GRAPHTEC

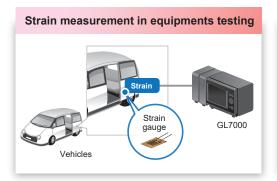
DATA PLATFORM GL7000

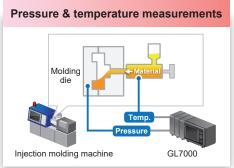
Strain and Temperature Measurement Set

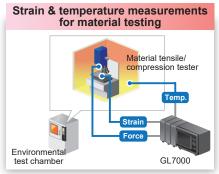
Easy Strain and Temperature measurement by DC strain module (GL7-DCB) and multi-input module (GL7-M)

- Supports Strain gauge & Sensor/Transducer in GL7-DCB module
 - Supports thermocouple and RTD for measuring temperature in GL7-M module
 - Converts to Engineering Unit by scaling





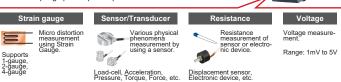




Easy connect the sensor in GL7-DCB

Support a direct connection with the strain gauge & strain gauge based sensor, and allows a wide variety measurements.

- Supports built-in bridge circuit and excitation power
- Supports voltage & resistance measurement
- \bullet Faster sampling speed up to 10 μs



Measure momentary and long-time phenomenon

Support multiple types of storage device realize to capture data in an endurance test of long time and even also an impact test of short time.

Supported storage device

- Built-in RAM
- Built-in Flash
- SD memory cardSSD (Option)

Strage	Using 14 channels (4ch in GL7-DCB & 10ch in GL7-M)			
Ollago	100kS/s(10µs)	1kS/s(1ms)	1S/s(1s)	
RAM	20 seconds	Approx. 33 min.	Approx. 23 days	
Built-in Flash memory *1	Not Available	Approx. 12 hr. 42 min.	Over 365 days	
SD card *2	Not Available	Approx. 12 hr. 33 min.	Over 365 days	

*1 : In 2GB data file size, GBD data format.
*2 : Uses 2GB SD memory card, GBVD data format

Sampling speed/Capturing time

Easy measure temperature in GL7-M

Support multiple input type for voltage and temperature, and allows a wide variety measurements.

- Faster sampling speed up to 10ms
- All isolated input channels (10ch/unit)
- Supports multiple input types
 Voltage: max. 50V (Allows 4-20mA current loop using B-551 shunt)
 Temperature: Thermocouple and RTD
 Humidity: optional sensor (B-530)

Scaling (engineering unit) function

Measured value can be converted to specified engineering unit.



Various type of display

Utilizes a clear 5.7-inch TFT color monitor. Makes it easy to read data in waveform or digital form by multiple type of display method.

Y-T display



It is also available X-Y and FFT displays.

Digital	display
Contraction	

Free running	■□□□□□ 8 9 3 3 % S	TOP -	
+ 1. 428	1-6 on-6 0 001		eaaa STOP■
152 0r1-2 CH	VALUE	Max	Min
+ 0.000	- 2. 028 v	+ 2. 241	- 2. 242
1-3 OH-3	- O. OO5 V	+ 0.006	- 0. 008
- N NN2 1-3	- 0.001 v	+ 0.001	- 0. 005
1-4 00-4	+ 0.000 v	+ 0.001	- 0.008
- n nn1 1-5	- 0. 001 v	+ 0.001	- 0. 002
1-5 OH-5	+ 0.000 v	+ 0.000	- 0. 004
_ n nn2 1-7	+ 0.000 v	+ 0.001	- 0.004
- U. UUZ ₁₋₈	- 0.001 v	+ 0.000	- 0.003
Format 01	+ 0.000 v	+ 0.000	- 0.003
1-10	- 0.001 v	+ 0.000	- 0.003
	Format 0159. Mode	Next 1	05-64-07 HOME

