



GRAPHTEC

INSTRUMENT PRODUCT LINE-UP

Data Logger, Data Acquisition



Your Expert Partner in Sensors & Controls

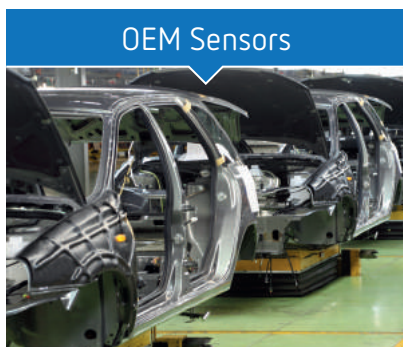
ABOUT ALTHEN SENSORS & CONTROLS

Althen Sensors & Controls stands for pioneering measurement and sensor solutions. We accept every measurement challenge. We are constantly looking for innovation and are only satisfied when we have found the perfect solution for your measurement task. We develop customer-specific solutions in our in-house production facilities. Althen is partner to many recognized universities and leading organizations. We find ourselves in an intensive knowledge transfer, developing future technologies. Althen is one of the first companies in its branch with a certification by the German technical inspection association in Hessen (TÜV PROFICERT) in accordance with DIN EN ISO 9001:2015.

OUR SERVICE FOR YOU

Are you facing a metrological challenge or do you need a suitable spare part for your application? Our specialists will advise you - in detail and professionally. We keep an eye on your costs and develop customer-specific special solutions if required. Benefit from our many years of experience in the field of measurement technology and sensor technology:

- A High-quality Production**
- A Measurement and Rental**
- A Special Custom Calibration**
- A Training & Consulting**





INSTRUMENT PRODUCT LINE-UP

DATA LOGGER, DATA ACQUISITION

GRAPHTEC



We offer compact data loggers with USB or Ethernet interface. The measured data are written to the built-in memory, SD card, SSD or USB stick. All devices have their own display, which immediately delivers optical results. The measuring range can be set between +/- 20 mV and +/- 1000 V. The recorded measurement data can be evaluated via the supplied PC software. An export of the measured values is also possible. All devices can be easily and quickly configured on site via the integrated, ergonomic keyboard and display. Complex configurations can be stored in memory and loaded as required.

KEY FEATURES

- Portability and versatility for onsite-testing needs
- Multifunction inputs for multiple signal recordings
- Channel-to-channel isolation for enhanced safety
- Quick solution for real-time Excel recording and reporting
- Field-ready instrument with large format display and ruggedness
- Differential inputs for all channels
- German-language user interface
- Extensive accessories



midi LOGGER GL840series

Isolated input, multi-channel logger



Multi-input model GL840-M

High withstand voltage model GL840-WV

GL100
up to 5 units
as remote sensor

midi LOGGER GL240

10 channel handy type logger



GL100
1 unit
as remote sensor

- Max. 10ms sampling
- Σ type A/D converter
- Temp. Humidity, Voltage, Pulse/Logic
- Up to 200 channels
- LAN USB SDcard

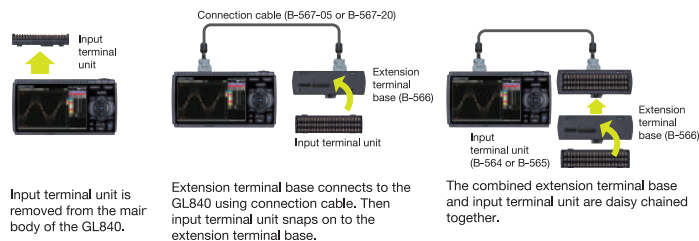
- Multifunction analog inputs
 - Voltage: 20 mV to 100 V
 - Temp.: TC: R, S, B, K, E, T, J, N, W (WRε5-26)
 - RTD: Pt100, Pt1000 (IEC750), JPt100 (JIS)
 - Humidity: 0 to 100% (the B-530 option is required)
- Flexible input system for wide array of applications
 - WLAN (option) capable for remote monitoring
 - Maximum sampling rate up to 10 ms^{*3}
 - Extended memory capacity using SD memory card
- Combining GL100 and GL840 by using WLAN

- Max. 10ms sampling
- Σ type A/D converter
- Temp. Humidity, Voltage, Pulse/Logic
- 10 channels
- USB SDcard

- Multifunction analog inputs
 - Voltage: 20 mV to 100 V
 - Temp.: TC: R, S, B, K, E, T, J, N, W (WRε5-26)
 - Humidity: 0 to 100% (the B-530 option is required)
- Multifunction input in 10 isolated channels
 - Maximum sampling rate up to 10 ms^{*3}
 - Extended memory capacity using SD memory card
 - WLAN (option) capable for remote monitoring
- Combining GL100 and GL240 by using WLAN

*1: WLAN is available in limited regions. *2: Select either Pulse or Logic input, and use the optional input/output cable (B-513). *3: Sampling rate is limited by the number of channels to be used.

Expandable up to 200 channels in GL840

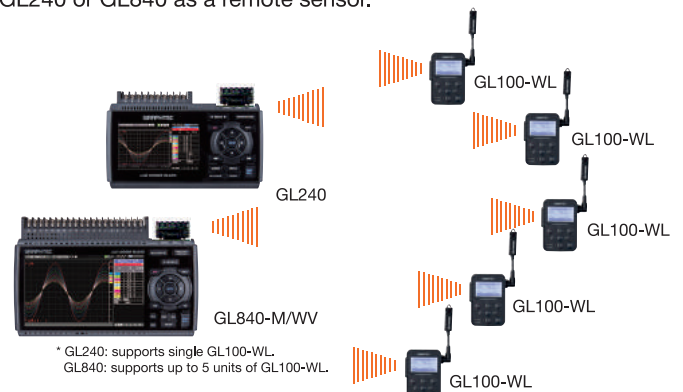


- Support the GS sensors in GL840
- Temperature, acceleration, and others are able to measure using the GL sensors.



