

SPECIFICATIONS

Angle Measurement

Measurement Method: Absolute Encoding
Minimum Readout: 1"/5"/10" (0.3mgon/1.5mgon/3mgon) optional
Accuracy¹ : 2"

Distance Measurement
(HTS-420 with Reflector)

Single Prism: 3000m (9,842ft.) under good condition³
Three Prisms: 6000m (19,685ft.) under good condition³
Reflective Sheet: 800m (2,624 ft.)
Accuracy: 2 mm +2ppm
Measuring Time (Fine/Quick/Tracking): 1.5s/1s/ 0.5s

Distance Measurement
(HTS-420R Reflectorless)

Reflectorless² Range: 600m (1968.5 ft)
Single Prism: >7500m (24606ft.)
Accuracy: 3mm+2ppm
Measuring Time: 1.5s

Telescope

Magnification: 30X
Field of View: 1°30' (2.7m at 100m)
Minimum Focusing Distance: 1.2m
Reticle: Illuminated

Compensator

System: Dual-axis liquid tilt sensor
Working Range: ±3'
Setting Accuracy: 1"

Communication

Bluetooth
Interface: Standard RS232, SD card⁴, USB pen drive, mini-B
Internal Data Memory: Approx. 20,000 Points
Data Format: ASCII

Operation

Operation system: Real-time Operating System
Display: Gray and white display with adjustable contrast; 280 X 160 pixels; 6 lines X 25 characters
Keyboard: 2 sides Alphanumeric backlit crystal keyboard

Laser Plummet

Type: Laser point, 4 brightness levels adjustment / Optical plummet (optional)
Centering Accuracy: 1 mm at 1.5m instrument height

Power Supply

Battery Type: Rechargeable Li-ion battery
Voltage/Capacity: ZBA-400: 7.4V (DC) / 3000mAh
Operating Time With ZBA-400: Optimal 16 hours⁵ (Continuous angle measurement every 30 seconds) / 10 hours (typical)
Measuring Times: Approx. 12000 times

Weight

Weight (Incl. Battery&Tribrach): Approx. 5.5kg (12.1lb.)

Environmental

Operating Temperature: -20°C ~ + 50°C (-4°F to +122°F)
Storage Temperature: -40°C ~ + 70°C (-40°F to + 158°F)
Dust&Water Proof (IEC60529 Standard)/Humidity: IP65, 95%, non-condensing

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1 Standard deviation based on ISO 17123-3.

2 Calculated by Kodak Gray Card white side (90% reflective), exact distance depends on measuring object, observation and environment conditions.

3 Good condition: no haze, visibility about 40km, moderate sunlight,

4 Maximum extension up to 32GB.

5 New battery at 25°C, 24 hours continuously angel measurement mode.

HI-TARGET

Surveying the world, Mapping the future.

HTS-420R Total Station

- Dual-axis reflectorless total station
- 2" accuracy with 600meter range
- Wireless bluetooth communication
- Big storage, can be extended up to 32GB
- Convenient data import and export with USB port



FC CE IP65



Dual-axis Compensation

The HTS-420R is configured with advanced dual-axis compensator for auto error elimination and auto accuracy compensation.



Absolute Encoding

The absolute encoding disk ensures high accuracy, efficiency and stable performance. No need to initialize but to measure the angle immediately as the HTS-420R is turned on. The previous data and setting are automatically saved. No data or setting is missed even though the HTS-420R is power-off unexpectedly.



High-performance MCU SMT32

Based on ARM Cortex™-M processor, the SMT32 MCU enabling the HTS-420R extra high processing speed and low-power consumption.



Bluetooth

The Bluetooth wireless technology makes HTS-420R accessible to any data collector for real-time communication. The third party field software such as Carlson SurvCE is fully compatible with the HTS-420R.



Data Storage

Multiple data transfer options such as SD card and Micro-USB port, which can work perfectly with our complimentary dual port USB disk.



Backlight

Adjustable backlight of the screen and the keyboard offer you a visible condition to work in the dark.



Diagonal Eyepiece

Support diagonal eyepiece for observations at steep line of sight.



Calibration Software

Real-time diagnosis can be run with HI-TARGET Calibration software, to find out the problem quickly to ensure trouble-free operation.



New Data Transfer Software

The newly easy-to-use data transfer software supports different type of output data format, which can be used in AutoCAD or other 3rd party post processing software.