



readout logger unit



TECHNICAL INSTRUCTION

Manual Readout unit
for geotechnical
instrumentation



MG01_instr_ENG.0.0.6/22





MultiGeo (MG01) is a multifunction readout unit for manual readings. The device allows to read the main types of instruments, presented on the market. MultiGeo is designed especially for the acquisition of the following types of transducers:

- **4/20mA:** the main part of geotechnical instrumentation is available in the version which answers this standard;
- **Volt:** clinometers, strain gauges, crack meters, etc.;
- **mV/V:** load cells, Wheatstone bridges, etc.;
- **Temp.:** temperature sensors, Pt100, NTC from 3 KOhm;
- **Hertz/Digit:** vibrating wire instrumentation such as: piezometers, strain gauges, etc..

1. KEYBOARD FEATURES



1. Switching ON and OFF Backlight.



2. Battery Test



3. Enter - Reading



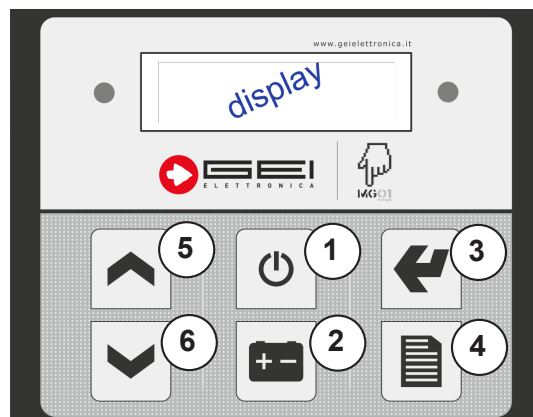
4. Menu



5. UP arrow

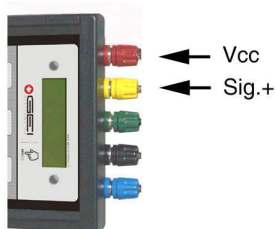


6. DOWN arrow

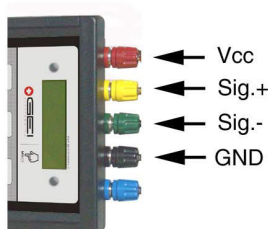


2. CABLE

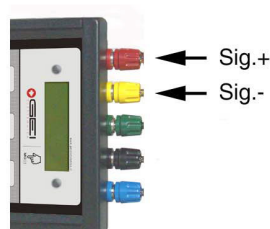
4/20mA 2C



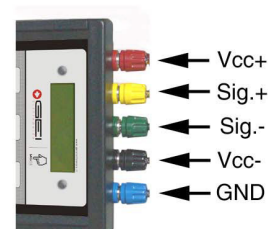
V, mV, mV/V 4C



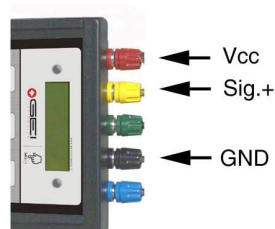
VW (Hz)



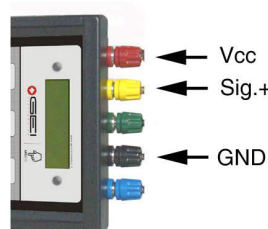
Vcc +/-12V Out Dual



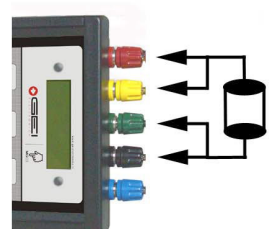
4/20mA 3C



V, mV, mV/V 3C



Pt100, NTC



3. ACQUISITION MODE: Press the **ON/OFF Key** to switch on the device. Press and hold the key for some seconds to switch it off. The readout unit turns off automatically, if the buttons are not pressed for about 5 minutes. The main screen, visible when the device is turned on, displays the last type of reading used by the operator on the upper line, for example:





4/20mA

Press the **ENTER Key** to make readings according to the type indicated on the top line. While keeping the key pressed, the device displays the values acquired in real time. While releasing the key, the last reading, which was done, remains shown on the display, for example:

4/20mA
+12.87mA

Press the **MENU Key** to change the unit's electric reading specifications. On the first pressing appears the following screen:

> Electrical
Vibrating wire

Select with the help of the arrow keys **UP**  and **DOWN**  if you want to make measurements with the vibrating wire or with other types of instruments. Press the **ENTER Key**  to confirm the choice. If you choose the ELECTRICAL option, select using the arrows the desired instrument type and press **ENTER** . In the next menu, scrolling with the arrows, you can select 4 different types of reading.

