

Leica CS20 & GS07 Sensor



Quick Guide
Version 2.3
English

- when it has to be **right**

Leica
Geosystems



1

Important Information about your Instrument

Read and follow the User Manual on the accompanying data storage device before using the product.



Keep for future reference!

Intended use

- Remote control of product
- Data communication with external appliances
- Recording measurements
- Computing with software
- Carrying out measurement tasks using various GNSS measuring techniques
- Recording GNSS and point related data
- Measuring raw data and computing coordinates using carrier phase and code signal from GNSS satellites (GNSS systems)

Laser products

The CS20 instrument contains the following laser products:

Laser product	Laser class
DISTO module	Class 2

The classification is in accordance with IEC 60825-1 (2014-05).

CAUTION

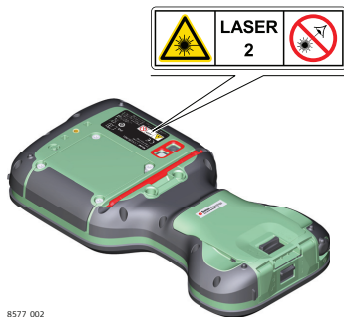
Class 2 laser product

From a safety perspective, class 2 laser products are not inherently safe for the eyes.

Precautions:

- ▶ Avoid staring into the beam or viewing it through optical instruments.
- ▶ Avoid pointing the beam at other people or at animals.

Labelling and
location of laser
aperture



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a Laser beam

Laser Radiation
Do not stare into the beam.
Class 2 Laser Product according to
IEC 60825-1 (2014 - 05)

$P_o \leq 0.95 \text{ mW}$
 $\lambda = 620 \text{ nm} - 690 \text{ nm}$



The following advice is only valid for power adapter or docking station.

 WARNING**Electric shock due to use under wet and severe conditions**

If unit becomes wet, it may cause you to receive an electric shock.

Precautions:

- ▶ If the product becomes humid, it must not be used!
- ▶ Use the product only in dry environments, for example in buildings or vehicles.



- ▶ Protect the product against humidity.



The product must not be disposed with household waste.

1.1 Conformity to National Regulations

1.1.1 Products without Radio

EU



Hereby, Leica Geosystems AG declares that the product/s is/are in compliance with the essential requirements and other relevant provisions of the applicable European Directives.
The full text of the EU declaration of conformity is available at the following Internet address:
<http://www.leica-geosystems.com/ce>.

USA

FCC Part 15

1.1.2 Products with Radio Transmitter/Receiver

1.1.2.1 CS20

EU



Hereby, Leica Geosystems AG declares that the radio equipment type CS20 is in compliance with Directive 2014/53/EU and other applicable European Directives.
The full text of the EU declaration of conformity is available at the following Internet address: <http://www.leica-geosystems.com/ce>.

USA

FCC ID: RFD-CSNGG
RFD-CSNGP

FCC Part 15, 15 B, 22 and 24

Changes or modifications not expressly approved by Leica Geosystems for compliance could void the user's authority to operate the equipment.

Canada

CAN ICES-003 B/NMB-003 B
IC: 3177A-CSNGG

Others

The conformity for countries with other national regulations has to be approved prior to use and operation.

1.1.1.2.2**GS07****EU**

Hereby, Leica Geosystems AG declares that the radio equipment type GS07 is in compliance with Directive 2014/53/EU and other applicable European Directives.
The full text of the EU declaration of conformity is available at the following Internet address: <http://www.leica-geosystems.com/ce>.

USA

FCC ID: RFD-SAGG04P
FCC Part 15, 15 B

Changes or modifications not expressly approved by Leica Geosystems for compliance could void the user's authority to operate the equipment.

Canada

CAN ICES-003 B/NMB-003 B
IC: 3177A-SAGG04P

Others

The conformity for countries with other national regulations has to be approved prior to use and operation.

1.1.2.3

CGR4

EU



Hereby, Leica Geosystems AG declares that the radio equipment type CGR4 is in compliance with Directive 2014/53/EU and other applicable European Directives.
The full text of the EU declaration of conformity is available at the following Internet address: <http://www.leica-geosystems.com/ce>.

Changes or modifications not expressly approved by Leica Geosystems for compliance could void the user's authority to operate the equipment.

Canada

CAN ICES-003 B/NMB-003 B
IC: 2422A - SATELTA23

Others

The conformity for countries with other national regulations has to be approved prior to use and operation.

2

Instrument Components

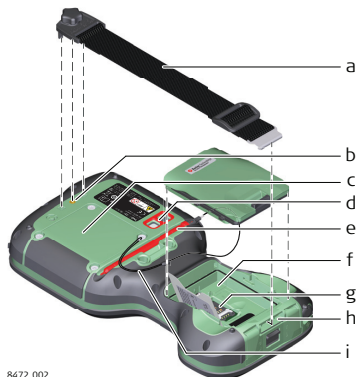
Upside of CS20



008471_001

- a DISTO with camera
- b Screen
- c Keyboard
- d Connector cover
- e Power socket
- f SD card slot
- g USB A host port
- h LEMO port (USB and serial)

