



RSF Elektronik

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PRODUCT DIRECTORY

MEASUREMENT DEVICES | CABLE SYSTEMS



INCREMENTAL LINEAR MEASURING DEVICES AND PRECISION GRADUATIONS

RSF Elektronik is one of the world's leading companies in the field of electronic linear measuring devices 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.



RSF Elektronik, corporate head quarters Tarsdorf,
Austria



RSF Elektronik, manufacturing subsidiary Střibro,
Czech Republic

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 devices for the widest range of sectors and areas of application, and these are manufactured by the Střibro 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.

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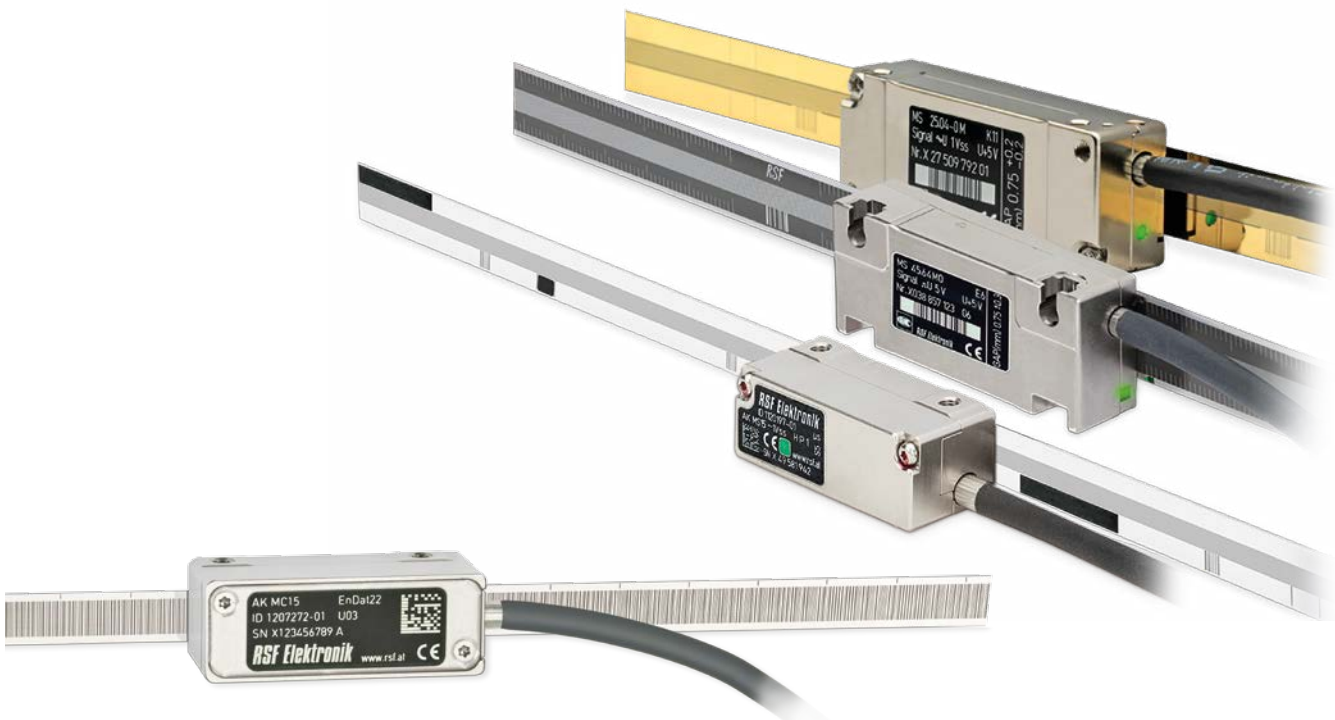
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EXPOSED LINEAR ENCODERS

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 scanning head must be protected against soiling in this construction style. Exposed linear encoders are optimized for use in a „clean environment“ (e. g. measuring machines, machines in electronic manufacture).

Due to increasing demand for absolute position valuation RSF Elektronik offers the MC 15, an absolute exposed linear encoder.



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

MC 15

- Absolute position valuation
- Large mounting tolerances
- Several serial interfaces

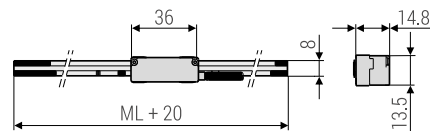
TYPICAL APPLICATIONS

- Metrology: coordinate measuring machine, measuring microscope, presetting devices, video inspection
- Electronic manufacturing: circuit board assembly/inspection/testing, screen-printing systems, LCD production
- Semi-conductor production: bonder
- Linear drives
- Rapid prototyping
- Printer
- Medical technology
- Solar technology
- Mounting machines
- Automation

VERSIONS INCREMENTAL

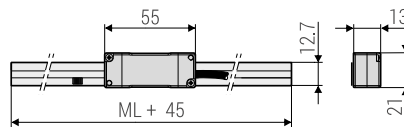
MS 15

- Grating pitch: 40 μm
- Gratuation carrier: steel tape



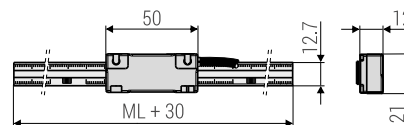
MS 2X SERIES

- Grating pitch: 40 μm
- Gratuation carrier: steel tape, glass, glass ceramic



MS 45

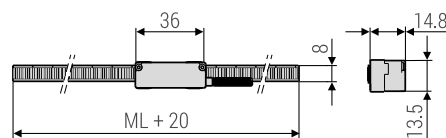
- Grating pitch: 200 μm
- Gratuation carrier: steel tape



