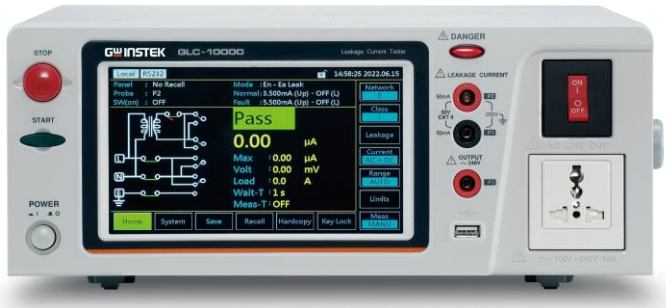


GW Instek GLC-10000

Leakage Current Tester

New Product Announcement

This document allows GW Instek's partners to quickly grasp product's main features and ordering information.

GLC-10000 Leakage Current Tester

New Product Announcement

GW Instek launches a new leakage current tester – GLC-10000, which features 12 simulated human impedance networks that comply with related safety regulations so as to conduct leakage current test for electric equipment under normal condition or single fault condition. These 12 simulated human impedance networks are comprised of networks for medical electric equipment and general electric and electronic equipment to ensure that the product design and manufacture are in compliance with requirements of safety regulations including IEC, EN, UL, etc.

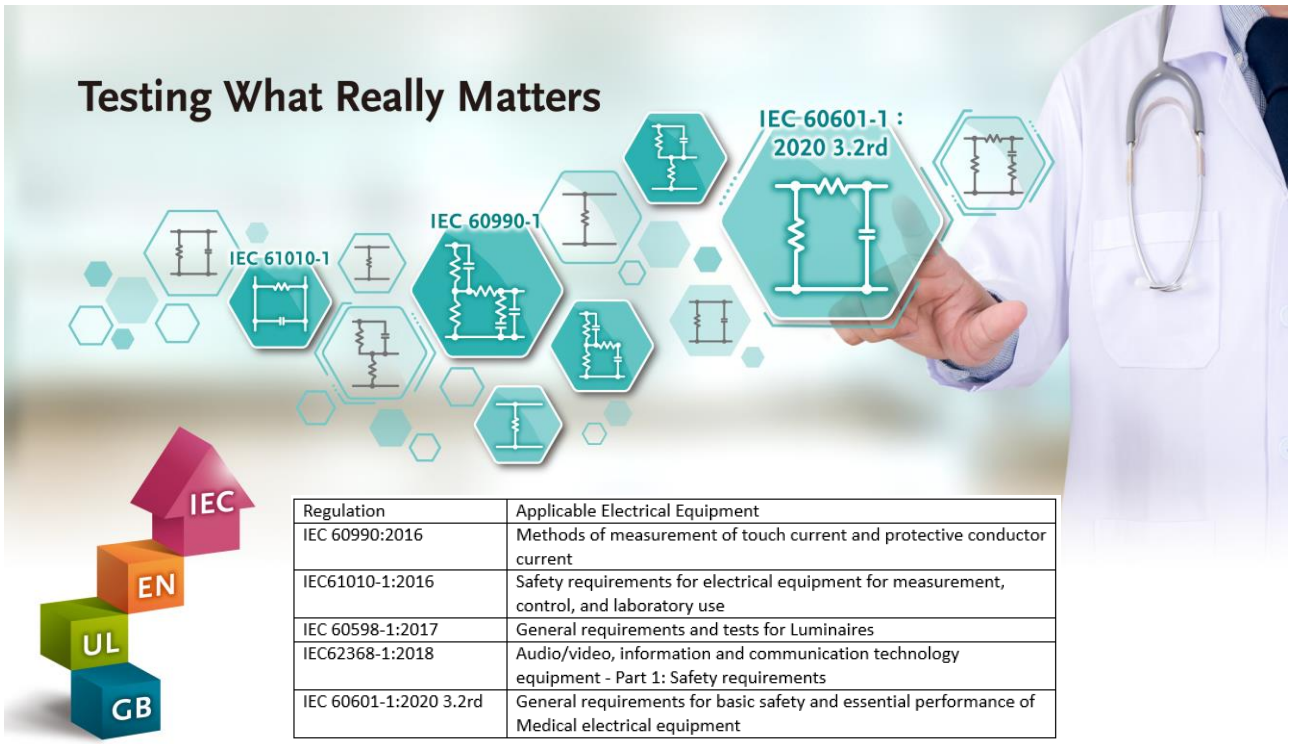
GLC-10000 provides test requirements for most IT products, household appliances and other electronic and electric equipment, and even medical electronics in the measurement of leakage current (or touch current), including the required measurement network, measurement bandwidth of various current forms are all in compliance with the requirements of the latest version of the applicable regulations. Furthermore, in order to comply with the leakage current flow paths under different regulations, GLC-10000 provides 20 measurement options to meet the requirements of the old and latest versions of the standards.

