



PRODUCT DIRECTORY

Linear Encoders

Rotary Encoders

Probes

Digital Readouts

Cable Systems

Precision Graduations





RSF Elektronik, Corporate Head Quarters Tarsdorf,
Austria



RSF Elektronik, Manufacturing Subsidiary Chotěšov,
Czech Republic

High-precision linear measuring systems and industrial electronics "Made in Austria" for cutting-edge positioning solutions

RSF Elektronik is one of the world's leading companies in the field of electronic linear measuring systems and it offers an extensive portfolio which includes almost all designs which are required by the market. The typical resolutions or measuring steps range from a few micrometres down to the nanometre range. Another core element of the product range are high-precision and resistant graduations which are manufactured in thin-layer technology on glass or other carrier substrates. RSF Elektronik also develops customized cable systems for the widest range of sectors and areas of application, and these are manufactured by the Chotěšov subsidiary. In order to safeguard the company's high quality standard, a comprehensive quality assurance and environmental management system – certified according to DIN EN ISO 9001 and DIN EN ISO 14001 – has been put in place. Thanks to the company's extensive distribution network, optimum customer service is guaranteed in practically all regions.



Sealed Linear Encoders

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Exposed Linear Encoders

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Rotary Encoders

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Digital Readouts

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Probes / Interface Electronics

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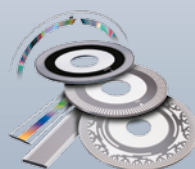
Accessories

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Cable Systems

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Precision Graduations

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SEALED LINEAR ENCODERS

FIELDS OF APPLICATION

Sealed Linear Encoders are particularly suitable for use in situations which demand a high level of precision and efficiency despite harsh ambient conditions including coolant and lubricant ingress or soiling by shavings, filings or dust.



PERFORMANCE CHARACTERISTICS

- Compact measuring unit with optical scanning
- Scale and reading head are protected by aluminium housing and sealing lips from soiling
- Simple assembly
- Patented coupling system between scanning carriage and scanning head allows greater assembly tolerances - without compromising precision
- Reproducible thermal performance
- Detachable connection cable

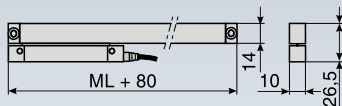
TYPICAL APPLICATIONS

- Machine tools:
Turning, milling and grinding machines, erosion machines, press brakes
- Electronics manufacturing:
Circuit board drilling and milling, screen-printing systems
- Measurement technology:
Microscopes, Video inspection
- Tool-presetter
- Linear units and drives
- Rapid prototyping

VERSIONS

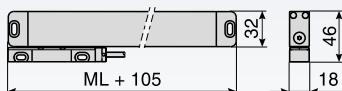
MSA 170 Series

- Miniaturized system
- Measuring length: up to 520 mm



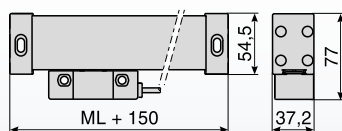
MSA 7xx Series MSA 8xx Series

- Small cross-sectional profile
- Measuring length: up to 3040 mm
- Various mechanical versions
- Detachable connection cable (MSA 8xx)



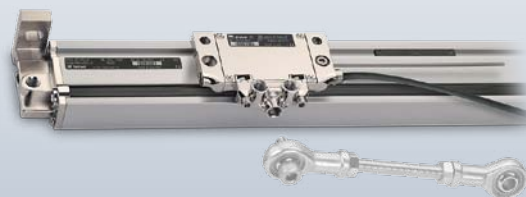
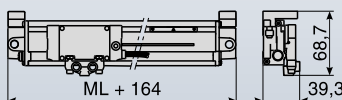
MSA 4xx Series MSA 5xx Series

- Large cross-sectional profile
- Measuring length: up to 3040 mm
- Various mechanical versions
- Detachable connection cable (MSA 5xx)



