

Digital Multimeters

5 1/2-digit DMM with a Wide Range of Applications

R6552

- Maximum display of "319999"
- High sensitivity measurement of DC voltage to $0.1\mu\text{V}$ and resistance to $100\mu\Omega$
- High sampling rate of 1000 samplings/sec
- GB-IB and RS232 interface (standard)
- Compliant with CE marking



(Photo is R6552)

R6552

5 1/2-digit DMM with a Wide Range of Applications

The R6552 is a digital multimeter designed for system or bench use with the maximum display of 319999, featuring GP-IB and RS232 interfaces with full remote control capability. It is capable of measuring DC voltage/current, AC voltage/current, 4- or 2-wire resistance, low/power 4- or 2-wire resistance, (AC+DC) AC voltage/current, frequencies, and diodes. ADVANTEST's unique multi-slope integral A/D conversion method ensures high speed and high precision measurements. The AC voltage/current measurement uses the true-RMS (true effective value) method while the (AC+DC) AC voltage/current measurement allows measurement of a true effective value of the distortion wave including the DC components. In addition to the FAST/MED/SLOW sampling modes of the conventional models, the R6552 has BURST and LONG-IT modes as well.

- Maximum display "319999"
- High sensitivity DC voltage $0.1\mu\text{V}$
Resistance $100\mu\Omega$
- Sampling rate 1000/sec max.
(BURST mode)
- High accuracy DC voltage $\pm 0.01\%$ of reading/year
AC voltage $\pm 0.06\%$ of reading/year
DC $\pm 0.05\%$ of reading/year

- Extended integral time can be set (LONG-IT mode) in 10ms steps between 100ms and 60s for averaging repetitive signals.
- GP-IB and RS232 interfaces (standard) for external equipment
- External trigger input, end-of-measurement signal output (standard)
- NULL, smoothing, scaling, dB/dBm, comparator, and MAX/MIN operation capabilities
- Data memory (1000 data max.)
- Parameter backup (4 kinds)
- High speed auto ranging for optimum setting of measurement ranges
- Fluorescent display tube for enhanced viewing
- CE marking compliance

■ High performance and high speed sampling

The high performance DMM, with a maximum "319999" (5.5 digits) display and ADVANTEST's unique multiple-slope integral A/D conversion, is capable of high speed sampling at 1000 samplings/sec in BURST, 100/sec max. in FAST, 20/sec in MED, and 5/sec max. in SLOW modes. The result of measurement is stored automatically in internal memory and recalled for later use. Various operations may be applied to the measured values.

■ Improved AC measurement performance

The AC measurement performance has been further improved with the measurement ranges of 300mV to 700VAC and 3mA to 3A at basic accuracies of $\pm 0.06\%$ of reading (VAC) and $\pm 0.2\%$ of reading (AC). The response time is increased 2 to 3 times while the frequency characteristics are expanded in both the high and low ranges.

■ (AC+DC) AC measurement

The true-RMS measurement of AC allows (AC+DC) measurement capability for measuring the true effective value of a distortion wave including the DC components.

■ Internal high capacity data memory

Up to 10000 measurement data can be stored in internal data memory after operation along with the measurement function information. This allows measurement for different measurement functions.

■ Parameter memory function

Up to four measurement conditions can be stored in internal flash memory as User-0 to User-3, and then any one can be activated during measurement.

■ Measurement of low power 2W Ω /4W Ω resistance

The low power 2W Ω /4W Ω resistance measurement allows a 1/10 measurement current setting to minimize the effect of heat generation during resistance measurement on the component being tested.

■ Up to seven kinds of operations

Seven kinds of operation (NULL, smoothing, scaling, dB/dBm, comparator, and MAX/MIN) can be performed on the measurement data.

■ Optimum remote control capability for system use

The standard GP-IB and RS232 interfaces facilitate automated measurement. Input terminals are available on both the front and rear panels for easy rack installation.

