Fast EDM, 16-hour battery and superior Nikon optics

The Nikon® DTM/NPL-302 Series total stations from Tripod Data Systems™ (TDS) deliver a versatile, easy-to-use platform to help you get the job done right. Nikon’s world-renowned optics give you brighter, clearer images. Fast, accurate Electronic Distance Measurement (EDM) helps you move quickly from point to point. Battery life is the longest in the industry—16 hours—so you can work through even the longest day with no battery changes. The built-in software includes several easy-to-use alpha input modes to help you work more efficiently. And its lightweight, waterproof construction ensures reliable performance in tough field conditions.

**See brighter, sharper, clearer images**
You’ll see the difference when you look through a Nikon total station. Nikon’s legendary optics effectively let in more light. The result is brighter, sharper images, even in the low-visibility conditions typical in the field. You’ll see much more detail and much less distortion, especially over longer distances. Better optics help you aim more precisely, and they’re much easier on your eyes—something you’ll really appreciate on long workdays.

All Nikon telescopes use a unique linear focusing mechanism that improves focusing at both short and long distances. And the large focusing knob is easy to use even when you’re wearing gloves.

**16-hour battery and rugged construction keep you going in the field**
The 302 Series features the industry’s longest-lasting battery—a BC-65 clip-on that gives you 16 hours of continuous distance/angle measurement; with one measurement every 30 seconds, battery life extends to 27 hours. That means you can work all day without having to stop and change the battery.

The 302 Series also features rugged, lightweight construction for reliable performance in the field—just 11.5 to 12.1 lbs with battery, depending on model. And all 302 Series total stations come with an IPX6 waterproof rating. That means the total station can withstand a powerful jet of water with no harmful effects. You can count on your total station to work just as hard as you do.
Prism or reflectorless—Nikon total stations

Fast, accurate distance measurement

The 302 Series models are among the fastest total stations in their class, with 1.4-second initial measurement and 1.0-second updates for DTM models in normal mode. This fast EDM helps you move quickly through your survey routines so you spend less time in the field.

The 302 Series is also extremely precise, with accuracy of \( \pm(3+2 \text{ ppm} \times D) \) mm for DTM models in precise mode. DTM models also feature advanced software to ensure measurements taken using reflector sheets are as fast and accurate as those taken with glass prisms.

NPL-352/332 pulse laser stations support reflectorless applications

The NPL-352/332 pulse laser stations deliver productivity and performance in reflectorless total station models. The NPL-302 Series build on the features of the DTM-302 Series to create the world’s first high-precision coaxial, focusing, reflectorless EDM. This lets you survey environments inaccessible to prism-based systems without compromising speed or accuracy.

The NPL-352/332 pulse laser stations use a Class 1 laser to measure points with accuracy of \( \pm(5+2 \text{ ppm} \times D) \) mm in precise mode. You can use the NPL-352/332 with reflector sheets or a standard prism. With a single prism, you can measure up to 16,400 ft (5 km), ideal for large-scale survey applications. What’s more, two independent measurement keys let you take measurements using both prism and reflectorless modes on the same job.

DTM/NPL-302 Series system diagram

The DTM/NPL-302 Series is available with a variety of accessories.
deliver speed, accuracy, ease of use

Part of the complete data collection system from TDS

The 302 Series total stations are part of a complete data collection system from TDS. For example, you can connect your total station to a rugged Ranger™ or Recon™ handheld for more flexible, powerful data collection capabilities. Both the Ranger and Recon meet military standards for durability, so you can count on them in the field.

Easy-to-use Survey Pro™ software has been the #1 choice of surveyors since 1995.1 All TDS products are designed to meet surveyors’ demanding requirements, helping you capture data accurately, work with it efficiently and present it to your clients professionally.