Combining GL100-WL and GL240/GL840

GL100-WL can now be connected to the GL240 or GL840 as a remote sensor.



* GL240: supports single GL100-WL
GL840: supports up to 5 units of GL100-WL.

PetitLOGGER GL100series

- Supports a wide array measurement by exchanging the sensor
- Connecting to the PC or smart device via a WLAN
- Driving by a battery or USB bus power



GL100-WL (with wireless LAN)

GL100-N (without wireless LAN)

GS sensors

The sensor is connected to the GS sensor port of the GL840 and GL100.

 Temp./Humidity GS-TH Temp.: -20 to 85°C Humidity: 0 to 100% RH Dew-point temp., Accumulated temp.	 Acceleration/Temp. GS-3AT Try-axial: max. 10 G Temp.: -10 to 50°C	 Carbon dioxide (CO₂) GS-CO ₂ CO ₂ concentration: 0 to 9999 ppm	 Illuminance/UV GS-LXUV Illuminance: 0 to 200 klx UV intensity: 0 to 50 mW/cm ² Accumulated Illuminance and UV
 Dual port adapter GS-DPA Connects two sensors of GS-TH, GS-CO ₂ , GS-LXUV.	 Thermistor terminal GS-4TSR Temp.: -40 to 120°C * It varies by the sensor. Logic or Pulse	 Current sensor adapter GS-DPA-AC 50, 100, 200 A Max. Single-phase, three-phase power system	 Voltage/Temp. terminal GS-4VT Voltage: max. 50 V Temp.: TC, K or T Logic or Pulse
 Extension cable Extension cable for input module GS-EXC Cable length: 1.5 m	 Thermistor sensor Normal type GS-103AT-4P Ultrathin type GS-103JT-4P	 AC current sensor 50 A, 100 A, 200 A	

- Wireless LAN GL100-WL
- USB Interface
- microSD memory card
- Sensor, input terminal, adapter 7types
- PC
- Smart device GL100-WL

*4: WLAN is available in limited regions.



midI LOGGER HV GL2000 High-speed High-Voltage Isolated 4 channel Data Logger NEW

Specifications for GL2000: Simultaneous sampling (Isolated), CATIII, Max. 1MS/s (1µs), USB SDCard, Voltage (Temp., Humidity, Pulse/Logic), Built-in RAM 4MS/ch, Built-in Flash memory 4GB

- Multifunction analog inputs: Voltage (20 mV to 1000 V DC, 1-5 V DC), Temp. (TC: K, J, E, T, R, S, B, N, W), Humidity (0 to 100%), Pulse/Logic inputs (4 channels), Pulse (4 channels), Logic (4 channels)



- 4ch High Speed Simultaneous Sampling, CAT III 600V Compatible, Measure AC 600 V Measurement with True-rms, Built-in High-capacity RAM (4 M sampling/ch) and Flash memory (4 GB), Large Easy-to-read 7-inch LCD

midI LOGGER HV GL980 Isolated simultaneous 8 channel data logger NEW

Specifications for GL980: Simultaneous sampling (Isolated), Max. 1MS/s (1µs), Voltage (Temp., Humidity, Pulse/Logic), Built-in RAM 4MS/ch, Built-in Flash memory 4GB, USB SDCard

- Multifunction analog inputs: Voltage (20 mV to 500 V DC, 1-5 V DC), Temp. (TC: K, J, E, T, R, S, B, N, W), Humidity (0 to 100%), Pulse/Logic inputs (4 channels), Pulse (4 channels), Logic (4 channels)



- 8ch High speed simultaneous sampling, Includes 500 V measurement with 16-bit A/D converter, Equipped with true-rms measurement, Large built-in RAM (4 M sampling/ch) and built-in Flash memory (4 GB), Large easy-to-read 7-inch LCD

DATA PLATFORM GL7000 Modular Type Data Acquisition Unit Hi-speed 1MS/s Multi-channels max.112ch High voltage 1000 V Huge memory capacity 128GB SSD



Supports the GL-Connection software Allows to use with other units of GL series

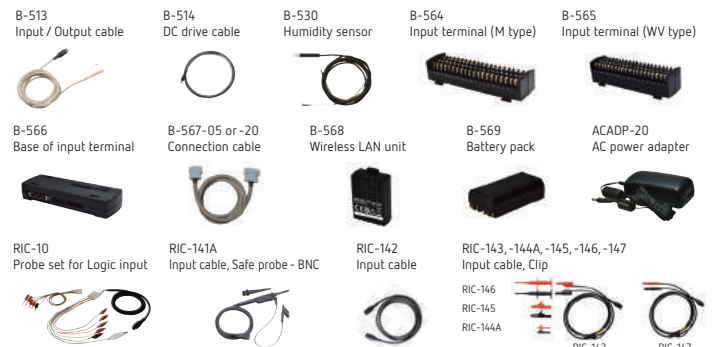
* Example, the option of 6 modules and the display are installed.

Grid of modules: Voltage Module (GL7-V), Voltage/Temperature Module (GL7-M), High speed Voltage Module (GL7-HSV), High Voltage Module (GL7-HV), DC Strain Module (GL7-DCB), Charge Module (GL7-CHA), Voltage Output Module (GL7-DCO), Logic/Pulse Module (GL7-L/P), SSD Module (GL7-SSD), Display Module (GL7-DISP)

* Optional input or output cable is required.

