FOCUS® 2 Series

Simply Affordable

FAST
VERSATILE
PRODUCTIVE
AFFORDABLE

FOCUS 2 Series Total Station

The Spectra Precision FOCUS 2 Series of total stations are new, highly affordable, mechanical total stations delivering versatility, ease-of-use and feature-packed onboard software to provide unmatched performance and productivity.

Key Features

- Versatile 2” and 5” angle accuracies
- Fast (0.3s), accurate (2+2ppm) distance measurement
- Long range prism (4,000m) and reflectorless (500m) measurements
- Long battery life (up to 13h)
- Large, easy to read graphic display
- Ergonomic keyboard design
  - Direct numeric input
  - Convenient alphanumeric input
  - Unique function keys
  - Customizable user keys
- Powerful and practical onboard software
- Bi-directional data transfer software for the PC

Fast, Accurate Distance Measurement

The FOCUS 2 is among the fastest total stations in their class with 0.3 second distance measurements. This very fast EDM enables you to move quickly through your survey routines getting more done, quicker. Measurements are also very precise with accuracies of ±(2 + 2 ppm) in prism mode and ±(3 + 2 ppm) in reflectorless mode.

Choice of Angle Accuracies

The FOCUS 2 Series offers 2” and 5” angle accuracy models providing the versatility to accommodate a wide array of survey and construction applications.

Full Featured Value

The Spectra Precision FOCUS 2 Series is an economical choice that uses established technology for optimal workflow efficiencies. With convenience and reliability as a cornerstone, Spectra Precision is an ideal choice for value.

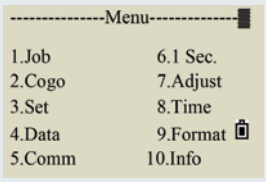
Large, Easy-to-read Graphic Display and Ergonomic Keypad

The keypad layout is ergonomic and logical for easy operation and field efficiency. The FOCUS 2 Series provides various keys such as MENU, MODE, USR, HOT and full cursor keys to give easy access to frequently adjusted settings, job management functions, viewing and editing of data, and timesaving feature code input methods such as Quick Codes, Code Lists and a Stack of previously input codes.

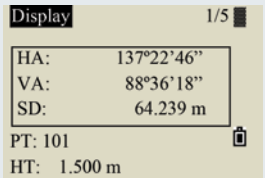
Specific functions can be assigned to USR keys providing easy access to frequently used functions. The two independent measurement keys (MSR1 and MSR2) enable both prism and reflectorless measurement modes to be available at the same time and initiated with a single key press.

Powerful Onboard Software Functions

Main Menu
Job management, coordinate geometry and data transfer functions are used on a regular basis while the instrument settings such as units, data formats, time and date are rarely accessed.



Basic Measurement Screen
Common operations such as Station Setup, Stakeout, Offsets and other functions can all be accessed quickly and simply from the basic measurement screen.



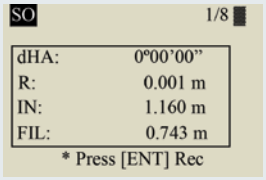
Easy Input of Codes
A variety of code input methods are available for convenience and efficiency in recording point descriptions in the field. These include direct code input, Quick Codes, a Code List and a Stack List.

Configurable Data Displays
The measured data may be displayed and scrolled through in a number of standard sets or screens by simply pressing the DSP key. Some measurement and stakeout screens are even user-configurable for individual preference.

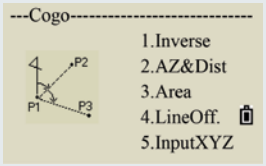
Face 1 / Face 2 Measurements
F1 and F2 measurements for improved accuracy are readily available and both raw measurement and averaged data is stored.

Multiple Point Resections
Instrument position and orientation can be computed using a minimum of two and a maximum of 10 known points. Measurements can consist of any combination of angle only, angle and distance and F1/F2 measured observations.