GLC-10000 is equipped with a 7-inch TFT LCD touch screen, which makes the operation more convenient and fast, and the large screen allows setting information and test results to be displayed on the LCD at the same time, improving the readability of information observation. In addition, users can select the front socket output (10A max.) or the rear terminal block output (up to 20A) to measure the leakage current according to the current consumption of the DUT. 30 sets of internal memory can be used to store the measurement settings of users' products. In addition, 1000 sets of measurement results can be stored to conduct subsequent analysis.

For the rear panel configuration, GLC-10000 also provides a reserved MD external terminal block (EXT+/EXT-), and users can self-define the required simulated impedance networks (only applicable to parallel RC combination) to measure the leakage current to meet the requirements of new MD in future regulations. In addition, GLC-10000 provides a variety of standard interfaces, such as RS-232C, USB device, LAN and Remote I/O, and even GPIB (optional) to meet the needs of system control and data acquisition.

Various Measurement Network

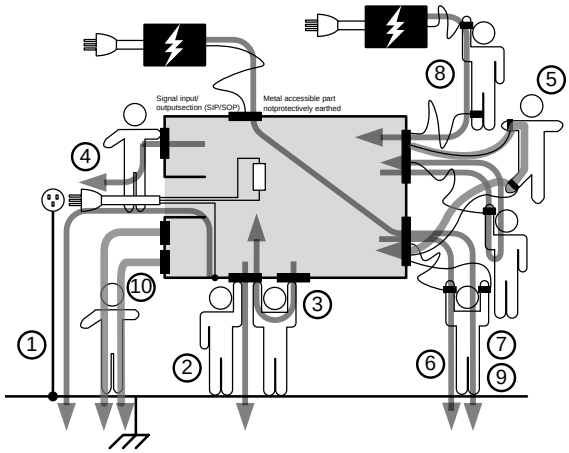
The most commonly & new safety regulation standards applied to various product categories.



Regulation	Applicable Electrical Equipment
IEC 60990:2016	Methods of measurement of touch current and protective conductor current
IEC61010-1:2016	Safety requirements for electrical equipment for measurement, control, and laboratory use
IEC 60598-1:2017	General requirements and tests for Luminaires
IEC62368-1:2018	Audio/video, information and communication technology equipment - Part 1: Safety requirements
IEC 60601-1:2020 3.2rd	General requirements for basic safety and essential performance of Medical electrical equipment

Various Leakage Current Mode Measurement

Leakage current tests can be separated into 3 basic types: Earth Leakage current, Enclosure Leakage current and Patient Leakage current. The GLC-10000 complies with IEC, UL and other international electrical safety standards requiring leakage current measurement.



Testing leakage current mode

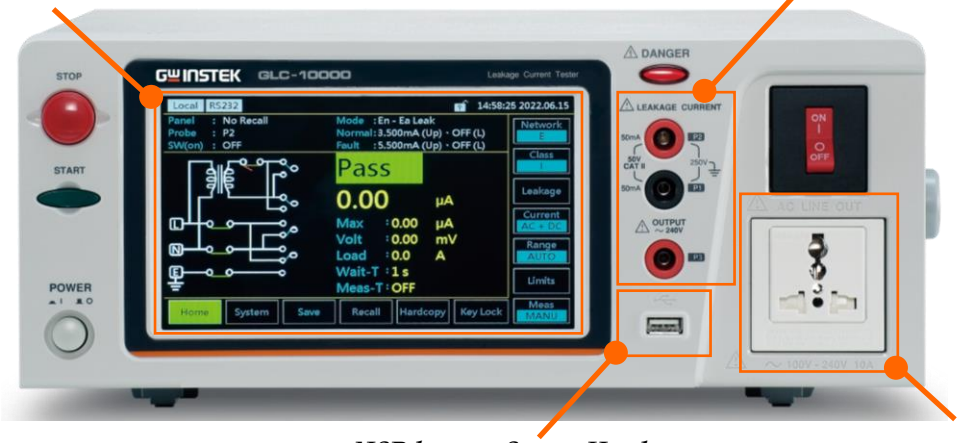
* Earth leakage current
* Touch current (Enclosure - Earth)
* Touch current (Enclosure - Enclosure)
* Touch current (Enclosure - Line)
* Patient auxiliary current
* Patient leakage current (Patient connection - Earth)
* Patient leakage current (external voltage on a SIP/SOP*)
* Patient leakage current (external voltage on a specific F-type applied part)
* Patient leakage current (external voltage on metal accessible part not protectively earthed)
* Total patient leakage current (Patient connection - Earth)
* Total patient leakage current (external voltage on a SIP/SOP*)
* Total patient leakage current (external voltage on a specific F-type applied part)
* Total patient leakage current (external voltage on metal accessible part not protectively earthed)
* Free current (Enclosure - Enclosure)