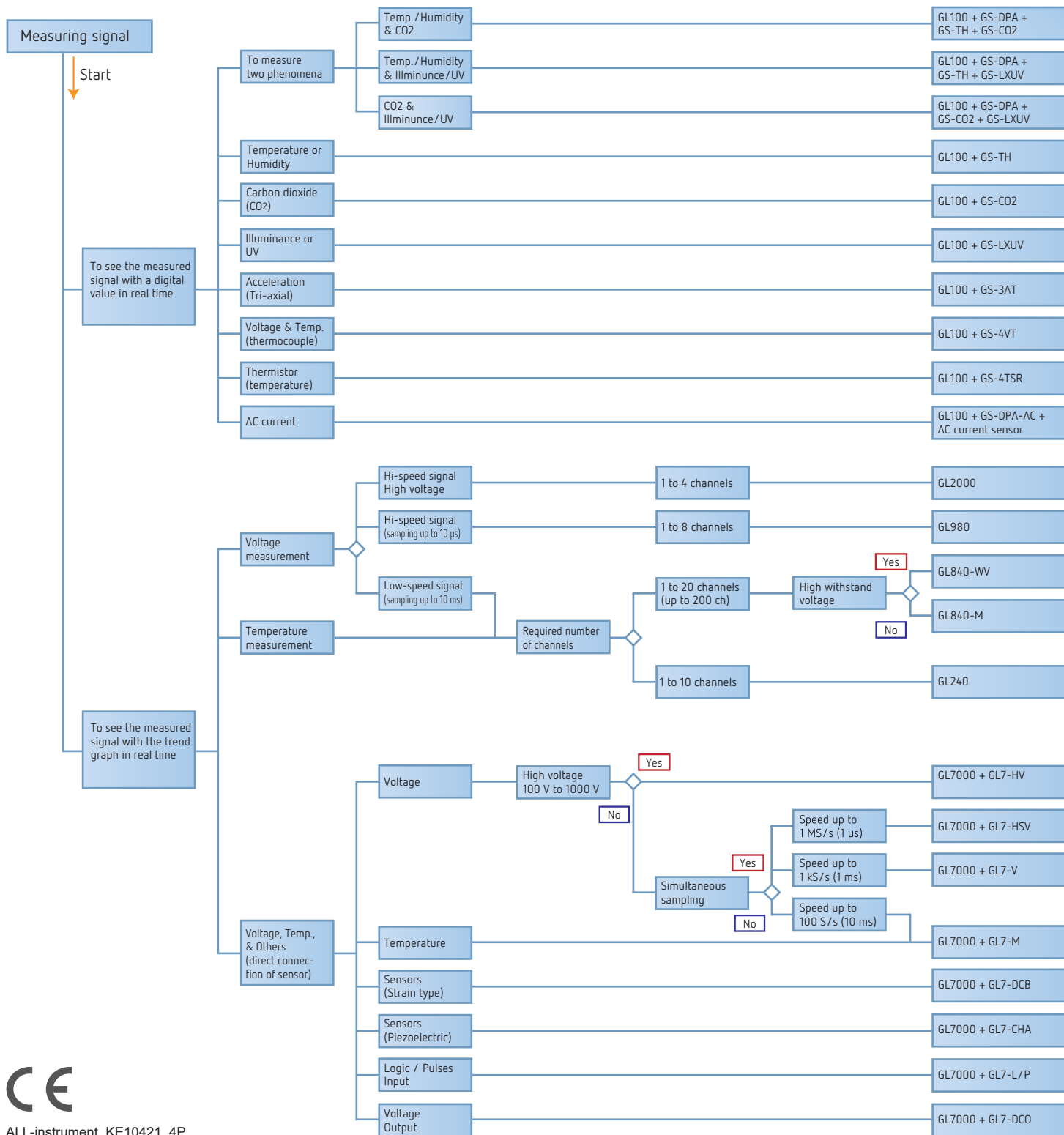
Options and Accessories

Table with 5 columns: Model, Item, GL240, GL840 series, GL2000/980, GL7000 series. Lists various cables, sensors, and accessories.



There is a wide variety of measurement as faster signal in the vehicle and equipment test, or slower signal like the temperature in the environment test. The device to capture the signal needs to be selected to fit the required application.

*Please refer to the inside page of this document for details on each product



ALL-instrument_KE10421_4P

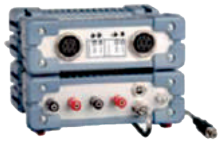
- Due to the possibility of equipment or PC failure, the data files on the Instrument will not be guaranteed to be held on the memory. Please make a backup of data whenever possible to avoid data loss.
- Brand names and product names listed in this brochure are the trademarks or registered trademarks of their respective owners.
- 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.

