GOM-805/804

D.C. Milliohm Meter

FEATURES

- 50,000 Counts Display
- 3.5" (320 x 240) TFT LCD Display
- High Accuracy of 0.05% Precision
- 1Amp Test Current, 0.1μΩ Resolution
- Fast Measurement of 60 Readings Per Second
- Four wire Resistance Measurement
- Temperature Compensation Measurement Function
- Delayed Measurement
- 20 sets of Panel Setting Memory
- Dry Circuit (GOM-805 Only)
- Drive Modes :
  GOM-805 : DC+/DC-, Pulsed, PWM, Zero, Standby
  GOM-804 : DC+, Standby
- Interface : USB Device, RS-232C, Handler/Scan/EXT I/O, and GPIB(Option)

GW INSTEK
Simply Reliable

Ideal Equipment for Low-Resistance Measurement

GOM-804/805 feature 3.5-inch TFT display, maximum 50,000 counts measurement display, the rapid sampling rate of 60 readings per second, optimum 0.05% measurement precision, four wire measurement method as well as the temperature measurement and temperature compensation measurement function to meet the requirement of low resistance measurement application. The GOM-805 also includes various drive modes and Dry circuit for contact resistance measurement applications. More features, including 20 sets of panel setting memory and many external control interface such as RS-232C, USB, Handler/Scan/EXT IO or GPIB (option), greatly elevate GOM-804/805 milliohm meter's convenience on practical applications.

GOM-804/805 adopt 3.5-inch color LCD to enhance the clarity of measurement results and to provide display for related setting criteria that tremendously brings up the completeness of test information. Additionally, GOM-804/805, with the optimum 0.05% precision, augment the measurement speed to 60 sampling rate per second and maintain the display digits of five instead of four despite of different speed selections. Furthermore, the independent functionality keys and direction keys together increase the operational convenience which allows users to complete their measurement tasks with intuitive convenience and speed.

GOM-805 provides Dry circuit and various drive modes (DC+, DC-, Pulsed, PWM) for measurement applications on different materials. The pulsed current output mode is suitable for interacting conductors of different materials and this output mode is to reduce the thermal EMF influence, which is caused by electric potential difference generated from different conductors acting on different temperatures while conducting low resistance measurements. The DC+ and DC- output modes are best for the measurement requirements of inductive components. The PWM output mode, ideal for changing temperature sensitive materials, can avoid resistance value variation which is due to over load happened on current measurement for a long period of time. During the DC+, DC- and Pulsed drive is supplied; the Dry circuit can work with them also. Dry circuit can limit the applied voltage under the open circuit voltage of 20mV to avoid over voltage occurred on the both ends of components. The over voltage will damage the oxide coating and the thin layer of contact surface, as a result, the validity of measurement will then be ruined. For instance, contact resistance of connector measurement is one of the applications.

With respect to connecting the external control, GOM-804/805 provide a D-sub 25-pin combined interface to execute, according to the functionalities, Handler, Scan or EXT IO for respectively connecting to a sorting machine; connecting to an external on-off switch, and directly conducting external trigger control. For remote control and measurement result retrieval requirements, GOM-804/805 also provide various interface selections such as RS-232C, USB, and GPIB (GOM-804(option)/GOM-805(standard) interface. Furthermore, the control commands are compatible to that of GOM-802 that saves time in adjusting programs while switching from the old model to the new model.

To sum up, GOM-804 evolves from GOM-802 platform with more advanced functionalities and specifications, including display digits, measurement speed and standard interface (RS-232C/USB). With all the capabilities of GOM-804, GOM-805 augments itself with new measurement abilities (Dry circuit and various drive modes) to meet the requirements of broader low resistance measurement applications.

