1”, 2”, 3”, and 5” accuracies
Choice of EDM
Survey Pro and Layout Pro onboard
Dual color touchscreen displays
Optional L2P asset protection
PIN security
Superior Nikon optics
Hot swappable batteries
Made in Japan

THE NIKON XF SERIES IS BUILT TOUGH FOR ALL OCCASIONS.

Nikon XF Series, a total station for everyone

The Nikon XF mechanical total station is packed with features that make survey work easier and faster. The superior Nikon optics give crisp, bright sightings even in low light conditions.

Nikon XF portfolio gives the opportunity to choose the electronic distance measuring (EDM) technology that works best for the type of work being performed.

Choose the EDM for the work you do:

Both the Nikon XF and Nikon XF HP total stations can measure to prisms and non-prism objects at various ranges, the EDM technology in each lends itself to specific situations.

### TIME OF FLIGHT EDM STRENGTHS
- Long range
- Very powerful, very fast

### PHASE SHIFT EDM STRENGTHS
- Easy non-prism edge and corner measurements
- High precision

#### Nikon XF

**TO PRISMS**
- 5,000 m Range
- $\pm (2 + 2 \text{ ppm} \times D)$ mm
- 0.5 s Measuring interval in normal mode

**TO NON-PRISMS**
- 800 m Range
- $\pm (3 + 2 \text{ ppm} \times D)$ mm
- Beam divergence of 60 mm at 30 m
- 12 h Operating time
- Optical or laser plummet

#### Nikon XF HP

**TO PRISMS**
- 3,000 m Range
- $\pm (1 + 1.5 \text{ ppm} \times D)$ mm
- 1.5 s Measuring interval in normal mode

**TO NON-PRISMS**
- 500 m Range
- $\pm (2 + 2 \text{ ppm} \times D)$ mm
- Beam divergence of 26 mm at 30 m
- 18 h Operating time
- Optical plummet

spectrageospatial.com
DISTANCE MEASUREMENT
Range with specified prisms

Good conditions¹
With single prism 8.25 cm (3.25 in)
With reflector sheet 5 cm x 5 cm (2 in x 2 in)
Non-Prism mode
XF
XF HP
350 m (1,148 ft)
350 m (1,148 ft)
300 m (984 ft)
300 m (984 ft)
200 m (656 ft)
200 m (656 ft)
100 m (328 ft)
100 m (328 ft)
30 m (98 ft)
30 m (98 ft)
20 m (65 ft)
20 m (65 ft)
10 m (33 ft)
10 m (33 ft)
5 m (16 ft)
5 m (16 ft)
3 m (10 ft)
3 m (10 ft)
2 m (6.5 ft)
2 m (6.5 ft)
1 m (3.3 ft)
1 m (3.3 ft)
0.5 m (1.6 ft)
0.5 m (1.6 ft)

Accuracy in precise mode³

<table>
<thead>
<tr>
<th>Mode</th>
<th>XF</th>
<th>XF HP⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prism⁷</td>
<td>±(2+2 ppm x D) mm</td>
<td>±(1+1.5 ppm x D) mm</td>
</tr>
<tr>
<td>Non-Prism⁷</td>
<td>±(3+2 ppm x D) mm</td>
<td>±(2+2 ppm x D) mm</td>
</tr>
</tbody>
</table>

Measuring interval⁵

<table>
<thead>
<tr>
<th>Mode</th>
<th>Precise mode</th>
<th>Normal mode</th>
<th>Fast mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prism Mode</td>
<td>1.0 s</td>
<td>0.5 s</td>
<td>0.3 s</td>
</tr>
<tr>
<td>Non-Prism Mode</td>
<td>1.0 s</td>
<td>0.5 s</td>
<td>0.3 s</td>
</tr>
<tr>
<td>XF HP</td>
<td>1.6 s</td>
<td>1.2 s</td>
<td>1.6 s</td>
</tr>
</tbody>
</table>

ANALOG MEASUREMENT

Accuracy
(Standard Deviation based on ISO 1723-3)...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: Diometrical/Single

TELESCOPE

<table>
<thead>
<tr>
<th>Tube length</th>
<th>Image</th>
<th>Magnification</th>
<th>Effective diameter of objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>128 mm (5.0 in)</td>
<td>Rect</td>
<td>30-180x/30x with optional eyepieces</td>
<td>45 mm</td>
</tr>
</tbody>
</table>

EDM

<table>
<thead>
<tr>
<th>Field of view</th>
<th>Resolving power</th>
<th>Minimum focusing distance</th>
<th>Tracklight</th>
<th>Reticle Illumination</th>
</tr>
</thead>
<tbody>
<tr>
<td>F/25</td>
<td>3'</td>
<td>1.5 (4.9 ft)</td>
<td>Yes</td>
<td>Yes, 4 steps</td>
</tr>
</tbody>
</table>

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
Charging time: 6 h

Operating time
Continuous angle-only measurement: 14 h | 19 h
Distance and angle measurement every 30s with Autofocus: 12 h | 18 h
Continuous distance and angle measurement: 7 h | 10.5 h

GENERAL SPECIFICATIONS

Autofocus
XF: Yes
XF HP: No

Tangent Clamps: No

Level vials
Sensitivity of Circular level vial on tripod: 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
XF: Optical or Class 2 Laser
XF HP: Optical

Optical Plummet
Magnification: 3x
Field of view: 5°
Minimum focusing distance: 0.5 m

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)
XF HP: 4.4 kg (9.7 lb)
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 (-13 °F to +140 °F)

Atmospheric Correction
Temperature range: -40 °C to +40 °C (-40 °F to +104 °F)
Barometric pressure range: 600 mmHg to 999 mmHg / 533 hPa to 1,332 hPa / 15.8 inHg to 39.3 inHg
Dust and water protection: IP66

CERTIFICATION

Class II Part 15 FCC certification, CE Mark approval, RCM Mark.
XM908295-1am 2007, IEC608295-1am 2014, FDA notice 50, EAC / NCC
XF: Prism/Non-prism mode: Class I laser
Laser Plummet / Laser Pointer: Class II laser
XF HP: Prism mode: Class I laser
Non-prism mode / Laser Pointer: Class III laser

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

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 (in direct sunlight, high ambient light).
4. Measuring time may vary depending on measuring distance and conditions.
5. Specifications based on average of repeated measurements.
6. Standard Deviation based on ISO 1723-1
7. IEC accuracy in fast mode for XF only: ±(20+5 ppm × D) mm.
8. IEC accuracy in fast mode for XF only: ±(50+10 ppm × D) mm.
9. Bluetooth type approvals are country specific.
10. Bluetooth type approvals are country specific.