MSA 373 Series (MSA 374, MSA 375 versions)

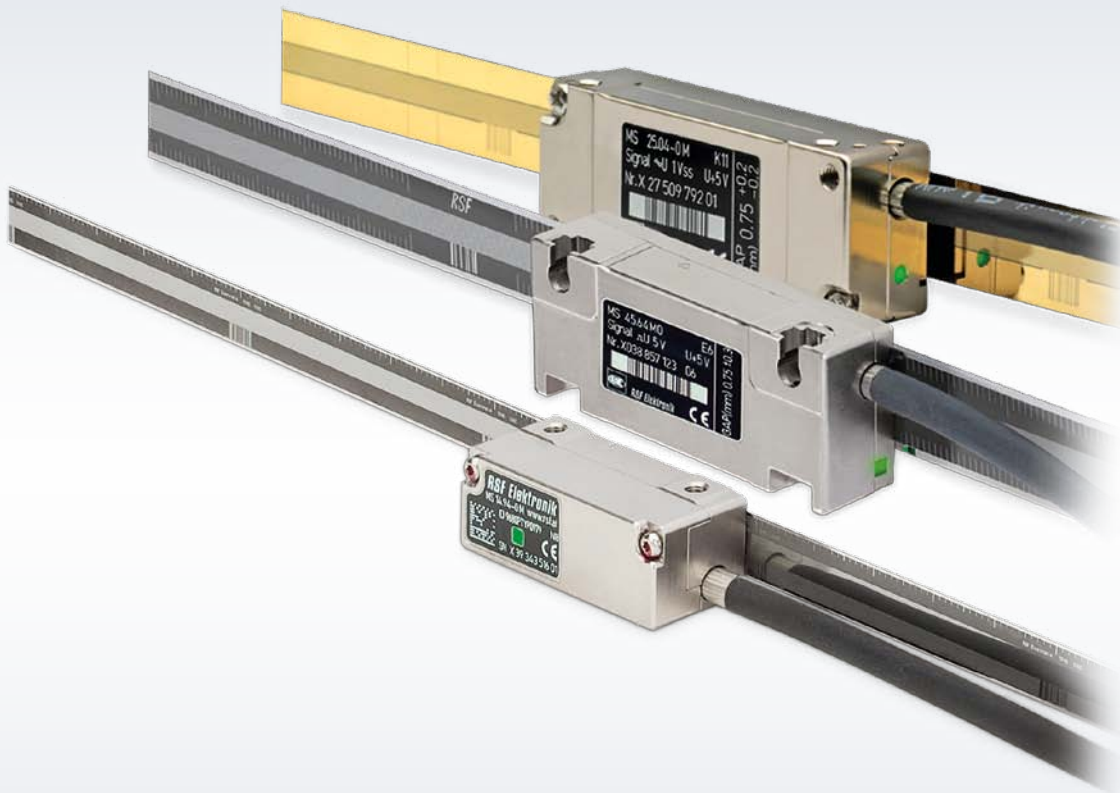
- With integrated guide rail system
- Measuring length: up to 1240 mm



EXPOSED LINEAR ENCODERS WITH SINGLEFIELD SCANNING

FIELDS OF APPLICATION

Escalating market demand in terms of processing speed, operating cycles and mechanical backlash, together with the requirement that there should be no mechanical influences necessitates the provision of high-precision exposed linear measurement systems. The scale and reading head must be protected against soiling in this construction style. Exposed linear encoders with non-contact singlefield scanning are optimized for use in a "clean environment" (e.g. measuring machines, machines in electronics manufacture).



