

FOCUS 50 Total Station

REGULATORY INFORMATION

Regulatory models 57002001 and 57004001.

Explanations of the regulatory symbols can be found in the Spectra Geospatial® FOCUS® 50 total station user guide.

INFORMATION ABOUT INCLUDED RADIO MODULES

- Long Range Robotic Total Station (Regulatory model 57002001) includes a Long Range Radio Module: Frequency band 2.4 GHz, max RF output power +20 dBm and a Bluetooth® wireless technology radio module: Frequency band 2.4 GHz, max RF output power +12 dBm.
- Short Range Robotic Total Station (Regulatory model 57004001) includes a Bluetooth wireless technology radio module: Frequency band 2.4 GHz, max RF output power +12 dBm.

EUROPE

Hereby, Spectra Geospatial, declares that the Spectra Geospatial FOCUS 50 total stations are in compliance with the following directives:

- Machinery Directive 2006/42/EC
- RED 2014/53/EU
- RoHS Directive 2011/65/EU



NOTICE TO OUR EUROPEAN CUSTOMERS

For product recycling instructions and more information, please go to:
www.spectrageospatial.com/weee-and-rohs/.



USA

SUPPLIER'S DECLARATION OF CONFORMITY

47 CFR § 2.1077 Compliance Information

Unique Identifier:

FOCUS 50 Autolock Total Station

FOCUS 50 Long Range Robotic Total Station

Responsible Party

Spectra Geospatial

4450 Gibson Drive, Tipp City,

OH45371 USA


www.spectrageospatial.com

FCC COMPLIANCE STATEMENT

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE – This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

 **CAUTION** – Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

CANADA

This Class B digital apparatus complies with Canadian ICES-003.

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions: (1) This device may not cause interference. (2) This device must accept any interference, including interference that may cause undesired operation of the device.

The radio transmitters 4492A-2420 (in Regulatory model 57002001) and 5325A-0946 (in Regulatory model 57004001) have been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Antenna part number 53007045, antenna gain 2 dBi.

Cet appareil numérique de la classe B est conforme à la norme NMB.003 du Canada.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. L'appareil ne doit pas produire de brouillage;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Les présents émetteurs radio 4492A-2420 (dans le modèle réglementaire 57002001) et 5325A-0946 (dans le modèle réglementaire 57004001) ont été approuvés par Innovation, Sciences et Développement économique Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué pour tout type figurant sur la liste, sont strictement interdits pour l'exploitation de l'émetteur.

Antenne numéro de référence 53007045, gain d'antenne 2 dBi.

BRASIL

Para maiores informações, consulte o site da Anatel www.gov.br/anatel/pt-br/. Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados.



SPECIFICATION

Power rating	
Power input	12 V DC, 20 W

Environmental specification	
IP classification: Dust protected / Protected against flushing water from nozzle	IP 65
Operating temperature range	-20 °C to +50 °C (-4 °F to +122 °F)
Humidity	100%, condensing

Dimensions of the FOCUS 50 Total Station:
Width 209 mm, Height 353 mm, Depth 197 mm.

Environmental conditions:

- Outdoor and Indoors use
- Altitude up to 5000m
- Overvoltage Category II
- Pollution degree II

For further technical specifications, please refer to the FOCUS 50 Total Station data sheet available from www.spectrageospatial.com.

EXTERNAL POWER


An external power supply is available from Spectra Geospatial which can be connected to the 12 V DC connector on the instrument.

NOTE – Use only the power supply approved by Spectra Geospatial with the FOCUS 50 Total Station.


Ratings: Input: 100-240 V AC, 47-63 Hz, 1.4 A. Output: 12 V DC 5.0 A max.
The external power supply must only be connected to a protective earthed socket.

In accordance with IEC standard 61010-1, the socket plug should always be accessible so that it is easy to disconnect the power supply.


Only use a cord set approved by Spectra Geospatial.
Cord set with plug IEC320-C13 to IEC320-C14 Rating: 250 VAC, 10 A.

 **CAUTION** – The optional power supply for the FOCUS 50 Total Station is intended for indoor use only, and shall not be exposed to moisture or liquids, and is approved for use up to an altitude of 3000 meters.


BATTERY SAFETY INFORMATION

 **WARNING** – Do not damage the rechargeable Lithium-ion battery. A damaged battery can cause an explosion or fire, and can result in personal injury and/or property damage. To prevent injury or damage:

- Do not use or charge the battery if it appears to be damaged. Signs of damage include, but are not limited to, discoloration, warping, and leaking battery fluid.
- Do not expose the battery to fire, high temperature, or direct sunlight.
- Do not immerse the battery in water.
- Do not use or store the battery inside a vehicle during hot weather.
- Do not drop or puncture the battery.
- Do not open the battery or short-circuit its contacts.

