

Topcon GM-60

Reflectorless total stations



Whether you are establishing control points, performing topographic surveys or laying out building foundations, the GM-60 delivers the essential accuracy you require. It provides dependable data across your core applications while streamlining your workflow to keep projects on schedule.

- » Fast, accurate reflectorless measurements up to 500m
- » Compact, lightweight design for easy portability
- » Built-in Bluetooth® for seamless connectivity
- » Long-lasting battery ensures 14-hour operation
- » Rugged, waterproof build with IP66 rating

Model		GM-62	GM-65
Telescope			
Magnification / Resolving power		30x / 2.5"	
Others		Length : 171 mm (6.7 in.), Objective aperture : 45 mm (1.8 in.) (48 mm (1.9 in.) for EDM), Image: Erect, Field of view: 1°30' (26 m/1,000 m), Minimum focus: 1.3 m (4.3 ft.), Reticle illumination: 5 brightness levels	
Angle measurement			
Minimum display		1"/5" (0.0002 / 0.001 gon, 0.005 / 0.02 mil)	
Accuracy (ISO 17123-3:2001)		2"	5"
Detecting		2 sides	1 side
Dual-axis compensator		Dual-axis liquid tilt sensor, working range: ±6'	
Collimation compensation		On/Off (selectable)	
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 500 m (1,640 ft.)	
	Reflective sheet ^{4 5}	RS90N-K: 1.3 to 500 m (4.3 to 1,640 ft.) RS50N-K: 1.3 to 300 m (4.3 to 980 ft.) RS10N-K: 1.3 to 100 m (4.3 to 320 ft.)	
	Mini pole prism Prism-5	1.3 to 500 m (4.3 to 1,640 ft.)	
	Standard prism Prism-2	1.3 to 4,000 m (4.3 to 13,120 ft.)	
Minimum display		Fine / Rapid: 0.0001 m (0.001 ft. / 1/16 in.) / 0.001 m (0.005 ft. / 1/8 in.) (selectable) Tracking / Road: 0.001 m (0.005 ft. / 1/8 in.) / 0.01 m (0.02 ft. / 1/2 in.) (selectable)	
Accuracy ² (ISO 17123-4:2001) (D=measuring distance in mm)	Reflectorless ³	(2 + 2 ppm x D) mm ⁶	
	Reflective sheet ^{4 5 7}	(2 + 2 ppm x D) mm	
	Prism ⁸	(1.5 + 2 ppm x D) mm	
Measuring time ⁹	Fine	0.9s (initial 1.5s)	
	Rapid	0.6 s (initial 1.3 s)	
	Tracking	0.4 s (initial 1.3 s)	

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OS, Interface and Data management		GM-62	GM-65
Operating system		Linux	
Display / Keyboard		Graphic LCD, 192 x 80 dots, backlight : on/off (Selectable) / Alphanumeric keyboard / 28 keys with backlight	
Operation panel		On both sides	On one side
Data storage	Internal memory	Approx. 50,000 points	
	External memory	USB flash memory (up to 64 GB)	
Interface		Serial RS-232C, USB2.0 (Type A for USB flash memory)	
	Bluetooth modem (option) ¹⁰	Bluetooth Class 1.5, Operating range: up to 10 m ¹¹	
General			
Laser-pointer		Coaxial red laser using EDM beam	
Levels	Graphic	6' (Inner Circle)	
	Circular level (on tribrach)	10' / 2 mm	
Plummet ¹³	Optical	Magnification: 3x, Minimum focus: 0.5 m (19.7 in.) from tribrach bottom	
	Laser	Red laser diode (635 nm ± 10 nm), Beam accuracy: <=1.0 mm @ 1.3 m, Class 2 laser product	
Dust and water protection / Operating temperature		IP66 (IEC 60529:2001) / -20 to +60°C (-4 to +140°F)	
Size with handle		200(W) x 181(D) x 348(H) mm (Display on both sides)	200(W) x 176(D) x 348(H) mm (Display on one side)
Instrument height		192.5mm from tribrach mounting surface	
Weight with battery & tribrach		5.3 kg (11.7 lb)	5.1 kg (11.3 lb)
Power supply			
Battery		Li-ion rechargeable battery BDC71	
Operating time (20°C) ¹²		Approx. 14hours	

¹ IEC60825-1:Ed.3.0:2014/ FDA CDRH 21CFR Part1040.10 AND1040.11

² Average conditions: Slight haze, visibility about 20 km (12 miles), sunny periods, weak scintillation.

³ 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 30° in relation to the reflective sheet target.

⁵ Measuring range in temperatures of 50 to 60°C (122 to 140°F): RS90N-K: 1.3 to 300 m (4.3 to 980 ft.), RS50N-K: 1.3 to 180 m (4.3 to 590 ft.), RS10N-K: 1.3 to 60 m (4.3 to 190 ft.)

⁶ Measuring range: 0.3 to 200 m

⁷ Figures when the laser beam strikes within 30° of the reflective sheet RS10N-K. When using other reflective sheet targets, face them directly toward the instrument and measure in both Faces 1 and 2 (direct and reverse).

⁸ Face the prism toward the instrument during the measurement with the distance at 10 m or less.

⁹ Good conditions: No haze, visibility about 40 km (25 miles), overcast, no scintillation.

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 Figures will change depending on observation conditions.

¹³ Plummet type depends on model and region.