Other company and product names are registered trademarks or trademarks of their respective holders.
- In this manual, the ® and TM symbols do not accompany their respective registered trademark or trademark names.

Revisions

- 1st Edition: October 2025

Checking the Package Contents

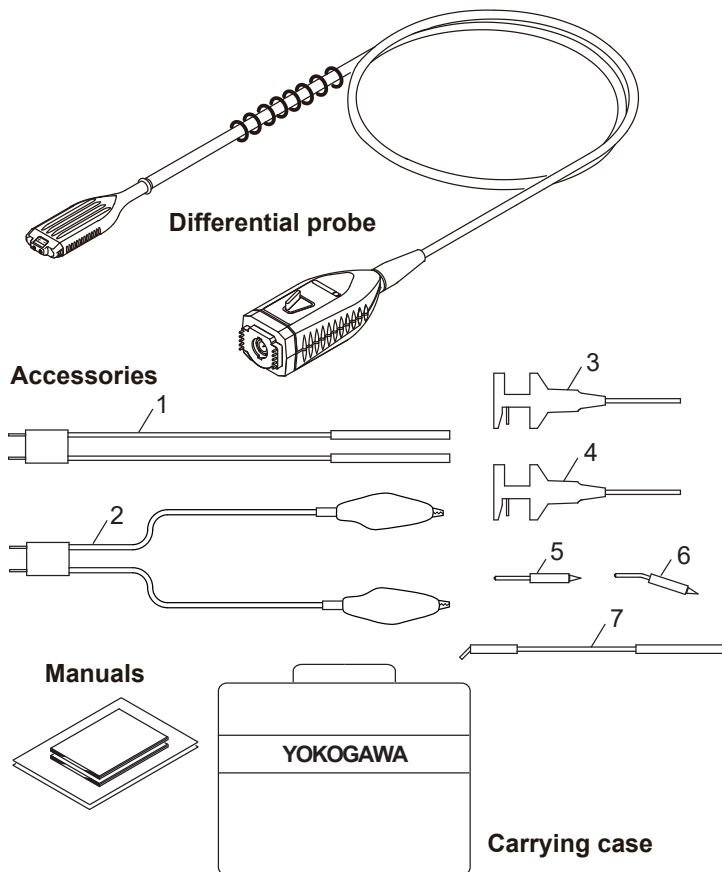
The following items are included. If some of the contents are not correct or missing or if there is physical damage, contact the dealer that you purchased them from.

- Differential probe unit (702928)

Standard Accessories

The numbers in the figure correspond to the table on the next page. Standard accessories are not covered by warranty for this instrument.

- Accessories (see below)
- Manuals (see List of Manuals on page i)
- Carrying case



Checking the Package Contents

No. Attachment Item		Quantity
1	10-cm pair leads (red/black)	2 sets
2	Alligator pair leads (red/black)	2 sets
3	Micro clip (red)	1
4	Micro clips (black)	2
5	Spring-type straight pins	4
6	Spring-type angled pins	4
7	Ground extension leads	2

Conventions Used in This Manual



Improper handling or use can lead to injury to the user or damage to the instrument. This symbol appears on the instrument to indicate that the user must refer to the user's manual for special instructions. The same symbol appears in the corresponding place in the user's manual to identify those instructions. In the manual, the symbol is used in conjunction with the word "WARNING" or "CAUTION."

WARNING

Calls attention to actions or conditions that could cause serious or fatal injury to the user, and precautions that can be taken to prevent such occurrences.

CAUTION

Calls attention to actions or conditions that could cause light injury to the user or damage to the instrument or user's data, and precautions that can be taken to prevent such occurrences.

Note

Calls attention to information that is important for the proper operation of the instrument.

French



Une manipulation ou une utilisation incorrectes risquent de blesser l'utilisateur ou d'endommager l'instrument. Ce symbole apparaît sur l'instrument pour indiquer à l'utilisateur qu'il doit se reporter au manuel de l'utilisateur afin d'y lire les instructions spécifiques correspondantes. Ce même symbole apparaît à la section correspondante du manuel de l'utilisateur pour signaler lesdites instructions. Dans le manuel de l'utilisateur, ce symbole est accompagné des termes AVERTISSEMENT et ATTENTION.

AVERTISSEMENT

Attire l'attention sur des gestes ou des conditions susceptibles de provoquer des blessures graves (voire mortelles), et sur les précautions de sécurité pouvant prévenir de tels accidents.

ATTENTION

Attire l'attention sur des gestes ou des conditions susceptibles de provoquer des blessures légères ou d'endommager l'instrument ou les données de l'utilisateur, et sur les précautions de sécurité susceptibles de prévenir de tels accidents.

Safety Precautions

This product is designed to be used by a person with specialized knowledge.

To use this product correctly and safely, the general safety precautions described herein must be observed during all phases of operation.

YOKOGAWA assumes no liability for the customer's failure to comply with these requirements.

In addition, before using the probe, read the manuals of the oscilloscope to thoroughly familiarize yourself with its specifications and operation.

This manual is part of the product and contains important information.

Keep this manual in a safe place so that you can refer to it immediately when using the product until you dispose of the product.