 **WARNING** – Avoid contact with the rechargeable Lithium-ion battery if it appears to be leaking. Battery fluid is corrosive, and contact with it can result in personal injury and/or property damage. To prevent injury or damage:

- If the battery leaks, avoid contact with the battery fluid.
- If battery fluid gets into your eyes, immediately rinse your eyes with clean water and seek medical attention. Do not rub your eyes!
- If battery fluid gets onto your skin or clothing, immediately use clean water to wash off the battery fluid. If skin irritation or pain persists, seek medical attention.

 **WARNING** – Charge and use the rechargeable Lithium-ion battery only in strict accordance with the instructions. Charging or using the battery in unauthorized equipment can cause an explosion or fire, and can result in personal injury and/or equipment damage. To prevent injury or damage:


- Do not charge or use the battery if it appears to be damaged or leaking.
- Charge the Lithium-ion battery only in a Spectra Geospatial product that is specified to charge it. Be sure to follow all instructions that are provided with the battery charger.
- Discontinue charging a battery that gives off extreme heat or a burning odor.
- Use the battery only in Spectra Geospatial equipment that is specified to use it.
- Use the battery only for its intended use and according to the instructions in the product documentation.
- Cover battery terminals with proper insulating tape before disposal to avoid heat generation by an inadvertent short-circuit.

LASER SAFETY INFORMATION

Before using the instrument, make sure that you have read and understand this document, as well as all equipment and job site safety requirements.

This equipment has been tested and found to comply with IEC 60825-1 2014.

It also complies with 21 CFR 1040.10 and 1040.11 except for conformance with IEC 60825-1 Ed. 3, as described in Laser Notice No. 56, dated May 8, 2019.

 **WARNING** – Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous LED or laser radiation exposure. As with any bright light source, such as the sun, electric welding arcs or arc lamps, common sense applies. **DO NOT** look into the laser aperture when the laser is on. For further information regarding safe use of lasers, refer to IEC 60825-1:2014.

APERTURES

LASER LABEL

FOCUS 50 TOTAL STATION

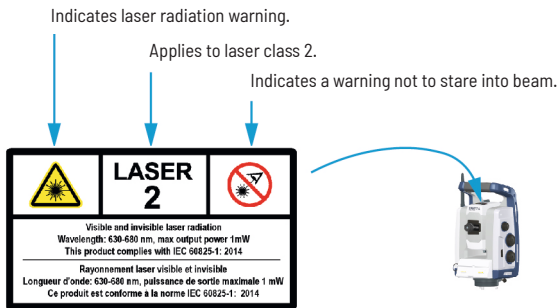
The FOCUS 50 total station is a CLASS 2 LASER PRODUCT.

The instrument contains visible and invisible laser sources:

- A laser diode for the distance measuring function operating at 905 nm (infrared, non-visible light), with a beam divergence of 0.4×0.8 mrad and an output power of <1.1 mW, while the emission is coaxial with the telescope, this mode operates in LASER CLASS 1.
- A laser diode for laser pointer function operating at 630 – 680 nm (visible light), with a beam divergence of 0.3 mrad and an output power of <0.7 mW, while the emission is coaxial with the telescope, this mode operates in LASER CLASS 2.



- A tracker laser diode for Autolock® technology function operating at 785 nm (infrared, non-visible light), with a beam divergence of 38.5 mrad and an



output power of <math><0.35\text{ mW}</math>, while the emission is coaxial with the telescope, this mode operates in LASER CLASS 1.

When operating in prism mode with Autolock technology and/or distance measurement the accessible radiation does not exceed the limits of LASER CLASS 1.

MODES FOR FOCUS 50

Mode	EDM DR mode ¹⁾	EDM Prism mode ¹⁾	Laser pointer	Tracklight	Tracker
Direct Reflex, aim*	ON	OFF	ON/OFF	ON/OFF	OFF
Direct Reflex, measure*	ON	OFF	ON/OFF	ON/OFF	OFF
Prism, Manual	OFF	ON	ON/OFF	ON/OFF	OFF
Prism, Autolock*	OFF	ON	OFF	ON/OFF	ON


*Mode set through field software.

¹⁾ EDM can be set to either DR mode or Prism mode.

For Spectra Geospatial support, go to www.spectrageospatial.com/support.

ADDITIONAL INFORMATION

The original document is written in English. All documents in other languages are translations from the original English document. For more information and information in other languages, go to www.spectrageospatial.com.

 **CAUTION** – Please read the full user guide including all safety warnings, before operating this product.



© 2021 - 2023, Trimble Inc. All rights reserved. Spectra Geospatial is a division of Trimble Inc. Autolock, FOCUS, Spectra Geospatial, Tracklight and Trimble are registered trademarks of Trimble Inc. or its subsidiaries. The Bluetooth word mark and logos are owned by the Bluetooth SIG, Inc. and any use of such marks by Trimble Inc. is under license All other trademarks are the property of their respective owners.

P/N 57151052-ENG, Revision C01, May 2023.

Spectra Geospatial
10368 Westmoor Drive
Westminster CO 80021
USA

www.spectrageospatial.com