

FARO Edge ScanArm ES

Features, Benefits & Technical Specifications



Enhanced Scanning Technology

- The FARO Edge ScanArm ES with new software algorithm enables users to effortlessly scan materials with challenging optical qualities

High Contrast Capture Mode

- New HDR Mode (High Dynamic Range) allow users to scan materials with high contrasting colors simultaneously

Intuitive On-Board Measurement System

- Built-in touchscreen computer
- Laptop-free basic measurements
- Personalized settings
- QuickTools
- On-board diagnostics

Smart Multi-Function Handle Port

- Seamless and interchangeable accessory integration
- Quick-change handle & expandable capability

Smart Connectivity

- Bluetooth®, Wi-Fi®, USB, and Ethernet ready
- Multiple device management through enhanced networking

Smart Sensor Technology

- Warn against excessive external loads
- Correct for thermal changes
- Detect possible setup problems

Multi-Probe Capability

- Use standard and custom probes
- FARO iProbe with automatic size recognition and temperature sensor

Non-Contact Measurement with Enhanced Scanning Technology

The FARO Edge ScanArm ES is the latest advancement in FARO's Laser Line Probe product line and features Enhanced Scanning Technology (EST). EST is the combination of multiple hardware and software improvements such as the High Dynamic Range (HDR) mode designed to boost performance by improving the ability to scan challenging surfaces including high contrasting colors simultaneously.

The FARO Edge ScanArm ES is the world's smallest, lightest, and affordable solution that combines the convenience of a FaroArm with the power of a Laser Line Probe to form the perfect contact/non-contact portable measurement system.

Most Common Applications

Aerospace: Reverse Engineering, Certification, Part Inspection

Automotive: Tool Building & Certification, Alignment, Part Inspection

Metal Fabrication: On-Machine Inspection, First Article inspection, Periodic Part Inspection

Molding/Tool & Die: Mold and Die Inspection, Prototype Part Scanning

Benefits

- ▶ Simplified user experience
- ▶ Quick measurements without a computer
- ▶ Improved reliability and capability
- ▶ Scan dark or reflective materials without special surface preparation
- ▶ Exceptional scanning speed up to 45,120 points per second

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FARO Laser Line Probe Specifications

| | | | |
|-----------------------|---|------------------|--|
| Accuracy: | ±35µm (±0.0014 in.) | Points per line: | 752 points/line |
| Repeatability: | 35µm, 2σ (0.0014 in.) | Scan rate: | 60 frames/second x 752 points/line = 45,120 points/sec. |
| Stand-off: | 80mm (3.15 in.) | Laser: | 660nm, CDRH Class II/IEC Class 2M |
| Depth of field: | 85mm (3.35 in.) | Weight: | 222.4g (0.49lbs.) |
| Effective scan width: | Near field 53mm (2.09 in.) Far field 90mm (3.54 in.) | | |

Performance Specifications

Contact

| Model (Measuring Range) | Single Point Repeatability | Volumetric Accuracy | FaroArm Weight |
|-------------------------|----------------------------|-------------------------|---------------------|
| Axis | 7 | 7 | 7 |
| Edge 1.8 m (6 ft) | 0.024 mm (0.0009 in.) | ±0.034 mm (±0.0013 in.) | 10.7 kg (23.6 lbs.) |
| Edge 2.7 m (9 ft) | 0.029 mm (0.0011 in.) | ±0.041 mm (±0.0016 in.) | 10.9 kg (24.1 lbs.) |
| Edge 3.7 m (12 ft) | 0.064 mm (0.0025 in.) | ±0.091 mm (±0.0035 in.) | 11.3 kg (24.9 lbs.) |

FaroArm test methods are a subset of those given in the B89.4.22 standard.

Single point articulation performance test (Max-Min)/2: The probe of the FaroArm is placed within a conical socket, and individual points are measured from multiple approach directions as specified by ASME the B89.4.22-2004 standard. Each individual point measurement is analyzed as a range of deviations in X, Y, Z.

Volumetric Accuracy or Volumetric Maximum Deviation: Determined by using 20 traceable lengths measured at locations and orientations throughout the working volume of the FaroArm as specified by the ASME B89.4.22-2004 standard. This test is a method for determining articulated arm accuracy.

Hardware Specifications

| | |
|---------------------------|--|
| Operating temp range: | 10°C - 40°C (50°F - 104°F) |
| Temperature rate: | 3°C/5min. (5.4°F/5min.) |
| Operating humidity range: | 95%, noncondensing |
| Power supply: | Universal worldwide voltage 100-240VAC 47/63Hz |

Meets OSHA requirements, NRTL Listed, MET-C Listed, Complies with Electronic Code of Federal Regulations 47 CFR PART 15 and 21 CFR 1040 Performance standards For Light-Emitting Products.

Complies with the following EC Directives: 93/68/EEC CE Marking; 2004/108/EC ELECTRICAL EQUIPMENT; 1999/5/EC R&TTE Directive; 2002/95/EC – RoHS.

Conforms to the following standards: EN 61010-1:2001 / CSA-C22.2 No. 61010-1; EN 61326-1:2006; IEC 60825-1:2007; FDA (CDRH) 21 CFR 1040.10 / ANSI Z136.1-2007; IEEE 802.11 b/g; FCC Part 15 Subpart C / IC RSS-210 and ESTI EN 300/301 (WLAN and Bluetooth).

Patents: 5402582, 5611147, 5794356, 6366831, 6606539, 6904691, 6925722, 6935036, 6973734, 6988322, 7017275, 7032321, 7043847, 7051450, 7069664, 7269910, 7735234, 7784194, 7804602, 7881896, RE42055, RE42082

