PRODUCT DIRECTORY

Linear Encoders
Rotary Encoders
Probes
Digital Readouts
Cable Systems
Precision Graduations
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

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 Vpp)

VERSIONS (LED)
For MS 2x: PG2-I (.), PG-U (1 Vpp)
For MS 3x: PG3-I (.), PG-U (1 Vpp)
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
# DISTRIBUTION CONTACTS

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