■ LONG-IT function for averaging of repetitive signals (DCV, DCI)

The LONG-IT function allows averaging of accurately repetitive input signals by measuring the same signal twice during any 10ms interval from 100ms to 60s. This simplifies measurement of the standby current (average) of PDC/PHS, etc.

Specifications

1. Measurement functions

DC voltage measurement

Range, maximum display, resolution, input impedance:

Range	Max. display		Resolution		Input impedance
	SLOW/MED LONG-IT	FAST/BURST	SLOW/MED LONG-IT	FAST/BURST	
30mV	31.9999mV	31.999mV	100nV	1 μ V	100M Ω or higher
300mV	319.999mV	319.99mV	1 μ V	10 μ V	
3000mV	3199.99mV	3199.9mV	10 μ V	100 μ V	
30V	31.9999V	31.999V	100 μ V	1mV	11.1M Ω $\pm 1\%$
300V	319.999V	319.99V	1mV	10mV	10.1M Ω $\pm 1\%$
1000V	1099.99V	1099.9V	10mV	100mV	10.0M Ω $\pm 1\%$

Measurement accuracy *2:

\pm (% of reading + digits) (sampling rate SLOW, 5 1/2 digits, auto zero ON)

Range	24 hours (23°C $\pm 1^\circ$ C) ^{*1}	90 days (23°C $\pm 5^\circ$ C)	1 year (23°C $\pm 5^\circ$ C)
30mV	0.003 + 30	0.01 + 40	0.015 + 40
300mV	0.002 + 5	0.006 + 7	0.014 + 7
3000mV	0.002 + 2	0.006 + 3	0.01 + 3
30V	0.002 + 3	0.007 + 6	0.015 + 6
300V	0.002 + 2	0.006 + 3	0.014 + 3
1000V	0.002 + 2	0.006 + 3	0.014 + 3

*1: Relative to calibrated standard

*2: 2 is added to the digit column at the MED sampling rate; 2 digits + 20 μ V is added (4 1/2 digits) at the FAST sampling rate; 3 digits + 20 μ V is added (4 1/2 digits) during BURST mode; an error from the "2. LONG-IT measurement errors" section is added during LONG-IT measurement.

Temperature coefficient: \pm (% of reading + digits)/ $^\circ$ C

Range	Auto zero ON	Auto zero OFF
30mV	0.0005 + 5	0.0005 + 35
300mV	0.0005 + 1	0.0005 + 5
3000mV	0.0005 + 0.1	0.0005 + 1.3
30V	0.0005 + 1	0.0005 + 2
300V	0.0005 + 0.1	0.0005 + 1.3
1000V	0.0005 + 0.1	0.0005 + 1.2

Max. permissible voltage

Terminals	Max. permissible voltage
HI - LO terminals	1000V _{peak}
LO - Chassis	500V

Noise rejection ratio

Sampling rate	Effective CMR (unbalanced impedance: 1k Ω)		NMR
	50Hz/60Hz $\pm 0.08\%$	DC	50Hz/60Hz $\pm 0.08\%$
SLOW/MED	120dB	130dB	60dB
FAST	60dB	130dB	0dB
BURST	60dB	130dB	0dB
LONG-IT	84dB	130dB	24dB

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Specifications

AC voltage measurement

Range, maximum display, resolution, input impedance:

AC						
Range	Max. display		Resolution		Input impedance	
	SLOW/MED	FAST	SLOW/MED	FAST		
300mV	319.999mV	319.99mV	1μV	10μV	1.2MΩ±5% 140pF or higher	
3000mV	3199.99mV	3199.9mV	10μV	100μV		
30V	31.9999V	31.999V	100μV	1mV	1.0MΩ±2% 140pF or higher	
300V	319.999V	319.99V	1mV	10mV		
700V	709.99V	709.9V	10mV	100mV		