GI 7000 specif	fications	
GL7000 specifications Item		Description
Number of module		Attached to up to 10 modules *1
Number of inp		Max. 112 channels in 1 of GL7000
External	Input	Start/Stop, External trigger, External sampling, Auto balance
Input/Output		Signal type: Contact (relay), Open collector, Voltage
signals *2	Output	Trigger, Busy, Alarm (10 channels) *3
		Signal type: Open collector (pulled-up by resistor 10 kΩ)
Trigger,	Trigger action	Start or stop capturing data by the trigger
Alarm	Trigger repeat	Enabled (ON): Automatically re-armed for the next data capture function
function		Disabled (OFF): Data capture is completed in a single trigger
	Trigger source	Start: Off, Measured signal, Alarm, External signal, Clock, Week or Time
		Stop: Off, Measured signal, Alarm, External signal, Clock, Week or Time
	Trigger	Combination: OR or AND condition at the level of signal or edge of signal
	determination conditions for	Analog: Higher/Rising, Lower/Falling, Window-in, Window-out Logic *4: Higher/Rising, Lower/Falling
	measured signal	Pulse *4: Higher/Rising, Lower/Falling, Window-in, Window-out
	Alarm	Combination: OR or AND condition at the level of signal or edge of signal
	determination	Analog: Higher/Rising, Lower/Falling, Window-in, Window-out
	condition *5	Logic *4: Higher/Rising, Lower/Falling
	Condition	Pulse *4: Higher/Rising, Lower/Falling, Window-in, Window-out
	Alarm output	10 channels
	Pre-trigger *6	Number of data before trigger: Up to specified number of captured data
Calculation	Between	Addition, Subtraction, Multiplication and Division for two analog inputs (Sampling
function	channels	speed is limited up to 10 Samples/s (100ms interval). Available arithmetic element
		and the output destination is the analog input channel 1 to 100.)
	Statistical	Select two calculations from Average, Peak, Max., Min. in real time and replay *7
Move function		Beginning, center or end of the data, Trigger point, Specific time (absolute, relative),
the display ran		Call cursor
Search function		Search for analog signal levels, logic signal pattern, pulse signal levels or alarm point
		in captured data
Annotation fur		Comment can be set in each channel (up to 31 alphanumeric characters)
Message / Ma	rker Functions	Message: The registered messages or entered message is able to be recorded for
		any timing. Up to 8 messages can be pre-registered.
		Marker: Marker is able to record for occurring alarm or power failure.
Resume		Resume automatically in the same condition after power is recovered as when the
		power failure occurred during data capture *8
FFT analysis	Analyzing	0.08, 0.2, 0.4, 0.8, 1.6, 2, 3.2, 4, 8, 20, 40, 80, 200, 400, 800 Hz,
function	frequency range	2, 4, 8, 20, 40, 80, 200, 400 kHz
(Firmware	Number of points	500, 1000, 2000, 4000, 10000
ver. 1.20 or	Window function	Rectangular, Hanning, Hamming, Blackman, Flat-top, Exponential
later)	Averaging	Summation average, Exponential averageg, Peak hold
	Channels	4 channels
	Functions	Y-T, Linear, Power, PSD, Cross, Transfer function, Coherence, COP
1	Display mode	Single display, Dual display, Nyquist
Interface to PC		Ethernet (10 BASE-T/100 BASE-TX), USB 2.0 (High speed)
Network functi		WEB server, FTP server, FTP client, NTP client, DHCP client
USB drive mod Storage	Built-in	Emulate the USB memory device *9 RAM (2 million samples for each channels, built-in amplifier module),
device	Dulle-III	Flash memory (2 GB, built-in the main module)
device	External *10	SD card (Support SDHC, up to 32 GB) slot, SSD (Approx. 64 GB)
	LAterrial **	The file for capturing data is limited up to 2 GB.
Data saving	Captured data*10	Built-in RAM, Built-in Flash, SD memory card, SSD (Data is saved directly to it.)
function	Data in built-in RAM	Specified number of data up 2 million samples in increments of 1
	Auto save *10	Available for the built-in RAM
		Enabled (ON): Data in the RAM is saved automatically to the built-in Flash,
		SD memory card, SSD
		Disabled (OFF): Data in the RAM is not maintained after power is turned off
	Capturing	Mode: Off, Normal, Ring, Realy
	mode *10	Ring*11: Saved most recent data (Number of capturing data: 1000 to 2000000 points,
		Destination of data: Built-in RAM, Built-in Flash, SD memory card, SSD)
		Relay*12: Saved data to multiple file without losing data until capturing data is stopped
		(Destination of data: Built-in Flash, SD memory card, SSD)
	During data	Displaying information in two windows, Hot-swapping the SD memory card,
	capture *13	Saving data in between cursors.
	Backup *10	Backup interval: Off, 1, 2, 6, 12, 24 hrs.
		Data destination: SD memory card, SSD, FTP server
Engineering S	cale function	Measured value can be converted to the engineering unit
		Analog voltage: Converts by four reference points (gain, offset)
		Temperature: Converts by two reference points (offset)
Complex ' ''	n habitaan	Pulse count: Converts by two reference points (gain)
	on between units	Start and Trigger *14
Operating environment		0 to 45 °C, 5 to 85 % RH (non condensed)
Power source		100 to 240 V AC, 50 to 60Hz
Power consumption Standard accessories		85 VA Quick guide, CD-ROM, AC power cable
Standard accessories External dimensions		Main module: Approx. 193 x 141 x 160 mm (Excluding Projection),
(W x D x H)		Alarm output terminal: Approx. 30 x 136 x 145 mm (Excluding Projection)
(W X D X H) Weight		Main module: Approx. 2.2 kg, Alarm output terminal: Approx. 350 g
Display module specification Model number		
		GL7-DISP
Display device		5.7-inch TFT color LCD monitor (VGA: 640 x 480 dots)
Display device Operation section		Touch panel and Cursor keys*15
Touch panel		Capacitive type touch panel, Operated by finger or the proprietary pen
		English, French, German, Chinese, Korean, Japanese
Displayed language Screen saver		Turns off backlight by 10, 30 sec., 1, 2, 5, 10, 30, 60 min.
Displayed info	rmation	Waveform in Y-T with digital values, Waveform only, Digital value, Waveform in X-Y
		LAN cable (CAT5 class, Straight connection, Up to 10m) *16
	ble	
Connection ca		Bracket for slanted mount, Connection cable (40cm). Ground cable. Screws
Connection ca Standard acce		Bracket for slanted mount, Connection cable (40cm), Ground cable, Screws
Connection ca Standard acce	ssories	Bracket for slanted mount, Connection cable (40cm), Ground cable, Screws Approx. 187 x 34.5 x 119 mm (Excluding projection) Approx. 187 g