The following symbols are used on this instrument.



Handle with care. Refer to the user's manual. This symbol appears on dangerous locations on the instrument which require special instructions for proper handling or use. The same symbol appears in the corresponding place in the manual to identify those instructions.

French



À manipuler délicatement. Toujours se reporter aux manuels d'utilisation et d'entretien. Ce symbole a été apposé aux endroits dangereux de l'instrument pour lesquels des consignes spéciales d'utilisation ou de manipulation ont été émises. Le même symbole apparaît à l'endroit correspondant du manuel pour identifier les consignes qui s'y rapportent.

Notes about Usage



WARNING

Purpose of the product

The product is used in combination with an oscilloscope to observe and measure electrical signals. Do not use for any other purpose.

Ground the measuring instrument

The protective grounding terminal of the oscilloscope must be connected to ground.

Check the grounding

Before connecting the probe input terminal to the device under measurement, ensure that the oscilloscope is properly grounded and that the probe's output connector is connected to the oscilloscope input.

Observe the maximum input voltage

Do not apply a voltage exceeding the following maximum values between an input and ground.

Maximum input voltage: ± 60 V DC, ± 42 V AC_{peak}

Be careful of electric shock

Never use the probe with wet hands or when the probe itself is wet. Doing so may cause electric shock. Be careful of electric shock when you connect the probe to the device under measurement.

Avoid exposed circuitry

To prevent electric shock, remove metal and jewelry such as watches and rings. Do not touch exposed connections or components when power is present on the device.

Precautions when connecting and disconnecting the probe

Do not disconnect the probe from the oscilloscope while the probe is connected to the device under measurement. Doing so may cause electric shock.

Do not operate in wet or damp conditions

To prevent electric shock, do not operate the probe in wet or damp conditions.

Do not operate in explosive atmosphere

To prevent injury or fire hazard, do not operate the probe in an atmosphere of flammable or explosive gases or vapors.

Do not operate with suspected failures

Stop using the probe if you suspect that the probe is damaged. Consult your nearest YOKOGAWA dealer.

Do not operate with a damaged signal cable

If the signal cable is torn and the inner metal is exposed or if a color different from the outer sheath appears, stop using the cable.

Do not disassemble or modify

Do not disassemble or modify the product. YOKOGAWA assumes no liability if you disassemble or modify the product.

CAUTION

Application and design of the product

The product has not been designed or manufactured for applications in which high reliability is required over a long period of time.

Protective structure

The product is not dust or water resistant. Do not use it in areas with a lot of dust or near water.

Usage and storage environment

Avoid using or storing the product in an environment that does not meet the specifications, such as direct sunlight, high temperature and humidity, or condensation. Deformation or insulation deterioration can occur resulting in failure to retain the product specifications.

Handling the probe

Avoid vibration, shock, and static electricity when handling the probe. Do not bend or pull the cables excessively. Doing so may damage or disconnect the probe.

French



AVERTISSEMENT

But du produit

Le produit est utilisé en association avec un oscilloscope pour observer et mesurer des signaux électriques. Ne l'utilisez pas à d'autres fins.

Mettez l'instrument de mesure à la terre

La borne de terre de protection de l'oscilloscope doit être connectée à la terre.

Vérifiez la mise à la terre

Avant de connecter la borne d'entrée de la sonde à l'appareil sous mesure, assurez-vous que l'oscilloscope est correctement mis à la terre et que le connecteur de sortie de la sonde est connecté à l'entrée de l'oscilloscope.

Respectez la tension d'entrée maximale

Ne pas appliquer une tension supérieure aux valeurs maximales suivantes entre une entrée et la terre.

Tension d'entrée maximale: ± 60 V DC, ± 42 V ACpeak

Faites attention au choc électrique

N'utilisez jamais la sonde les mains mouillées ou lorsque la sonde elle-même est mouillée. Cela pourrait provoquer un choc électrique. Faites attention au choc électrique lorsque vous connectez la sonde à l'appareil à mesurer.

Évitez les circuits exposés

Pour éviter un choc électrique, retirez le métal et les bijoux tels que les montres et les bagues. Ne touchez pas les connexions ou composants exposés en présence de courant sur l'appareil.

Précautions lors de la connexion et de la déconnexion de la sonde

Ne déconnectez pas la sonde de l'oscilloscope lorsque la sonde est connectée à l'appareil en cours de mesure. Cela pourrait provoquer un choc électrique.

N'opérez pas dans des conditions mouillées ou humides

Pour éviter un choc électrique, ne faites pas fonctionner la sonde dans des conditions mouillées ou humides.

N'opérez pas dans une atmosphère explosive

Pour éviter les blessures et les risques d'incendie, n'utilisez pas la sonde dans une atmosphère de gaz ou des vapeurs inflammables ou explosifs.

N'opérez pas en cas de défaillances suspectées

Arrêtez d'utiliser la sonde si vous pensez qu'elle est endommagée. Consultez votre revendeur YOKOGAWA le plus proche.

N'opérez pas avec le câble de signal endommagé

Si le câble de signal est coupé et que le métal interne est exposé ou si une couleur différente de la gaine extérieure apparaît, arrêtez d'utiliser le câble.