AC + DC						
Range	Max. display		Resolution		Input impedance	
	SLOW/MED	FAST	SLOW/MED	FAST		
300mV	319.99mV	319.9mV	10μV	100μV	1.2MΩ±5% 500pF or higher	
3000mV	3199.9mV	3199mV	100μV	1mV		
30V	31.999V	31.99V	1μV	10mV	1.0MΩ±10% 140pF or higher	
300V	319.99V	319.9V	10mV	100mV		
700V	709.9V	709V	100mV	1V		

Measurement accuracy *1:

±(% of reading + digits) (5 1/2 digits, 1 year, 23°C ± 5°C)

AC, AC + DC						
Frequency range *2	Range					
	300mV	3000mV	30V	300V	700V	
20Hz to 45Hz	0.28 + 100	0.28 + 100	0.30 + 100	0.30 + 100	0.28 + 100	
45Hz to 100Hz	0.12 + 100	0.12 + 100	0.12 + 100	0.12 + 100	0.12 + 100	
100Hz to 10kHz	0.06 + 100	0.06 + 100	0.06 + 100	0.06 + 100	0.06 + 100	
10kHz to 20kHz	0.1 + 100	0.1 + 100	0.1 + 100	0.1 + 100	0.1 + 100	
20kHz to 50kHz	0.2 + 150	0.2 + 150	0.2 + 150	0.2 + 150	–	
50kHz to 100kHz	0.5 + 300	0.5 + 300	0.5 + 300	0.5 + 300	–	
100kHz to 300kHz	3 + 500	3 + 500	3 + 500	–	–	

*1: Crest factor additional error

Crest factor	Error (digits)
1 to 2	150
2 to 3	450

*2: Protected at 300Hz or higher when the AC filter is in FAST mode.

Max. permissible voltage

Terminals	Max. permissible voltage
HI - LO	700Vrms, 1000Vpeak, 10000000V · Hz
LO - Chassis	500V

Measurement method: True-RMS

Input range: 5% of full scale or greater

Crest factor: 3:1 at full scale

Temperature coefficient: 1/10 of measurement accuracy/°C in the applicable range and frequency range

Response time:

AC filter FAST 230ms or less

AC filter SLOW 950ms or less

(before reaching ±0.1% of the final value in the same range)

Resistance measurement

Range, maximum display, resolution, measurement current:

2WΩ/4WΩ, low power 2WΩ/4WΩ						
Range	Max. display		Resolution		Measurement current	
	SLOW/MED	FAST/BURST	SLOW/MED	FAST/BURST	2WΩ/4WΩ	Low power 2WΩ/4WΩ
30Ω	31.9999Ω	31.999Ω	100μΩ	1mΩ	1mA	—
300Ω	319.999Ω	319.99Ω	1mΩ	10mΩ	1mA	100μA
3000Ω	3199.99Ω	3199.9Ω	10mΩ	100mΩ	1mA	100μA
30kΩ	31.9999kΩ	31.999kΩ	100mΩ	1Ω	100μA	10μA
300kΩ	319.999kΩ	319.99kΩ	1Ω	10Ω	10μA	0.9μA
3000kΩ	3199.99kΩ	3199.9kΩ	10Ω	100Ω	1μA	1μA
30MΩ	31.9999MΩ	31.999MΩ	100Ω	1kΩ	90nA	90nA
300MΩ	319.999MΩ	319.99MΩ	1kΩ	10kΩ	10nA	—

Measurement accuracy *3: ±(% of reading + digits) (5 1/2 digits, auto zero ON)

2WΩ/4WΩ ²			
Range	24 hours(23°C ± 1°C) ⁻¹	90 days(23°C ± 5°C)	1 year(23°C ± 5°C)
30Ω	0.003 + 30	0.01 + 40	0.015 + 40
300Ω	0.002 + 5	0.008 + 11	0.015 + 11
3000Ω	0.002 + 3	0.007 + 3	0.012 + 3
30kΩ	0.002 + 3	0.007 + 3	0.013 + 3
300kΩ	0.002 + 3	0.009 + 3	0.014 + 3
3000kΩ	0.007 + 14	0.03 + 19	0.03 + 19
30MΩ	0.06 + 14	0.18 + 19	0.2 + 19
300MΩ	0.6 + 14	1.7 + 19	2 + 19