- Weight Approx. S0 g

 1. Excluding the function module as the Display module or SSD module. In case of the DC Strain module (GL7-DCB): up to 8 modules. In case of the Logic/Dube module (GL7-DCB): up to 8 modules. In case of the Logic/Dube module (GL7-DCB): up to 8 modules. In case of the Logic/Dube module (GL7-DCB): up to 8 modules. In case of the Logic/Dube module (GL7-DCB): up to 8 modules. In case of the Logic/Dube module (GL7-DCB): up to 8 modules. In case of the Logic mode, up to 2 modules when the module is used in the pluse mode.

 1. The Input/Dubt cable (GL7-DCB): the terminal block attached to the main module as standard accessory.

 3. It is available on the Logic/Pulse (GL7-LP) module.

 5. Method of detection. Voll. Term. module:

 5. Method of detection. Voll. Term. module:

 The alarm is detected every 5 seconds when the sampling interval is longer than 5 seconds and reported. The alarm is detected in the sampling interval is horter than 5 seconds and reported.

 The alarm is detected overy 1 ms when the sampling interval is shorter than 1 ms. The alarm is detected in the sampling interval when the sampling interval is longer than 5 seconds and reported.

 The alarm is detected overy 5 seconds and reported.

 The alarm is detected in the sampling interval is longer than 5 seconds and reported.

 8. It is available when the captured data is saved to the built-in RAM. The pre-trigger function may not available in combination with the trigger settings.

 7. The result of real time calculation is displayed in the digital display mode. Available sampling speed is the 10 samples/s (100 ms interval).

 8. When the captured data is asset on the built-in-RAM. The pre-trigger function may not available in combination with the trigger settings.

 9. The IUSB drive mode is started by setting of the switch on the main module. It can be also started when the power is turned on while pressing the STARTSTOP key on the displaym mode. Available sampling speed is the 10 samples/s (100 ms interval).