Ne démontez ou modifiez pas

Ne démontez ou modifiez pas le produit. YOKOGAWA n'assume aucune responsabilité si vous démontez ou modifiez le produit.

ATTENTION

Application et conception du produit

Le produit n'a pas été conçu ou fabriqué pour des applications dans lesquelles une fiabilité élevée est requise sur une longue période.

Structure de protection

Le produit n'est pas résistant à la poussière ou à l'eau. Ne l'utilisez pas dans des zones très poussiéreuses ou près de l'eau.

Environnement d'utilisation et de stockage

Évitez d'utiliser ou de stocker le produit dans un environnement qui ne répond pas aux spécifications, comme la lumière directe du soleil, les températures et l'humidité élevées ou la condensation. Une déformation ou une détérioration de l'isolation peut se produire, entraînant le non-respect des spécifications du produit.

Manipulation de la sonde

Évitez les vibrations, les chocs et l'électricité statique lors de la manipulation du produit. Ne pliez pas et ne tirez pas les câbles de manière excessive. Cela pourrait endommager ou déconnecter la sonde.

Operating environmental limitations

Please note the following operating environmental limitations.

CAUTION

This product is a Class A (for industrial environments) product. Operation of this product in a residential area may cause radio interference in which case the user will be required to correct the interference.

French

ATTENTION

Ce produit est un produit de classe A (pour les environnements industriels). Le fonctionnement de ce produit dans une zone résidentielle peut provoquer des interférences radio, auquel cas l'utilisateur devra corriger les interférences.

Regulations and Sales in Various Countries and Regions

Waste Electrical and Electronic Equipment (WEEE)



(EU WEEE Directive valid only in the EEA* and UK WEEE Regulations in the UK)

■ This product complies with the WEEE marking requirement. This marking indicates that you must not discard this electrical/electronic product in domestic household waste. When disposing of products in the EEA or UK, contact your local Yokogawa office in the EEA or UK respectively.

*EEA: European Economic Area

Authorized Representative in the EEA (AR)

Yokogawa Europe B. V. is the authorized representative of Yokogawa Test & Measurement Corporation for this product in the EEA. To contact Yokogawa Europe B. V., see the separate list of worldwide contacts, PIM 113-01Z2.

Disposal

When disposing of YOKOGAWA products, follow the laws and ordinances of the country or region where the product will be disposed of.

Contents

List of Manuals	i
Checking the Package Contents	iii
Conventions Used in This Manual	v
Safety Precautions	vi
Regulations and Sales in Various Countries and Regions	xi
1. Product Overview	
Features of 702928	1
2. Configuration and Functions	
Combinations of Accessories and Component Names	2
Standard accessories	3
Accessories sold separately	3
Functions of Components	4
3. How to Use	
⚠ Operating Precautions	5
Operating Procedure	7
Handling the Accessories	7
How to Create Extension Leads	9
Using the Ground Extension Lead	12
Example of Connecting the Accessories	13
Warm-up and Offset Voltage Adjustment	14
4. Product Specifications	
Electrical Specifications	16
⚠ Input Voltage Derating by Frequency	17
General Specifications	18
Compliant Standards	18

1. Product Overview

Features of 702928

PBD0200 differential probe (model 702928) is a differential input active probe with a wide bandwidth (DC to 200 MHz). The probe features excellent common mode rejection capability and allows direct observation of differential signals.

The 702928 is equipped with a Yokogawa dedicated probe interface. When connected to a Yokogawa oscilloscope with probe interface, the probe is automatically detected and power is supplied via the probe interface.

We offer various standard accessories and other accessories sold separately so that you can exchange according to the device under measurement.

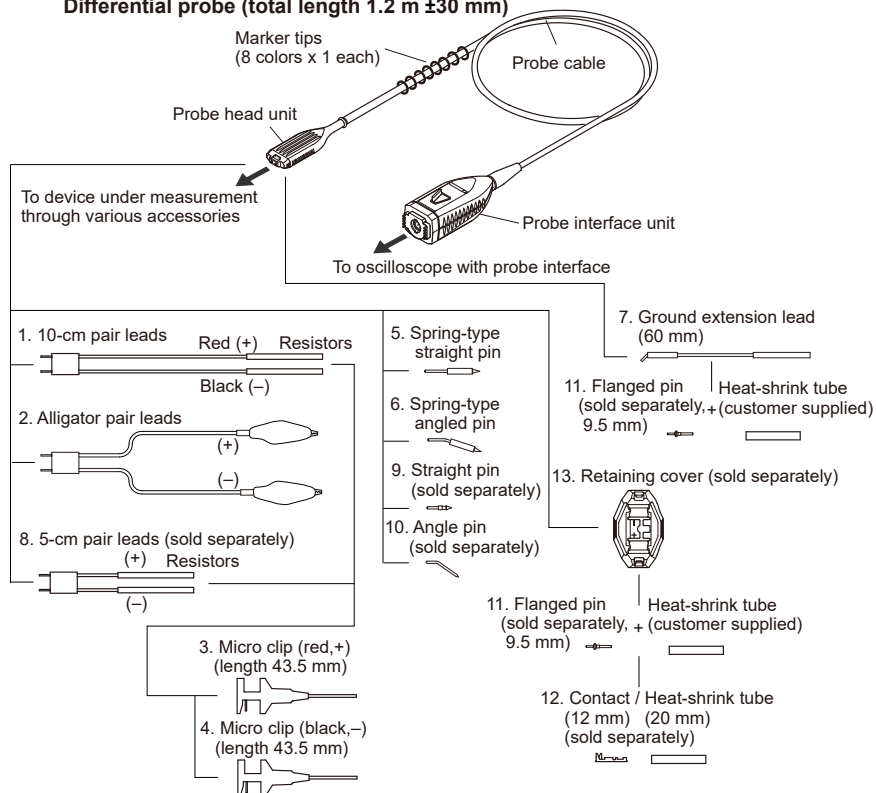
- * For information about oscilloscopes with Yokogawa dedicated probe interface, contact your nearest Yokogawa dealer.