Large, easy-to-read display, ergonomic keypad and one-touch codes speed data input

All 302 Series models feature a large, easy-to-read LCD graphic display and an ergonomic keypad for efficient field operation. MENU, MODE and HOT keys give you easy access to frequently adjusted settings and job management functions. The full numeric keyboard makes it fast and easy to input angle and height of target data. Multiple code-input methods help speed data input as well. You can assign specific functions to the two USR keys for one-touch access to the functions you use most. You can also assign up to 10 one-touch Quick Codes to the numeric keys 0 through 9. Once you’ve defined your codes, you simply aim at the target and press one of the Quick Code keys to measure and record a point with full coding.

Easy-to-use keypad features USR, Quick Code keys
To speed up data input, you can assign frequently used functions to the two USR keys. You can also define up to 10 one-touch Quick Codes; simply aim at the target and press one of the Quick Code keys to measure and record a point with the assigned code.

The 302 Series’ internal memory can store up to 10,000 data records in up to 32 separate jobs. You can check, edit, delete, input and search for job file data directly on the total station. Plus, you can save survey control-point coordinates in a job file, then access that data from other jobs.

Connect a TDS Recon for more data collection capabilities
You can expand your data collection capabilities by connecting a TDS Recon (shown) or Ranger data collector to the 302 Series total station.

BASIC MSMT SCREEN
MSR 1
MSR 2
DSP
ANG
STN
S-O
0/5
PRS
DAT
USR definable
COD
HOT
Leveling

302 Series menu tree

ANG
1. 0-set
2. Input angle
3. Repeat angle
4. F1/F2 measurement
5. Hold

STN
1. Known station setup
2. Reaction
3. Quick station setup
4. Remote benchmark
5. Backsight check
6. Base XYZ
7. Known line

STAKEOUT
1. Angle & distance
2. Coordinate
3. Divide line S-O
4. Reference line S-O

OFFSET MEASUREMENT
1. 2Pt reference line
2. Angle
3. 2-Pole pole
4. Line by HA
5. Input HD
6. Corner
7. Circle
8. Input dSD

PRG
1. 2Pt reference line
2. Arc reference line
3. RDH (radial)
4. RDH (continuous)
5. Remote elevation
6. Vertical plane
7. Sloped plane

HOT
1. Height of target
2. Temp. & pressure
3. Target settings
4. Notes input

MENU
1. Job manager
2. COGO
3. Settings
4. Data view/edit
5. Communications
6. Key settings
7. Calibration
8. Time & date

COGO
1. Inverse
2. Input
3. Area & perimeter
4. Line & O/S
5. Intersection
DTM/NPL-302 Series Specifications

**TELESCOPE**
- **DTM-352**: 6.22 in (158 mm), Erect, 1.77 in (45 mm), EDM: 1.97 in (50 mm), w/optional eyepieces
- **DTM-332**: 6.22 in (158 mm), Erect, 1.77 in (45 mm), EDM: 1.97 in (50 mm), w/optional eyepieces
- **NPL-352**: 6.02 in (153 mm), Erect, 1.57 in (40 mm), EDM: 1.97 in (50 mm), w/optional eyepieces
- **NPL-332**: 6.02 in (153 mm), Erect, 1.57 in (40 mm), EDM: 1.97 in (50 mm), w/optional eyepieces

**MAGNIFICATION**
- **DTM-352**: 33x (21x/41x)
- **DTM-332**: 33x (21x/41x)
- **NPL-352**: 26x (16x/32x)
- **NPL-332**: 26x (16x/32x)

**FIELD OF VIEW**
- **DTM-352**: 1°20'
- **DTM-332**: 1°20'
- **NPL-352**: 1°30'
- **NPL-332**: 1°30'

**RESOLVING POWER**
- **DTM-352**: 2.5
- **DTM-332**: 2.5
- **NPL-352**: 3
- **NPL-332**: 3

**MINIMUM FOCUSING DISTANCE**
- **DTM-352**: 4.26 ft (1.3 m)
- **DTM-332**: 4.26 ft (1.3 m)
- **NPL-352**: 5.3 ft (1.6 m)
- **NPL-332**: 5.3 ft (1.6 m)