PANEL INTRODUCTION

CE | RS-232 | USB Device | GPIB

Handler | SCAN | EXT I/O | LabVIEW Driver

1. 3.5” Large TFT Lcd Provides The Optimum Setting Parameters and Measurement Result Observation
2. Independent Functional Keys and Direction Keys Provide More Intuitive and Fast Operation
3. Gnd/Guard Terminals Are Ideal for Grounding to Eliminate Measurement Noise And for
4. Reading Display Resolution Will Not Be Affected by Speed Selections
5. Four Wire Measurement Terminal
6. GPIB Port (GOM-804 Option)
7. RS-232C Port (Standard)
8. Handler/Scan/EXT I/O Combined Port
9. General Power Input AC 100~240V
10. Temperature Probe Port
11. Usb Port (Standard)

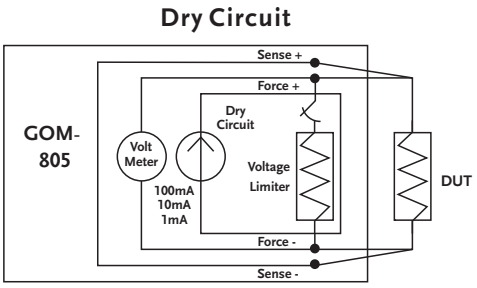
A. TOTALLY REPLACING THE EXISTING MODELS

In terms of the basic functionalities and specifications, GOM-804/805 can absolutely replace the existing model—GOM-802. All GOM-802 functionalities can be found from GOM-804/805, including resistance measurement range, 1A test current (maximum), four wire measurement method, temperature probe (option, accessory model: PT-100) for temperature measurement and temperature compensation measurement, etc. The programming commands are also compatible to that of GOM-802. To simply put it, the brand new GOM-804/805 not only provide better display interface, fast measurement (60 readings per second), but also collocate with standard communications interface (RS-232C/USB device) to facilitate users in accomplishing measurement tasks rapidly. On top of that, model switching will not be a problem.

B. FASTER MEASUREMENT WITHOUT SACRIFICING RESOLUTION

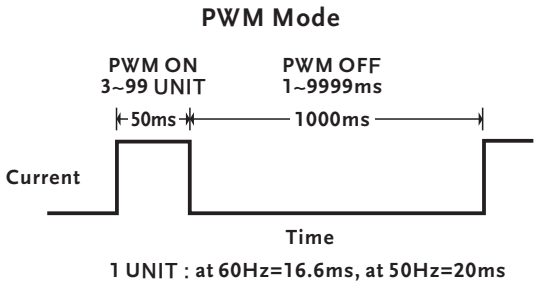
GOM-804/805 has two measurement speed selections, which are Fast reaching 60 readings per second, and Slow 10 readings per second. A major departure from the past, users, in the past, had to juggle between speed and display resolution. GOM-804/805 will not affect resolution despite of any speed selections and will maintain the highest display digits. In other words, reading resolution will not be changed by changing speed and the display digits remain the same.

C. DRY CIRCUIT TEST FOR GOM-805 ONLY



Dry circuit is to limit test voltage and current to certain levels which will not cause contact points to produce physically or electrically changed circuit and its most frequently used application is contact resistance of connector measurement. Based upon MIL-STD-1344 method 3002-1 low signal level contact resistance, tests must be applied under the maximum open circuit voltage of 20mV (or lower), and short circuit current of 100mA (or lower) to avoid over voltage for the both ends of components. The over voltage will damage the oxide coating and the thin layer of contact surface, as a result, the validity of measurement will then be ruined. GOM-805 provides three levels (500mΩ:100mA/5Ω:10mA/50Ω:1mA) to limit open circuit voltage at 20mV to execute Dry circuit tests.

D. VARIOUS DRIVE MODES FOR GOM-805 ONLY



GOM-805 provides various current output drive modes to satisfy diversified and accurate low resistance measurement applications. For instance, for interacting conductors of different materials, the pulsed current output mode can be applied to reduce the thermal EMF influence, which is caused by different conductors acting on different temperatures. The PWM output mode, ideal for changing temperature sensitive materials, can avoid resistance value variation which is due to over load on large current measurement in a long period of time. The DC+ and DC- output modes are best for the measurement requirements of inductive components.

E. STANDARD INTERFACE FOR CONTROL AND COMMUNICATIONS

With respect to connecting the external control, GOM-804/805 provide a D-sub 25-pin composite interface to execute, according to the functionalities, Handler, Scan or EXT IO for connecting to a sorting machine; connecting to an external on-off switch, and directly conducting external trigger control respectively. For remote control and measurement result retrieval requirements, GOM-804/805 also provide various interface selections such as RS-232C, USB, and GPIB GOM-804(option)/GOM-805 (standard) interface.