2. Configuration and Functions

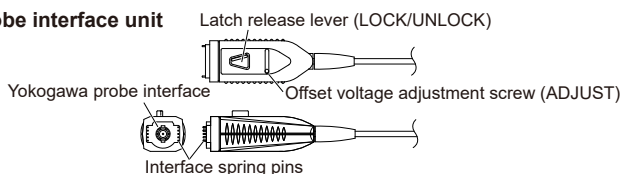
Combinations of Accessories and Component Names

The combinations of standard accessories and separately sold accessories and the component names are as follows. The numbers in the figure correspond to the table on the next page.

Differential probe (total length 1.2 m $\pm$ 30 mm)



Probe interface unit



Standard accessories

No.	Item	Quantity
1	10-cm pair leads (red/black)	2 sets
2	Alligator pair leads (red/black)	2 sets
3	Micro clip (red)	1
4	Micro clips (black)	2
5	Spring-type straight pins	4
6	Spring-type angled pins	4
7	Ground extension leads	2

Accessories sold separately

This shows the parts number and quantity when purchasing standard accessories and separately sold accessories.

No.	Item	Parts Number	Quantity
1	10-cm pair leads (red/black) ¹	B8099KU	5 sets
2	Alligator pair leads (red/black) ¹	B8089EB	1 set
3	Micro clip (red) ¹	B8099KP	1
4	Micro clip (black) ¹	B8099KH	1
5	Spring-type straight pins ¹	B8099DJ	5
6	Spring-type angled pins ¹	B8099DK	5
7	Ground extension leads ¹	B8089FA	5
8	5-cm pair leads (red/black)	B8099KV	5 sets
9	Straight pins	B8099DL	10
10	Angled pins	B8099DM	10
11	Flanged pins	B8099KX	5
12	Contacts, heat-shrink tubes	B8099KW	10 each
13	Retaining covers	B8099KY	2

1 Standard accessories (for additional purchase)

Functions of Components

Probe head

Depending on the device and measurement environment, various accessories—such as input leads, pins, or clips—may be attached to the signal input terminal at the tip of the probe head. These accessories are then connected to the device under measurement. See *Handling the Accessories* for details. Custom-made extension leads can also be used.

Ground extension lead

The ground lead is usually not used when measuring differential signals. See *Using the Grounding Extension Lead* for details.

Marker tips

There are 8-colored marker tips attached to the probe cable. Matching the tip color to the display color of the connected oscilloscope channel makes it easy to identify the probe.

Probe interface

Connect the output connector of the tip to an oscilloscope. The interface is equipped with a latch release lever and an offset voltage adjustment screw.

Output connector and interface spring pins

Connect the output connector to an oscilloscope's input terminal. The connector has a Yokogawa probe interface function. Therefore, when connected to a Yokogawa oscilloscope with a probe interface, the interface spring pins touch the pad on the input terminal of the oscilloscope and the probe is automatically detected. The power for the probe is also supplied from these pins.

Latch release lever

When you connect the output connector to the oscilloscope input terminal, you will hear a latch sound and it will be locked. To release the lock, push the latch release lever to the UNLOCK side.

Offset voltage adjustment screw

There is a variable resistor inside. Use a suitable screwdriver to adjust the residual offset voltage. See *Offset Voltage Adjustment* for details.

3. How to Use

Operating Precautions



WARNING

- Use this probe only with Yokogawa's oscilloscopes with probe interface. Even with Yokogawa's oscilloscopes, this probe can be used only when specified as a connectable accessory. Also, use this probe only with standard or optional accessories sold separately.
- Do not apply a voltage exceeding the following maximum values between an input and ground.

Maximum input voltage: ± 60 V DC, ± 42 V ACpeak

- To use the probe, first connect to the oscilloscope and then to the device under measurement. After use, turn off the power to the device under measurement, disconnect the probe from the device under measurement first, and then disconnect from the oscilloscope.

CAUTION

- This probe is designed to measure the voltage difference between two points on the device under measurement. It does not electrically isolate the device under measurement from the measuring instrument.
- When cleaning the probe, wipe with a piece of soft cloth to prevent damaging the probe. Do not immerse the probe body in liquid. Do not use abrasive cleaners or volatile solvents such as benzene on the probe.