Low power 2WΩ/4WΩ ²			
Range	24 hours(23°C ± 1°C) ⁻¹	90 days(23°C ± 5°C)	1 year(23°C ± 5°C)
300Ω	0.003 + 30	0.008 + 40	0.015 + 40
3000Ω	0.002 + 5	0.008 + 11	0.015 + 11
30kΩ	0.002 + 5	0.008 + 11	0.015 + 11
300kΩ	0.007 + 5	0.03 + 11	0.03 + 11
3000kΩ	0.06 + 20	0.18 + 33	0.2 + 33
30MΩ	0.6 + 20	1.7 + 33	2 + 33

*1: Relative to calibrated standard

*2: 2WΩ with auto zero ON; resistance of the measurement cable + offset error of 200mΩ max. is added in 2WΩ and low power 2WΩ measurements; maximum resistance of the measurement cable must not exceed 1/15 of full scale in 4WΩ and low power 4WΩ measurements.

*3: 2 is added to the digit column at the MED sampling rate; 2 digits + 20μΩ is added (4 1/2 digits) at the FAST sampling rate; 3 digits + 20μΩ is added (4 1/2 digits) during BURST mode.

Temperature coefficient: ±(% of reading + digits)/°C

2WΩ/4WΩ		
Range	2WΩ auto zero ON, 4WΩ	2WΩ auto zero OFF
30Ω	0.0007 + 5	0.0007 + 50
300Ω	0.0007 + 1	0.0007 + 6
3000Ω	0.0007 + 0.2	0.0007 + 1.4
30kΩ	0.0007 + 0.2	0.0007 + 1.4
300kΩ	0.0007 + 0.2	0.0007 + 1.4
3000kΩ	0.003 + 1.3	0.003 + 1.4
30MΩ	0.01 + 1.3	0.01 + 1.4
300MΩ	0.1 + 1.3	0.1 + 1.4

Low power 2WΩ/4WΩ		
Range	2WΩ auto zero ON, 4WΩ	2WΩ auto zero OFF
300Ω	0.0007 + 5	0.0007 + 50
3000Ω	0.0007 + 1	0.0007 + 6
30kΩ	0.0007 + 1	0.0007 + 6
300kΩ	0.003 + 1	0.003 + 6
3000kΩ	0.01 + 1.3	0.01 + 1.4
30MΩ	0.1 + 1.3	0.1 + 1.4

* Temperature coefficient of resistance of the measurement cable + offset error of 200mΩ/°C max. is added in 2WΩ and low power 2WΩ measurements.

Specifications

Max. permissible voltage :

Terminals		Max. permissible voltage
IINPUT	HI - LO	1000Vpeak
	LO - Chassis	500
4WΩ input	HI - LO	350Vpeak
	LO - Chassis	500V

Voltage across open terminals: 8V max.

Response time: 0.5sec max. (before reaching $\pm 0.1\%$ of the final value in the 3000kΩ or 30MΩ range); 5sec max. (before reaching $\pm 0.1\%$ of the final value in the 300MΩ range)

DC measurement

Range, maximum display, resolution, resistance between terminals :

Range	Max. display		Resolution		Resistance between terminals
	SLOW/MED LONG-IT	FAST/BURST	SLOW/MED LONG-IT	FAST/BURST	
3000μA	3199.99μA	3199.9μA	10nA	100nA	10.5Ω or less
30mA	31.9999mA	31.999mA	100nA	1μA	
300mA	319.999mA	319.99mA	1μA	10μA	0.4Ω or less
3000mA	3199.99mA	3199.9mA	10μA	100μA	

Measurement accuracy: $\pm(\%$ of reading + digits) (sampling rate SLOW , 5-1/2 digits, auto zero ON)

