

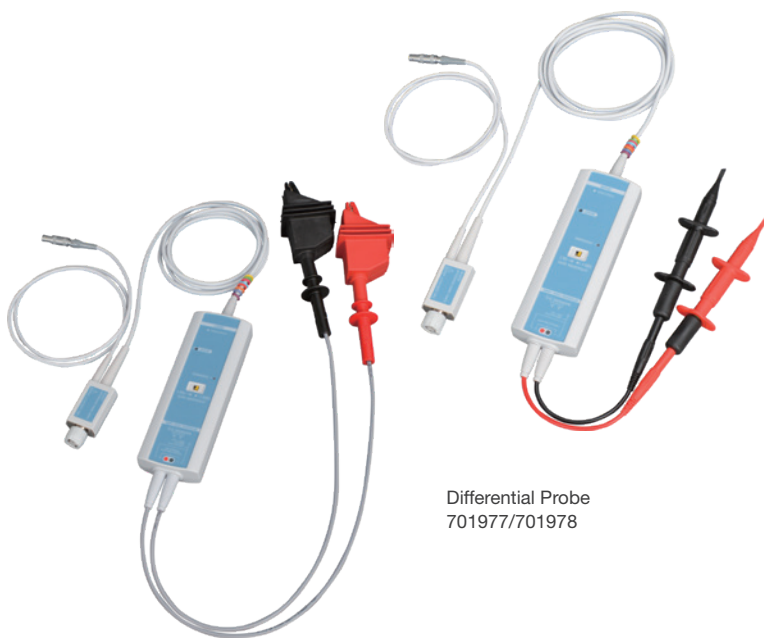
Accessories for DLM series

High Voltage Differential Probe

701977 (7000 V_{peak}, 50 MHz)

701978 (1500 V_{peak}, 150 MHz)

For floating signal measurement with oscilloscopes in the power electronics and mechatronics fields



Differential Probe
701977/701978

For wide range of floating signal measurement

Widely supports the floating signal measurement needs such as power electronics and mechatronics.

	Maximum Input Voltage	Frequency Bandwidth (-3 dB)	CMRR (Typical)
701977	5000 Vrms and 7000 Vpeak	DC to 50 MHz	-80 dB (60 Hz), -50 dB (1 MHz)
701978	±1500 V (DC + ACpeak)	DC to 150 MHz	-80 dB (60 Hz), -50 dB (1 MHz)

Realized High voltage measurement with small probe

The box part of 701977/78 is smaller than the conventional model. This saves space when measuring multiple channels such as inverter measurement. 701977/78 has a shape that is easy to tie up and put together.

Application

701977

- 3.3 kV level railway drive inverter measurement
- High voltage, low frequency IGBT measurement
- High voltage surge noise waveform measurement

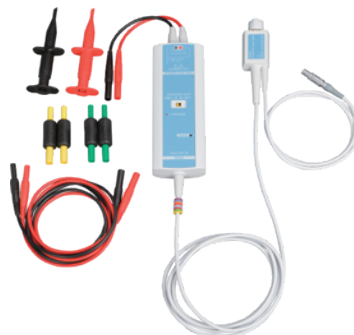
701978

- Research evaluation of inverter
- High voltage battery such as EV/HEV
- High-voltage commercial power line such as 400 Vrms
- New energy high voltage circuit such as PV power conditioners

Abundant accessories to enhance measurement*

The pincher tip (Std. accessory) is removable, and you can use the 1 m extension cable (Std. accessory) to keep the distance from the measurement object. It can also be combined with the high voltage measurement accessories such as long test clips (sold separately).

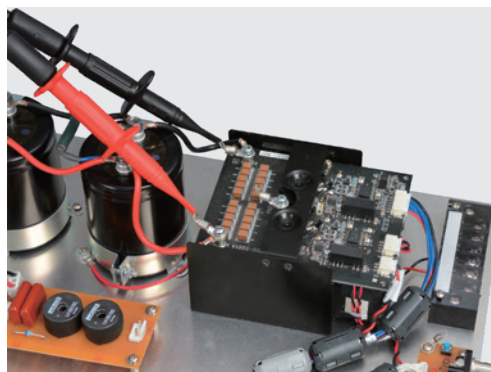
*In the case of 701978



Example of floating signal measurement with oscilloscope

Inverter measurement

- Simultaneous measurement of three-phase voltage and, current on the inverter output side, and power parameter measurement
- High side switching timing confirmation by simultaneous measurement of source waveform gate-source and drain-source
- High and low side switching timing confirmation