French



AVERTISSEMENT

- Utilisez la sonde uniquement avec les oscilloscopes de Yokogawa avec interface de sonde. Même avec les oscilloscopes de Yokogawa, la sonde ne peut être utilisée que si spécifiée comme accessoire connectable. Et utilisez la sonde uniquement avec des accessoires standard ou des accessoires en option vendus séparément.
- Ne pas appliquer une tension supérieure aux valeurs maximales suivantes entre une entrée et la terre.

Tension d'entrée maximale: ± 60 V DC, ± 42 V ACpeak

- Pour utiliser la sonde, connectez-la d'abord à l'oscilloscope, puis à l'appareil en cours de mesure. Après utilisation, coupez l'alimentation de l'appareil sous mesure, débranchez d'abord l'appareil sous mesure, puis déconnectez-la de l'oscilloscope.

ATTENTION

- Le produit n'est pas étanche à la poussière ni à l'eau. N'utilisez pas le produit dans des zones très poussiéreuses ou dans lesquelles de l'eau pourrait être renversée.
- Lors du nettoyage de la sonde, essuyez avec un morceau de chiffon doux pour éviter d'endommager la sonde. Ne plongez pas le corps de la sonde dans un liquide. N'utilisez pas de nettoyeurs abrasifs ni de solvants volatils tels que la benzine sur la sonde.

Operating Procedure

1. Have the probe and an oscilloscope with probe interface ready.
2. Depending on the device and environments under measurement, various accessories such as input leads, pins, or clips are combined and attached to the signal input terminal at the tip of the probe head.
3. Insert the output connector into the oscilloscope input terminal.
The connector will be locked when you insert it until you hear a latch.
4. The probe interface automatically detects the probe and automatically sets the oscilloscope input coupling. Otherwise, set it manually.
5. Connect the probe head to the device under measurement.
6. Warm up for at least 30 minutes. Also, adjust the offset voltage if necessary. See Offset Voltage Adjustment for details.

Handling the Accessories

Select an accessory suitable for the device under measurement according to the table on the next page, and connect it to the signal input terminals of the probe head. See also Example of Connecting the Accessories.

Pair leads

10-cm pair leads (included) and 5-cm pair leads (sold separately) can be connected directly to the device under measurement, such as a pin header (a 0.64-mm square pin or a $\Phi 0.65$ -mm pin), or be used in combination with micro clips (included). These pair leads contain the damping resistors, which take the connection and combination into consideration. The 10-cm pair leads are especially suitable for measuring relatively low-frequency signals.

- 10-cm pair leads (included) 150 Ω , 1/4 W, 1 %
- 5-cm pair leads (sold separately) 100 Ω , 1/4 W, 1 %

In addition, alligator clip pair leads is provided as standard.

Pins

The following four types of pins are available. They are suitable for measuring relatively high-frequency signals. Select the pin according to the position and the status of the device under measurement.

- Spring-type straight pin (included)
- Spring-type angled pin (included)
- Straight pin (sold separately)
- Angled pin (sold separately)

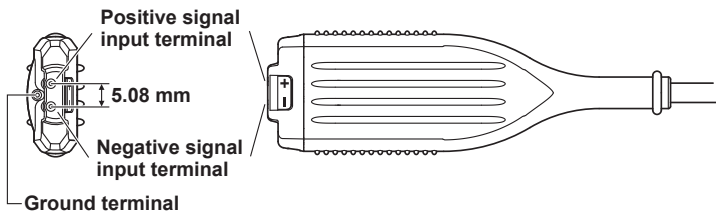
Custom-made extension lead

If you require longer leads than those included or a retaining cover to prevent the leads from coming out of the probe head, you can make extension leads. See [Creating Extension Leads](#) for details.

Note

Because the probe input has high impedance, the inductance from the probe head to the device under measurement has a large effect on the measured results of high frequency signal components. When measuring signals with frequency components of 100 MHz or higher, it is recommended to use as short attachments as possible for both the positive and negative signal input terminals.

Probe head



How to Create Extension Leads

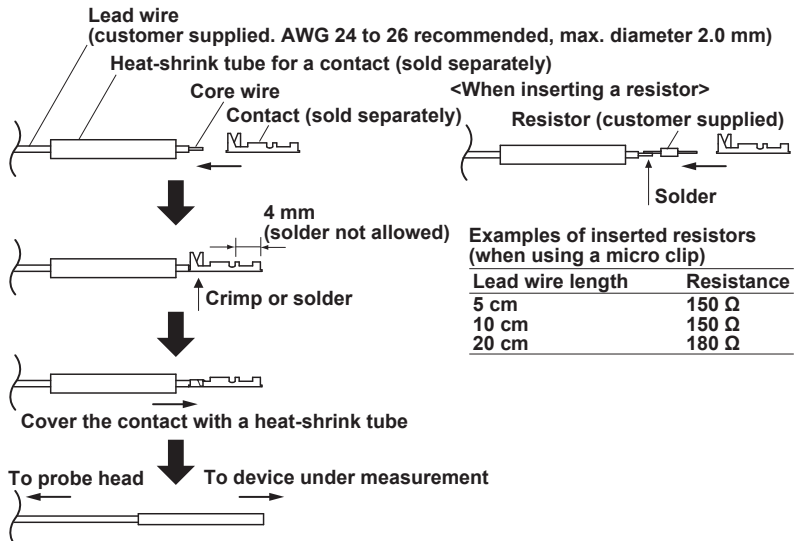
You can create extension leads using separately sold accessories and customer-supplied lead wires.