 10. The SD memory card is no

politypes Voltage, Strain, Resistance value (roducing potentiometer) 500,000,000,000,000,000,000,000,000,00	Sampling speed (interval)		val)	100 k Samples/s to 1 Sample/h (10µs to 1hr.)		
Strain and the transper and transper and the transper and t	Built in RAM			2 million samples for each channel		
ent range O. 2. 0.2. 0.4 0.5 1, 2. 2.5 4, 5.10 m/V/ Available are consistent voltage for the bridge. Voltage are 1, 2. 5, 10, 20, 30 100, 200, 500 m/V 1, 2.5 V Full Scale The season of the control of the season of the seaso	Measure-	Strain				
Voltage 1, 2, 5, 10, 20, 50, 100, 200, 500 The 1, 2, 5 Year, 12, 10, 20, 50, 100, 200, 500 The 1, 2, 5, 10, 20, 50, 50 The 15 Caste Voltage 1, 12, 5, 10, 20, 50, 100, 200, 500 The 1, 2, 5, 10, 20, 50, 50 Full Scale Voltage 1, 20, 5 Year, 12, 2, 5, 10, 20, 50, 500 The 15 Caste Voltage 1, 20, 5 Year, 12, 20, 50, 50, 50, 50, 50, 50, 50, 50, 50, 5	nent range			0.2, 0.25, 0.4, 0.5, 1, 2, 2.5, 4, 5, 10 mV/V		
Resistance 1, 2, 5, 10, 20, 50, 100, 200, 500, 21, 2, 5, 10, 20, 50 ND Full Scale 1, 2, 5' of Full Scale + 10 µU) 1 (Convertine 2 (C.2.5') of Full Scale + 10 µU) 3 (C.2.5') of Full Scale + 10 µU) 3 (Convertine 3 (C.2.5') of Full Scale + 10 µU) 3 (Strain Scale + 10 µU) 3 (Strain Scale + 10 µU) 4 (C.2.5') of Full Scale + 10 µU) 4 (C.2.5') of Full Scale + 10 µU) 4 (C.2.5') of Full Scale + 10 µU) 5 (Strain Scale + 10 µU) 5 (Str						
Strain and 19 (1969) Resistance Resist				1, 2, 5, 10, 20, 50, 100, 200, 500 mV, 1, 2, 5 V	Full Scale	
voltage on the contraction of t	lageura.		ice	11, 2, 5, 10, 20, 50, 100, 200, 500 Ω, 1, 2, 5, 10, + (0.2 % of Full Scale + 10 us)	20, 50 KΩ Full Scale	
coursey." Vil Resistance Downwell South Converted South Constant South Converted South	nent					
Discreter Supported Surpoints (1) Strain (1	ccuracy *17	Resistar	ice			
Strain gauge menor Strain gauge menor All bridge (data gauge) in 2-, 3- or 4-wire (supports remote sensing in 3- or 4-wire) Half bridge (data gauge) in 3-, 4-, 5-wire (supports remote sensing in 3- or 4-wire) Half bridge (data gauge) in 3-, 4-, 5-wire (supports remote sensing in 3- or 4-wire) Half bridge (data gauge) in 3-, 4-, 5-wire (supports remote sensing) Resistance Resistanc	VD converte				resolution: 1/40000 of the m	easuring full range)
Guarter bridge (engle gauge) in 2, 5, or 4-wire (supports remote sensing in 5 or 4-wire)						
Half bridge (oldu gauge) in 3-, 4 - 5 write (supports remote sensing in 4- or 5 write) Full bridge (oldu gauge) in 4- or 6 write (supports remote sensing in 6- wire) Full bridge (paul of paule) in 4- or 6 write (supports remote sensing) Festifance Full bridge type in 4-wire. Full bridge type in 6-wire (supports remote sensing) Full bridge type in 6-wire. Full bridge type in 6-wire (supports remote sensing) Full bridge type in 6-wire. Full bridge type in 6-wire (supports remote sensing) Full bridge type in 6-wire. Full bridge type in 6-wire (supports remote sensing) Full bridge type in 6-wire. Full bridge type in 6-wire (supports remote sensing) Full bridge type in 6-wire. Full bridge type in 6-wire (supports remote sensing) Full bridge mode 1. 2. 2. 5. 10 V DC Current mode		Strain			(aumanta ramata assains i	m 2 au 4 mira)
Full bridge (total gauge) in 4- or 8-wire (supports remote sensing in 6-wire) Transducerinsensor based on strain gauge Full bridge type in 4-wire, Full bridge type in 6-wire (supports remote sensing) Resistance Resistanc	ensor					
Transducer/insertor based on strain gauge Full bridge type in 4-wire (supports remote sensing) Resistance Full bridge type in 6-wire (supports remote sensing) Resistance Single professor To 10 kG, Available excitation power varies by selection of element.						