GLET SERIES ACCESSORY FOR DATA LOGGER SERIES GL2XX / GL8XX IN MODULAR ENCLOSURE

	<p>GLET-IU-BA2-BA4 Passive modular enclosure for conversion of (0)4 ... 20 mA to (0)1 ... 5 V</p> <ul style="list-style-type: none"> • Connection via jacks • Supply voltage: --- • Dimensions: 45 x 115 x 90 mm <p>Passive modular enclosure for the conversion of up to 4 measuring signals 0(4) ... 20 mA into a precise 0(1) ... 5 V signal, in connection with a datalogger</p>	<ul style="list-style-type: none"> • Input signal: IIN = 0 ... 20 mA or 4 ... 20 mA (UMAX = 30 V) • Output signal: UOUT= 0 ... 5 V or 1 ... 5 V • High-precision resistance 250 Ohm (0.1 %) • Electrical connection measuring signal: 4 mm jack • Electrical connection analog output to datalogger: 2 mm jack • Enclosure: desktop • Dimensions without connections (WxHxD): approx. 45 x 115 x 90 mm • Environmental sealing: IP20 • Operating temperature range: 0 ... +50 °C
 	<p>GLET-B513-KA-BA4 Passive modular enclosure for trigger inputs, logic inputs and alarm outputs as open collector.</p> <ul style="list-style-type: none"> • Connection via jacks • Supply voltage: --- • Dimensions: 45 x 115 x 90 mm <p>Passive modular enclosure for trigger inputs, logic inputs and alarm outputs of a datalogger.</p>	<ul style="list-style-type: none"> • Alarm outputs: open collector (see specification datalogger) • Integrated jack: 4 mm jack • Connection to datalogger: cable B-513 • Enclosure: desktop • Dimensions without connections (WxHxD): approx. 45 x 115 x 90 mm • Environmental sealing: IP20 • Operating temperature range: 0 ... +50 °C
 	<p>GLET-B513-KA-BA4-REL Active modular enclosure for 1 trigger, 2 logic inputs and 3 alarm outputs via relay contacts.</p> <ul style="list-style-type: none"> • Connection via jacks • Supply voltage: 24 VDC ±5 % • Dimensions: 45 x 115 x 90 mm <p>Active modular enclosure for 1 trigger, 2 logic inputs and 3 alarm outputs via relay contacts.</p>	<ul style="list-style-type: none"> • Alarm output via relay contacts (2x closing contact, 1x opening contact) • Rating: max. 30 V, 0.5 A • Integrated jack: 4 mm jack • Connection to datalogger: cable B-513 • Supply voltage: 24 VDC ±5 % * • Enclosure: desktop • Dimensions without connections (WxHxD): approx. 45 x 115 x 90 mm • Environmental sealing: IP20 • Operating temperature range: 0 ... +50 °C
 	<p>GLET-SU-BA2/B514-BI5 - (1 channel version) GLET-SU2K-BA2/B514-BI5 - (2 channel version) Active modular enclosure for active transducers / sensors with voltage output.</p> <ul style="list-style-type: none"> • Connection via connector and jack • Supply voltage: 24 VDC ±5 % • Dimensions: 45 x 115 x 90 mm <p>Active modular enclosure for wiring of one or two active transducers / sensors with voltage output in 3-wire technology in connection with a datalogger.</p>	<ul style="list-style-type: none"> • Transducer excitation: 18 VDC (max. 50 mA) • Input signal: 0 ... 5/10 V 3-wire • Connector for transducer: 5-pin connector (Binder, supplied with mating connector) • Analog output signal: 0 ... 5/10 V • Electrical connection analog output to datalogger: 2 mm jack • Supply voltage: 24 VDC ±5 % * • Enclosure: desktop • Dimension without connections (WxHxD): approx. 45 x 115 x 90 mm • Environmental sealing: IP20 • Operating temperature range: 0 ... +50 °C
 	<p>GLET-SI-BA2/B514-BI5 - (1 channel version) GLET-SI2K-BA2/B514-BI5 - (2 channel version) Active modular enclosure for active transducers / sensors with current signal</p> <ul style="list-style-type: none"> • Connection via connector and jack • Supply voltage: 24 VDC ±5 % • Dimensions: 45 x 115 x 90 mm <p>Active modular enclosure for wiring of on or two active transducers / sensors with current signal in 2- or 3-wire technology in connection with a datalogger.</p>	<ul style="list-style-type: none"> • Transducer excitation: 18 VDC (max. 30 mA) • Input signal: 0(4) ... 20 mA 2- or 3-wire • Connector for transducer: 5-pin connector (Binder, supplied with mating connector) • High-precision resistance 250 Ohm (0.1 %) • Analog output signal: 0(1) ... 5 V • Electrical connection analog output to datalogger: 2 mm jack • Supply voltage: 24 VDC ±5 % * • Enclosure: desktop • Dimension without connections (WxHxD): approx. 45 x 115 x 90 mm • Environmental sealing: IP20 • Operating temperature range: 0 ... +50 °C

GLET SERIES ACCESSORY FOR DATA LOGGER SERIES GL2XX / GL8XX IN MODULAR ENCLOSURE

**GLET-SG2K-BA2-BI7**

Active modular enclosure with 2 channel strain gauge amplifier

- Connection via BNC and jack
- Supply voltage: 24 VDC $\pm 5\%$
- Dimension: 45 x 115 x 90 mm

Active modular enclosure for the connection of passive strain gauge transducers / sensors (bridge resistance more than 350 Ohm) in connection with a datalogger.

- Number of measuring channels: 2 Potentiometers for zero and span adjustment
- Strain gauge excitation: 5 VDC (max. 15 mA/channel)
- Input sensitivity: 1 ϵ_i 3 mV/V
- Limit frequency: 1 kHz
- Connector for transducer: 7-pin connector (Binder, supplied with mating)
- Analog output signal: 0 ϵ_i 10 V, ± 10 V
- Analog output rating: max. 1 mA
- Electrical connection analog output to datalogger: 2 mm jack
- Supply voltage: 24 VDC $\pm 5\%$ *)
- Enclosure: desktop
- Dimension without connectors (WxHxD): approx. 45 x 115 x 90 mm
- Environmental sealing: IP20
- Operating temperature range: 0 ... +50 °C

**GLET-8B4K-BA2-BI5**

Active modular enclosure with base rack for up to 4 8B-module amplifiers

- Connection via connector and jack
- Supply voltage: 24 VDC $\pm 5\%$
- Dimension: 74 x 115 x 175 mm

Active modular enclosure with base rack for up to 4 8B-module amplifiers

- Connector for transducer: 5-pin connector (Binder, supplied with mating connector)
- Electrical connection analog output to datalogger: 2 mm jack
- Supply voltage: 24 VDC $\pm 5\%$ *)
- Enclosure: desktop
- Dimension without connections (WxHxD): approx. 74 x 115 x 175 mm
- Environmental sealing: IP20
- Operating temperature range: 0 ... +50°

GLET SERIES ACCESSORY FOR DATA LOGGER SERIES GL9XX / GL2000 IN MODULAR ENCLOSURE

**GLET-IU-BNC-BA4**

Passive modular enclosure for conversion of (0)4 ... 20 mA to (0)1 ... 5 V

- Connection via jacks and BNC
- Supply voltage: ---
- Dimensions: 45 x 115 x 90 mm

Passive modular enclosure for the conversion of up to 4 measuring signals 0(4) ... 20 mA into a precise 0(1) ... 5 V signal, in connection with a datalogger

- Input signal: IIN = 0 ... 20 mA or 4 ... 20 mA (UMAX = 30 V)
- Output signal: UOUT= 0 ... 5 V or 1 ... 5 V
- High-precision resistance 250 Ohm (0.1 %)
- Electrical connection measuring signal: 4 mm jack
- Electrical connection analog output to datalogger: BNC
- Enclosure: desktop
- Dimensions without connections (WxHxD): approx. 45 x 115 x 90 mm
- Environmental sealing: IP20
- Operating temperature range: 0 ... +50 °C

**GLET-B513-KA-BA4**

Passive modular enclosure for trigger inputs, logic inputs and alarm outputs as open collector.