Device-under-Measurement End

1. Pass a lead wire (customer supplied) through a heat-shrink tube (sold separately) for a contact.

The recommended lead wire size is AWG 24 to 26 with a maximum diameter of 2.0 mm. Here, a damping resistor (customer supplied) can be also inserted between the lead wire and the contact (sold separately).

2. Crimp or solder the core of the lead wire to the contact. A dedicated crimping tool is needed to crimp the lead wires.
3. Cover the contact with the heat-shrink tube, and then apply heat with a drier to fix the tube in place.

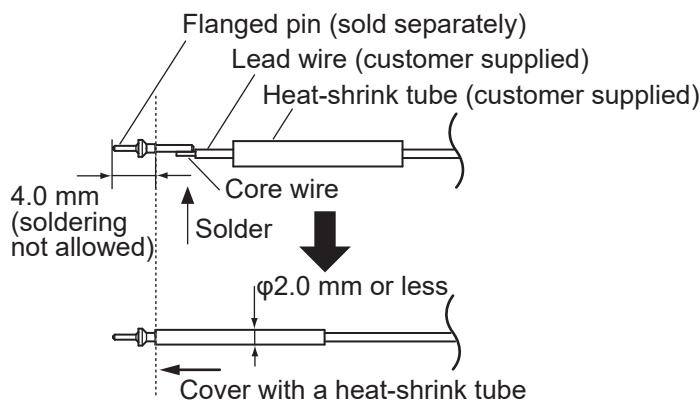


Note

If solder gets into the soldering-not-allowed part (4 mm from the tip of the contact), the contact or the device under measurement may be damaged.

Probe Head End

4. Pass the lead wire through the heat-shrink tube (customer supplied). The heat-shrink tube for the probe-head end is not available as accessories sold separately.
5. Solder the core wire of the lead wire to the flanged pin (sold separately).
6. Cover the flanged pin with a heat-shrink tube, and then apply heat with a drier to fix the tube in place.

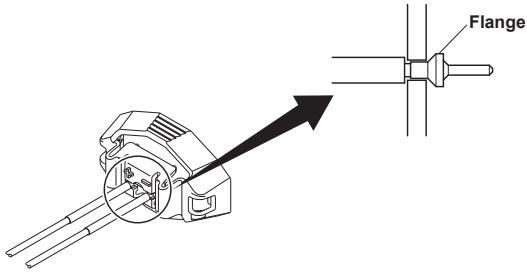


Note

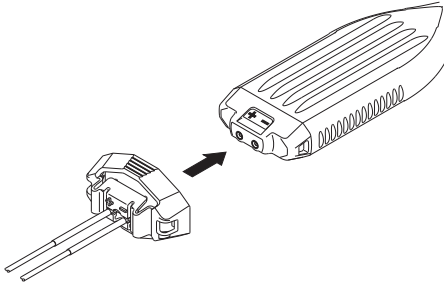
- If solder gets into the soldering-not-allowed part (4 mm from the tip of the flanged pin), the probe may be damaged. Also, do not cover the part with the heat-shrink tube.
 - Make sure that the diameter of the tube after shrinking is 2.0 mm or less. If the maximum diameter exceeds 2.0 mm, the lead wire cannot pass through the retaining cover.
-

Attaching the Retaining Cover (sold separately)

7. Pass the flanged sections of the two input pins through the center holes of retaining cover (sold separately), and place the input pins on the holders on either side.

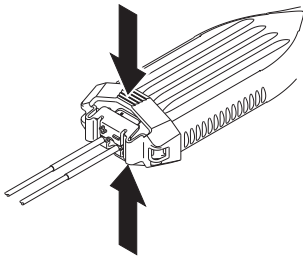


- 8.** Align the + and – markings on the retaining cover to those on the probe head, and attach the retaining cover to the probe head. Check that the retaining cover's left and right latches are securely locked.



Removing the Retaining Cover

- 9.** While pinching the retaining cover at the top and bottom, remove the cover from the probe head.



Note

- The retaining cover (sold separately) can only be used with a flanged pin (sold separately) that is included in the package.
- The probe's ground terminal cannot be used if you are using the retaining cover.

Using the Ground Extension Lead

CAUTION

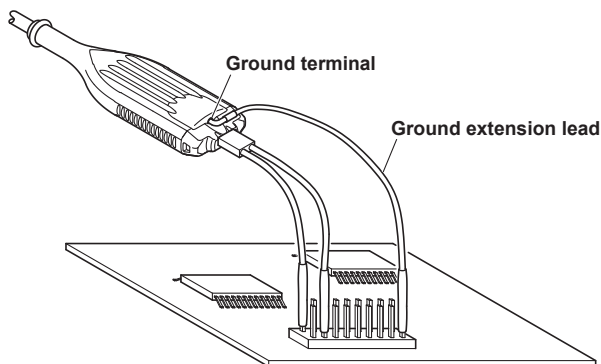
Connect the ground extension lead only to the common ground. If measuring a floating circuit, do not use the ground terminal. Doing so may damage the measuring system or the device under measurement.

