FX Series

FX-101/FX-102/FX-103/FX-105/FX-107

Functional X-ellence Station

SPECIFICATIONS

Model		FX-101	FX-102	FX-103	FX-105	FX-107
Telescope						
Magnification / Resolving power		30x / 2.5"				30x / 3.5"
Others		Length: 171mm (6.7in.), Objective aperture: 45mm (1.8in.) (48mm (1.9in.) for EDM), Image: Erect, Field of view: 1°30' (26m/1,000m), Minimum focus: 1.3m (4.3ft.), Reticle illumination: 5 brightness levels				
Angle measurement						
Display resolution		0.5" / 1" (0.0001 / 0.0002gon, 0.002 / 0.005mil)	1" / 5" (0.0002 / 0.001gon, 0.005 / 0.02mil)			
Accuracy (ISO 17123-3:2001)		1"	2"	3"	5"	7"
IACS (Independent Angle Calibration System)		Provided		-		
Dual-axis compensator / Collimation compensation		Dual-axis liquid tilt sensor, working range: ±6' (±111mgon) / Collimation compensation available				
Distance measurement						
Laser output *1		Reflectorless mode: Class 3R / Prism / sheet mode: Class 1				
Measuring range (under average conditions*2)	Reflectorless*3	0.3 to 500m (1.0 to 1,640ft.)				
	Reflective sheet*4/*5	RS90N-K: 1.3 to 500m (4.3 to 1,640ft.) , RS50N-K: 1.3 to 300m (4.3 to 980ft.), RS10N-K: 1.3 to 100m (4.3 to 320ft.)				
	Mini prisms	CP01: 1.3 to 2,500m (8,200ft.), OR1PA: 1.3 to 500m (1,640ft.)				
	One AP prism	1.3 to 4,000m (4.3 to 13,120ft.) / Under good conditions*6: 5,000m (16,400ft.)				
	Three AP prisms	to 5,000m (16,400ft.) / Under good conditions*6: to 6,000m (19,680ft.)				
Display resolution		Fine/Rapid: 0.001m / 0.01ft. / 1/8in. Tracking: 0.01m / 0.1ft. / 1/2in.				
Accuracy*2 (ISO 17123-4:2001) (D=measuring distance in mm)	Reflectorless*3	(3 + 2ppm x D) mm*7				
	Reflective sheet*4	(3 + 2ppm x D) mm				
	AP/CP prism	(2 + 2ppm x D) mm				
Measuring time*8		Fine: 0.9s (initial 1.7s), Rapid: 0.7s (initial 1.4s), Tracking: 0.3s (initial 1.4s)				
OS, Interface and Data management						
Operating system / Application		Microsoft Windows® CE 6.0 / MAGNET Field				
Display / Keyboard		3.5inch, Semi-transmissive TFT QVGA color LCD with LED backlight, Touch screen, Automatic brightness control / 26 keys with backlight				
Control panel location*9		On both faces (Face 2 is only touch screen display)				On one face
Trigger key		On right instrument support				
Data storage	Internal memory	500MB internal memory (includes memory for program files)				
	Plug-in memory device	USB flash memory (max. 8GB)				
Interface		Serial RS-232C, USB2.0 (Type A / mini B)				
Bluetooth modem (Factory option)*10		Bluetooth Class 1, Ver.2.1+EDR, Operating range: up to 300m (980ft.)*11				
General						
Laser-pointer*12		Coaxial red laser using EDM beam				
Guide light*12		Green LED (524nm) and Red LED (626nm), Operating range: 1.3 to 150m (4.3 to 490ft.)*2				
Levels	Graphic	6' (Inner Circle)				
	Circular level	10' / 2mm				
Optical plummet		Magnification: 3x, Minimum focus: 0.3m (11.8in.) from tribrach bottom				
Laser plummet (option)		Red laser diode (635nm±10nm), Beam accuracy: ≦1.0mm@1.3m, Class 2 laser product				
Dust and water protection		IP65 (IEC 60529:2001)				
Operating temperature*13		-20 to +50ºC (-4 to +122ºF)				
Size with handle*9		Control panel on both faces: W191 x D190 x H348mm (W7.5 x D7.5 x H13.7in.) Control panel on one face: W191 x D174 x H348mm (W7.5 x D6.9 x H13.7in.)				
Weight with battery & tribrach		Approx. 5.7kg (12.6 lb.)				
Power supply						
Battery	BDC70 detachable battery	Li-ion rechargeable battery				
Operating time (20ºC)	BDC70	Approx. 20hours (single distance measurement every 30 seconds)				
	External battery*14 (option)	BDC60: approx. 24hours, BDC61: approx. 49hours (single distance measurement every 30 seconds)				