- Connection via jacks
- Supply voltage: ---
- Dimensions: 45 x 115 x 90 mm

Passive modular enclosure for trigger inputs, logic inputs and alarm outputs of datalogger

- Alarm outputs: open collector (see specification datalogger)
- Integrated jack: 4 mm jack
- Connection to datalogger: cable B-513
- Enclosure: desktop
- Dimensions without connections (WxHxD): approx. 45 x 115 x 90 mm
- Environmental sealing: IP20
- Operating temperature range: 0 ... +50 °C

**GLET-B513-KA-BA4-REL**





Active modular enclosure for 1 trigger, 2 logic inputs and 3 alarm outputs via relay contacts.

- Connection via jacks
- Supply voltage: 24 VDC $\pm 5\%$
- Dimensions: 45 x 115 x 90 mm



Active modular enclosure for 1 trigger, 2 logic inputs and 3 alarm outputs via relay contacts.

- Alarm output via relay contacts (2x closing contact, 1x opening contact)
- Rating: max. 30 V, 0.5 A
- Integrated jack: 4 mm jack
- Connection to datalogger: cable B-513
- Supply voltage: 24 VDC $\pm 5\%$ *)
- Enclosure: desktop
- Dimensions without connections (WxHxD): approx. 45 x 115 x 90 mm
- Environmental sealing: IP20
- Operating temperature range: 0 ... +50 °C

GLET SERIES ACCESSORY FOR DATA LOGGER SERIES GL9XX / GL2000 IN MODULAR ENCLOSURE

	<p>GLET-SU-BA2/B514-BI5 (1 channel) GLET-SU2K-BA2/B514-BI5 (2 channels) Active modular enclosure for active transducers / sensors with voltage output.</p> <ul style="list-style-type: none"> • Connection via connector and jack • Supply voltage: 24 VDC $\pm 5\%$ • Dimensions: 45 x 115 x 90 mm <p>Active modular enclosure for wiring of one or two active transducers / sensors with voltage output in 3-wire technology in connection with a datalogger.</p>	<ul style="list-style-type: none"> • Transducer excitation: 18 VDC (max. 50 mA) • Input signal: 0 ... 5/10 V 3-wire • Connector for transducer: 5-pin connector (Binder, supplied with mating connector) • Analog output signal: 0 ... 5/10 V • Electrical connection analog output to datalogger: BNC • Supply voltage: 24 VDC $\pm 5\%$ *) • Enclosure: desktop • Dimension without connections (WxHxD): approx. 45 x 115 x 90 mm • Environmental sealing: IP20 • Operating temperature range: 0 ... +50 °C
	<p>GGLET-SI-BA2/B514-BI5 (1 channel) GGLET-SI2K-BA2/B514-BI5 (2 channels) Active modular enclosure for active transducers / sensors with current signal</p> <ul style="list-style-type: none"> • Connection via connector and BNC • Supply voltage: 24 VDC $\pm 5\%$ • Dimensions: 45 x 115 x 90 mm <p>Active modular enclosure for wiring of one or two active transducers / sensors with current signal in 2- or 3-wire technology in connection with a datalogger.</p>	<ul style="list-style-type: none"> • Transducer excitation: 18 VDC (max. 30 mA) • Input signal: 0(4) ... 20 mA 2- or 3-wire • Connector for transducer: 5-pin connector (Binder, supplied with mating connector) • High-precision resistance 250 Ohm (0.1 %) • Analog output signal: 0(1) ... 5 V • Electrical connection analog output to datalogger: BNC • Supply voltage: 24 VDC $\pm 5\%$ *) • Enclosure: desktop • Dimension without connections (WxHxD): approx. 45 x 115 x 90 mm • Environmental sealing: IP20 • Operating temperature range: 0 ... +50 °C
	<p>GLET-SG2K-BNC-BI7 Active modular enclosure with 2 channel strain gauge amplifier</p> <ul style="list-style-type: none"> • Connection via BNC and jack • Supply voltage: 24 VDC $\pm 5\%$ • Dimension: 45 x 115 x 90 mm <p>Active modular enclosure for the connection of passive strain gauge transducers / sensors (bridge resistance more than 350 Ohm) in connection with a datalogger.</p>	<ul style="list-style-type: none"> • Number of measuring channels: 2 Potentiometers for zero and span adjustment • Strain gauge excitation: 5 VDC (max. 15 mA/channel) • Input sensitivity: 1 ... 3 mV/V • Limit frequency: 1 kHz • Connector for transducer: 7-pin connector (Binder, supplied with mating) • Analog output signal: 0 ... 10 V, ± 10 V • Analog output rating: max. 1 mA • Electrical connection analog output to datalogger: 2 mm jack • Supply voltage: 24 VDC $\pm 5\%$ *) • Enclosure: desktop • Dimension without connectors (WxHxD): approx. 45 x 115 x 90 mm • Environmental sealing: IP20 • Operating temperature range: 0 ... +50 °C
	<p>GLET-8B4K-BNC-BI5 Active modular enclosure with base rack for up to 4 8B-module amplifiers</p> <ul style="list-style-type: none"> • Connection via connector and jack • Supply voltage: 24 VDC $\pm 5\%$ • Dimension: 74 x 115 x 175 mm <p>Active modular enclosure with base rack for up to 4 8B-module amplifiers</p>	<ul style="list-style-type: none"> • Connector for transducer: 5-pin connector (Binder, supplied with mating connector) • Electrical connection analog output to datalogger: 2 mm jack • Supply voltage: 24 VDC $\pm 5\%$ *) • Enclosure: desktop • Dimension without connections (WxHxD): approx. 74 x 115 x 175 mm • Environmental sealing: IP20 • Operating temperature range: 0 ... +50°

RECOMMENDED ACCESSORY

	<p>KA-BNC-iso-sw-0.5m BNC safety connection cable with 2 straight BNC connectors</p> <ul style="list-style-type: none"> • Material: PVC • Rating: 1000 V, CAT II (600 V CAT III) • Cable length: 0.5 m • Colour: black
	<p>ADAPKLS4 Set of 2 clamping connectors for direct connection of dismantled leads.</p> <ul style="list-style-type: none"> • Connector type: 4 mm connector • Wire cross section: 0.12 ... 2.5 mm² • Colour: red and black • Configured for voltages up to max. 30 V

The Ocean Cleanup required Althen to set up a force monitoring system capable of measuring the forces occurring between the tug and the floating tube structure.