French

ATTENTION

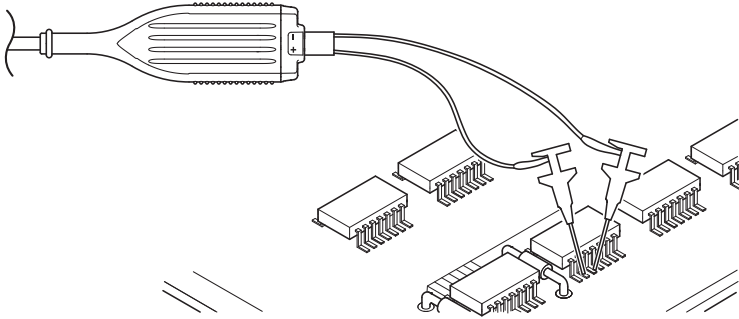
Connectez le câble d'extension de terre uniquement à la terre commune. N'utilisez pas la borne de terre si vous mesurez un circuit flottant. Cela pourrait endommager le système de mesure ou l'appareil sous mesure.

When measuring low frequency signals, noise may be reduced by connecting the probe ground terminal to the common ground on the device under measurement using the ground extension lead (included). The tip of the ground extension lead can be directly connected to 0.64 mm square pins or $\Phi 0.65$ mm diameter pins.

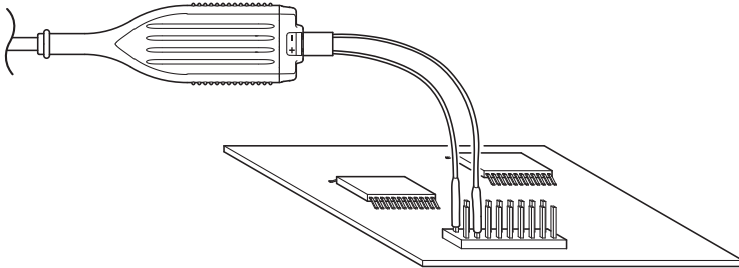


Example of Connecting the Accessories

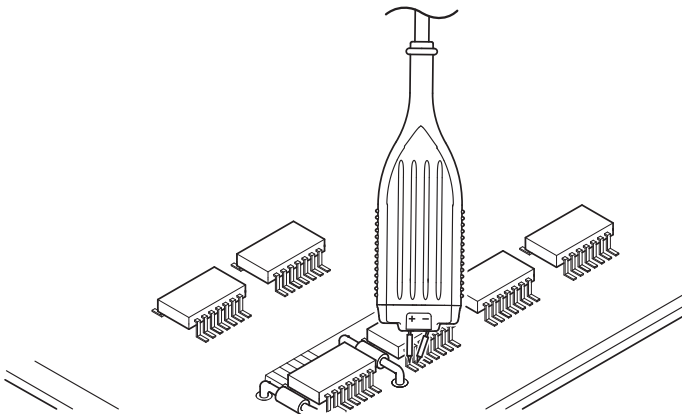
Using 10-cm Pair Leads with Micro Clips



Using 5-cm Pair Leads (sold separately)



Using Pins (Spring-type Straight or Angled)



Warm-up and Offset Voltage Adjustment

Warm-up

Immediately after connecting the probe, the heat emitted by the probe itself causes the offset voltage to drift. After turning on the power, warm up the probe for at least 30 minutes to stabilize it.

Offset Voltage Adjustment

CAUTION

- Do not apply excessive force to the offset voltage adjustment screw. Doing so may damage the internal variable resistor.
 - Use an appropriate screwdriver that fits the adjustment screw. Using a screwdriver with a large grip or an extremely small tip may damage the probe.
-

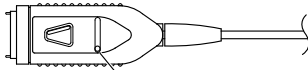
French

ATTENTION

- N'appliquez pas une force excessive sur la vis de réglage de la tension de décalage. Cela pourrait endommager le résistance variable interne.
 - Utilisez un tournevis adapté à la vis de réglage. L'utilisation d'un tournevis à large manche ou à pointe extrêmement petite peut endommager la sonde
-

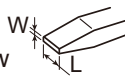
Adjust the residual offset voltage that remains even after warm-up.

While checking the input signal on an oscilloscope, turn the offset voltage adjustment screw on the probe head by using an appropriate adjustment screwdriver (customer supplied).

Probe interface unit

Offset voltage adjustment screw
(ADJUST)

Recommended adjustment screwdriver
dimensions (customer supplied)



Thickness (W): 0.2 to 0.35 mm
Width (L): 1.3 to 1.5 mm
Shape: flat or Phillips

Note

- The offset voltage drifts depending on the ambient temperature. Pay attention to changes in the ambient temperature when making continuous measurements.
- Only use the offset voltage adjustment screw to adjust the residual offset voltage. If you deliberately change the offset voltage for some other purpose, the probe may no longer meet the specifications.

