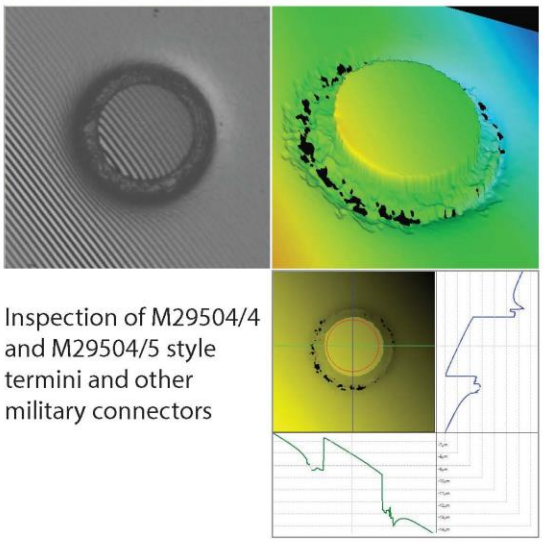
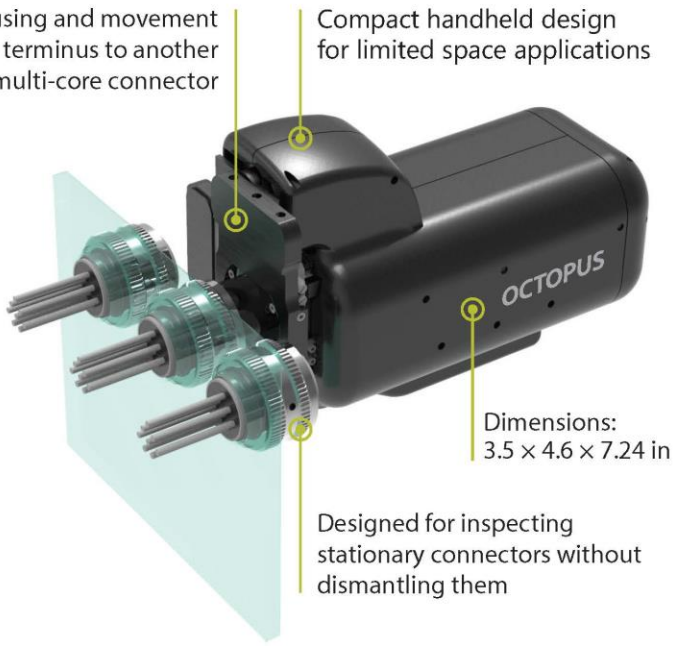
SUMIX

SENKO®
Advanced Components

# Robotic interferometer for maintenance inspection of multi-termini fiber optic connectors



Inspection of M29504/4 and M29504/5 style termini and other military connectors




## Inspect mounted MIL style connectors in 3D. Ensure reliability and accurate performance of a critical connection.

End face inspection of MIL style connections is crucial as they are used in mission-critical systems demanding high optical performance and are continuously exposed to vibration, temperature cycling, repeated mating, and other harsh environmental conditions.

This is why for critical applications, 2D evaluation of a terminus end face would be insufficient. Additional inspection must be performed by interferometry to:

- obtain 3D information about the defect that can't be removed by cleaning;
- detect fiber chips and cracks;
- register fiber height change of connectors over time to avoid mating issues.

Sumix OCTOPUS robotic interferometer uses a multi-axis motion system allowing geometry inspection of fiber optic termini inside military and harsh environment connectors installed in patch-panels, server boxes, and other optical-network units on board of an aircraft or marine vessel.

**PATENTED**

## Application

- Aerospace, marine and military vehicle field service;
- On-site inspection in harsh environments like oil & gas, backbone telecom etc.

## Specification

| | |
|---|---|
| **Connectors tested:** | M29504/4, M29504/5 style termini, other MIL style and harsh environment connectors |
| **Field of view:** | D = 1.6 mm |
| **Area covered:** | Y, X-axis motion: ± 12.5 mm |
| **Optical resolution:** | 3.2 µm |
| **Magnification:** | 300× |
| **Focus:** | Autofocus |
| **Focus range:** | 4 mm |
| **Measurement mode:** | white light + phase shift |
| **Power supply:** | external, USB 3.0 cable, 12 V DC power adapter |
| **Dimensions (H × W × L):** | 90 × 118 × 184 mm (3.5 × 4.6 × 7.24 in) |
| **Weight:** | 1.26 kg (2.78 lbs) |
| **Compatible with:** | desktop PC, laptop, tablet |
| **Operating system:** | Windows 10 |

Compliance with IEC measurement standards

NIST traceable calibration

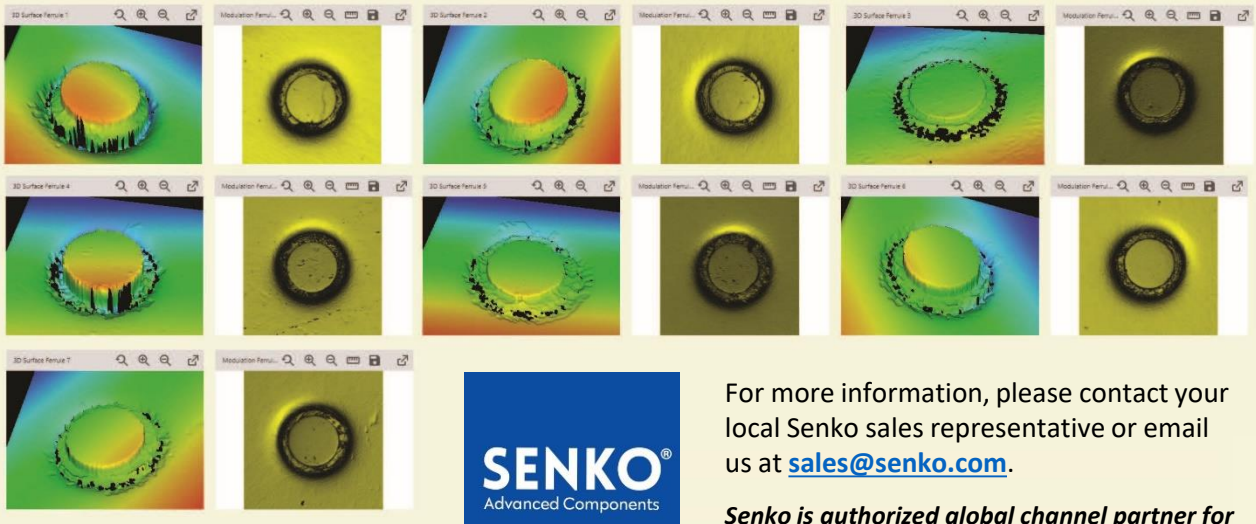
## Capabilities

- Fiber Height and Radius of Curvature measurement
- 3D anomalies detection.

| | |
|---|---|
| Name: | Result7747 |
| Date & Time: | 4/14/2021 10:42:7 AM |
| Task name: | MiniInterferometer SF scenario. |
| Device SN, Fixture SN: | MINI 65003 |
| Connector ID: | |
| Customer: | |
| Technician: | Mykola |
| Company: | Sumix |

FIBERS

| Measurement Parameter | Units | Pass/Fail Limits | | Fiber Number / Measured Value / Verdict | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Min | Max | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Height | nm | | | 1571.92 | 2192.13 | 1343.22 | 1692.61 | 1614.40 | 2556.26 | 1728.28 |
| ROC | mm | | | 17.56 | 8.08 | 8.85 | 3.02 | 15.78 | 16.27 | 4.89 |



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For more information, please contact your local Senko sales representative or email us at sales@senko.com.

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