The commands of GOM-804/805 are compatible to that of GOM-802 that allows users to switch equipment with simple settings. There is no cost in adjusting existing programs and production delay will not be happening while switching from the old model to the new model.

SPECIFICATIONS

		GOM-804	GOM-805
DISPLAY		50,000 counts	
SAMPLING RATE	Slow Fast	10 readings / s 60 readings / s	
RESISTANCE MEASUREMENT		See table below	
TEMPERATURE	Range Accuracy Resolution	-50 °C ~ 399.9 °C -10 °C ~ 40 °C : 0.3%±0.5 °C ; Other : 0.3%±1.0 °C 0.1 °C	
DRY CIRCUIT		–	Open circuit less than 20mV; For 500mΩ, 5Ω, 50Ω range only
DRIVE MODE	DC+ / DC- Pulsed PWM Zero Standby(*)	DC + Only – – – Yes	Yes Yes Yes Yes Yes
OTHER FUNCTIONS		Trigger - Internal, Manual, External; Math - ABS, REL, %, TC; Average : 2~10 times; Measurement Delay; TC for Transformer; Compare; Diode; Continuity beeper; Binning (only GOM-805)	
INTERFACE	USB RS-232C HANDLER/SCAN/EXT I/O GPIB	Standard Standard Standard Option (factory installed)	Standard Standard Standard Standard
DISPLAY		3.5"(320 x 240) TFT LCD	
MEMORY		20 sets for panel setting	
POWER SOURCE		AC 100 ~ 240 V, 50/60Hz	
COMSUMPTION		25VA (max.)	
DIMENSIONS & WEIGHT		223(W) x 102(H) x 283(D) mm ; Approx. 3kg	

RESISTANCE MEASUREMENT			
Range	Resolution	Test Current	Accuracy
5mΩ	0.1μΩ	1A	±(0.1% reading + 0.2% of range)
50mΩ	1μΩ	1A	±(0.1% reading + 0.02% of range)
500mΩ	10μΩ	100mA	±(0.05% reading + 0.02% of range)
5Ω	100μΩ	100mA	±(0.05% reading + 0.02% of range)
50Ω	1mΩ	10mA	±(0.05% reading + 0.02% of range)
500Ω	10mΩ	1mA	±(0.05% reading + 0.008% of range)
5kΩ	100mΩ	100μA	±(0.05% reading + 0.008% of range)
50kΩ	1Ω	100μA	±(0.05% reading + 0.008% of range)
500kΩ	10Ω	10μA	±(0.05% reading + 0.008% of range)
5MΩ (GOM-804)	100Ω	1μA	±(0.2% reading + 0.008% of range)
5MΩ (GOM-805)	100Ω	1μA	±(0.5% reading + 0.008% of range)

Note:(*)The Standby function must be collocated with the new PCB hardware; it is not applicable to sold instruments.

Specifications subject to change without notice. OM-805GD1BH-2018

ORDERING INFORMATION

GOM-805	**D.C. Milliohm Meter(Handler/RS-232C/USB Device/GPIB)**
GOM-804 with GPIB	**D.C. Milliohm Meter(Handler/RS-232C/USB Device/Opt.01 GPIB)**
GOM-804	**D.C. Milliohm Meter(Handler/RS-232C/USB Device)**

ACCESSORIES

Quick Start Guide x 1, Power cord x 1, Test lead GTL-308 x 1, CD x1(complete user manual)

OPTION

Opt. 1 GPIB Card (only for GOM-804 and must be installed at factory before shipment)

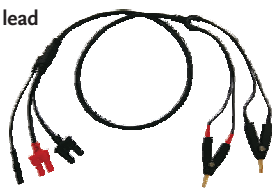
OPTIONAL ASSESSORIES

PT-100	Platinum Temperature Probe
GTL-232	RS-232C cable 9-pin, F-F type, approx. 2000mm
GTL-246	USB cable, A-B type, approx. 1200mm
GTL-248	GPIB cable approx. 2000mm
GTL-309	Test lead, approx. 3m

FREE DOWNLOAD

Driver LabView Driver

GTL-308 Test lead



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