Resistance Sign of to 10 kBC, Available excitation power varies by selection of element. 120 or 350 D for the quarter- and half-ordge Available excitation power varies by selection of element. 200 or 350 D for the quarter- and half-ordge Available excitation power varies by selection of element. 200 or 350 D for the quarter- and half-ordge Available excitation power varies by selection of element. 200 or 350 D for the quarter- and half-ordge and selection of element. 200 or 350 D for the quarter varies by selection of element. 200 or 350 D for the quarter varies by selection of element. 200 or 360 D for the quarter varies by selection of element. 200 or 360 D for the quarter varies by selection of element. 200 or 360 D for the quarter varies by selection of element. 200 or 360 D for the quarter varies by selection of element. 200 or 360 D for the quarter varies by selection of element. 200 or 360 D for the quarter varies by selection of element. 200 or 360 D for the quarter varies by selection of element. 200 or 360 D for the quarter varies by selection of element. 200 or 360 D for the quarter varies by selection of element. 200 or 360 D for the quarter varies by selection of element. 201 or 360 D for the quarter varies by selection of element. 201 or 360 D for the quarter varies by selection of element. 201 or 360 D for the quarter varies by selection of element. 201 or 360 D for the quarter varies by selection of element. 201 or 360 D for the quarter varies by selection of element. 201 or 360 D for the quarter varies varies by selection of element. 201 or 360 D for the quarter varies varies by selection of element. 202 or 360 D for the quarter varies varies varies varies by selection of element. 203 or 360 D for the quarter varies varies. 203 or 360 D for the quarter varies varies. 203 or 360 D f					<u> </u>	,
100 pc 10 10 KL, Available excitation power varies by selection of element.					vire (supports remote sensi	ng)
validation Voltage mole 20 or 360 Ω for the quarter- and half-bridge Available excitation Voltage mole 1, 2, 2, 5, 5, 10 V DC 1, 2,			ice			
Available excitation power varies by selection of element. Voltage mode 1, 2, 2, 5, 10 V DC Excitation voltage 5 and 10 V is available when bridge resistance is the 350 Ω or higher. Corrent mode Approx. 60 kG (1200 gauge). Approx. 175 kG (3500 gauge) Approx. 60 kG (1200 gauge). Approx. 175 kG (3500 gauge) Between channels mode Corrent mode Approx. 60 kG (1200 gauge). Approx. 175 kG (3500 gauge) Between channels mode Corrent mode Corre					s by selection of element.	
voltagle mode 1, 2, 2, 5, 5, 10 V DC Excitation voltage 5 and 10 V is available when bridge resistance is the 350 Ω or higher. Constant current 0.1 to 20 mA (supported voltage is up to 10 V) Welford Fully automate (via push button or setting) the condition meru)	suilt-in elem	ent of the	bridge	120 or 350 Ω for the quarter- and half-bridge	felement	
Excitation voltage 5 and 10 V is available when bridge resistance is the \$50 \Omega or higher. Ournet mode Constant current. 10 Lo 20 mA (supported voltage is up to 10 V). **ro Aglastic Method Fully automatic (via push button or setting the condition menu) **raing large Max. Range ± 1000 µ; µ; Lo 10 st.	vcitation	Voltage	mode		i didilidili.	
Society of the Constant current: 0.1 to 20 mA (supported voltage is up to 10 V.) Finding support Max. Range ### 10000 µ (up: 10% strain) ### 10000 µ (up	ower	Vollago			bridge resistance is the 35	0 Ω or higher.
size Aplaster Method Fully automatic (via push button or setting the condition menu) implications are provided as the provided of strain) automatic automatic and the provided as the provi		Current	mode			
awmun (Calibration) Between (F)(Perminal 10 V, Common-mode voltage: 10 Vrms AC put Between (F)(Perminal 10 V, Common-mode voltage: 10 Vrms AC put Between channels				Fully automatic (via push button or setting the condition menu) ±10000 με (με: 10 ⁻⁶ strain)		
Approx. 600 (1200, gauge), Approx. 175k0 (3000, gauge) (astromatical activation) and activation of the service	train gauge	Max. Ra	nge			