Stakeout
Stakeout is available using manually input coordinate or distance and angle data or by specifying Point Name, Code or Radius from the instrument.



Coordinate Geometry (Cogo) Computations
The onboard Cogo provides functions to calculate inverses, points by bearing and distance, area and perimeter information and more…



Powerful Measurement Functions
These routines include two point reference line, reference arc, remote distance and elevation measurements, vertical and sloping plane measurements and road stakeout.

FOCUS 2 Technical Specifications

Distance Measurement

Range with specified prisms (Good conditions[1])

- Single Prism: 2.5m to 4,000m (8.2 ft to 13,123 ft)
- Reflectorless[2]: 500 m (1,640 ft)
  - Shortest possible range: 1.0m (3.3 ft)

Accuracy (Precise mode) ISO 17123-4

- Prism: ±(2+2 ppm × D) mm
- Reflectorless[5]: ±(3+2 ppm × D) mm

Measuring interval[3]

- Fine: .0.3 sec.
- Normal: .0.2 sec.

Angle Measurement

Accuracy (ISO17123-3)

- (horizontal and vertical): 2"/0.6 mgon 5"/1.5 mgon
- Reading system: Absolute encoder
- Circle diameter: 79 mm (3.1 in)
- Horizontal/Vertical angle: Diametrical

Minimum increment

- Degree: 1/5"
- Gon: 0.2/1 mgon
- MIL6400: 0.005/0.02 mil

Telescope

- Tube length: 154 mm (6.0 in.)
- Image: Erect
- Magnification: 30×
- Effective diameter of objective: 45 mm (1.8 in)
- EDM diameter: 50 mm (2.0 in)
- Field of view: 1°30'
- Resolving power: 3"
- Minimum focusing distance: 1.0 m (3.3 ft)
- Laser pointer: Coaxial Red Light

Tilt Sensor

- Type: Dual-axis
- Method: Liquid-electric detection
- Compensation range: ±3.0'

Communications

- Communication ports: 1 x serial (RS-232C)
- Data Interface: SD Card, Mini-USB

Power

Internal Ni-MH battery (x2)

- Output voltage: 6.0 V DC
- Operating time[4]: approx. 13 hours
- Charging time
  - Full charge: 4 hours

General Specifications

- Level vials
  - Sensitivity of Circular level vial: 8'/2 mm
  - Sensitivity of Plate level: 30"/2mm
- Optical plummet
  - Image: Erect
  - Magnification: 3×
  - Field of view: 5°
  - Focusing range: 0.3 m (1.0 ft) to ∞
- Display face 1 and face 2: backlit, graphic LCD, 160 x 90 pixels
- Point memory: 10,000 records
- Dimensions
  - (W x D x H): 160mm x 150mm x 340mm (6.3 in x 5.9 in x 13.4 in)
- Weight (approx.): 5.1 kg (11.3 lb)
- Battery: 0.2 kg (0.5 lb)
- Carrying case: 3.2 kg (7.0 lb)

Environmental Characteristics

- Operating temperature range: –20 °C to +50 °C (–4 °F to +122 °F)
- Atmospheric correction
  - Temperature range: –40 °C to +60 °C (–40 °F to +140 °F)
  - Barometric pressure: 400 mmHg to 999 mmHg/ 533 hPa to 1,332 hPa/ 15.8 inHg to 39.3 inHg
- Dust and water protection: IP55

[1] Good conditions (good visibility, overcast, twilight, underground, low ambient light).

[2] Measuring distance may vary depending on targets and measuring conditions.

[3] Measuring time may vary depending on measuring distance and conditions. For the initial measurement, it may take a few more seconds.

[4] Battery life specification at 25 °C (77 °F). Operation time may be shorter in low temperatures or if the battery is not new.

[5] Accuracy for 1.0 m to 5.0 m (3.3 ft to 16.4 ft) is ±8 mm

This product is only available in selected markets.

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