Range	90 days(23°C \pm 5°C)	1 year(23°C \pm 5°C)
3000μA	0.03 + 40	0.05 + 40
30mA	0.03 + 6	0.05 + 6
300mA	0.06 + 40	0.1 + 40
3000mA	0.085 + 6	0.12 + 6

* 2 is added to the digit column at the MED sampling rate; 2 is added (4-1/2 digits) to the digit column at the FAST sampling rate; 3 is added (4-1/2 digits) during BURST mode; an error from the "2. LONG-IT measurement errors" section is added during LONG-IT measurement.

Temperature coefficient: $\pm(\text{ppm of reading + digits})/^\circ\text{C}$

Range	Auto zero ON	Auto zero OFF
3000μA	0.003 + 4	0.003 + 35
30mA	0.003 + 0.6	0.003 + 7
300mA	0.005 + 4	0.005 + 35
3000mA	0.005 + 0.6	0.005 + 7

Max. permissible current: 3A (DC or ACrms) continuous between mA-LO; protected by 3.15A fuse (replaceable in the front panel)

AC measurement

Range, maximum display, resolution, resistance between terminals:

AC					
Range	Max. display		Resolution		Resistance between terminals
	SLOW/MED	FAST	SLOW/MED	FAST	
3000μA	3199.99μA	3199.9μA	10nA	100nA	10.5Ω or less
30mA	31.9999mA	31.999mA	100nA	1μA	
300mA	319.999mA	319.99mA	1μA	10μA	0.4Ω or less
3000mA	3199.99mA	3199.9mA	10μA	100μA	

AC+DC					
Range	Max. display		Resolution		Resistance between terminals
	SLOW/MED	FAST	SLOW/MED	FAST	
3000μA	3199.9μA	3199μA	100nA	1μA	10.5Ω or less
30mA	31.999mA	31.99mA	1μA	10μA	
300mA	319.99mA	319.9mA	10μA	100μA	0.4Ω or less
3000mA	3199.9mA	3199.mA	100μA	1mA	

Measurement accuracy *1: $\pm(\%$ of reading + digits) (5 1/2 digits, 1 year, 23°C \pm 5°C)

AC, AC + DC				
Frequency range	Range			
	3mA	30mA	300mA	3000mA
20Hz to 45Hz	0.45 + 200	0.45 + 200	0.45 + 200	0.5 + 200
45Hz to 100Hz	0.25 + 200	0.25 + 200	0.35 + 200	0.4 + 200
100Hz to 1kHz	0.2 + 200	0.2 + 200	0.3 + 200	0.35 + 200
1kHz to 5kHz	0.4 + 200	0.4 + 200	0.25 + 200	0.3 + 200

*1: Crest factor additional error $\pm(\%$ of reading + digits)

Range	Crest factor	
	1 to 2	2 to 3
3000μA	0 + 150	0 + 450
30mA	0.2 + 150	6.7 + 450
300mA	0 + 150	0 + 450
3000mA	0 + 150	0.07 + 450

*2: Protected at 300Hz or higher when the AC filter is in FAST mode.

Measurement method: True-RMS

Input range: 5% of full scale or greater

Crest factor: 3:1 at full scale

Temperature coefficient: 1/10 of measurement accuracy/ $^\circ\text{C}$ in the applicable range and frequency range

Response time: AC filter FAST ... 230ms or less

AC filter SLOW ... 950ms or less

(before reaching $\pm 0.1\%$ of the final value in the same range)

Max. permissible current: 3A (DC or ACrms) continuous between mA-LO; assured by 3.15A fuse (replaceable in the front panel)

Frequency measurement

Measurement range, input signal range, input impedance

Measurement range	Input signal range	Input impedance
1Hz to 300kHz	100mVrms to 700Vrms	1.1MΩ \pm 20% 140pF or less

Measurement accuracy: $\pm(\%$ of reading)

Measurement range	Measurement accuracy
1Hz to 10Hz	0.05
10Hz to 300kHz	0.02

* Other frequency ranges can be displayed without assurance.

