Leica TS12 Robotic
Quick Guide

Version 1.1
English

- when it has to be **right**

Leica Geosystems

1 Important Information about your Instrument

Read and follow the User Manual on the accompanying DVD before using the product.

Keep for future reference!

Intended use

- Measuring horizontal and vertical angles.
- Measuring distances.
- Recording measurements.
- Automatic target search, recognition and -tracking.
- Visualising the aiming direction and vertical axis.
- Remote control of product.
- Data communication with external appliances.
- Computing with software.

Laser products

The TS12 Robotic instrument contains the following laser products:

Laser product	Laser class
EDM (Electronic Distance Measurement) module	
• measurements with reflectors	Class 1

Laser product	Laser class
• measurements without reflectors	Class 3R
ATR (Automatic Target Aiming)	Class 1
PS (PowerSearch)	Class 1
EGL (Electronic Guide Light)	Exempt Group
Laser plummet	Class 2

- The classification for the EDM, ATR, PS and Laser plummet is in accordance with IEC 60825-1 (2007-03).
- The classification for the EGL is in accordance with IEC 62471 (2006-07).

CAUTION

From a safety perspective, class 3R laser products should be treated as potentially hazardous.

Precautions:

1) Prevent direct eye exposure to the beam.
2) Do not direct the beam at other people.

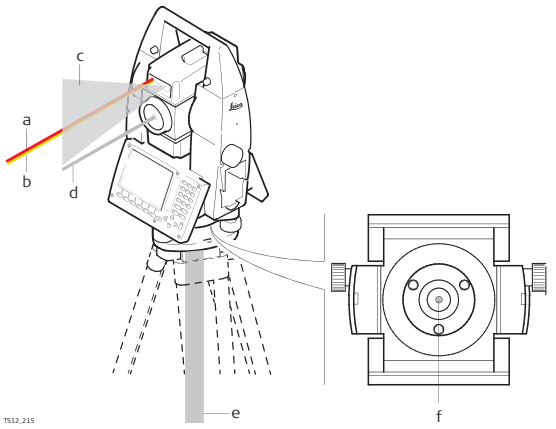
CAUTION

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

Precautions:

1) Avoid staring into the beam.
2) Avoid pointing the beam at other people.

Locations of laser apertures



a) LED beam red (EGL)
b) LED beam yellow (EGL)
c) Laser beam (PS)
d) Laser beam (EDM, ATR)
e) Laser beam (Laser plummet)
f) Exit for laser beam (Laser plummet)

The product must not be disposed with household waste.

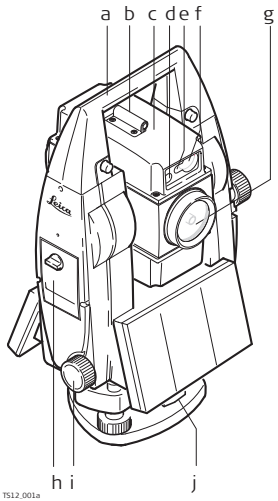
Conformity to national regulations

- FCC Part 15 (applicable in US).
- Hereby, Leica Geosystems AG, declares that the instrument with Communication side cover is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC and other applicable European Directives. The declaration of conformity may be consulted at http://www.leica-geosystems.com/ce.

  Class 1 equipment according European Directive 1999/5/EC (R&TTE) 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 or European directive 1999/5/EC has to be approved prior to use and operation.

