Nikon XF Total Station

Datasheet

Nikon Quality You Can Trust

Key Features

- **Autofocus**
- **Fast, powerful EDM**
- **Dual color touchscreen displays**
- **Trimble Locate2Protect ready**
- **PIN security**
- **1", 2", 3", and 5" accuracies**
- **Hot swappable batteries**

SOLD &
SERVICED BY

Survey Instrument Sales

Helping You
Measure the World

24037 Acacia Redford, MI 48239
313-535-5252

Nikon XF

The Nikon XF mechanical total station is packed with new features that make survey work easier and faster, including an 800m range Non-prism EDM, time-saving autofocus and dual full displays. With the Nikon XF, fieldwork is always accurate and efficient thanks to proven workflows and an array of features, including:

- New autofocus powered by Nikon that delivers quick, precise focus.
- Color touch screens, which allow Survey Basic, Survey Pro, and Layout Pro to run onboard.
- Superior Nikon optics for crisp, bright sightings even in low light conditions.
- Trimble L2P ready for easy, effective tracking, so you always know where your assets are.

In the field, the Nikon XF reduces the need for downtime thanks to hot swappable batteries. The lightweight, compact design makes the total station easy to store, transport and handle. The Nikon optics deliver crisp, bright images, reducing eye fatigue. The Nikon XF is durable too–standing up to the toughest worksite conditions. Surveyors all over the globe rely on the Nikon XF to deliver exceptional results, wherever their work takes them.

The Nikon XF is built tough for all occasions.

Nikon XF Series Total Stations

Distance measurement

- Range with specified prisms
  - Good conditions[1]
    - With reflector sheet 5 cm x 5 cm (2 in x 2 in): 1.5 m to 300 m (4.9 ft to 984 ft)
    - With single prism 6.25 cm (2.5 in): 1.5 m to 5000 m (4.9 ft to 16404 ft)
- Non-Prism mode
  - KGC (18%)
    - Good[1]: 400m (1312 ft)
    - Normal[2]: 300 m (984 ft)
    - Difficult[3]: 235 m (771 ft)
  - KGC (90%)
    - Good[1]: 800 m (2625 ft)
    - Normal[2]: 500 m (1640 ft)
    - Difficult[3]: 250 m (820 ft)
- Accuracy in precise mode[7]
  - Prism[6]: ±(2+2 ppm × D) mm
  - Non-Prism: ±(3+2 ppm x D) mm
- Measuring interval[4]
  - Prism and Non-Prism mode
    - Precise mode: 1.0 sec.
    - Normal mode: 0.5 sec.
    - Fast mode: 0.3 sec.

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: 62 mm (2.4 in)
- Horizontal/Vertical angle: Diametrical/ Single

Telescope

- Tube length: 125 mm (4.9 in)
- Image: Erect
- Magnification: 30× (19x/38x with optional eyepieces)
- Effective diameter of objective: 45 mm (1.77in)
  - EDM Diameter: 50 mm (1.97 in)
- Field of view: 1°25'
- Resolving power: 3"
- Minimum focusing distance: 1.5 m (4.9 ft)
- Tracklight: Yes
- Reticle Illumination: Yes, 4 steps

Tilt Sensor

- Type: Dual axis
- Method: Liquid-electric detection
- Compensation range: ±3'

Communications

- Communication ports: 1 x serial (RS-232C), 2x USB (host and client)
- Wireless Communications: Integrated Bluetooth (Class 1, Long Range)

Power

- Internal Li–ion battery (x2)
  - Output voltage: 3.6V
- Operating time
  - Continuous angle-only measurement: 14 h
  - Distance and angle measurement every 30s with Autofocus: 12 h
  - Continuous distance and angle measurement: 7 h
- Charging time
  - Full charge: 6 h

General Specifications

- Autofocus: Yes
- Tangent Clamps: Yes
- Level vials
  - Sensitivity of Circular level vial on tribrach: 10'/2 mm
- 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 800MHz
- Memory: 512 MB RAM, 4 GB Flash Memory
- Internal Plummet: Optical or Class 2 Laser
  - Optical Plummet:
    - Magnification: 3x
    - Field of view: 5°
    - Minimum focusing distance: 0.5m
- Dimensions (W x D x H): 206 mm x 169 mm x 318 mm (8.1 in x 6.7 in x 12.5 in)
- Weight (approx.)
  - Main unit: 4.3 kg (9.5 lb)
  - Battery: 0.1 kg (0.2 lb)
  - Carrying case: 3.3 kg (7.3 lb)

Environmental

- Operating temperature range: –20 °C to +50 °C (–4 °F to +122 °F)
- Storage temperature range: –25 °C to +60 °C (–22 °F to +140 °F)
- Atmospheric correction:
  - Temperature range: –40 °C to +60 °C (–40 °F to +140 °F)
  - Barometric pressure range: 400 mmHg to 999 mmHg / 533 hPa to 1,332 hPa / 15.8 inHg to 39.3 inHg
- Dust and water protection: IP66

Certification

- Class B Part 15 FCC certification, CE Mark approval. RCM Mark.
- IEC60825-1 am 2007, IEC60825-1 am 2014, FDA notice 50
- Prism/Non-prism mode: Class 1 laser
- Laser Plummet/Laser Pointer: Class 2 laser

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

(2) Normal conditions (normal visibility, object in the shadow, moderate ambient light).

(3) Difficult conditions (haze, object in direct sunlight, high ambient light).

(4) Measuring time may vary depending on measuring distance and conditions. Specification based on average of repeated measurements.

(5) Battery life specification at 25 °C (77 °F). Operation times may vary depending on the condition and deterioration of the battery.

(6) Standard Deviation based on ISO 17123-4

(7) For both prism and non-prism modes, EDM accuracy in normal mode is ±(10+5 ppm × D) mm and fast mode is ±(20+5 ppm × D) mm.

Bluetooth type approvals are country specific.
Specifications subject to change without notice.

Bluetooth® CE

Contact Information:

AMERICAS

Spectra Precision Division
10368 Westmoor Drive
Westminster, CO 80021, USA

+1-720-587-4700 Phone
888-477-7516 (Toll Free in USA)

EUROPE, MIDDLE EAST AND AFRICA

Spectra Precision Division
Rue Thomas Edison
ZAC de la Fleuriaye - CS 60433
44474 Carquefou (Nantes), France

+33 (0)2 28 09 38 00 Phone

ASIA-PACIFIC

Spectra Precision Division
80 Marine Parade Road
#22-06, Parkway Parade
Singapore 449269, Singapore

+65-6348-2212 Phone

www.spectraprecision.com

Specifications subject to change without notice.
©2017, Trimble Inc. All rights reserved. Nikon is a registered trademark of Nikon Corporation. All other trademarks are the property of their respective owners.
Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. (2017/10)