Sampling rate	Gate time	Maximum display
FAST	10ms	9999
MED	100ms	99999
SLOW	1s	999999

Max. permissible voltage

Terminals	Max. permissible voltage
HI - LO	700Vrms, 1000Vpeak, 10000000V·Hz
LO - Chassis	500V

Measurement method: Reciprocal

Measurement time: Gate time to twice the input signal period

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Specifications

Diode measurement

Maximum display, resolution, measurement current

Maximum display		resolution		Measurement current
SLOW/MED	FAST	SLOW/MED	FAST	
3199.99mV	3199.9mV	10 μ V	100 μ V	1mA

Measurement accuracy *: \pm (% of reading + digits) (5 1/2 digits, 1 year, auto zero ON)

23°C \pm 5°C (C/year)
0.012 + 3

*: An offset error of (resistance of measurement cable + 200m Ω max.) x 1mA is added; 2 is added to the digit column at the MED sampling rate; 2 is added (4 1/2 digits) to the digit column at the FAST sampling rate; 3 is added (4 1/2 digits) during BURST mode.

Voltage across open terminals: 8V max.

Terminals :

Terminals	Max. permissible voltage
HI - LO	1000Vpeak
LO - Chassis	500V

2. LONG-IT measurement errors

(1) Input waveform conditions

- The repetition period of the input signal must match the LONG-IT integral time setting.
- Minimum pulse width of input signal
DC voltage measurement: 2ms or higher
DC measurement: 100 μ s or higher
- The peak value of the input value must not exceed full scale of the measurement range.

(2) Measurement accuracy

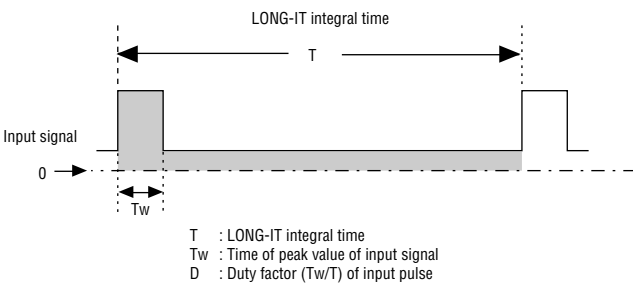
Measurement accuracy = \pm (Basic accuracy + Periodic error)

a) Basic accuracy

DC voltage measurement: Accuracy of DC voltage measurement at FAST sampling rate

DC measurement: Accuracy of DC measurement at FAST sampling rate

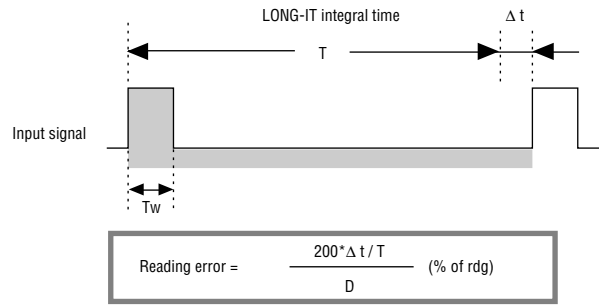
b) Periodic error



$$\text{Reading error} = \frac{0.02}{D} \quad (\% \text{ of rdg})$$

(3) Periodic error caused by a difference from integral time setting of input signal

The following error is added when the integral time settings of the input signal and LONG-IT do not match each other:



3. Measurement time

Measurement time (during free run, times/sec)

Function	FAST	MED	SLOW	BURST	LONG-IT
DC voltage measurement	100(50)	20(10)	5(2.5)	1000	*1
AC voltage measurement	100	20	5	—	—
AC voltage measurement (AC+DC)	20	10	4	—	—
2-wire resistance measurement	100(50)	20(10)	5(2.5)	1000	—
4-wire resistance measurement	50	10	2.5	—	—
2-wire resistance measurement (low power)	100(50)	20(10)	5(2.5)	1000	—
4-wire resistance measurement (low power)	50	10	2.5	—	—
DC measurement	100(50)	20(10)	5(2.5)	1000	*1
AC measurement	100	20	5	—	—
AC measurement (AC+DC)	20	10	4	—	—
Diode measurement	100(50)	20(10)	5(2.5)	—	—

(Values in parentheses apply to auto zero ON setting.)

