GDM-8351

5 1/2 Digit Dual Measurement Multimeter

3 Year WARRANTY

FEATURES

- 120,000 Counts, VFD Display
- Dual Measurement/Dual Display
- The Basic Precision of DC Voltage : 0.012%
- Selectable Measurement Speeds, the Mmaximum : 320 Readings/s
- True RMS (AC, AC+DC) Measurements
- Auto/Manual Selection
- 12 Different Measurement Functions : AC/DC Voltage, AC/DC Current, AC+DC Voltage/Current, 2W/4W Resistance, Continuity Beeper, Diode Test, Capacitance, Frequency, Temperature
- Many Auxiliary Functions : Max./Min., REL/REL#, Compare, Hold, dB, dBm, Math(MX+B, %, 1/X)
- Digital I/O Provides Dual Mode(Standard Compare and User Definition Modes)
- Standard RS-232C and USB Device Interface(Support USBCDC and USBTMC Modes)

GW INSTEK
Simply Reliable

GW Instek presents the brand new 5 1/2 Digit Dual Measurement Multimeter-GDM-8351 to replace GDM-8251A of the same category. GDM-8351 eatures VFD dual-display, maximum 120,000 counts, 0.012% basic DC voltage accuracy and USB/RS232C connectors to provide users with measurement precision, lucid data observation, and the convenient connection with the personal computer. In addition to the fundamental measurement items such as AC/DC voltage, AC/DC current, AC+DC voltage/current, 2W/4W resistance, frequency, temperature measurement, continuity beeper and diode test, GDM-8351 also equips with the capacitance measurement function. Furthermore, the GDM-8351 also provides many auxiliary functions, including maximum/minimum values, dB, dBm, compare, reading hold, algorithms (MX+B, 1/X, %) etc. to meet the measurement requirements for manufacturing process tests, educational experiments and testing facilities. For the external control, the pin of digital I/O interface not only provides the signal output frequently used by the compare function, but also allows users to define signal output for each pin. Under the self-definition mode, users can apply the I/O as a simple digital hardware. The external control requirement can be achieved by signals from each pin so as to help users reduce trouble of making hardware. With respect to remote control and retrieving data, GDM-8351, taking consideration of users' habitual practice and universal system interface, provides standard RS-232C and USB interface to edit control programs and read measurement results. It is worth noting that for utilizing the USB interface, users have options of selecting either USBCDC or USBTMC mode. While USBTMC is selected, users are able to control instrument with the USB interface exactly the same as controlling instrument with the GPIB interface; therefore, the relatively expensive GPIB connection cable is no longer required.

PANEL INTRODUCTION

A. SELECTABLE MEASUREMENT SPEEDS

Displayed digits will not be decreased because of selecting different speeds

Function vs. Speed(Reading/s)	Slow(S)	Medium(M)	Fast(F)
DCV/DCI/R	10	40	320
ACV/ACI	10	40	320
Continuity Beeper/Ddiode	10	40	320
Frequency/Period	1	9.8	83
Temperature	10	40	320
Capacitance	2	2	2

GDM-8351 has fastest measurement speed among the same category products and three selectable measurement speeds are available - slow/medium/fast. For instance, the DC voltage measurement can reach 320 readings per second on the fast mode, which can maximize the effectiveness of each measurement

B. DUAL MEASUREMENT/DUAL DISPALY

	ACV	DCV	ACI	DCI	Freq.	R
ACV	✓	✓	✓	✓	✓	–
DCV	✓	✓	✓	✓	–	–
ACI	✓	✓	✓	✓	✓	–
DCI	✓	✓	✓	✓	–	–
Freq.	✓	–	✓	–	✓	–
R	–	–	–	–	–	✓

GDM-8351, similar to GW Instek 6 1/2 and 5 1/2 digit multimeters, equips with VFD dual display to support the possible combinations of measurement items. For example, the DC voltage and current or DC voltage with AC element will appear when monitoring components of test wiring. The results of each measurement will simultaneously appear on different displays that not only save users' precious time but also exempt users from the trouble of selecting displays while reading measurement results.