> 4/20mA
Temp. Volt
mV/V

If required, use the same procedure to set the additional parameters, such as Supply Voltage and Type of Signal.
Selecting +20Volts displays the following screen:

> +20Volts
+12/-12Volts

After selecting, with the arrows, the necessary statement keep pressed to read. Selecting TEMP displays the following entries:

> Single ended
Differential

> NTC
Pt100

By selecting VIBRATING WIRE, the control unit immediately reads the vibrating wire.

Electrical
> Vibrating wire

Vibrating wire
[] H [] B

The Vibrating wire is read in Frequency (H symbol Hz) or in Digit (B).

OVERFLOW COUNTER is a problem in reading the vibrating wire. It may indicate a failure of data transmission or malfunction of the vibrating rope.

Vibrating wire
Overflow counter

4. HELP: Before making the readings, press and hold the **MENU key**  to access the guide that gives an overview of the wiring mode, depending on the selected type of the instrument.

Scroll through the pages with the **UP/DOWN Keys**  . Press the **ENTER Key**  to return to the main screen.

5. BACKLIGHT: Press the **ON/OFF Key**  to turn on/off the backlight of the display.

Warning: it is recommended to use the backlight only when necessary in order not to preclude the duration of the battery charge.

6. BATTERY TEST : Press and hold the **BATTERY Key**  to display the device's charge status. The screen graphically displays the battery charge level and its voltage value.

Battery: 11,26V
- [] [] [] [] [] [] [] [] [] [] +

7. TECHNICAL FEATURES:

- Type of measurement:	4-20 mA, V, mV/V, Ohm, Hz/Digit;
- Measuring ranges in the various types:	mA 4 ÷ 20 mA V 0 ÷ 100 mV single ended 0 ÷ 5 V differential 0 ÷ 5 V mV / V 0 ÷ 20 mV / V single ended differential PT100 - 50 to +200°C NTC VW Hz 500 to 4600 Hz 12 Vdc battery; 16 Bit; from -20 to +70 °C; +15 ppm/°C max; +20 V, +/-12 V, +5 V(mV/V); 16 x 2 backlight characters;
- Supply:	
- Measurement resolution:	
- Operating temperature:	
- Temperature stability:	
- Sensors supply voltage:	
- Display LCD:	
- Battery voltage autotest;	
- Protection:	IP65;
- Dimensions:	130 x 100 x 34,2 mm;
- Weight:	600 gr..

Dichiarazione di Conformita'



Declaration of Conformity

La società Gei S.r.l. (a S.U.), nella figura del Responsabile dell'Ufficio Tecnico, dopo aver verificato la corrispondenza alle disposizioni delle seguenti Direttive Comunitarie,

Gei S.r.l. (a S.U.), as the Technical Officer, after having checked the correspondence to the provisions of the following Community Directives,

2014/30/UE (Compatibilità Elettromagnetica - Electromagnetic Compatibility)

2011/65/CE (RoHS)

e delle norme armonizzate vigenti, con relative revisioni
and of the current harmonized standards, with relative revisions

EN 61000-6-2, EN 61000-6-3

Dichiara - States

che il prodotto modello Multigeo (MG01) risulta conforme alle specifiche imposte dalle norme in materia di Direttiva Compatibilità Elettromagnetica, Direttiva Bassa Tensione e Direttiva RoHS.

that the Multigeo (MG01) model product complies with the specifications imposed by the regulations regarding the Electromagnetic Compatibility Directive, the Low Voltage Directive and the RoHS Directive.

Parma, 15/10/2021

Il Responsabile Ufficio Tecnico
The Technical Officer

Ing. Corrado Carini

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