

Trimble C5 HP

MECHANICAL TOTAL STATION



KEY FEATURES

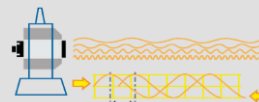
- ▶ Enjoy all of the features of Trimble® Access™ software from both faces with two-color touchscreen displays
- ▶ Fully integrated with Trimble Business Center office software to manage, process, and create customer deliverables
- ▶ Keep your total station insight, even if it goes off-site with Trimble L2P
- ▶ Compact, lightweight and rugged

Choose the model that works for you:

C5 HP



Phase Shift EDM



Without Autofocus

Prism

Range 3,000 m

Accuracy 1 mm + 1.5 ppm

Reflectorless

Range 500 m

Accuracy 2 mm + 2 ppm

Measuring interval in
Standard mode 1.6 s

26 mm beam divergence at 30 m

18 h operating time*

Optical plummet type

* Measuring Angle and Distance Every 30 s.

Learn more: geospatial.trimble.com/trimble-C5HP

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DISTANCE MEASUREMENT

Range with specified prisms

| Good conditions ¹ | C5 HP |
|--|--------------------|
| With single prism 2.5 in (6.25 cm) | 9,843 ft (3,000 m) |
| With reflector sheet 2 in x 2 in (5 cm x 5 cm) | 886 ft (270 m) |

Reflectorless mode

| C5 HP | Good ¹ | Normal ² | Difficult ³ |
|-----------|-------------------|---------------------|------------------------|
| KGC (90%) | 1,640 ft (500 m) | 1,312 ft (400 m) | 820 ft (250 m) |
| KGC (18%) | 1,148 ft (350 m) | 820 ft (250 m) | 656 ft (200 m) |

Accuracy in standard measurement mode⁷

| | C5 HP ^{4, 8} |
|--------------------|-----------------------|
| Prism ⁴ | ± (1 mm + 1.5 ppm) |
| Reflectorless | ± (2 mm + 2 ppm) |

Measuring interval⁵

| C5 HP | Standard mode | Fast standard mode |
|--------------------|---------------|--------------------|
| Prism mode | 1.6 s | 1.2 s |
| Reflectorless Mode | 2.1 s | 1.6 s |

ANGLE MEASUREMENT

Accuracy (Standard Deviation based on ISO 17123-3)... 1" (0.3 mgon), 2" (0.6 mgon), 3" (1.0 mgon), 5" (1.5 mgon)

Reading system Absolute encoder
Circle diameter 2.4 in (62 mm)
Horizontal/Vertical angle Diametrical/ Single

TELESCOPE

Tube length 5.0 in (128 mm)
Image Erect
Magnification 30x (19x/38x with optional eyepieces)
Effective diameter of the objective
Trimble C5 HP 1.57 in (40 mm)
EDM Diameter
Trimble C5 HP 1.8 in (45 mm)
Field of view 1° 25'
Resolving power 3"
Minimum focusing distance 4.9 ft (1.5 m)
Laser Pointer Coaxial Red Light
Tracklight Yes
Reticle Illumination Yes, 4 steps

TILT SENSOR

COMMUNICATIONS

Communication ports 1 x serial (RS-232C), 2 x USB (host and client)
Wireless communications Integrated Bluetooth®

POWER

Internal Li-ion battery (x2)

Output voltage V

| Operating time ⁶ | C5 | C5 HP |
|--|------|--------|
| Continuous angle-only measurement | 14 h | 19 h |
| Distance/ angle measurement/ AF every 30 s | 12 h | 18 h |
| Continuous distance / angle measurement | 7 h | 10.5 h |

Charging time, full charge both batteries approx. 6 h

GENERAL SPECIFICATIONS

Level vials

Sensitivity of Circular level vial on tribrach 10'/2 mm
Tangent Clamps Yes
Display face 1 LCD back-lit (640 x 480 pixel)
Display face 2 LCD back-lit (640 x 480 pixel)
Operating system Windows® Embedded Compact 7
Processor Dual Core 800 MHz
Point memory 512 MB RAM, 4 GB flash memory
Internal Plummet Optical or Class 2 Laser
Optical Plummet:
Magnification x
Field of view 5°
Minimum focusing distance 0.5 m
Dimensions (W x D x H) 8.1 in x 6.7 in x 12.5 in
(206 mm x 169 mm x 318 mm)

Weight (approx.)

1", 2", 3", 5" Main unit

Trimble C5 HP 9.7 lb (4.4 kg)

Battery 0.2 lb (0.1 kg)

Carrying case 7.3 lb (3.3 kg)

ENVIRONMENTAL

Operating temperature range -4 °F to +122 °F (-20 °C to +50 °C)
Winterized -22 °F to +122 °F (-30 °C to +50 °C)
Storage temperature range -13 °F to +140 °F (-25 °C to +60 °C)
Winterized -22 °F to +140 °F (-30 °C to +60 °C)
Atmospheric correction
Temperature range -40 °F to +140 °F (-40 °C to +60 °C)
Barometric pressure 15.8 inHg to 39.3 inHg (400 mmHg to 999 mmHg)
or (533 hPa to 1,332 hPa)
Dust and water protection P66

CERTIFICATION

Class B Part 15 FCC certification, CE Mark approval. RCM Mark.

IEC60825-1 am 2007, IEC60825-1 am 2014, FDA notice 50

C5 HP

Prism mode Class 1 laser

Reflectorless/Laser Pointer Class 3R laser

- Good condition (good visibility, overcast, twilight, low ambient light).
- Normal conditions (normal visibility, object in the shadow, moderate ambient light).
- Difficult conditions (haze, object in direct sunlight, high ambient light).
- Standard Deviation based on ISO 17123-4
- Measuring time may vary depending on measuring distance and conditions. Specification-based on average of repeated measurements.
- Battery life specifications at 77 °F (25 °C). Operation times may vary depending on the condition and deterioration of the battery.
- For both prism and reflectorless modes, EDM accuracy in fast standard mode is ± (10 mm + 5 ppm) for the C5, ± (5 mm + 5 ppm) for the C5 HP, and tracking mode is ± (20 mm + 5 ppm) for the C5 only.
- C5 HP accuracy in standard measurement mode to a prism less than 1000 m away is ± (1 mm + 1.5 ppm). At a range greater than or equal to 1000 m, the accuracy is ± (2 mm + 2 ppm).

Bluetooth type approvals are country-specific.

Specifications are subject to change without notice.



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