PERFORMANCE CHARACTERISTICS

- Non-contact optical scanning
- No mechanical influence on the measurement slide
- High measuring speed
- High precision, small measuring increments
- Reproducible thermal performance
- Minimal space requirement

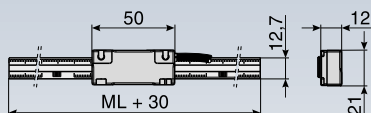
TYPICAL APPLICATIONS

- Measurement technology:
Coordinate measuring machines, measuring microscopes, presetting devices, video inspection
- Electronics manufacturing:
Circuit board assembly/ inspection / testing, screen-printing systems, LCD production, bonder
- Linear drives
- Rapid prototyping
- Printer
- Medical technology
- Solar technology

VERSIONS

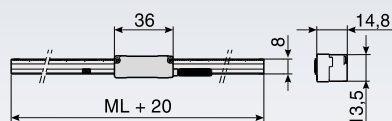
MS 45 Series

- Grating pitch: 200 μm
- Graduation substrate: Steel tape



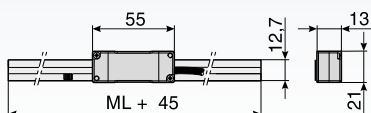
MS 14 Series

- Grating pitch: 40 μm
- Graduation substrate: Steel tape



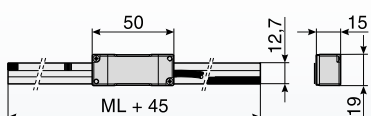
MS 2x Series

- Grating pitch: 40 μm
- Graduation substrate: Steel tape, glass, glass ceramic



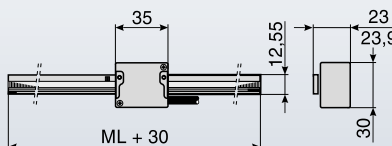
MS 3x Series

- Grating pitch: 20 μm
- Graduation substrate: Steel tape, glass, glass ceramic



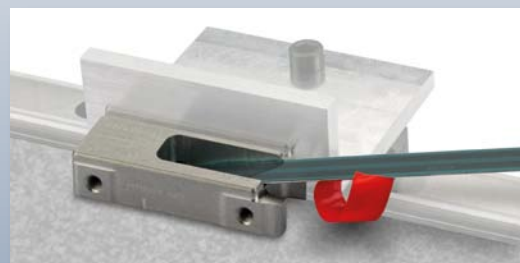
MS 82 Series

- Optical interferential scanning
- Grating pitch: 8 μm
- Signal periods: 4 μm
- Graduation substrate: Glass, glass ceramic



ACCESSORIES FOR STEEL TAPE SCALES (optional): Tape mounting tool TMT 14 MK, TMT 20 MK, TMT 30 MK, TMT 40 MK

For secure and precise application of a steel tape scale to linear encoder systems: MS 14 MK, MS 2x MK, MS 3x MK, MS 4x MK



