DATASHEET

The Trimble® TS600 Series Total Stations are rugged, feature-packed mechanical total stations designed to meet the needs of concrete and general contractors performing layout and alignment for building construction. Use the Trimble TS635/662 alone or partner it with the Trimble LM80 Layout Manager.

UNSURPASSED RELIABILITY FROM A BEST-IN-CLASS TOTAL STATION
The Trimble TS600 Series delivers practical hardware and software in a rugged (IP66)—but sleek and compact—housing.

The Advanced Features You Need for Every Job
Whether setting out points to align concrete forms, setting anchor bolts, staking building corners, or creating offset points for column lines, the Trimble TS635/662 makes your job more efficient and profitable, safer and easier:

• Long-range reflectorless DR (Direct Reflex) capability for efficient one-person measurements
• Proven, powerful, easy-to-use Trimble TS total station software in TS635
• Extended onboard software of TS662 provides additional data collection and layout features including RAW data storage.
• TS600 Series offers either 5 second or 2 second angular accuracy.

The software delivers powerful construction-specific layout programs, data collection and feature coding, stakeout programs, COGO calculation programs, and measurement functions. A full alpha-numeric keyboard provides dedicated keys for accessing software menus and modes. The TS662 on-board software offers additional functionality for the most demanding contractors.

BEST PERFORMANCE AND ACCURACY
You can always rely on the Trimble TS600 series to deliver the accuracy you need. Its industry-leading distance and measurement capabilities and simple interface let you take control of your layout needs without third parties.

By partnering the TS600 series with the LM80, you can achieve even greater performance via the LM80’s powerful link to CAD or BIM software: Generate point position and description information directly from a file and effortlessly transfer this data between office and field.

A CONSTRUCTION LAYOUT SOLUTION FROM THE POSITIONING LEADER
Trimble is the industry leader in high-accuracy and precision positioning, delivering the latest in technology for construction layout solutions. So with the Trimble TS600 series Total Station you can be assured of the quality of your work, and confidently stake your reputation on your results. In addition, Trimble 24/7 worldwide support means you are never alone; the surveying and construction professionals at Trimble are ready to lend a hand whenever you need it.
DISTANCE MEASUREMENT

Range with specified prisms (Good conditions)i

<table>
<thead>
<tr>
<th></th>
<th>TS662</th>
<th>TS635</th>
</tr>
</thead>
<tbody>
<tr>
<td>With reflector sheet 5 cm x 5 cm (2 in x 2 in)</td>
<td>1.5 m to 270 m (4.9 ft to 886 ft)</td>
<td>1.5 m to 300 m (4.9 ft to 984 ft)</td>
</tr>
<tr>
<td>With single prism 6.25 cm (2.5 in)</td>
<td>1.5 m to 3,000 m (4.9 ft to 9,843 ft)</td>
<td>1.5 m to 5,000 m (4.9 ft to 16,404 ft)</td>
</tr>
</tbody>
</table>

Range reflectorless mode

<table>
<thead>
<tr>
<th></th>
<th>TS662 Goodd</th>
<th>Normald</th>
<th>Difficultd</th>
</tr>
</thead>
<tbody>
<tr>
<td>KGc (18%)</td>
<td>350 m (1,148 ft)</td>
<td>250 m (820 ft)</td>
<td>200 m (656 ft)</td>
</tr>
<tr>
<td>KGc (90%)</td>
<td>500 m (1,640 ft)</td>
<td>400 m (1,312 ft)</td>
<td>250 m (820 ft)</td>
</tr>
</tbody>
</table>

5.0 m (16.4 ft) to ∞

Shortest possible range... 1.5 m (4.9 ft)

Accuracy (Precise mode) (Standard deviation based on ISO 17123-4)