*1 IEC60825-1:Ed.2.0:2007 / FDA CDRH 21 CFR Part 1040.10 and 11 *2 Average conditions: Slight haze, visibility about 20km (12 miles), sunny periods, weak scintillation. *3 Fine mode. With Kodak Gray Card White Side (90% reflective). When brightness on measured surface is 30,000 lx. or less. Reflectorless range/accuracy may vary according to measuring objects, observation situations and environmental conditions. *4 When the measuring beam's incidence angle is within 30º in relation to the reflective sheet target. *5 Measuring range in temperatures of -30 to -20ºC (-22 to -4ºF) with Low Temperature models and 50 to 60ºC (122 to 140ºF) with High Temperature models: RS90N-K: 1.3 to 300m (4.3 to 980ft.), RS50N-K: 1.3 to 180m (4.3 to 590ft.), RS10N-K: 1.3 to 60m (4.3 to 190ft.) *6 Good conditions: No haze, visibility about 40km (25 miles), overcast, no scintillation. *7 Measuring range:0.3 to 200m *8 Typical, under good conditions. Reflectorless measurement time may vary according to measuring objects, observation situations and environmental conditions. *9 Control panel location may vary depending on region or model. *10 Usage approval of Bluetooth wireless technology varies according to country. Please consult your local office or representative in advance. *11 No obstacles, few vehicles or sources of radio emissions/interference in the near vicinity of the instrument, no rain. *12 The laser-pointer and the guide light do not work simultaneously. *13 Low Temperature models:-30 to 50 ºC (-22 to 122ºF) and High Temperature models:-20 to 60ºC (-4 to 140ºF, No direct sunlight) are available on built-to-order basis. *14 For FX-101, FX-102 and Low Temperature models.

Standard Accessories

●FX main unit ●Battery (BDC70) ●Battery charger (CDC68) ●Power Cable ●Lens cap ●Lens hood ●Tool pouch ●Screwdriver ●Lens brush ●Adjusting pin x2 ●Cleaning cloth ●Operation manual ●USB memory ●Laser caution sign-board ●Carrying case ●Carrying strap

TOPCON

TOPCON CORPORATION

75-1 Hasunuma-cho, Itabashi-ku, Tokyo 174-8580, Japan
Phone: (+81)3-3558-2993 Fax: (+81)3-3960-4214
www.topcon.co.jp

<Contact to>

Sokkia Singapore Positioning Sales Pte. Ltd.
60 Alexandra Terrace, #08-27 The Comtech, Singapore 118502
Phone: (+65)6479-3966 Fax : (+65)6479-4966
Email : sales@sokkia.com.sg
Web : www.sokkia.com.sg/

Specifications subject to change without notice

Your local Authorized Dealer is:

