

R80 Motorized Total Station

Motorized Total Station
for high-precision
works



R80 **Motorized** **TOTAL STATION**

Stonex R80 is a Motorized Total Station for classic jobs for survey and stakeout and perfect for high precision surveying areas, such as rail traffic monitoring, control of structures, bridges, dams and landslide areas.

R80 adopts up to date automatic prism recognition and positioning technology and has a high accuracy of 1".

R80 has a distance measurement accuracy of 1 mm + 1 ppm (Prism) and a 1.000 m long range reflectorless distance measurement.

This advanced Total Station run Windows CE 7.0 operating system and each user can choose the software that best suits own needs. It supports also SDK and external control protocol for software developing.

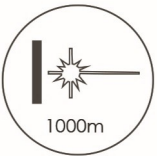
R80 is the perfect solution for monitoring because through the remote control software is possible turning the instrument on and off and have a tool of survey management of difficult and complex areas.



HIGH PRECISION SURVEYING

Angle measurement accuracy 1"

Distance measurement accuracy 1 mm + 1 ppm (Prism)



LONG DISTANCE REFLECTORLESS

By using digital phase laser ranging technology, R80 guarantees high accuracy long range measurements: up to 1.000 m in reflectorless mode and up to 5.000 m using a single prism, with millimeter accuracy.



BLUETOOTH LONG RANGE

Use R80 built in Bluetooth for medium range data transfer or its dedicated long range Bluetooth handle for highest performance over long distances.



HIGH QUALITY SOFTWARE

Windows CE 7.0 operating system. Supports SDK and external control protocol for software developing





R80 Motorized TS

The best solution for Monitoring

R80 combines the power of a Total Station and the capabilities of a remote control. The monitoring of large and small structural works has never been so simple and accurate. With our Software and R80 your work will be like never before.



R80 TECHNICAL FEATURES

ANGLE MEASUREMENT

Accuracy ¹	1"
Reading system	Absolute, continuous four-quadrant
Display Resolution (selectable)	0.1" / 0.5" / 1"
Angle Units	DEG 360°/GON 400/MIL 6.400

TELESCOPE

Magnification/ Field of view	30x/1°20'
Tube length	156 mm
Minimum focus distance	1.5 m
Reticle	10 brightness levels adjustable
Objective aperture	φ 45 mm
Laser pointer	Red light, coaxial

TILT SENSOR

Type	Electronic, quadruple-axis
Compensation range/accuracy	± 3.0'/1"

DISTANCE MEASUREMENT RANGE²

Standard mode prism	2.500 m ³
Long mode prism	5.000 m ⁴
Reflective sheet (6cm x 6cm)	800 m ⁴
Reflectorless ⁵	Up to 1.000 m ⁴

DISTANCE MEASUREMENT ACCURACY⁶

Standard mode prism	1 mm + 1 ppm
Long mode prism	4 mm + 2 ppm
Reflective sheet (6cm x 6cm)	2 mm + 2 ppm
Reflectorless	3 mm + 2 ppm

MEASUREMENT TIME

Standard mode/Prism (Tracking/Fine)	0.4/ 0.8 sec
Reflectorless	1.5÷3 sec

DISTANCE MEASUREMENT

Distance Unit	m/US ft/INT ft
Display Resolution (selectable)	0.0001m/0.001m 0.001ft/0.01ft

MOTORIZATION

Technology	Gear motor drives
Max rotation speed	35°/sec
AIM accuracy	±1.5", ±1.5 mm @ <100 m
AIM range	1000 m at round prism
Search range	800 m at round prism
Lock range	600 m at round prism
Max lock speed	50 km/h at 100 m

LASER PLUMMET

Laser type	635nm semiconductor laser
Accuracy	1mm/1.5 m
Spot	± 1.5mm/1.5 m

LEVEL VIAL SENSITIVITY

Plate level	30"/2mm
Circular level	8'/2mm

ENVIRONMENTAL CONDITIONS

Operating Temperature	-20° C +50° C
Storage Temperature	-40° C +70° C
Waterproof/Dustproof	IP55

PHYSICAL SPECIFICATION

Dimensions	220 x 225 x 380 mm
Weight including battery and tribrach	7.9 Kg

POWER

Battery Voltage/Capacity	7.4V/5.800mAh Li-ion
Operating time	5-8 hours
Battery charger	110/220V, charging time 4h

OTHER SPECIFICATIONS

CPU	ARM Cortex A8
Display/Keyboard	Two sides, 3.5" color TFTLCD 320x240 pixel touch screen
OS	Windows CE 7.0
Memory	4Gb internal
Interface	RS-232C/standard USB/ mini USB/Bluetooth long range
Guide Light	100 m
Sensor	Temperature/Pressure

Illustrations, descriptions and technical specifications are not binding and may change

1 Standard deviation based on ISO 17123-3

2 Good condition: no haze, visibility about 40km, no heat shimmer, breeze.
Under optimal conditions on Kodak Grey Card (90% reflective)

3 Class 1

4 Class 3R

5 Under optimal conditions on good surface

6 Standard deviation based on ISO 17123-4

STONEX AUTHORIZED DEALER

STONEX®
Part of **UniStrong**

Via Cimabue 39 - 20851 Lissone (MB) Italy
Phone +39 039 2783008 | Fax +39 039 2789576
www.stonex.it | info@stonex.it