ROTARY ENCODERS WITH INTEGRAL BEARING

FIELDS OF APPLICATION

Position and rotator control for electrical drives, measurement technology

VERSIONS

DG 118 / DG 120

DG 150 / DG 151



PERFORMANCE CHARACTERISTICS

- Simple assembly
- Robust
- Various construction styles

TYPICAL APPLICATIONS

- Paper industry
- Metal industry
- Printer
- Automation

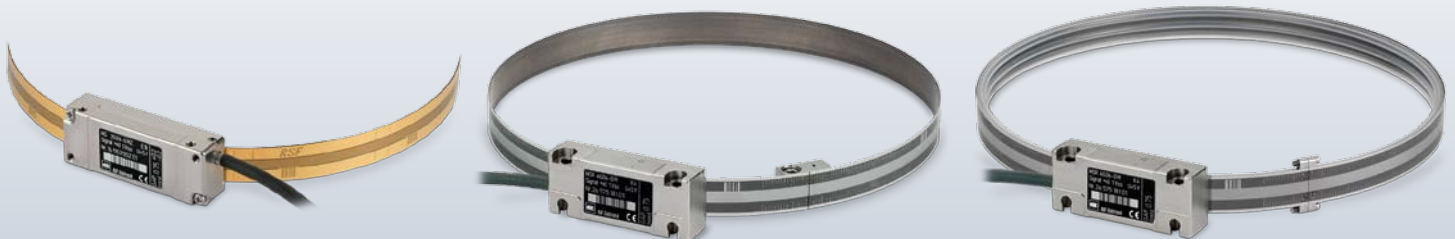
MODULAR ROTARY ENCODERS

FIELDS OF APPLICATION

Position and rotator control for electrical drives, measurement technology

VERSIONS

MSR 20 / MSR 40



PERFORMANCE CHARACTERISTICS

- For small but also large diameters
- Full-circle version
- Segment version

TYPICAL APPLICATIONS

- Large rotary tables
- Telescopes
- Computer tomography
- Drive technology

DIGITAL READOUTS

FIELDS OF APPLICATION

Equipment for manual machine tools

VERSION

Z 300



PERFORMANCE CHARACTERISTICS

- Multifunctional software for turning and milling machines
- Operator-friendly surface
- Robust housing

TYPICAL APPLICATIONS

- Milling machines
- Turning machines
- Grinding machines

LINEAR ENCODERS FOR RETROFITTING MANUALLY OPERATED MACHINE TOOLS

FIELDS OF APPLICATION

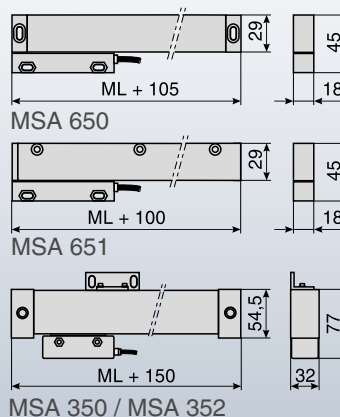
Equipment for manual machine tools

VERSIONS

MSA 650

MSA 651

MSA 350 / MSA 352



PERFORMANCE CHARACTERISTICS

- Very simple assembly
- Robust housing
- Various mechanical versions

TYPICAL APPLICATIONS

- Milling machines
- Turning machines
- Grinding machines

PROBES

FIELDS OF APPLICATION

Monitoring of measuring equipment, production measurement

VERSIONS

DIT 10 / DIT 30 / DIT 48



PERFORMANCE CHARACTERISTICS

- Manual and/or pneumatic hoist
- Stroke length 10 mm, 30 mm, 48 mm

TYPICAL APPLICATIONS

- Hardness testing system
- Adjustment technique
- Automotive industry

INTERFACE ELECTRONICS

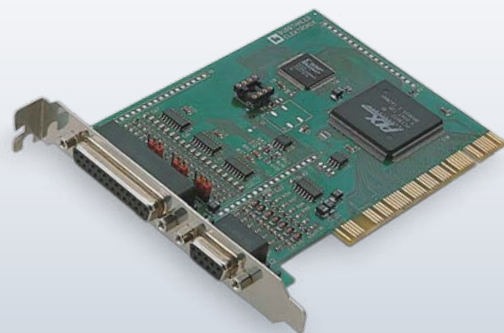
FIELDS OF APPLICATION

Counter board for the measurement acquisition of incremental linear measurement devices

VERSIONS

UFC 430 USB-Interface module

IFC 430 PC plug-in card



PERFORMANCE CHARACTERISTICS

- PC plug-in card for three axes
- USB-Interface Module for three axes

TYPICAL APPLICATIONS

- Measuring microscopes
- Measuring machines
- Presetting devices

ACCESSORY - AIR PRESSURE UNIT

FIELDS OF APPLICATION

With the DA 400 in sealed linear encoders excess pressure is produced, which counteracts oil mist or lubricant ingress.