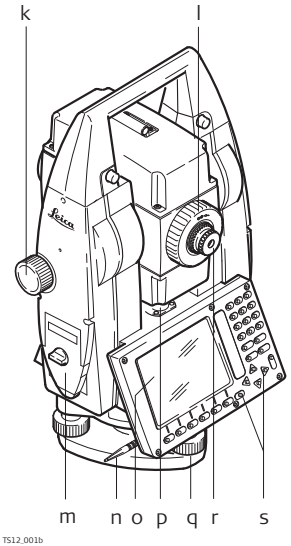
2 Instrument Components

Instrument components part 1 of 2



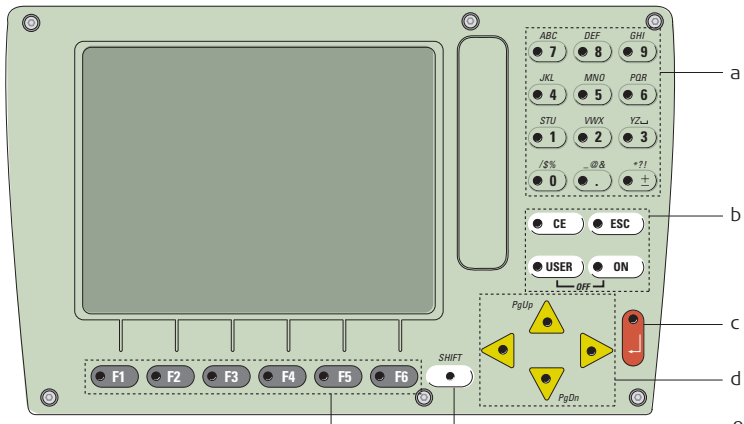
a) Carry handle
b) Optical sight
c) Telescope, integrating EDM, ATR, EGL, PS
d) EGL flashing diode - yellow and red
e) PowerSearch, transmitter
f) PowerSearch, receiver
g) Coaxial optics for angle and distance measurement, and exit port of visible laser beam for distance measurements
h) CompactFlash card compartment
i) Horizontal drive
j) Tribrach securing screw

Instrument components part 2 of 2



k) Vertical drive
l) Focusing ring
m) Battery compartment
n) Stylus for touch screen
o) Screen
p) Circular level
q) Tribrach footscrew
r) Eyepiece
s) Keyboard

Keyboard



TS12 070

a) Alphanumeric keys
b) CE, ESC, USER, ON
c) **ENTER**
d) Arrow keys
e) **SHIFT**
f) Function keys **F1**-**F6**

Keys

Key	Description
Alphanumeric keys	• To type letters and numbers.
CE	• Clears all entry at the beginning of user input. • Clears the last character during user input.
ESC	• Leaves the current menu or dialog without storing changes made.
USER	• Calls the user-defined menu.
ON	• If the instrument is off: to turn instrument on.
ENTER	• Selects the highlighted line and leads to the next logical dialog/menu. • Starts the edit mode for edit fields. • Opens a list box.
SHIFT	• Changes between the first and the second level of function keys.
Arrow keys	• Move the focus on the screen.
Function keys **F1**-**F6**	• Correspond to the six softkeys that appear on the bottom of the screen when the screen is activated.

3 Technical Data

Environmental specifications

Temperature

Operating temperature [°C]	Storage temperature [°C]
-20 to +50	-40 to +70

Protection against water, dust and sand
IP54 (IEC 60529)

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

4 Care and Transport

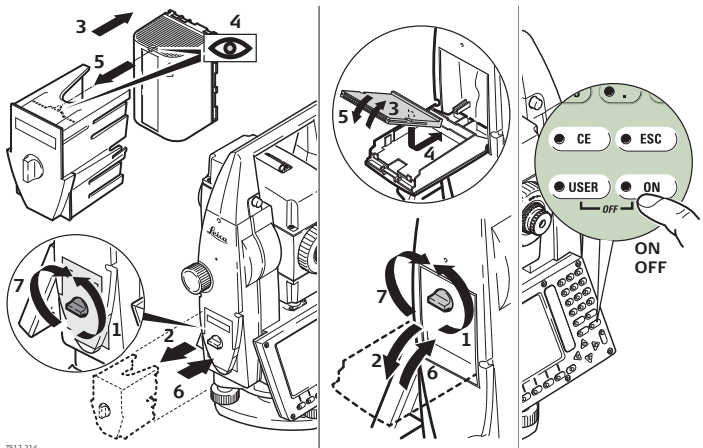
Care and transport

- Carry the product in its original container or carry the tripod with its legs splayed across your shoulder, to protect the product 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.

5 Operation

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

Turning on and off the instrument



Total Quality Management: Our commitment to total customer satisfaction.

Leica Geosystems AG, Heerbrugg, Switzerland, has been certified as being equipped with a quality system which meets the International Standards of Quality Management and Quality Systems (ISO standard 9001) and Environmental Management Systems (ISO standard 14001).

Ask your local Leica Geosystems dealer for more information about our TQM program.

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