*1: Measurement time = Integral time setting x 2 + 200ms

4. Operating functions

NULL: Displayed value (NULL) = Measured value - NULL constant

Smoothing (moving average): Displayed value (SM) = Measured value 1 + Measured value 2 + ... Measured value n)/n

Comparator:

Display (HIGH) <- HIGH setting < Measured value

Display (LOW) <- Measured value < LOW setting

Display (PASS) <- LOW setting \leq Measured value \leq HIGH setting

Scaling: Displayed value (SCL) = Measured value -B)/AxC

A, B, C constants (set values)

MAX/MIN:

Displayed value (MAX) = Max. measured value after start of operation

Displayed value (MIN) = Min. measured value after start of operation

Displayed value (AVE) = Average value after start of operation

dB/dBm (voltage measurement):

dB displayed value = 200 log (Measured value/D)

dBm displayed value = 10 log ((Measured value)²/D)/10⁻³

D constant (set value)

Specifications

5. Interface specifications

GP-IB interface

GP-IB or RS232 to be selected in the front panel.

Specification: Complies with IEEE-488.2-1987

Connector: 24-pin, Amphenol

Interface functions: SH1, AH1, T5, L4, SR1, RL1, PP0, DC1, DT1, C0,E2

Output format: ASCII/BINARY switchable (BINARY output available on R6552 exclusively)

Addressing: Assign 31 kinds of talkers/listeners from the front panel.

RS232 interface

GP-IB or RS232 to be selected in the front panel.

Specification: RS232

Connector: Dsub 9-pin

Baud rates: 9600, 4800, 2400, 1200, 600, 300

Parity: Even, odd, none

Data bit: 7 bits, 8 bits

Stop bit: 1 bit, 2 bits

Echo: ON, OFF

Trigger signal input

Manual: TRIG key in the front panel

External: TRIGGER connector in the rear panel

TTL level, negative pulse, fall edge, pulse width 1μs or larger

Remote: Remote command E, *TRG

Complete signal output

Output from the BNC connector in the rear panel

TTL level, negative pulse, pulse width approx. 5μs

7. Accessories

A01041 Input cable (standard accessory)

A08398 Alligator clip adapter (standard accessory)

A08397 Spring hook adapter

A01001 Input cable

R16213 Carrying case

A02263 Rack mount set (JIS standard)

A02264 Rack mount set (JIS standard, twin)

A02463 Rack mount set (EIA standard)

A02464 Rack mount set (EIA standard, twin)

A02039 Panel mount set

A02040 Panel mount set (twin)

6. General specifications

Operating range:

Ambient temperature : Relative humidity 85%

RH or lower,

75%RH or lower for resistance measurement

range 30MΩ/300MΩ

Storing range : Ambient temperature -25 to +70°C

Warm-up time : 60 minutes or longer

Display : 7-segment fluorescent tube, bargraph display

Range selection : Manual and auto

Input method : Floating

Measurement method : Integral

Over-input display : OL display

Input terminal selection : Front/rear selection

Internal data memory : 10000 data max.

Power : AC power supply 100V/120V/220V/240V

(user selectable, specify when ordering)

Option No.	Standard	32	42	44
Supply voltage	100V	120V	220V	240V

Power source frequency : 50/60Hz

Power consumption : 27VA max.

Dimensions : Approx. 212(W) × 88(H) × 350(D) mm

Weight : 3.3kg max.

Safety : IEC-1010 (Installation category II)