VERSION

DA4 00



ACCESSORY - ELECTRONIC SIGNAL TEST/SET-UP BOXES

FIELDS OF APPLICATION

For the accurate connection of measurement systems

VERSIONS (LCD DISPLAY)

PG1-I (⌈) / PG1-U (⌋ ~ 1 V_{pp})



VERSIONS (LED)

For MS 2x: PG2-I (⌈), PG-U (⌋ ~ 1 V_{pp})

For MS 3x: PG3-I (⌈), PG-U (⌋ ~ 1 V_{pp})

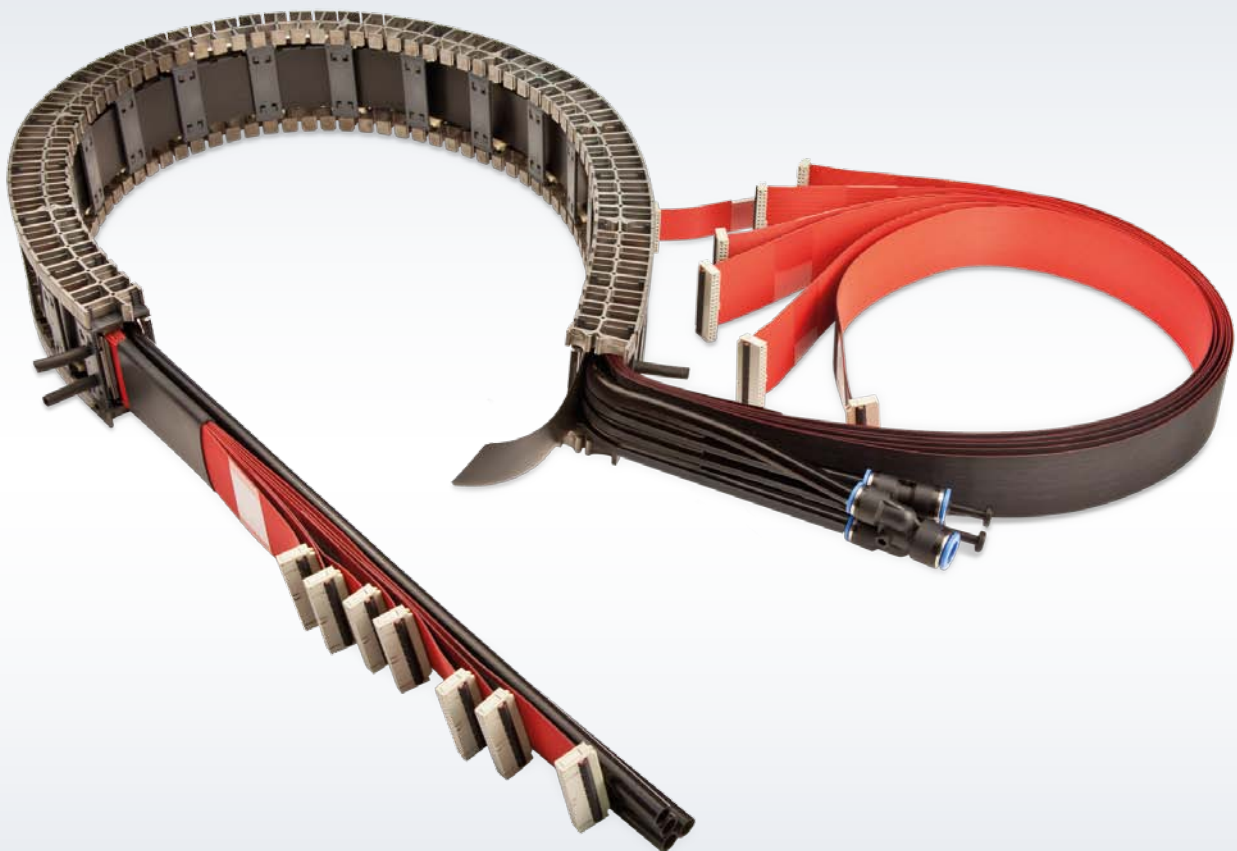


CABLE SYSTEMS

FIELDS OF APPLICATION

In its cable systems division, RSF Elektronik develops and produces customized products and optimized solutions for the widest range of sectors and areas of application.