Specification

Item	701977	701978
Frequency Bandwidth (−3 dB)	50 MHz	150 MHz
Connector type	BNC	
Input resistance/capacitance (typical) ^{*1}	52 MΩ±5% 10 pF	4.1 MΩ±3% 5 pF
Allowable differential voltage	5000 V _{rms} or less and 7000 V _{peak} or less	±1500 V (DC + AC _{peak})
Maximum input voltage	5000 V _{rms} and 7000 V _{peak}	±1500 V (DC + AC _{peak})
CMRR	−80 dB (60 Hz), −50 dB (1 MHz)	
DC gain accuracy (23°C±5°C)	Common mode input voltage within ±2000 V: ±2% Common mode input voltage within ±5000 V: ±3%	Common mode input voltage within ±400 V: ±2% Common mode input voltage within ±1000 V: ±3%
Operating temperature range	5 to 40°C	
Operating humidity range	25 to 85%	
Length	Probe Length	2840 mm
	Tip lead	610 mm
	Power cable	1000 mm
Attenuation ratio	100:1/1000:1	50:1/500:1
Measurement category	CATO 5000 V, CATIII 1000 V	CAT III 1000 V
Probe power ^{*2}	Probe power supply	
Standard accessories	High voltage alligator clip (Red, Black)	Pincher tip (Red, Black), Extension lead (1 m), 100 Ω resistance adapter, 150 Ω resistance adapter

*1: To ground *2: It is not battery powered. probe power supply is required.

Related products

A power supply is required to operate the 701977/78. Please choose the DLM series main unit option /Px or the following probe power supply.

701934 Probe Power Supply

A power supply for current probes, FET probes, and differential probes. Probes work with both DL probe power connectors and the 701934 probe power supply. Supplies power for up to four probes, including large current probes. Supports both AC100 V and 200 V power supply requirements.³

- Number of power supply connectors: 4
- Output voltage: ±12 V±0.5 V
- Rated output current: +12 V: 2.5 A (the total value of four outputs)
−12 V: 2.5 A (the total value of four outputs)
- Operating temperature and humidity range:
0 to 40°C, 80% RH or less (no condensation)
- Rated supply voltage: AC100 to 240 V (50/60 Hz)
- Maximum rated power: 190 VA
- External dimensions: Approx. 80 (W) × 119 (H) × 200 (D) mm
- Weight: Approx. 1.2 kg



Notice: 701934 does not support 701928 and 701929.

*3: Up to 2 pcs of 702915 and 702916 can be connected when measuring maximum input.

YOKOGAWA

YOKOGAWA TEST & MEASUREMENT CORPORATION
Global Sales Dept. /E-mail: tm@cs.jp.yokogawa.com

YOKOGAWA CORPORATION OF AMERICA
YOKOGAWA EUROPE B.V.
YOKOGAWA TEST & MEASUREMENT (SHANGHAI) CO., LTD.
YOKOGAWA ELECTRIC KOREA CO., LTD.
YOKOGAWA ENGINEERING ASIA PTE. LTD.
YOKOGAWA INDIA LTD.
YOKOGAWA ELECTRIC CIS LTD.
YOKOGAWA AMERICA DO SUL LTDA.
YOKOGAWA MIDDLE EAST & AFRICA B.S.C(c)

<https://tmi.yokogawa.com/us/>
<https://tmi.yokogawa.com/eu/>
<https://tmi.yokogawa.com/cn/>
<https://tmi.yokogawa.com/kr/>
<https://tmi.yokogawa.com/sg/>
<https://tmi.yokogawa.com/in/>
<https://tmi.yokogawa.com/ru/>
<https://tmi.yokogawa.com/br/>
<https://tmi.yokogawa.com/bh/>

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

YMI-N-MI-M-E03

The contents are as of March 2023. Subject to change without notice.
Copyright © 2020, Yokogawa Test & Measurement Corporation
[Ed: 03/b]