

Sokkia FX-105 Reflectorless Total Station 5" FX Series



Year of Purchase: 2013

Cost: 73.83 Lac (24 Nos)

The FX was inspired by a long tradition of quality and reliability from Sokkia. This new series includes new features such as long-range Bluetooth built-in, and the TSshield advanced security and maintenance system.

FX Series Features

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

RED-Tech EDM Technology

A reliable technology from Sokkia has gotten even better. In side-by-side tests with competing instruments, the FX EDA outperformed the rest. The FX offers a tight beam signal and strong returns from the most difficult of surfaces — dark and wet.

TSshield Advanced Maintenance & Security

Every instrument has a telematics card installed that will communicate to the TSshield servers every day. The system then reviews current software and sends an x-alert to the FX total station if a newer version is available. The security comes from registration at the point of sale. This gives you the power to lock and unlock the operation of the FX. An owner can log into the TSshield website and lock an instrument if it is lost or stolen. This theft deterrent functionality is the first in the industry.

Long-Range Bluetooth Class 1 Communications, 300m+

When connected with an external data collector, the FX communication provides control at the remote rod position. The controller operator can record the data for codes and rod heights at the point of measurement. For stakeout, the remote operator can view directions required to find the next stake point. The system becomes a very productive system, similar to a robotic system where the instrument man simply needs to follow, aim, and focus on the remote prism. (Available in a future firmware.)

MAGNET Software

Achieve higher levels of production with MAGNET Field on-board software. All of the total station functions are available directly on-board the FX total station touch screen. Surveyors, contractors, engineers, and mapping professionals agree, MAGNET streamlines your workflow.

Specifications

Feature	Specifications
Telescope	
Magnification / Resolving power	30x / 2.5"
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	1" / 5" (0.0002 / 0.001gon, 0.005 / 0.02mil)
Accuracy (ISO 17123-3:2001)	5"
IACS (Independent Angle Calibration System)	NA
Dual-axis compensator / Collimation compensation	Dual-axis liquid tilt sensor, working range: ±6' (±111mgon) / Collimation compensation available
Laser output	Reflectorless mode: Class 3R / Prism / sheet mode: Class 1
Distance measurement	
Measuring range	
Reflectorless	0.3 to 500m (1.0 to 1,640ft.)
Reflective sheet	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	
Reflectorless	(3 + 2ppm x D) mm
Reflective sheet	(3 + 2ppm x D) mm
AP/CP prism	(2 + 2ppm x D) mm
Measuring time	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 Operating system / Application [®] 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	On both faces (Face 2 is only touch screen display)
Trigger key	On right instrument support
Data storage (Internal memory)	500MB internal memory (includes memory for program files)
Data storage (Plug-in memory device)	USB flash memory (max. 8GB)
Interface	Serial RS-232C, USB2.0 (Type A / mini B)
Bluetooth modem (Factory option)*	Bluetooth Class 1, Ver.2.1+EDR, Operating range: up to 300m (980ft.)
General	
Laser-pointer	Coaxial red laser using EDM beam
Guide light	Green LED (524nm) and Red LED (626nm), Operating range: 1.3 to 150m (4.3 to 490ft.)
Levels (Graphic)	6' (Inner Circle)
Levels (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*	-20 to +50°C (-4 to +122°F)
Size with handle	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	Li-ion rechargeable battery
Operating time (20°C)	Approx. 20hours (single distance measurement every 30 seconds)