Between (1/)(Jemminal 10 V, Common-mode voltage: 10 Vrms AC						
Between channel(SN) 10 Vp-p (Eetween negative (-) terminals in different channels) at yout page Between channel(SN) 100 Vp-p (*) minute) requency response			(±)// \tempir -1		our gauge)	
Setween channels 100 Vp-p (1 minute)				10 Vn-n (Retween negative (-) terminals in different	t channels)	
Internation 1000 Vp-p (1 minute)	oltage			60 Vp-p 1000 Vp-p (1 minute) 1000 Vp-p (1 minute) DC to 20 kHz Off, Line(1.5Hz), 3, 6, 10, 30, 50, 60, 100, 300, 500 Hz, 1k, 3k, 5k, 10k Hz (in -30dB/oct)		
Withstand Between channel(OND 1000 Vp-p (1 minute)	/lax. voltage	Between	channels			
DC to 20 kHz	withstand)	Between				
Anti-allasing	requency re	esponse				
IEEE 151.4 Class2 (Temperate No.33)	ilter					
Reading information from the sensor and setting it to module	·					
Approx. 49 x 136 x 160mm (Excluding Protection)			1		n it to module	
Approx.840 g		ensions (W x D x H)			
Content		ononono (11 X D X 11)	Approx. 840 g		
December Color C		perature	input module			
All channels isolated balanced input, Scans channels for sampling, Screw terminal (M3 screw)	Nodel numb	er		GL7-M		
Screw terminal (M3 screw)			nels			
100 Samples's with 1-10ch to 1 Samples'n (10 ms with 1-10ch to 1 hr.)	nput method	t				
	\ I'	d C4				
Voltage		eea (inter	vai)		ns with 1-10ch to 1 hr.)	
Temperature		Voltage		20, 50, 100, 200, 500 mV, 1, 2, 5, 10, 20, 50 V, and 1-5 V Full Scale		
Humidity	nent range		ature			
Voltage				RTD: Pt100, JPt100 (JIS), Pt1000 (IEC751)		
Temperature			/	0 to 100 % RH, using optional humidity sensor	(B-530)	
RS	/leasure-			± 0.1% of Full Scale		
100 < TS ≤ 300 °C						
R. 300 < TS ≤ 1600 °C	oodiaoy	rature	K/5			
S: 300 < TS ≤ 1760 °C						°C)
					± (0.05 % of reading + 2.0	°C)
K			В			
1-00 < TS ≤ 1370 °C						
E			K	-200 ≤ TS ≤ -100 °C		
1-00 < TS : 800 °C			F			
T			_			
1-100 < TS ≤ 400 °C			Т			
J				-100 < TS ≤ 400 °C	± (0.1 % of reading + 0.5 °	
100 < TS ≤ 1100 °C			J	-200 ≤ TS ≤ -100 °C	± 2.7 °C	
N				-100 < TS ≤ 100 °C		
0 s Ts s 1300 °C						
W 0 s TS ≤ 2000 °C Reference Junction Compensation (R.J.C.) accuracy: ± 0.5 °C 'Wire size of thermocouple used is 0.32mm diameter in the T type and 0.65mm diameter in other types. RTD Measurement range Driving current Accuracy P1100 -200 to 850 °C (F.S. = 1050 °C) 1 mA ± 1.0 °C JP1100 -200 to 500 °C (F.S. = 700 °C) 1 mA ± 0.8 °C P1100 -200 to 500 °C (F.S. = 700 °C) 1 mA ± 0.8 °C P1100 -200 to 500 °C (F.S. = 700 °C) 0.2 mA ± 0.8 °C P1000 -200 to 500 °C (F.S. = 70			IN			
Reference Junction Compensation (R.J.C.) accuracy: ± 0.5 °C *Wire size of thermocouple used is 0.32mm diameter in the T type and 0.65mm diameter in other types. RTD Measurement range Driving current Accuracy PP100 -200 to 850 °C (F.S. = 7050 °C) 1 nmA ± 1.0 °C JP1100 -200 to 500 °C (F.S. = 700 °C) 1 nmA ± 2.0.8 °C PP1000 -200 to 500 °C (F.S. = 700 °C) 0.2 mA ± 0.8 °C J. Compensation Select internal or external Disconverter Sigma-Delta type, 16 bits (effective resolution: 1/40000 of the measuring full range) put impedance 1 1MΩ ± 5% aximum Between channels 00 Vp-p Between channels 00 Vp-p Islage Between channels MD 60 Vp-p (1 minute) Withstand) Between channels 350 Vp-p (1 minute) Withstand) Between channels (MOV) 350 Vp-p (1 minute) Withstand (MOV) 350 Vp-			w			
"Wire size of thermocouple used is 0.32mm diameter in the T type and 0.65mm diameter in other types. RTD Measurement range PH100						-,
RTD Measurement range Driving current Accuracy P1100 - 200 to 850° C(F.S. = 7105° C) 1 mA						er in other types.
PH100			RTD	Measurement range		Accuracy
JP1100				-200 to 850 °C (F.S. = 1050 °C)	1 mA	± 1.0 °C
J. Compensation Select Internal or external				-200 to 500 °C (F.S. = 700 °C)		
Documeter Sigma-Delta type, 16 bits (effective resolution: 1/40000 of the measuring full range)			LP#1000	1=200 to 500 °C (E.S. = 700 °C)	U.2 mA	± 0.8 °C