C. VARIOUS MEASUREMENT ITEMS AND FUNCTIONALITIES

Auxiliary Functions	MAJOR MEASUREMENT ITEMS						
	V	I	R	Hz/P	Temp*	Diode	Capa.
dB	✓	–	–	–	–	–	–
dBm	✓	–	–	–	–	–	–
Max/Min	✓	✓	✓	✓	✓	–	✓
Relative	✓	✓	✓	✓	✓	–	✓
Hold	✓	✓	✓	✓	✓	–	–
Compare	✓	✓	✓	✓	✓	–	✓
Math	✓	✓	✓	✓	✓	–	–

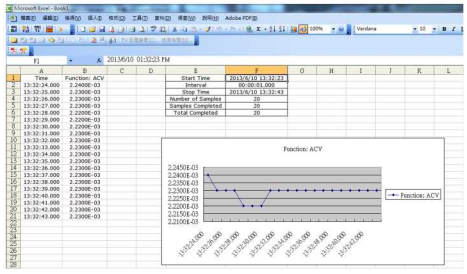
GDM-8351 provides various measurement items and functionalities compared with that of the products of same category. There are twelve major measurement items of GDM-8351, including AC voltage/current, DC voltage/current, AC+DC voltage/current, two-wired and four-wired resistance, temperature, frequency, diode and continuity beeper test, and even the capability of measuring capacitance. Many auxiliary functions, such as maximum/minimum values, reading hold, relative values, dB, dBm, algorithms (MX+B, 1/X, %) and compare, are designed to reinforce the major measurement items to satisfy users' daily working requirements.

D. CONVNEIENT DIGITAL I/O FUNCTION

H.F	L.F	PASS	EOM	TRIG	GND
SET1	SET2	SET3	SET4	IN	

Another difference, while comparing with GDM-8251A, is that the Digital I/O of GDM-8351 provides two different modes which are general and self-definition. With the general mode, Digital I/O will output Hi Fail, Lo Fail, Pass and EOM (measurement results) based upon the results of the compare function and, furthermore, external trigger input is also provided. Under the self-definition mode, users can define output conditions for four pins (SET1~SET4) to execute the external control.

E. FREE SOFTWARE-REMOTE CONTROL AND DATA RETRIEVING



GDM-8351 provides free software-Excel ADDins for users' easy access. After installing the software, Microsoft Excel will establish Marco for users to directly control the setting of GDM-8351 to record the results of the measurements. The recorded data will be synchronously transformed into graphic displays via Excel drawing function that not only eliminates the cost and time of developing programs but also overcomes the compatibility issue of different programming languages.

F. COMMAND COMPATIBILITY

For GDM-8251A users, GDM-8351 also provides compatible commands. Users can replace machines through the simple setting of GDM-8351 without worrying the extra cost to modify the existing program and the delay of production time.

SPECIFICATIONS (*1)

Range(*2)	Resolution	Input Resistance	Accuracy(*3)1 Year(23°C±5°C)
DC VOLTAGE			
100.000mV	1µV	10MΩ or >10GΩ	0.012 + 8
1.00000V	10µV	10MΩ or >10GΩ	0.012 + 5
10.0000V	100µV	11.1MΩ	0.012 + 5
100.000V	1mV	10.1MΩ	0.012 + 5
1000.00V	10mV	10MΩ	0.012 + 5
RESISTANCE			
100.000Ω	1mΩ	1mA	0.05 + 8
1.00000Ω	10mΩ	1mA	0.05 + 5
10.0000kΩ	100mΩ	100µA	0.05 + 5
100.000kΩ	1Ω	10µA	0.05 + 5
1.000000kΩ	10Ω	1µA	0.05 + 5
1.0000MΩ	100Ω	0.5µA	0.30 + 5
1000.000MΩ	1kΩ	0.5µA//10MΩ	3.00 + 8
DC CURRENT			
10.0000mµA	100nA	1Ω	0.05 + 15
100.000mA	1µA	1Ω	0.05 + 5
1.00000A	10µA	0.1Ω	0.20 + 5
10.0000A	100µA	0.01Ω	0.20 + 5
CONTINUITY			
1000.00Ω	10mΩ	1mA	0.05 + 5
DIODE TEST			
6.0000V	100µV	1mA@6V	0.05 + 15
CAPACITANCE			
10.00nF	0.01nF	10µA	2.0 + 10
100.0nF	0.1nF	10µA	2.0 + 4
1.000µF	0.001µF	100µA	2.0 + 4
10.00µF	0.01µF	1mA	2.0 + 4
100.0µF	0.1µF	1mA	2.0 + 4

