

## REFLECTOR LESS TARGET MONITORING EQUIPMENT SPEC

# Leica Nova MS50 MultiStation

<b>ANGLE MEASUREMENT</b>		
Accuracy <sup>1</sup> Hz and V	Absolute, continuous, quadruple	1" (0.3 mgon)
<b>DISTANCE MEASUREMENT</b>		
Range <sup>2</sup>	Prism (GPR1, GPH1P) <sup>3</sup> Non-Prism / Any surface <sup>4</sup>	1.5 m to >10000 m 1.5 m to 2000 m
Accuracy / Measurement time	Single (prism) <sup>2,5</sup> Single (Any surface) <sup>2,4,5,6</sup>	1 mm + 1.5 ppm / typ. 1.5 s 2 mm + 2 ppm / typ. 1.5 s
Laser dot size	at 50 m	8 mm x 20 mm
Measurement technology	Wave Form Digitising	coaxial, visible red laser
<b>SCANNING</b>		
Max. Range <sup>7</sup> / Range noise (1 sigma) <sup>4</sup>	1000 Hz mode 250 Hz mode 62 Hz mode 1 Hz mode	300 m / 1.0 mm at 50 m 400 m / 0.8 mm at 50 m 500 m / 0.6 mm at 50 m 1000 m / 0.6 mm at 50 m
Visualisation of point cloud	Onboard 3D point cloud viewer, including true colour point clouds	
<b>IMAGING</b>		
Overview and telescope camera	Sensor Field of view (overview / telescope) Frame rate	5 Mpixel CMOS sensor 19.4° / 1.5° Up to 20 frames per second
<b>MOTORISATION</b>		
Direct drives based on Piezo technology	Rotation speed / Time to Change Face	max. 200 gon (180°) per s / typ. 2.9 s
<b>AUTOMATIC AIMING (ATR)</b>		
Range ATR mode <sup>2</sup> / Lock mode <sup>2</sup>	Circular prism (GPR1, GPH1P) 360° prism (GRZ4, GRZ122)	1000 m / 800 m 800 m / 600 m
Accuracy <sup>1,2</sup> / Measurement time	ATR angle accuracy Hz, V	1" (0.3 mgon) / typ. 2.5 s
<b>POWERSEARCH</b>		
Range / Search time <sup>8</sup>	360° prism (GRZ4, GRZ122)	300 m / typ. 5 s
<b>GUIDE LIGHT (EGL)</b>		
Working Range / Accuracy	5–150 m / typ. 5 cm @ 100 m	
<b>GENERAL</b>		
Autofocus telescope	Magnification / Focus Range	30 x / 1.7 m to infinity
Display and Keyboard	VGA, colour, touch, both faces	36 keys, illumination
Operation	3x endless drives, 1x Servofocus drive, 2x Autofocus keys, User-definable SmartKey	
Power management	Exchangeable Lithium-Ion battery with internal charging capability	Operating Time 7–9 h
Data storage	Internal memory / Memory card	1 GB / SD card 1 GB or 8 GB
Interfaces	RS232, USB, Bluetooth®, WLAN	
Weight	MultiStation incl. battery	7.6 kg
Environmental specifications	Working temperature range Dust & Water (IEC 60529) / Blowing rain Humidity	–20°C to +50°C IP65 / MIL-STD-810G, Method 506.5-1 95%, non-condensing

<sup>1</sup> Standard deviation ISO 17123-3

<sup>2</sup> Overcast, no haze, visibility about 40 km, no heat shimmer

<sup>3</sup> 1.5 m to 3000 m for 360° prisms (GRZ4, GRZ122)

<sup>4</sup> Object in shade, sky overcast, Kodak Gray Card (90% reflective)

<sup>5</sup> Standard deviation ISO 17123-4

<sup>6</sup> Distance > 500 m: Accuracy 4 mm + 2 ppm, Measurement Time typ. 4 s

<sup>7</sup> Object in shade, sky overcast, uninterrupted visibility, static target object, Kodak Gray Card (90% reflective)

<sup>8</sup> Target perfectly aligned to the instrument

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