HIGH-SPEED DATA LOGGER FOR VOLTAGE AND TEMPERATURE MEASUREMENTS



DATA LOGGER GL 980

JUNCTION BOX FOR CONNECTION OF UP TO 10 TEMPERATURE/HUMIDITY PROBES

GLET CONNECTION BOX



RECOMMENDED ACCESSORY

**8-B Measuring Amplifier Modules**

Please see detailed specification for the 8B-module amplifiers in their respective datasheets.

General specification:

- 1500 Vrms isolation
- 240 Vrms input protection
- -40 ... +85 °C operating temperature range

DI-8B-32 / DI-8B-42 Current input modules

- input 4 ... 20 mA
- sensor excitation 15 VDC (DI-8B-42 only)
- output +1 ... +5 V or +2 ... +10 V
- common mode rejection 100 dB
- accuracy ± 0.05 %
- linearity ± 0.02 %
- bandwidth 100 Hz
- supply voltage +5 V

DI-8B-36 Potentiometer input module

- interface to 100 Ohm platinum resistance thermometer, 4-wire
- output 0 ... 5 V
- common mode rejection 120 dB
- accuracy ± 0.20 °C
- bandwidth 4 Hz
- input resistance 50 MOhm
- supply voltage +5 V

Preview – further GLET Accessories

- GLET-B514-KA-bat: Additional battery block for a longer power-supply-independent operation (GL2/8/900)
- GLET-TCmini-TMEBx-KA: Interface box with mini connector for thermo-couples (GL2/8/900)
- GLET-SU... : Version with bi-directional supply ± 15 VDC

Customised versions available on request.

*) For voltage supply the datalogger's AC-adaptor can be used. The unit provides a jack for AC-adaptor connection, as well as a datalogger supply cable (comparable to B-514). For use with multiple GLET units an additional AC-adaptor is required.

Due to continual product development, ALTHEN and partners reserve the right to vary the fore-going details without prior notice.

8B-34 Linearized 2- or 3-wire RTD modules

- PT100 sensor input 2-,3-wire
- output 0 ... 5 V
- common mode rejection 120 dB
- accuracy ± 0.05 %
- linearity ± 0.02 %
- bandwidth 3 Hz
- input resistance <30 Ohm
- supply voltage +5 V

8B-35 Linearized 4-wire RTD modules

- interface to 100 Ohm platinum resistance thermometer, 4-wire
- output 0 ... 5 V
- common mode rejection 120 dB
- accuracy ± 0.20 °C
- bandwidth 4 Hz
- input resistance 50 MOhm
- supply voltage +5 V

DI-8B-38 Strain gauge input module

- interface to full or half bridges
- bridge excitation 3.33 V or 10.00 V
- bridge resistance 100 ... 20000 Ohm or 300 ... 20000 Ohm
- output ± 5 V
- isolation 1500 Vrms
- input protection 240 Vrms
- common mode rejection 100 dB
- accuracy ± 0.05 %
- linearity 0.02 %
- bandwidth 3 kHz
- input resistance 50 MOhm
- supply voltage +5 V

DI-8B-45 Frequency input module

- input 0 ... 500 Hz to 0 ... 100 kHz
- output 0 ... 5 V
- common mode rejection 100 dB
- accuracy ± 0.10 %
- linearity ± 0.05 %
- supply voltage +5 V

GLET CONNECTION BOX

**GLET-AB-10K-BA2-BA4**

10-Channel connection box for wiring up to 10 differential measurement signals via 4mm connector

Signal input: via integrated 4 mm jacks

Signal output: 2mm sockets

Housing: Aluminium table housing (IP20)

The connection box is designed for measurement signals up to max. 60VDC bzw. 25VAC.




**GLET-10xB530AH(T)-Bi12-Bi5**

Connection box with connecting cables and power supply unit for connection of up to 10 pcs. temperature / humidity probes type B530A-H (T) for GRAPHTEC data logger



- Supply voltage: 24 VDC
- Sensor supply: 18 VDC

The connection box GLET-10xB530AH (T) -Bi12-Bi5 enables the connection of up to 10 temperature / humidity sensors of type B530A-H (T) for a GRAPHTEC data logger. The connecting cables to the data logger included in the scope of supply considerably simplify the wiring effort and simultaneously improve electromagnetic compatibility. The connected sensors are supplied with an internally regulated voltage via the enclosed power supply unit. The system is installed in an aluminum table top housing (IP20).