- Electronics
- Energy technology
- Medical technology
- Semi-conductor manufacture
- Regenerative energy



COMPETENCES

- Fully automatic cutting machines
- Connector assembly using a range of joining techniques
- The latest crimping machines and fine-soldering work stations
- Tools and devices for all contacts and plugs
- Extrusion coating of components and cables
- Small- and large-scale production
- Manufacture of prototypes and initial samples
- 100% performance testing

TYPICAL APPLICATIONS

- Data lines
- Hybrid cables
- Cable drag
- Power cables
- System solutions

SERVICES

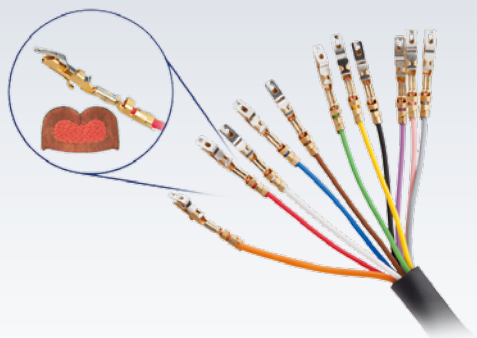
- Advance development and technology selection
- Production development
- Project planning and project management
- Prototyping

PRODUCTION TECHNOLOGY

All cables and cable systems are produced using the latest production techniques. Fully automatic cutting machines, automatic crimp force monitoring and comprehensive final inspection all ensure maximum flexibility and quality.

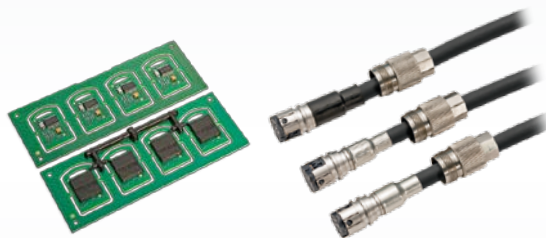
Crimp technology

- Automatic crimp force monitoring
- Preparation of crimp micrographs for every order (at the beginning and at the end of every process, failures)
- Trigger controls for every order and contact
- Reliable crimping processing for cable cross-section from 0.032 mm² to 35 mm²



Extrusion coating

- For plugs, cables, circuit boards and cable ducts
- For the protection and sealing of sensitive components



System development

- Cable systems with electrical and mechanical components
- Use of devices to simulate actual applications



Quality Assurance

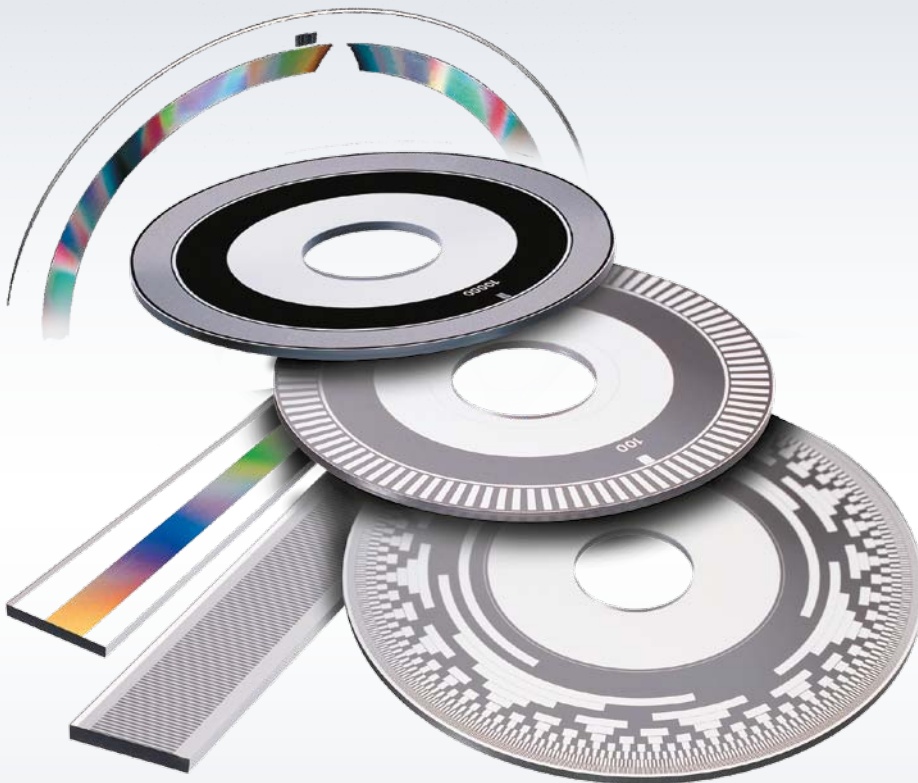
- Incoming goods inspection
- In-process inspections
- Inspection modules for all contacts and plugs
- 100% performance testing and electrical inspection
- Regular audits