Range(*3)	Resolution	Frequency	Accuracy 1 Year (23°C±5°C)
True RMS AC (or AC+DC – AC Coupled) Voltage			
100.000mV	1µV	20Hz ~ 45Hz 45Hz ~ 10kHz 10kHz ~ 30kHz 30kHz ~ 100kHz	1.0 + 100 0.3 + 100 1.5 + 300 5.0 + 300
1.00000V	10µV	20Hz ~ 45Hz 45Hz ~ 10kHz 10kHz ~ 30kHz 30kHz ~ 100kHz	1.0 + 100 0.2 + 100 1.0 + 100 3.0 + 200
10.0000V	100µV	20Hz ~ 45Hz 45Hz ~ 10kHz 10kHz ~ 30kHz 30kHz ~ 100kHz	1.0 + 100 0.2 + 100 1.0 + 100 3.0 + 200
100.000V	1mV	20Hz ~ 45Hz 45Hz ~ 10kHz 10kHz ~ 30kHz 30kHz ~ 100kHz	1.0 + 100 0.2 + 100 1.0 + 100 3.0 + 200
750.00V	10mV	20Hz ~ 45Hz 45Hz ~ 10kHz 10kHz ~ 30kHz 30kHz ~ 100kHz	1.0 + 100 0.2 + 100 1.0 + 100 3.0 + 200
True RMS AC (or AC+DC – AC Coupled) Current			
10.0000mA	1µA	20Hz ~ 45Hz 45Hz ~ 2kHz 2kHz ~ 10kHz	1.5 + 100 0.5 + 100 2.0 + 200
100.000mA	1µA	20Hz ~ 45Hz 45Hz ~ 2kHz 2kHz ~ 10kHz	1.5 + 100 0.5 + 100 2.0 + 200
1.00000mA	10µA	20Hz ~ 45Hz 45Hz ~ 2kHz 2kHz ~ 10kHz	1.5 + 100 0.5 + 100 2.0 + 200
10.0000A	100µA	20Hz ~ 45Hz 45Hz ~ 2kHz 2kHz ~ 10kHz	1.5 + 100 1.0 + 100 -------
FREQUENCY			
(Voltage)10Hz – 1MHz	-------	-------	0.01 + 3
(Current)20Hz – 10kHz	-------	-------	0.01 + 3
TEMPERATURE (THERMOCOUPLE)			
-200 °C ~ 0 °C	0.01 °C	J / T / K	0.4 °C(typical)
0 °C ~ +300 °C	0.01 °C	J / T / K	0.2 °C(typical)

General

Display	VFD, Two Colors Display
Interface	RS-232C, USB device (USBCDC & USBTMC)
Power Source	AC 100 V / 120 V / 220 V / 240 V ±10%, 50-60Hz ; Power Consumption Max. 15VA
Dimensions & Weight	265(W) x 107(H) x 302(D) mm, approx. 2.9kg

Note:

1. All specifications are applicable to the main (1st) display only and warmed up for at least 30 minutes and operated in the slow rate.
2. 20% overrange on all ranges, except 750V/10A range
3. Accuracy: ± (% of Reading + Digits)

Specifications subject to change without notice. DM-8351GD1BH

ORDERING INFORMATION

GDM-8351 5 ½ Digit Dual Measurement Multimeter

ACCESSORIES

Safety Instruction Sheet x 1
Power cord x 1
Test lead GTL-207 x 1
CD x 1 (including complete user manual, driver and software)

OPTIONAL ASSESSORIES

GTL-108A 4Wire Test Lead (Kelvin Clip), Approx. 1100mm
GTL-205 Temperature probe adaptor with thermocouple (K-type), Approx. 1000mm
GTL-232 RS-232C Cable, 9-pin female to 9-pin, null modem for computer, Approx. 2000mm
GTL-246 USB Cable, A-B type, Approx. 1200mm
GRA-422 Rack Adapter Panel (19" 2U)

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