<table>
<thead>
<tr>
<th></th>
<th>Precise mode</th>
<th>Normal mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prism</td>
<td>±(2+2 ppm x D) mm</td>
<td>±(3+2 ppm x D) mm</td>
</tr>
<tr>
<td>Reflectors</td>
<td>±(2+2 ppm x D) mm</td>
<td>±(3+2 ppm x D) mm</td>
</tr>
<tr>
<td>Prism mode</td>
<td>TS662: 1.6 s</td>
<td>0.8 s</td>
</tr>
<tr>
<td></td>
<td>TS635: 1.5 s</td>
<td>0.8 s</td>
</tr>
<tr>
<td>Reflectors mode</td>
<td>TS662: 2.1 s</td>
<td>1.2 s</td>
</tr>
<tr>
<td></td>
<td>TS635: 1.8 s</td>
<td>1.0 s</td>
</tr>
<tr>
<td>Least count</td>
<td>1 mm (0.002 ft)</td>
<td>10 mm (0.02 ft)</td>
</tr>
</tbody>
</table>

ANGLE MEASUREMENT

ISO 17123-3 accuracy (horizontal and vertical) 2°/0.6 mgon TS662
5°/1.5 mgon TS635

Reading system... Absolute encoder

Circle diameter... 62 mm (2.4 in)

Horizontal/Vertical angle... Diometrical TS662

Single TS635

Minimum increment... Degree: 1/5°/10"

Gon: 0.2/1/2 mgon

MIL6400: 0.005/0.02/0.05 mil

TELESCOPE

Tube length... 125 mm (4.9 in)

Image... Erect

Magnification... 30x (18x36x with optional eyepieces)

TS662 Effective diameter of objective... 40 mm (1.6 in)

TS662 EDM diameter... 45 mm (1.8 in)

TS635 Effective diameter of objective... 45 mm (1.8 in)

TS635 EDM diameter... 50 mm (2.0 in)

Field of view... 1°/20"

Resolving power... 3"

Minimum focusing distance... 1.5 m (4.9 ft)

Laser Pointer... Coaxial Red Light

TILT SENSOR

Type... Dual-axis

Method... Liquid-electric detection

Compensation range... ±3.5°

COMMUNICATIONS

Communication ports... 1 x serial (RS-232C)

Wireless communications... Integrated Bluetooth

POWER

Internal Li-ion battery (x2)

Output voltage... 3.8 V DC

Operating time... TS662: approx. 19 hours (continuous distance/angle measurement)

approx. 57 hours (distance/angle measurement every 30 seconds)

approx. 62 hours (continuous angle measurement)

TS635: approx. 10 hours (continuous distance/angle measurement)

approx. 26 hours (distance/angle measurement every 30 seconds)

approx. 31 hours (continuous angle measurement)

Charging time... Full charge... 4 hours

GENERAL SPECIFICATIONS

Level vials... Sensitivity of circular level vial... 10'/2 mm

Optical plummet... Image... Erect

Magnification... 3x

Field of view... 5°

Focusing range... 0.5 m (1.6 ft) to ∞

Display face... Backlit, graphic LCD (128x64 pixel)

Laser plummet (optional)... 4 levels

Point memory... 10,000 records

Dimensions (W x D x H)... 149 mm x 145 mm x 306 mm

(5.8 in x 5.7 in x 12.0 in)

Weight (approx.)

TS662 Main unit (without batteries)... 3.8 kg (8.4 lb)

TS635 Main unit (without batteries)... 3.6 kg (8.0 lb)

Battery... 0.1 kg (0.2 lb)

Carrying case... 2.3 kg (5.1 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... −40 °C to +60 °C (-40 °F to +140 °F)

Barometric pressure... 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, C-Tick.

Laser safety IEC 60825-1:2007

TS662 Prism mode: Class 1 laser

TS662 Reflectorless / Laser Pointer: Class 3R laser

TS635 Reflectorless / Prism mode: Class 1 laser

TS635 Laser Pointer: Class 2 laser

Laser Pl plummet (optional): Class 2 laser

Bluetooth type approvals are country specific.

Specifications subject to change without notice.

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