PRECISION GRADUATIONS

FIELDS OF APPLICATION

The use of measuring standards, principally in the form of linear grids, is an essential component of precision graduations. These precision graduations satisfy the highest quality requirements and define both the function and the precision of the measuring device. A further focus is on the production of customer-specific RSF Elektronik graduations for particular requirements.



PERFORMANCE CHARACTERISTICS

- Longitudinal graduations in chrome on glass
- Longitudinal graduations on a steel tape
- Reflective medium gold or polished steel surface
- Circular graduations in chrome on glass
- Graticules
- Antireflection coating
- Other coatings

TYPICAL APPLICATIONS

- Linear measurement systems
- Angle measurement systems
- Optical measuring and monitoring devices
- Aiming devices

VERSIONS

Standard rods



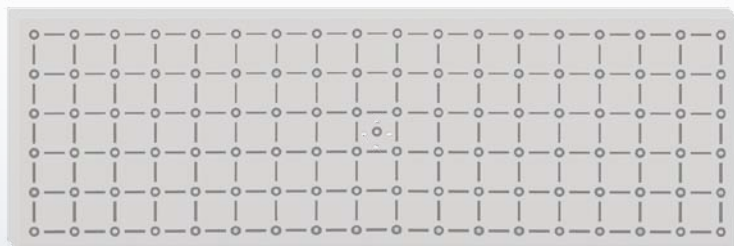
Special rod for capacitive application



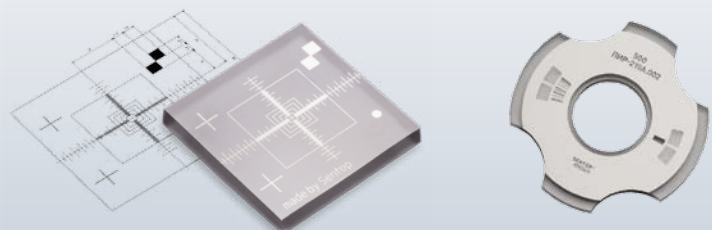
Customer-specific design



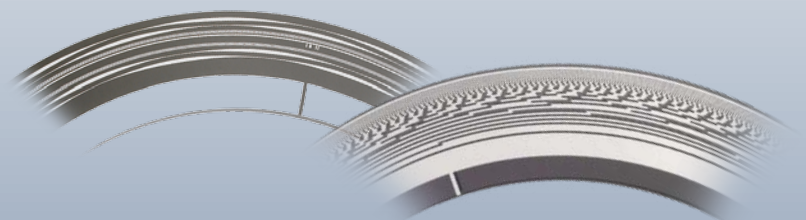
Special structures



Special version graticule



Special graduations to meet customer specifications



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RSF Elektronik
Ges.m.b.H.

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Precision Graduations
Cable Systems

Certified acc. to
DIN EN ISO 9001
DIN EN ISO 14001

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