

Topcon's new Measuring Stations MS05AX and MS1AX feature a number of technological and functional enhancements that provide higher accuracy, higher speed, and higher work efficiency in structural monitoring and large-scale 3D measurement applications.



# MS05AX / MS1AX



#### Auto-Collimation Accuracy

The auto-collimation accuracy with the standard prism is increased to 1", and the accuracy with a reflective sheet is also improved to 1mm@50m.

#### 400m Non-Prism Range (MS1AX)

The non-prism measurement range of the MS1AX model is doubled to 400m with Kodak white side (90% reflective).

#### Increased Rotation Speed

Incorporating the new servo-motors and driving mechanism, the maximum rotation speed is increased by 33 percent to 60°/s. The increased rotation speed reduces the total measurement time, especially in large-scale monitoring applications.

#### Enlarged LCD with Automatic Brightness Control

The LCD touch-screen display is enlarged to 3.7 inches. Incorporating a built-in light sensor, the MS-AX models automatically optimize the LCD brightness level.

#### Reflector Prescan\* for Monitoring Setup

This function dramatically improves the initial setup efficiency for structural monitoring applications.

The MS-AX models, in combination with the external control system, automatically search the predetermined area to quickly locate the approximate positions of reflectors. This function works even in low light or dark conditions where the reflectors cannot be recognized by the human eye.

The approximate reflector positions obtained with this function greatly increase efficiency in reflector search for precise collimation.

#### Rapid 2D Monitoring\*

This function was specifically developed to reduce measurement time for real-time two-dimensional monitoring applications.

The MS-AX models can be operated by the external control system to quickly obtain vertical and horizontal angles, enabling faster recognition of 2D (vertical and horizontal) movements.

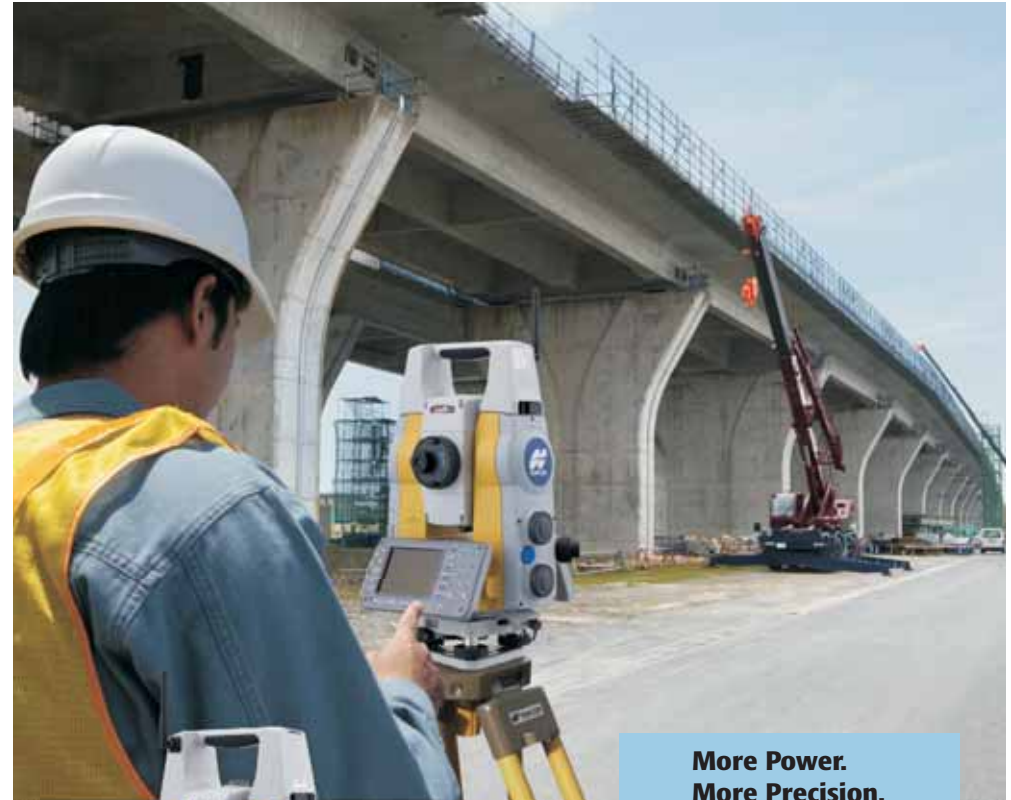
Employing advanced image processing technology, the MS-AX measures the vertical and horizontal angles to the reflectors located within the telescope's field of view. This function requires neither precise collimation to the reflector nor distance measurement, significantly increasing measurement speed. Ideal for subsidence, displacement or deformation monitoring where vertical or horizontal movements are critical.

\* "Reflector Prescan" and "Rapid 2D Monitoring" are available when operating the MS-AX via command operation from an external PC or other devices.

	MS05AX	MS1AX
<b>Angle measurement</b>		
Accuracy (ISO 17123-3)	0.5" (0.15mgon)	1" (0.3mgon)
Minimum reading	0.1" / 0.5" (0.02 / 0.1mgon)	
<b>Distance measurement</b>		
Maximum range	Non-prism	100m
	Reflective sheet	200m
	1 prism	3,500m
Accuracy (ISO 17123-4)	Non-prism	1mm + 1ppm
	Reflective sheet	0.5mm + 1ppm
	Prism	0.8mm + 1ppm
	Minimum reading	0.01mm / 0.1mm
<b>Auto-Collimation</b>		
Range	AP prism	1.3m to 1,000m
	Reflective sheet	5m to 50m
Accuracy*	AP prism	1" (0.3mgon) (1mm@200m)
	Reflective sheet	1mm@50m

\*1 Up to 200m range.

\*2 Auto-collimation accuracy is verified using the methods specified by ISO 17123-3.



**More Power.  
More Precision.**

- 1" AUTO-COLLIMATION ACCURACY
- 1000M AUTO-COLLIMATION RANGE
- 400M NON-PRISM RANGE (MS1AX)
- 0.5" / 1" ANGLE ACCURACY
- 3.7IN. LCD WITH AUTO BRIGHTNESS CONTROL
- REFLECTOR PRESCAN
- RAPID 2D MONITORING



**It's time.**

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