**DISTANCE MEASUREMENT**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Reflectorless/Precise Mode</th>
<th>Reflectorless/Normal Mode</th>
<th>Prism/Precise Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Under good conditions</strong></td>
<td>±(5+2 ppm x D) mm</td>
<td>±(5+2 ppm x D) mm</td>
<td>±(5+2 ppm x D) mm</td>
</tr>
<tr>
<td>With reflector sheet</td>
<td>16.4 to 328 ft (5 to 100 m)</td>
<td>16.4 to 328 ft (5 to 100 m)</td>
<td>16.4 to 328 ft (5 to 100 m)</td>
</tr>
<tr>
<td>With mini prism</td>
<td>3,280 ft (1,000 m)</td>
<td>3,280 ft (1,000 m)</td>
<td>3,280 ft (1,000 m)</td>
</tr>
<tr>
<td>With single prism</td>
<td>6,560 ft (2,000 m)</td>
<td>6,560 ft (2,000 m)</td>
<td>6,560 ft (2,000 m)</td>
</tr>
<tr>
<td>With triple prism</td>
<td>8,530 ft (2,600 m)</td>
<td>8,530 ft (2,600 m)</td>
<td>8,530 ft (2,600 m)</td>
</tr>
</tbody>
</table>

**LEAST COUNT**
- **DTM-352**: 0.002 ft (1 mm)
- **DTM-332**: 0.002 ft (1 mm)
- **NPL-352**: 0.002 ft (1 mm)
- **NPL-332**: 0.002 ft (1 mm)

**MEASURING INTERVALS**

<table>
<thead>
<tr>
<th>Mode</th>
<th>Normal</th>
<th>Increasing</th>
<th>With Mini Prism</th>
<th>With Single Prism</th>
<th>With Triplet Prism</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Normal mode</strong></td>
<td>0.002 ft (1 mm)</td>
<td>0.002 ft (1 mm)</td>
<td>0.002 ft (1 mm)</td>
<td>0.002 ft (1 mm)</td>
<td></td>
</tr>
<tr>
<td><strong>Precise mode</strong></td>
<td>0.002 ft (1 mm)</td>
<td>0.002 ft (1 mm)</td>
<td>0.002 ft (1 mm)</td>
<td>0.002 ft (1 mm)</td>
<td></td>
</tr>
</tbody>
</table>

**ANGLE MEASUREMENT**

<table>
<thead>
<tr>
<th>Mode</th>
<th>Normal</th>
<th>Increasing</th>
<th>With Mini Prism</th>
<th>With Single Prism</th>
<th>With Triplet Prism</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Normal mode</strong></td>
<td>0.2 ft (10 mm)</td>
<td>0.2 ft (10 mm)</td>
<td>0.2 ft (10 mm)</td>
<td>0.2 ft (10 mm)</td>
<td></td>
</tr>
<tr>
<td><strong>Precise mode</strong></td>
<td>0.1 ft (5 mm)</td>
<td>0.1 ft (5 mm)</td>
<td>0.1 ft (5 mm)</td>
<td>0.1 ft (5 mm)</td>
<td></td>
</tr>
</tbody>
</table>

**OPTICAL PLUMBET**
- **DTM-352**: 0.2/1/2 mgon
- **DTM-332**: 0.2/1/2 mgon
- **NPL-352**: 0.2/1/2 mgon
- **NPL-332**: 0.2/1/2 mgon

**AMBIENT TEMPERATURE RANGE**
- 4 to 122 °F (-20 to 50 °C)

**ATMOSPHERIC CORRECTION**
- Temperature range: 40 to 140 °F (40 to 60 °C)
- Barometric pressure: 15.8 to 39.3 inHg (400 to 999 mmHg/333 to 1332 hPa)

**POWER SUPPLY**
- **Carrying case**: 5.3 lbs (2.4 kg) (DTM-352/DTM-332)
- **Battery charger**: 1.3 lbs (0.6 kg)
- **Main unit**: 7.1 lbs (3.2 kg) (NPL-352/NPL-332)
- **Clip-on battery**: 9.9 lbs (0.4 kg)

**DISPLAY**
- Type: Graphic LCD (128 x 64 pixel)

**TRIPOD DATA SYSTEMS**
P.O. Box 947, Corvallis, OR 97339