GLET CONNECTION BOX

	<p>GLET-IU10K-Bi12-Bi5 Passive Connection Box with connecting cables for the connection of up to 10 standard measuring signals (0 ... 20mA or 4 ... 20mA) for GRAPHTEC data logger</p> <ul style="list-style-type: none"> • Input signal: 0 ... 20 mA / 4 ... 20 mA • Analogue output: 0 ... 5 V / 1 ... 5 V 	<p>The passive connection box GLET-IU10K-Bi12-Bi5 enables the connection of up to 10 standard measuring signals (0 ... 20mA or 4 ... 20mA) for a GRAPHTEC data logger. The connection cables to the data logger included in the scope of supply considerably simplify the wiring effort and simultaneously improve electromagnetic compatibility. The system is installed in an aluminum table top housing (IP20).</p>
	<p>GLET-SI10K-3L-Bi12-Bi5 Connection Box with connecting cable and power supply unit for wiring up to 10 active sensors with current output 4 ... 20mA in 3-wire technology for GRAPHTEC data logger</p> <ul style="list-style-type: none"> • Supply voltage: 24 VDC • Sensor supply: 18 VDC • Input signal: 4 ... 20 mA • Internal shunt resistor: 250 Ohm • Analogue output: 1 ... 5 V 	<p>The connection box GLET-SI10K-3L-Bi12-Bi5 enables the connection of up to 10 active sensors with current output 4 ... 20mA in 3-wire technology for a GRAPHTEC data logger. The connecting cables to the data logger included in the scope of supply considerably simplify the wiring effort and simultaneously improve electromagnetic compatibility. The connected sensors are supplied with an internally regulated reference voltage via the enclosed power supply unit. The system is installed in an aluminum table top housing (IP20).</p>
	<p>GLET-SU10K-3L-Bi12-Bi5 Connection Box with connecting cable and power supply unit for wiring up to 10 active sensors with voltage output in 3-wire technology for GRAPHTEC data logger</p> <ul style="list-style-type: none"> • Supply voltage: 24 VDC • Sensor supply: 18 VDC • Input signal: 0 ... 5 V / 0 ... 10 V • Analogue output: 0 ... 5 V / 0 ... 10 V 	<p>The Connection Box GLET-SU10K-3L-Bi12-Bi5 enables the connection of up to 10 active sensors with voltage output in 3-wire technology for a GRAPHTEC data logger. The connecting cables to the data logger included in the scope of supply considerably simplify the wiring effort and simultaneously improve electromagnetic compatibility. The connected sensors are supplied with an internally regulated reference voltage via the enclosed power supply unit. The system is installed in an aluminum table top housing (IP20).</p>
	<p>GLET-SU10K-4L-Bi12-Bi5 Connection Box with connecting cable and power supply unit for wiring up to 10 active sensors with voltage output in 4-wire technology for GRAPHTEC data logger</p> <ul style="list-style-type: none"> • Supply voltage: 24 VDC • Sensor supply: 18 VDC • Input signal: 0 ... 5 V / 0 ... 10 V • Analogue output: 0 ... 5 V / 0 ... 10 V 	<p>The Connection Box GLET-SU10K-4L-Bi12-Bi5 enables the connection of up to 10 active sensors with voltage output in 4-wire technology for a GRAPHTEC data logger. The connecting cables to the data logger included in the scope of supply considerably simplify the wiring effort and simultaneously improve electromagnetic compatibility. The connected sensors are supplied with an internally regulated reference voltage via the enclosed power supply unit. The system is installed in an aluminum table top housing (IP20).</p>

PT100 RESISTANCE TEMPERATURE SENSORS Accessories for Data Loggers



	<p>PT100-514140-1E Resistance Temperature Sensor These robust temperature sensors have a rigid protection tube welded at the tip and made of heat-resistant stainless steel. The silicone-insulated connecting cable is firmly crimped to the thermowell.</p>	<ul style="list-style-type: none"> • Pt100 measuring resistor according to DIN EN 60751:1996 Tolerance class B • Temperature range: -50 ... +200 °C • Protection tube: stainless steel, material no. 1.4435, Ø 6 mm x 30 mm • 3-wire technology • Connection cable: 2 m long, stranded wire, conductor cross-section 0.22 mm², PTFE-insulated cores with silicone-insulated outer sheath. Colour coding of the cores: red, red, white
	<p>PT100-515680-1E - Resistance temperature sensor, self-adhesive Self-adhesive Pt100 resistance temperature sensor with short response times for measuring straight and curved surfaces.</p>	<ul style="list-style-type: none"> • Pt100 flat film resistor according to DIN EN 60751:1996 Class B • Temperature range: -50 ... +150 °C • Dimensions of the silicone bag: 40 x 14 mm x 7 mm max. thickness • 4-wire circuit, can also be operated in 3-wire circuit • Filler pocket made of silicone rubber with self-adhesive underside • 2 m connecting cable with PTFE-insulating sheath and stainless steel braiding


















Product Image	Product Specification	
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THERMOCOUPLE Accessories for Data Loggers

	<p>TCK-401301-5E – Thermocouple</p> <p>Simple thermocouple type K for fast response times; free conductor ends; length 2 m. Ideal for low temperature applications.</p>	<ul style="list-style-type: none"> • Thermocouple Type K • Temperature range: -75 ... +250 °C • Stranded thermocouple wires, 0.2 mm diameter with PTFE insulating sheath • Cable length: 2 m
	<p>TCK-401140-5E – Thermocouple Typ K with adhesive pad</p> <p>Ideally suited for application to flat or curved surfaces using a self-adhesive plaster. Thermocouple made of thermocouple wires bonded with a self-adhesive glass fibre plaster with PTFE impregnation.</p>	<ul style="list-style-type: none"> • Thermocouple Type K • Temperature range: -50 ... +250 °C • Pavement size: 25 mm x 20 mm • Stranded thermal wires (wire diameter: Ø 0.2 mm) • PTFE insulating sleeve • Cable length: 2 m
	<p>TCT-401304-5E - Thermocouple Type T</p> <p>Simple thermocouple type T for fast response times; free conductor ends; length 2 m. Ideal for low temperature applications.</p>	<ul style="list-style-type: none"> • Thermocouple Type T • Temperature range: -75 ... +250 °C • Stranded thermocouple wires, 0.2 mm diameter with PTFE insulating sheath • Cable length: 2 m
	<p>TCJ-401307-5E - Thermocouple Type J</p> <p>Simple thermocouple type J for fast response times; free conductor ends; length 25 m. Ideal for low temperature applications.</p>	<ul style="list-style-type: none"> • Thermocouple Type J • Temperature range: -75 ... +250 °C • Stranded thermocouple wires, 0.2 mm diameter with PTFE insulating sheath • Cable length: 2 m
	<p>TCJ-401310-5E - Thermocouple Type N</p> <p>Simple thermocouple type J for fast response times; free conductor ends; length 2 m. Ideal for low temperature applications.</p>	<ul style="list-style-type: none"> • Thermocouple Type N • Temperature range: -75 ... +250 °C • Stranded thermocouple wires, 0.2 mm diameter with PTFE insulating sheath • Cable length: 2 m
	<p>RIC-410 - Rod Thermocouple Type K</p>	<ul style="list-style-type: none"> • Thermocouple Type K • Temperature range: -100 ... +300 °C • Accuracy: Class 1 (±1.5 °C) • Cable length 1.1 m • For liquids as well as viscous and semi-solid materialstions.
	<p>RIC-420 - Thermocouple Type K</p>	<ul style="list-style-type: none"> • Thermocouple Type K • Temperature range: -30 ... +400 °C • Accuracy: Class 2 (±2.5 °C) • Cable length 1.1 m • For solid surfaces
	<p>RIC-430 - L-Shaped Thermocouple Type K</p>	<ul style="list-style-type: none"> • Thermocouple Type K • Temperature range: -30 ... +600 °C • Accuracy: Class 2 (±2.5 °C) • Cable length 1.1 m • For solid surfaces