Key Features

※ Suitable for Medical Electrical & General Electrical of Leakage Current Measurement
※ 7' Touch Pane with Color LCD
※ 12 Different Measurement Network to Simulate the Resistance of Human Body (including IEC 60601-1:2020 3.2rd)
※ The Measurement of Maximum Allowable Leakage Current is Up to 50mA
※ External Terminal for Extension MD Connection
※ MD OUT Terminal can be Connected to an Oscilloscope for Convenient Comparison of Measured Waveforms
※ 30 Sets Memories for Test Parameter; 1000 Sets Memories for Measured Data.
※ Test Parameter Export/Import Function through USB Host
※ USB Storage for Measurement Data/ Screen Capture
※ Various Standard Interfaces: RS-232C, USB Host & Device, LAN, Signal I/O and GPIB (optional)

7' Touch TFT LCD for intuitive & simply operation and better result observation.

Measuring Terminals for Enclosure or Patient leakage current measurement.

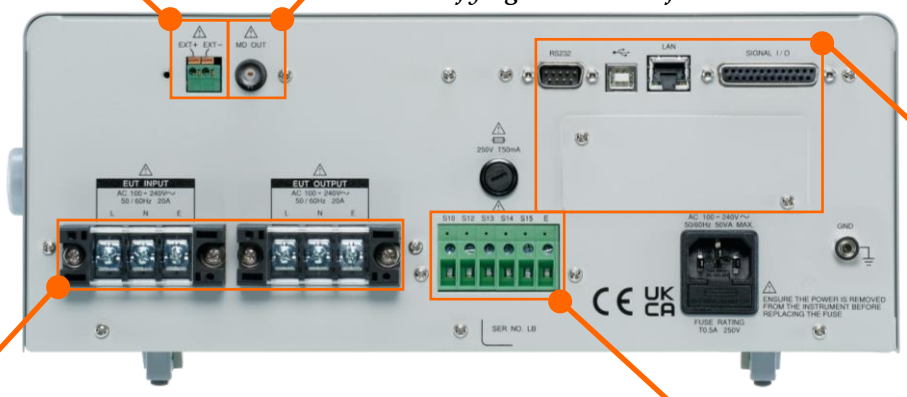


USB host to Screen Hardcopy, Setting parameter Import or Export and Data Storage.

Universal Socket (or Euro Socket) available for DUT with power plug Measurement. (10A max.)

EXT MD terminal to expend new module from external.

With external voltage meter or oscilloscope it is convenient for verifying the circuit of MD.



RS-232, USB and LAN as well as optional GPIB communication ports facilitate the easy & convenient communication.

EUT Input & Output terminal for EUT testing source. (20A)

Switch for Medical device measurement (MD-F).

Comparison

Specifications highlighted in red represent better performance
"X" represents "function not available"