SOKKIA

FX Series

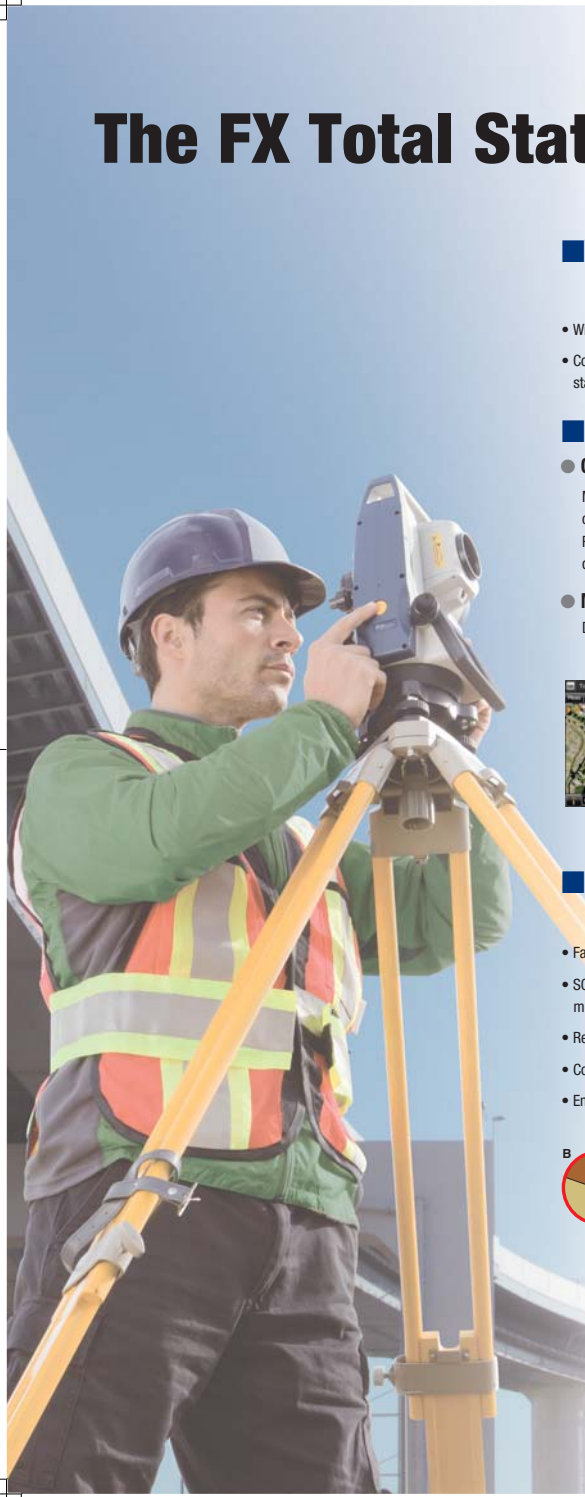
Functional X-ellence Station

Totally Functional

- Windows® CE is Ready in a Lightweight, Compact Body
- MAGNET™ Field On-Board Application Software
- RED-tech Technology Reflectorless EDM
- LongLink Data Communication*
- Advanced Angle Measurement System
- Long-lasting Battery
- Waterproof, Rugged, and Operator Friendly

*Offered as a factory option.

The FX Total Station Offers High Performance in a Compact Size.



■Windows® CE is Ready in a Lightweight, Compact Body

- Windows® CE 6.0 provides a comfortable operating environment.
- Completely new onboard application "MAGNET™ Field" is installed as standard feature.

■MAGNET™

Cloud-based Solutions for Precise Positioning

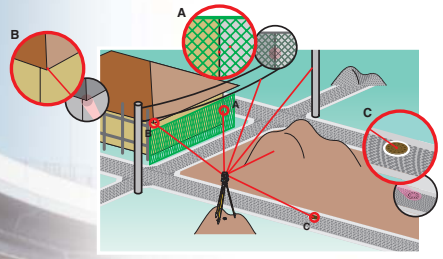
MAGNET™ is a software family that uses the "cloud" to seamlessly connect data in the field and office.
Real-time connections. When you need it. Where you need it. For data exchange, communications, asset tracking and more.

MAGNET™ Field

Data collection, stakeout, roads, and coordinate geometry.

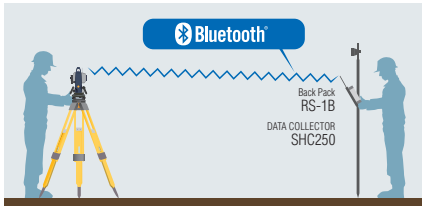
■RED-tech Technology Reflectorless EDM

- Fast distance measurement of 0.9s regardless of object.
- SOKKIA traditional pinpoint precision in reflectorless distance measurement.
- Reflectorless operation from 30cm to 500m.
- Coaxial EDM beam and laser-pointer provide fast and accurate aiming.
- Ensures accuracy even with reflective sheets.



The ultra-narrow EDM beam can precisely measure walls, corners, manholes on the road surface, even chain-link fences and tree branches.

■LongLink Data Communication*



- The FX series of total stations features ***Bluetooth***® Class1 wireless technology for reliable data communications.
- All FX data is instantly available at the Bluetooth-equipped controller.

*Offered as a factory option.

■Advanced Angle Measurement System

- FX features SOKKIA's original absolute encoders that provide long-term reliability in any job site condition. Dual-axis compensator ensures stable measurements even when setup on uneven terrain.

- Sokkia's traditional motion clamp and tangent screw are employed to ensure stable angle measurement.
- FX-101 and FX-102 feature groundbreaking IACS (Independent Angle Calibration System) technology for extremely reliable angle measurement.

■Long-lasting Battery

- Uses the same high capacity battery as MDTS and GNSS.
- One battery provides 20 hours of power.

■Waterproof, Rugged, and Operator Friendly

- IP65 dustproof / waterproof rating.
- Metal chassis and heavy duty handle.
- Standard usage temperature range -20 to +50°C. Low temperature models can be used as low as -30°C*2 and high temperature models up to +60°C.*2
- New star key [★] instantly brings up functions.
- Trigger key lets you take a series of measurements without taking your eye off the telescope.
- Control panel consists of 10-key pad with color LCD touch screen display.*2
- USB type A / mini B as well as serial ports.

- Green / Red telescope guide light enhances work efficiency in a range up to 150m.

- Built-in laser plummet with five brightness levels is equipped for quick instrument setting in all lighting conditions.*3

*1 Low and High temperature models available as options.

*2 Face 2 is only touch screen display. Control panel location may vary depending on region or model.

*3 Offered as an option in some areas.