put impedance aximum put Between (+)/(-)terminal 60 Vp-p Between channels 60 Vp-p Between channels 60 Vp-p Between channels 70 Vp-p (1 minute) 80) Carre	natic:	11 11000	Calant internal or outers: -1		
Setween (+)/(-)terminal 60 Vp-p			1111000	Select internal or external	1/40000 of the measuring fo	Ill ranna)
Between channels 60 Vp-p	/D converte	er	111000	Select internal or external Sigma-Delta type, 16 bits (effective resolution:	1/40000 of the measuring fu	ill range)
Between channel(GND 60 Vp-p 1 minute)	/D converte put impeda	er ance		Select internal or external Sigma-Delta type, 16 bits (effective resolution: $^{\prime}$ 1 M Ω ±5%	1/40000 of the measuring fu	Ill range)
Max. voltage Between channels 350 Vp-p (1 minute)	/D converte put impeda laximum	er ance Between	(+)/(-)terminal	Select internal or external Sigma-Detta type, 16 bits (effective resolution: ¹ 1 MΩ ±5% 60 Vp-p	1/40000 of the measuring fu	Ill range)
Moving average Off, 2, 5, 10, 20, 40	/D convertenput impeda laximum iput oltage	Between Between Between	(+)/(-)terminal channels channel/GND	Select internal or external Sigma-Delta type, 16 bits (effective resolution: 1 $M\Omega$ $\pm 5\%$ 6 0 0 p-p 0 0 0 0 p-p	1/40000 of the measuring fu	ill range)
(Moving average in selected number. When the sample is longer than 5 seconds, the data sampled in the sub-sample (5 seconds) will be used for creating the average value.) V output Driving the humidity sensor B-530, 1 channel stemal dimensions (W-D×H) Approx. 49 x 136 x 160 mm (Excluding projections) (eight Approx. 770 g 3. This function is able to be available when sampling speed is set up to 10 samples/s (100 ms interval). 1. The Sync cable (B-59) is required when this function is used. The GL-Connection software is required when the synchronizing function is used, per substance can be selected by both the touch panel and keys. 1. When the display module is mounted at an angle using the bracket, the display module is connected to the main module by a LAN cable that is the conditions. 7. Subject to the conditions. 8. Room temperature is 23 °C. 5 °C. • When 30 minutes or more have elassed after power was turned on.	/D converted aput impedate laximum aput oltage lax. voltage	Between Between Between Between	(+)/(-)terminal channels channel/GND channels	Select internal or external Sigma-Delta type, 16 bits (effective resolution: 1 $M\Omega$ ±5% 60 V_{PP} 60 V_{PP} 60 V_{PP} 60 V_{PP} 350 V_{PP} 0 (or imitute)	I/40000 of the measuring fu	ill range)
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4 channels
All channels isolated balanced input, Simultaneous sampling,
D-SUB type connector (9 pins, receptacle)
100 k Samples/s to 1 Sample/h (10µs to 1hr.)

DC Strain input module specifications
Model number GL7-DCB

Number of input channels

Sampling speed (interval) Built in RAM

GL7000 model for Strain and Temperature measurement		
Item	Model number	Quqntity
Main module	GL7000	1
Input module	GL7-DCB, DC Strain input module	1
Input module	GL7-M, Voltage/Temperature input module	1
Display module	GL7-DISP	1

- Due to the possibility of equipment or PC failure, the data files on the instrument will not be guaranteed to be held on the memory. Please make a backup of data whenever possible to avoid data loss.
- avoid data loss.

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 Specifications are subject to change without notice. For more information about product, please check the web site or contact your local representative For using equipment in correctly and safely

 Before using it, please read the user manual and then please use it properly in accordance with the description.

 To avoid malfunction or an electric shock by current leakage or voltage, please ensure a ground connection and use according to the specification.



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