VERSION ABSOLUTE

MC 15

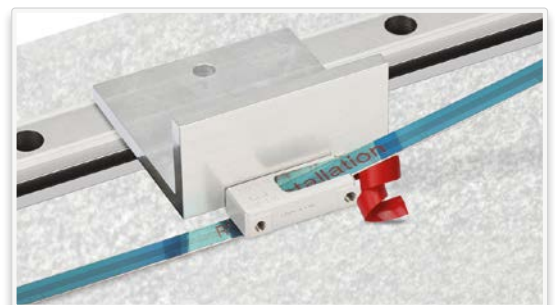
- System resolution: 50 nm, 100 nm
- Gratuation carrier: steel tape
- Interfaces: EnDat 2.2,
Mitsubishi (M),
Panasonic (P)



ACCESSORIES FOR STEEL TAPE SCALE (OPTIONAL): TAPE MOUNTING TOOL TMT 14 MK, TMT 20 MK, TMT 40 MK

For secure and precise application of a steel tape scale at linear encoder systems:

MS 15 MK, MS 2x MK, MS 40 MK, MC 15 MK



SEALED LINEAR ENCODERS

FIELDS OF APPLICATION

Linear encoders from RSF Elektronik are all-purpose. They are suited for manual applications; yet they are also particularly suitable for closed loop drive devices. Owing to their sealed design, the linear encoders of the MSA 7 and MSA 8 series are predestined for applications in automation and production technology. They are ideally suited for metrology, printing and robotics, especially in applications where protection for the scale and the reading head is required.



PERFORMANCE CHARACTERISTICS

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

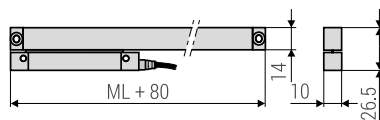
TYPICAL APPLICATIONS

- Automation and production technology
- Printing
- Robotics
- Electronics manufacturing: circuit board drilling and milling, screen-printing systems
- Metrology: microscopes, measuring stages
- Presetting devices
- Linear units and drives
- Rapid prototyping

VERSIONS

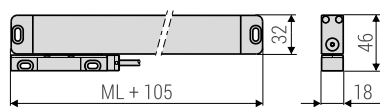
MSA 170

- Miniaturized system
- Measuring length: up to 520 mm



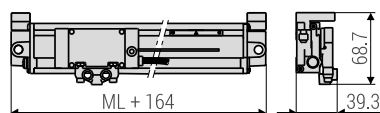
MSA 7XX SERIES MSA 8XX SERIES

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



MSA 37X (MSA 373, MSA 374, MSA 375 VERSIONS)

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



MODULAR ANGLE MEASUREMENT ENCODERS

FIELDS OF APPLICATION

Position and rotator control for electrical drives, metrology

VERSIONS

MSR 20 / MSR 40



PERFORMANCE CHARACTERISTICS

- For small and very large diameters as well
- Full-circle solution
- Segment solution
- External tape scale

TYPICAL APPLICATIONS

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

INTERFACE ELECTRONICS

FIELDS OF APPLICATION

Counter board for the measurement acquisition of incremental linear measurement

VERSIONS

UFC 430 USB-INTERFACE MODULE

IFC 430 PC PLUGIN-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

DIGITAL READOUT

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

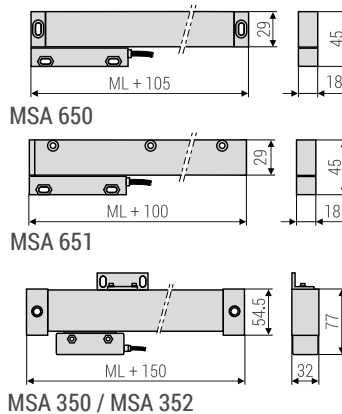
Equipment for manual machine tools

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

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



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



Quality assurance

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



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



COMPETENCES

- Fully automatic cutting machines
- 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

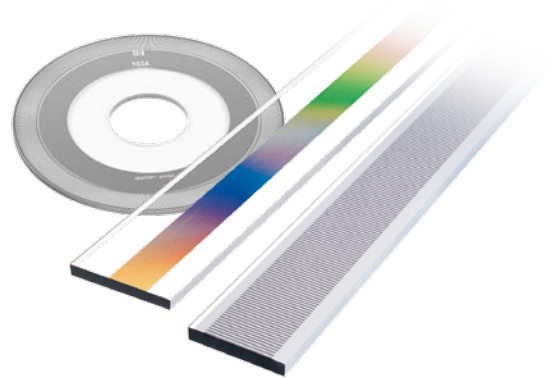
SERVICES

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

PRECISION GRADUATIONS

FIELDS OF APPLICATION

The use of measuring standards, principally in the form of linear grids, is an essential component of RSF Elektronik precision graduations. These precision graduations satisfy the highest quality requirements and define both the function and the precision of the measuring device.



VERSIONS

A further focus is on the production of customer-specific RSF Elektronik graduations for particular requirements.

Standard rods



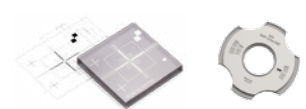
Customer-specific design



Special graduations to meet customer specifications



Special version graticule



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

DISTRIBUTION CONTACTS

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RSF Elektronik

Ges.m.b.H.

Linear Encoders
Cable Systems
Precision Graduations
Digital Readouts

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