	GLC-10000	ST5540
Outlook		
Display	7" TFT LCD	5.7" MONO LCD
Operation	Touch (Capacitive)	Touch (Resistive)
Selectable MD	12	9
DC		
Range	50μA/500μA/5mA/50mA	50μA/500μA/5mA/50mA
Resolution	0.01μA/0.1μA/1μA/10μA	0.01μA/0.1μA/1μA/10μA
Accuracy	±2.0% fs/±(0.2% rdg+6dgt)	±2.0% fs/±(0.2% rdg+6dgt)
AC / AC+DC		
Range	50μA/500μA/5mA/50mA	50μA/500μA/5mA/50mA
Resolution	0.01μA/0.1μA/1μA/10μA	0.01μA/0.1μA/1μA/10μA
Accuracy -- 0.1Hz<f≦15Hz	±4.0% fs/±(4.0% rdg+10dgt)	±4.0% fs/±(4.0% rdg+10dgt)
Accuracy-- 15Hz<f≦100kHz	±2.0% fs/±(2.0% rdg+6dgt)	±2.0% fs/±(2.0% rdg+6dgt)
Accuracy -- 100kHz<f≦1MHz	±2.0% fs/±(2.0% rdg+10dgt)	±2.0% fs/±(2.0% rdg+10dgt)
AC Peak		
Range	750μA/7.5mA/75mA	500μA/1mA/10mA/75mA
Resolution	1μA/10μA/100μA	0.1μA/1μA/10μA/100μA
Accuracy-- 15Hz<f≦10kHz	±4.0%fs/±2.5%fs/±(2.0% rdg+6dgt)	±4.0%fs/±2.5%fs/±(2.0% rdg+6dgt)
Accuracy-- 10kHz<f≦100kHz	±5%fs/±5%fs/±5%fs	±5%fs/±5%fs/±5%fs
Accuracy -- 100kHz<f≦1MHz	15.0%fs/15.0%fs/±20.0%fs	15.0%fs/15.0%fs/±20.0%fs
Others		
EUT (V/I Check)	85V ~ 300V / 0.5A ~ 20A	85V ~ 300V / 0.5A ~ 20A
EUT Breaker	Yes	Yes
EUT Rated Current (max.)	Front: 10A / Rear: 20A	Socket: 15A / Terminal: 20A
Measured Data Storage	1000 sets	50 sets
MD OUT terminal	Yes	X
EXT MD terminal	Yes	X
Interface	RS-232C, USB host&device, LAN, Signal I/O, GPIB (opt.)	RS-232C, USB device, Signal I/O
Power Source (for GLC)	AC 100V~240V±10%	AC 100V/120V/220V/230V±10%
(for EUT)	AC 100V~240V±10%	AC 85V ~ 250V, 50/60Hz
Power Consumption	50VA (max.)	30VA (max.)
Dimension(WxHxD),mm	342 x 133.87 x 348.51	320 x 110 x 253
Weight	7.8kg	4.5kg

	GLC-10000 (NEW)	GLC-9000 (OLD)
Outlook		
Display	7" TFT LCD	5.7" TFT LCD
Operation	Touch (Capacitive)	Touch (Resistive)
Selectable MD	12	9
DC		
Range	50μA/500μA/5mA/50mA	50μA/500μA/5mA/25mA
Resolution	0.01μA/0.1μA/1μA/10μA	0.01μA/0.1μA/1μA/10μA
Accuracy	±2.0% fs/±(0.2% rdg+6dgt)	±1.0% fs/±(0.2% rdg+3dgt)
AC / AC+DC		
Range	50μA/500μA/5mA/50mA	50μA/500μA/5mA/25mA
Resolution	0.01μA/0.1μA/1μA/10μA	0.01μA/0.1μA/1μA/10μA
Accuracy -- 0.1Hz<f≦15Hz	±4.0% fs/±(4.0% rdg+10dgt)	X
Accuracy-- 15Hz<f≦100kHz	±2.0% fs/±(2.0% rdg+6dgt)	±2.0% fs/±(2.0% rdg+6dgt)
Accuracy -- 100kHz<f≦1MHz	±2.0% fs/±(2.0% rdg+10dgt)	±2.0% fs/±(2.0% rdg+10dgt)
AC Peak		
Range	750μA/7.5mA/75mA	500μA/1mA/10mA/75mA
Resolution	1μA/10μA/100μA	0.1μA/1μA/10μA/100μA
Accuracy-- 15Hz<f≦10kHz	±4.0%fs/±2.5%fs/±(2.0% rdg+6dgt)	±5.0% fs/±(5.0% rdg+10dgt)
Accuracy-- 10kHz<f≦100kHz	±5%fs/±5%fs/±5%fs	X
Accuracy -- 100kHz<f≦1MHz	15.0%fs/15.0%fs/±20.0%fs	X
Others		
EUT (V/I Check)	85V ~ 300V / 0.5A ~ 20A	85V ~ 300V / 0.5A ~ 10A
EUT Breaker	Yes	Yes
EUT Rated Current (max.)	Front: 10A / Rear: 20A	Front:10A / X
Measured Data Storage	1000 sets	50 sets
MD OUT terminal	Yes	X
EXT MD terminal	Yes	X
Interface	RS-232C, USB host&device, LAN, Signal I/O, GPIB (opt.)	RS-232C, USB host&device, Signal I/O, GPIB
Power Source (for GLC)	AC 100V~240V±10%	AC 100V/120V/220V/230V±10%
(for EUT)	AC 100V~240V±10%	AC 85V ~ 250V, 50/60Hz
Power Consumption	50VA (max.)	30VA (max.)
Dimension(WxHxD),mm	342 x 133.87 x 348.51	330 x 150 x 350
Weight	7.8kg	5kg

Key Dates for Product Announcement

1. Distributor Announcement & Demo Unit Order (13th February)
2. Demo Unit Shipping starting (13th February)
3. Global Market Announcement & Quantity Order (24th February)

Service Policy

1. 2 year warranty

2. Service Support

The service instructions in the Service Manual will help distributors repair defective units promptly. Should a board replacement be necessary to fix a defective unit, a board swapping service is provided by Good Will Instrument to facilitate the repairs done at a distribution site.

