

Leica CS20 & GS07 Sensor



Quick Guide
Version 2.2
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

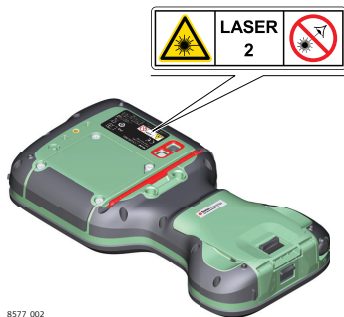
Class 2 laser product

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.



**Conformity to
national
regulations**

The product must not be disposed with household waste.

For products without radio transmitter or receiver:

- FCC Part 15 (applicable in US)



- 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>.

Conformity to national regulations

- FCC Part 15, 22 and 24 (applicable in US)
- 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>.



Class 1 equipment according to European Directive 2014/53/EU (RED) can be placed on the market and be put into service without restrictions in any EEA member state.

- The conformity for countries with other national regulations not covered by the FCC part 15, 22 and 24 or European Directive 2014/53/EU has to be approved prior to use and operation.
-

Conformity to national regulations



Applicant name: Leica Geosystems Korea AG
Product name: Specific small output wireless device
Model name: CS20 LTE
KC number: R-R-rks-CS20LTE
Manufacture date: Marked separately
Manufacturer: LEICA GEOSYSTEMS/SWITZERLAND

Conformity to national regulations

- FCC Part 15 (applicable in US)
- 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>.
- This Class 2 equipment may be operated in: AT, BE, BG, CA, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MT, NL, NO, PL, PT, RU, RO, SE, SI, SK, US.



Class 2 equipment according to European Directive 2014/53/EU (RED) for which following EEA Member States apply restrictions on the placing on the market or on the putting into service or require authorisation for use:

- *France*
 - *Italy*
 - Norway (if used in the geographical area within a radius of 20 km from the centre of Ny-Ålesund)
- The conformity for countries with other national regulations not covered by the FCC part 15 or European Directive 2014/53/EU has to be approved prior to use and operation.
-

2

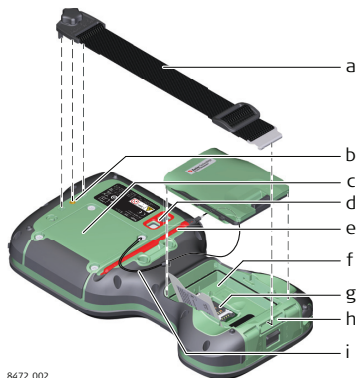
Instrument Components

Upside of CS20



- 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)

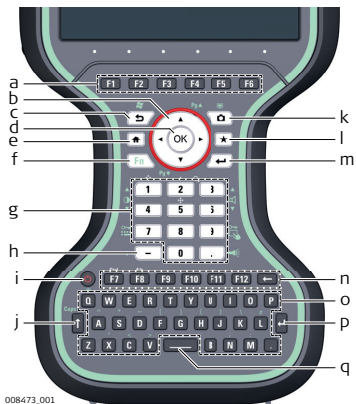
Underside of CS20



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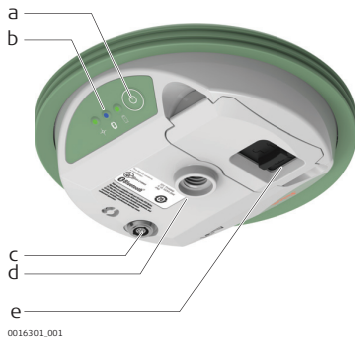
- a Hand strap
- b Thread for screwing on hand strap or utility hook
- c Expansion cover
- d Digital camera with flash
- e Stylus
- f Battery compartment
- g SIM card slot under the battery
- h Socket for fastening clip of the hand strap
- i Tether for the stylus

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**;
Backspace
- o Alpha keys
- p 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
GEB331	-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

GEB331

IP54 (IEC 60529)
Dust protected
Protection against splashing water from any direction

Humidity**Protection**

Instrument

Up to 95 %.
The effects of condensation are to be effectively counteracted
by periodically drying out the instrument.

GEB331

For indoor use only

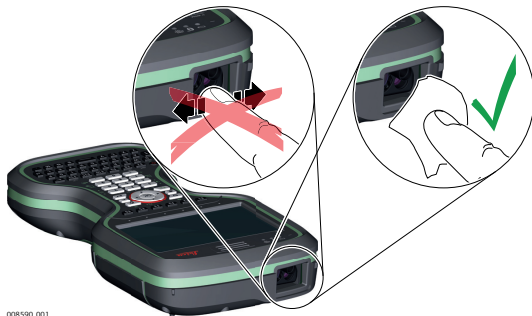
4

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



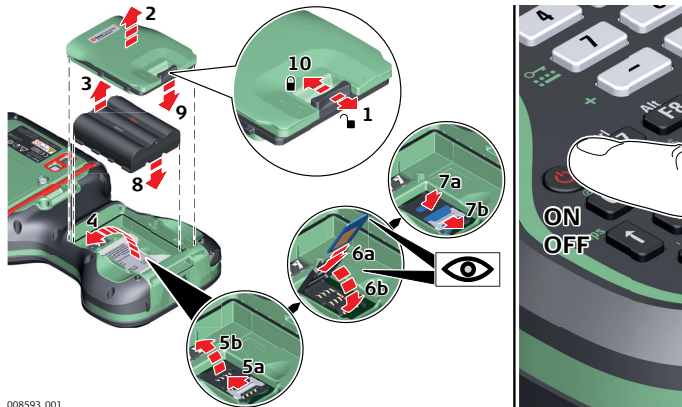
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Operation



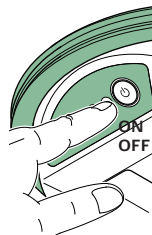
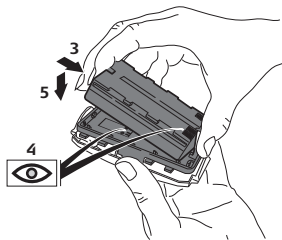
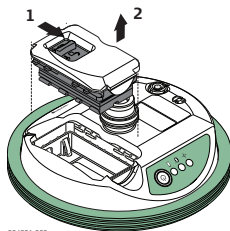
The battery must be charged before using it for the first time.

Turning the instrument ON and OFF



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Turning on and off the GS07



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