AIR HUMIDITY SENSORS Accessories for Data Loggers

	<p>B-530 – AIR HUMIDITY SENSORS</p>	<ul style="list-style-type: none"> • Humidity: 0 ... 100 % r.h. • Cable length 3 m • Power supply to data logger
	<p>B-530A - Digital miniature sensor for humidity and temperature</p> <p>The B-530A miniature humidity and temperature sensor offers excellent performance in terms of accuracy and linearity thanks to microprocessor technology with multi-point calibration. The miniature sensor in 12 mm format has two linear analog outputs for temperature and relative humidity, dew point or absolute humidity.</p>	<ul style="list-style-type: none"> • Measuring range humidity 0 ... 100 % r.h., ±2 % • Measuring range temperature -20 ... +80 °C, ±0.2 °C • Output signal 0 ... 1 V • Supply voltage 4.5 ... 35 VDC • Required external power Supply

Product Image	Product Specification	
CABLES, PLUGS AND OTHER Accessories for Data Loggers		
	GL220-HB-DIN GL240-HB-DIN	Accessory for wall mount or DIN-rail mounting of data logger GL220/GL240 (DIN rail is not included)
	GL820-HB-DIN GL840-HB-DIN GL980/2000-HB-DIN	Accessory for wall mount or DIN-rail mounting of data logger GL820/GL840/GL980/GL2000 (DIN rail is not included)
	TK-midi-4 High-Impact ABS Plastic Carrying Case	Shatterproof, waterproof (up to 5m depth) and dustproof case with accurately fitting partition; for use with series GL7000; space for additional accessories; document pouch in top cover; carrying strap.
	TK-midi-6 Water- and Dust-Proof Carrying Case	Black plastic; IP67; accurately fitting partition suited to protect series GL240, GL840, GL980, GL2000 for dust, water and impact; enough space for additional accessories; document pouch in top cover.
	ADAPXM-BB4	Contact protected adapter BNC to 4 mm banana jack, recommended accessory for data logger GL900
	ADAPAK2B-SB4	Set of two clamps (red /black), with protection against contact, 4 mm banana jack, for wires up to 9.5 mm, recommended accessory for cable KA-BNC-BA4, price per set
	B-513	Logic / alarm cable (2 m)
	B-514	DC power cable (2 m)
	B-577 / B-578 / B-579	Rubber protector cover for model GL240 / GL840 / GL980 / GL2000
	KA-BA2-FE	Connecting cable from GLET-box with 2 mm banana jack to data logger GL220/820, length: approx. 300 mm, set of 2 cables, price per set
	KA-BNC-BA4	Connecting cable with 1 BNC connector (isolated) and 2 banana plugs 4 mm (not isolated) for safety extra-low voltage, length 1.6 m, 1000V, CAT II (600 V, CAT III)
	KA-BNC-iso-sw-... Cable length 2m / Cable length 0.5m	BNC safety connection cable with 2 BNC connectors, material: PVC, rating: 1000 V, CAT II (600 V CAT III), color black
	KA-USB-1.5m	USB cable type A/B (1.5 m)
	RIC-10A	Probe Set: logic IC cable; alligator clip cable, IC clip cable for module GL7-L/P
	RIC-112	BNC-BNC cable (1.5 m), replaced by model KA-BNC-iso-sw
	RIC-113	BNC banana plug cable (1.5 m), replaced by model KA-BNC-BA4
	RIC-114	BNC alligator clip cable (1.5 m), replaced by model KA-BNC-BA4 with ADAPAK2B-SB4
	RIC-141A	Safe probe acc. to IEC/EN61010 (BNC safety type) 1:1, 42 pF, 1.2 m
	B-562	SMA-BNC connection cable for module GL7-DCO







THE RIGHT SOLUTION FOR YOUR REQUIREMENTS

Due to our decades of experience, we at Althen can supply our customers with developments ranging from standard and customer-specific sensors to complete measuring systems.

All physical parameters are represented in our product range, using different technologies so that you always get the best solution for your measurement requirements. Thanks to our many years of experience, our technical know-how, our strong team of engineers with different professional backgrounds and our broad product range, we can offer the most efficient solutions for almost all applications in all branches of industry.

Our team will be happy to advise you. You can reach us by phone at **+49 6195 70060** or by e-mail to **sales@althen.de**

OUR PRODUCT SCOPE

bar	Pressure	mm	Displacement	g	Acceleration		Amplifier
N	Force	α	Rotation	m/s²	Vibration		Data Logger
Nm	Torque		Joystick	°/s	Angular Rate		Automation
ε	Strain		Inclination	°C	Temperature		Measurement Solutions



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