4. Product Specifications

Electrical Specifications

Specifications for use with an oscilloscope with an input resistance of 50 Ω .

Item	Specifications
Frequency band (–3 dB) ¹	DC to 200 MHz
Attenuation ratio ¹	10:1
DC gain accuracy ^{1,2}	± 1 %
Differential input voltage range (between +/- terminals)	± 20 V (DC + ACpeak)
Maximum input voltage (to ground) ³	± 60 V DC, ± 42 V ACpeak
Maximum non-destructive voltage (to ground) ⁴	± 100 V (DC + ACpeak), < 5 s
Common mode rejection ratio (CMRR) ^{1,4}	DC –80 dB
	< 60 Hz –80 dB
	< 100 kHz –70 dB
	< 10 MHz –50 dB
	< 100 MHz –20 dB
Input equivalent noise ⁴	4 mVrms or less
Input capacitance (to ground) ⁴	2 pF
Input resistance (to ground) ⁴	500 k Ω
Output resistance ⁴	50 Ω
Rise/Fall time ⁴	1.75 ns
Delay time	8.4 ns
Warm-up time	30 minutes or more

1 Standard operating conditions: 23 $\pm 5^\circ\text{C}$, 55 ± 10 % RH, 30 minutes or more after power-on

2 When either the +/- input is 0 V. When voltage is applied to both the +/- inputs, there are no specifications since the CMRR characteristics are involved.

3 Derating of maximum input voltage according to frequency applies (see next page).

This instrument is designed to withstand input voltages of up to ± 100 V (DC + ACpeak) for up to 5 seconds but limited to ± 60 V DC and ± 42 V ACpeak in normal use according to safety standards.

4 Typical value. A typical or average value, not strictly guaranteed.

Input Voltage Derating by Frequency



WARNING

As the frequency of the input signal increases, the maximum input voltage of the probe decreases.

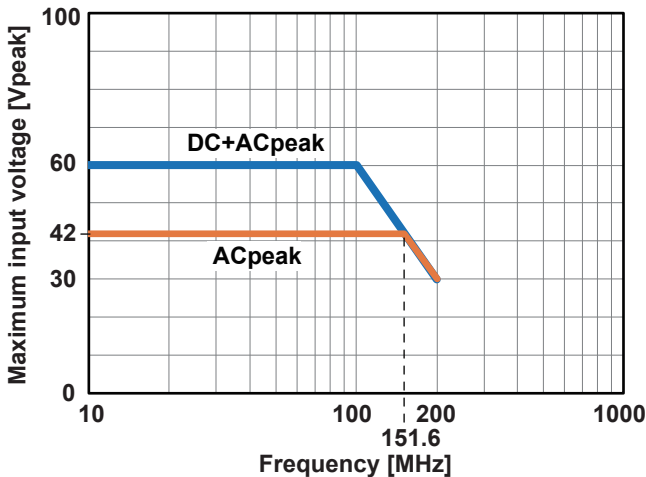
French



AVERTISSEMENT

Lorsque la fréquence du signal d'entrée augmente, la tension d'entrée maximale de la sonde diminue.

Input voltage derating



DC+ACpeak: Derating of signals containing DC components

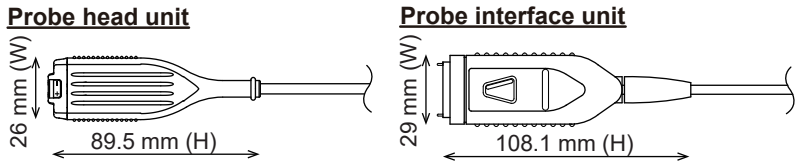
ACpeak: Derating of AC signals

Use under conditions that satisfy each derating.

General Specifications

Item		Specifications
Operating environment	Temperature	+5 °C to +40 °C
	Humidity	20 % to 80 % RH (no condensation)
	Altitude	2000 m or less
	Installation	Indoor use
Storage environment	Temperature	−30 °C to +60 °C
	Humidity	20 % to 80 % RH (no condensation)
	Altitude	3000 m or less
Power supply voltage ¹		±(12.0 ±0.6) V
Power consumption		200 mA or less
Recommended calibration period		1 year
Output connector type		Yokogawa dedicated probe interface
External dimensions	Head unit	26 (H) x 89.5 (W) x 12.6 (D) mm
	Interface unit	29 (H) x 108.1 (W) x 24 (D) mm
Weight		Approx. 90 g

1 Supplied via interface pins from Yokogawa oscilloscopes with probe interface.



Compliant Standards

Item		Specifications
EMC standards ^{1,2}	Emission	EN 61326-1 Class A Group 1
	Immunity	EN 61326-1 Table 2
Environmental standards ³		EU RoHS Directive compliant

- 1 Make sure that the wiring of the conductor under measurement and instruments containing the cable do not interfere with each other. The output value of this instrument may be affected. In addition, the cable of this instrument may cause electromagnetic interference to other instruments.
- 2 Accurate measurements may not be possible near objects with strong electromagnetic fields such as transformers, large current circuits, or wireless equipment
- 3 For conformity to environmental regulations and/or standards other than EU, contact your local Yokogawa office (PIM 113-01Z2).