

Absolute Scanner AS1-XL

Key features

An extra-wide scan line, large standoff and high measurement speed combined with advanced SHINE technology for intelligent data handling – the AS1-XL is a quantum leap forward for the non-contact measurement of large surfaces.

OLED touchscreen wrist display for instant access to settings and monitoring

Scan almost any surface with default exposure settings thanks to patented SHINE technology

Complete arm and scanner system supported and serviced by a single manufacturer

Removable pistol-grip for accessing tight spaces

The first ever laser scanner that can be used with both a portable measuring arm and a laser tracker, with no realignment required when switching

IP54-rated environmental protection with both arm and tracker

Remountable in seconds with no time-wasting realignment

The most compact blue laser scanner on the market

Horizontally oriented scan line for more comfortable measurement

On-screen, LED and projected range finder guidance make correct scanner positioning simple

Extra-wide scan line for faster part coverage – 600 mm at standoff

Full system scanning certification defined according to ISO 10360-8 annex D

High-volume data collection without reducing data quality

700 mm measurement standoff for inspection of cavities and hidden areas



Absolute Scanner AS1-XL specifications

Accuracy (sensor)*	0.014 mm (P _{Form.Sph.1x25:0DS})
Point acquisition rate	up to 1.2 million points/s
Points per line	max. 4000
Line rate	max. 300 Hz
Line width (mid)	600 mm
Standoff	700 ± 300 mm
Minimum point spacing	0.080 mm
System scanning certification	yes
Laser class	2
Operating temperature	5–45°C
Weight	0.46 kg

* see the AS1-XL SSA column in the specifications table for the complete Scanning System Accuracy (arm + scanner)

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Absolute Arm 7-Axis

Key features

Absolute Encoders

Exclusive to Absolute Arm, no referencing needed: power on and measure.

Advanced construction

High-end carbon-fibre ensures thermal stability and uneven tube lengths typical in industrial robot design make the arm lighter to use.

Sensor recognition

Change touch probes or mount sensors on the fly without realignment.

Total protection

Full IP54 rating is standard on all Absolute Arm models for measurement in challenging environments.

Asset management

Compatibility with Hexagon's leading asset management platform allows remote real-time status and performance monitoring in the field.

Handling grips

Ergonomic infinite-rotation grips minimise operator fatigue, ensure thermal stability and maximise accuracy.

Zero-G counterbalance

Effectively balances the arm while minimising torque in the arm's base, making movement effortless.

Control packs (WiFi and battery)

Boost functionality with full scanning performance over WiFi or single-cable connection (USB or Ethernet) and battery power (hot-swappable dual battery pack).

RDS SMART

Proprietary software featuring Self-Monitoring Analysis and Reporting Technology that manages the arm in the field by monitoring diagnostics including shocks and temperature changes.

RDS Quick Measure

Built-in utility program allows basic measurements without additional software.

24-month warranty

As standard on all Absolute Arm systems.



Worldwide service

Our network of Hexagon service centres around the world can provide local support and servicing for arms and all compatible sensors.

Absolute Arm 7-Axis and AS1-XL accuracy and size specification

	Model	E _{UNI} ⁽¹⁾	P _{SIZE} ⁽²⁾	L _{DIA} ⁽³⁾	P _{FORM} ⁽⁴⁾	AS1 SSA ⁽⁵⁾	Max. reach
83 series	8325-7	0.048 mm	0.023 mm	0.060 mm	0.043 mm	0.114 mm	2.98 m
	8330-7	0.078 mm	0.034 mm	0.090 mm	0.058 mm	0.142 mm	2.48 m
	8335-7	0.092 mm	0.042 mm	0.115 mm	0.067 mm	0.169 mm	3.98 m
	8340-7	0.114 mm	0.051 mm	0.140 mm	0.084 mm	0.198 mm	4.48 m
	8345-7	0.158 mm	0.078 mm	0.168 mm	0.106 mm	0.236 mm	4.98 m
85 series	8525-7	0.031 mm	0.012 mm	0.048 mm	0.025 mm	0.097 mm	2.98 m
	8530-7	0.057 mm	0.020 mm	0.083 mm	0.038 mm	0.129 mm	3.48 m
	8535-7	0.069 mm	0.024 mm	0.099 mm	0.045 mm	0.147 mm	3.98 m
	8540-7	0.084 mm	0.030 mm	0.120 mm	0.050 mm	0.159 mm	4.48 m
	8545-7	0.113 mm	0.048 mm	0.140 mm	0.065 mm	0.189 mm	4.98 m
87 series	8725-7	0.029 mm	0.011 mm	0.044 mm	0.023 mm	0.087 mm	2.98 m
	8730-7	0.053 mm	0.018 mm	0.076 mm	0.035 mm	0.103 mm	3.48 m
	8735-7	0.062 mm	0.022 mm	0.092 mm	0.041 mm	0.121 mm	3.98 m
	8740-7	0.078 mm	0.028 mm	0.110 mm	0.046 mm	0.138 mm	4.48 m
	8745-7	0.104 mm	0.044 mm	0.125 mm	0.060 mm	0.155 mm	4.98 m

⁽¹⁾E_{UNI}

Maximum permissible longitudinal error of measurement – according to ISO 10360-12:2016

⁽²⁾P_{SIZE}

Maximum permissible probe deviation, size – according to ISO 10360-12:2016

⁽³⁾L_{DIA}

Maximum permissible probe deviation, position – according to ISO 10360-12:2016

⁽⁴⁾P_{FORM}

Maximum permissible probe deviation, shape – according to ISO 10360-12:2016

⁽⁵⁾SSA

Scanning System Accuracy: L_{DIA} according to ISO 10360-8 annex D

Hexagon is the global leader in measurement technologies. We provide the confidence that vital industries rely on to build, navigate, and innovate. From microns to Mars, our solutions ensure productivity, quality, safety, and sustainability in everything from manufacturing and construction to mining and autonomous systems.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 24,800 employees in 50 countries and net sales of approximately 5.4bn EUR.

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