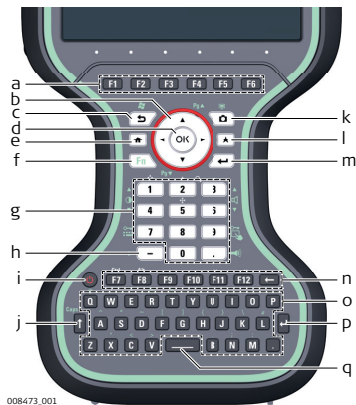
Underside of CS20



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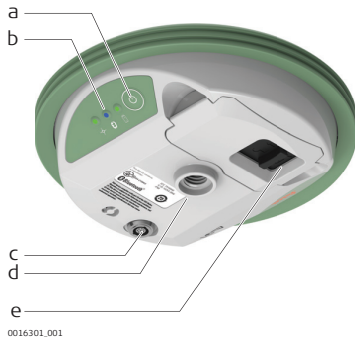
- a Hand strap
- b Thread for screwing on hand strap or utility hook
- c Expansion cover
- d Digital camera with flash
- e Stylus
- f Battery compartment
- g SIM card slot under the battery
- h Socket for fastening clip of the hand strap
- i Tether for the stylus

Keyboard display



- a Function keys **F1 - F6**
- b Arrow keys
- c ESC
- d OK
- e Home
- f **Fn**
- g Numeric keys
- h ± key
- i ON/OFF
- j CAPS Lock
- k Cameras
- l Favourites
- m ENTER
- n Function keys **F7 - F12**;
- o Backspace
- p Alpha keys
- q ENTER
- q SPACE

GS07 components



- a ON/OFF button
- b LEDs
- c LEMO port including USB port
- d Antenna Reference Plane (ARP)
- e Battery compartment

3

Technical Data

Environmental
specifications

Temperature

Type	Operating temperature [°C]	Storage temperature [°C]
CS20	-30 to +60*	-40 to +80
GEB334	-30 to +60	-40 to +70
GS07	-40 to +65	-40 to +80

* The operating temperature of the DISTO module is -10° C to +50° C. Outside of these limits, the module will be switched off automatically and a warning message will be displayed.

Protection against water, dust and sand

Protection	
Instrument	GS07: IP66 & IP68 (IEC 60529) CS20: IP68 (IEC 60529)
	 CS20 is in compliance with IP68 only when expansion cover, connector cover and battery cover are closed.
	Dust tight

Protection	
	Protected against continuous immersion in water Tested for 2 hours in 1.40 m depth
GEB334	IP54 (IEC 60529) Dust protected Protection against splashing water from any direction

Pollution degree

Type	Pollution
All instruments	4 Electrical equipment for outdoor use
All chargers	2 Electrical equipment for office environment

Humidity

Protection	
Instrument	Max 95 % non-condensing The effects of condensation are to be effectively counteracted by periodically drying out the instrument.

Protection

GEB334	For indoor use only
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Altitude**Type****Protection**

All instruments	Unrestricted
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All chargers	≤ 2000 m above sea level
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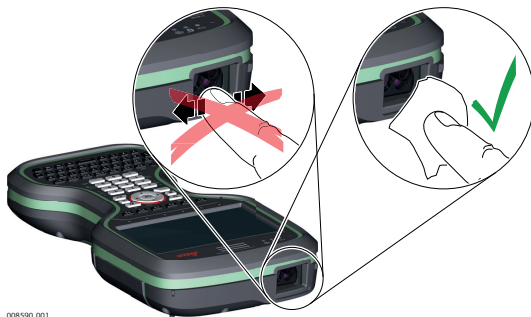
4

Care and Transport

Care and transport

- Carry the product in its original container or carry the tripod with the attached product upright, to protect it against shock and vibration.
- Periodically carry out test measurements and perform the field adjustments indicated in the User Manual, particularly after the product has been dropped, stored for long periods or transported.

DISTO window



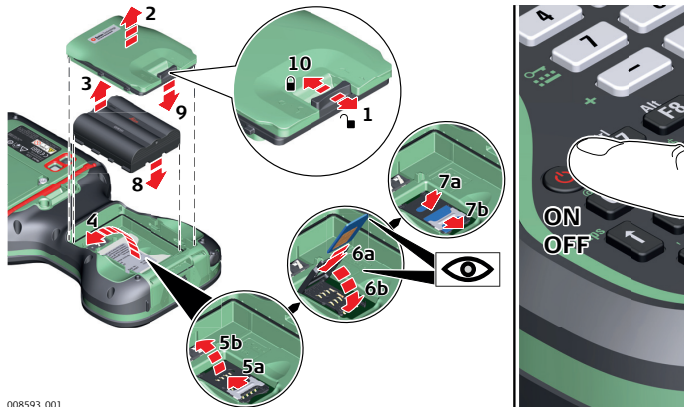
5

Operation



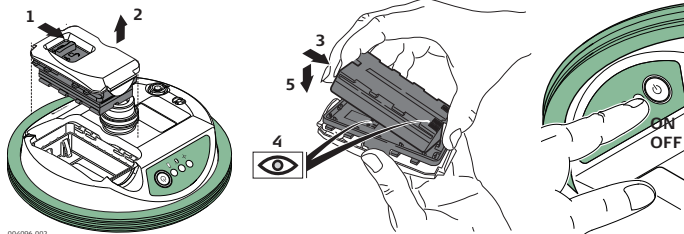
The battery must be charged before using it for the first time.

Turning the
instrument ON and
OFF



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Turning on and off the GS07



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