3. GW Instek continues to provide the after sales support through its website. The most updated version of the service manual and Marcom material for GLC-10000 series will be posted on the distributor zone of GW Instek Website at https://www.gwinstek.com

Specifications:

DC					
Ranges	Range	Resolution	Accuracy		
50.00mA	4.00mA～50.00mA	10μA	±(0.2%rdg+6dgt)		
5.000mA	0.400mA～5.000mA	1μA	±(0.2%rdg+6dgt)		
500.0μA	40.0μA～500.0μA	0.1μA	±(0.2%rdg+6dgt)		
50.00μA	4.00μA～50.00μA	0.01μA	±2.0%fs		
AC/ AC+DC					
Ranges	Range	Resolution	Accuracy		
			0.1Hz≦ f ≦15Hz	15Hz< f ≦100kHz	100kHz< f ≦1MHz
50.00mA	4.00mA～50.00mA	10μA	±(4.0%rdg+10dgt)	±(2.0%rdg+6dgt)	±(2.0%rdg+10dgt)
5.000mA	0.400mA～5.000mA	1μA	±(4.0%rdg+10dgt)	±(2.0%rdg+6dgt)	±(2.0%rdg+10dgt)
500.0μA	40.0μA～500.0μA	0.1μA	±(4.0%rdg+10dgt)	±(2.0%rdg+6dgt)	±(2.0%rdg+10dgt)
50.00μA	4.00μA～50.00μA	0.01μA	±4.0%fs	±2.0%fs	±2.0%fs
AC Peak					
Ranges	Range	Resolution	Accuracy		
			15Hz≦ f ≦10kHz	10kHz< f ≦ 100kHz	100kHz< f ≦1MHz
75.0mA	5.0mA～75.0mA	100μA	±(2.0%rdg+6dgt)	±5%fs	±15%fs
7.50mA	0.50mA～7.50mA	10μA	±2.5%fs	±5%fs	±15%fs
750μA	4μA～750μA	1μA	±4%fs	±5%fs	±20%fs
EUT Voltage / Current Monitor					
Ranges	Range	Resolution	Accuracy		
300V	85V～300V	0.1V	±(5%rdg+10dgt)		
20A	0.5A～20A	0.1A	±(2%rdg+5dgt)		
Power Supply					
For	GLC-10000	AC 100V~240V±10%, 50/60Hz			
For	EUT IN	AC 100V~240V±10%, 50/60Hz , 20A			
	EUT OUT (Front)	AC 100V~240V, 50/60Hz , 10A			
	EUT OUT (Rear)	AC 100V~240V, 50/60Hz , 20A			
Power Consumption					
	50VA Max.				
Interface					
	RS-232C, USB host & device, LAN, Signal I/O and GPIB (optional)				
Dimensions & Weight					
	342 (W) x 133.87 (H) x 348.51 (D); Approximately 7.5kg				

Ordering Information:

GLC-10000	Leakage Current Tester	
(Universal)	***Part Number:*** *01LC10K000GT*	***EAN Code:*** *4713008678350*
GLC-10000	Leakage Current Tester	
(EU Type)	***Part Number:*** *01LC10K020GT*	***EAN Code:*** *4713008678374*

Included Accessories

CD (User manual) x 1, Power cord (Region dependent) x 1, Test leads (GTL-207A) x 2,
Alligator Clips (GLC-01) x 1 (2 Red/2 Black), Foil Probe (GLC-02) x 1
Power Cord for EUT (GLC-03) x 1, Input & Output Terminal Cover (GLC-04) x 1

Option

GLC-10KG1	GPIB Card

Optional Accessories

GTL-232	RS-232C Cable
GTL-240	USB Cable, USB 2.0, A-B Type (L Type), 1200mm
GTL-246	USB Cable, USB 2.0, A-B Type Cable, 4P
GTL-248	GPIB Cable (2.0m)

Should you have any questions on the GLC-10000 series announcement, please don't hesitate to contact us.

Sincerely yours,

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