

## Press release - SCHNEEBERGER AMS integrated distance measuring systems

### Integrated measuring system guarantees exact travel distances

*For over ten years, SCHNEEBERGER has been developing compact, integrated distance measuring systems for its MONORAIL guideways and today, sets the standard in terms of accuracy, design, installation, adjustment, operation and maintenance. A variety of interfaces to all major control systems, depending on the AMS version, are available. For example, the new AMSABS absolute measuring system can communicate directly with the Siemens DRIVE CLiQ®<sup>1</sup> communication protocol and all Mitsubishi controllers.*

Quiet, low-vibration, and low-friction linear travel are essential in sophisticated mechanical engineering systems. This applies to automated applications in metrology, as well as in the semiconductor, biotech, medical devices, machine tools, laser processing, and many other branches of industry. SCHNEEBERGER provides high-quality MONORAIL guideways to serve as the perfect basis for such applications. The Swiss company offers many different versions of its magneto-resistive measuring system to always supply the appropriate solution to meet the stringent requirements of precision distance measurement.

The MONORAIL AMS 3B, for example, is an integrated magneto-resistive distance measuring system based on the MONORAIL MR roller profile guideway. This integration results in axes with a compact design and distance measurement and guideways which are especially suitable for use in machine tools. No additional assembly or adjustment of the measuring system is required by the operator; It also delivers cost savings in the design, manufacture, and maintenance of the equipment. And, by using the AMS 3B, accuracy and process reliability are improved.

The AMSA 3B analog variant features a voltage interface of 1 V<sub>SS</sub> that connects to all conventional controllers and is the starting point for the AMSD 3B digital version. The latter has a digital incremental interface that references different resolutions and permits system adaptation for controllers with different input frequencies.

SCHNEEBERGER developed the AMS 4B integrated magneto-resistive measuring system for the MONORAIL BM ball guideway. In terms of measurement technology, it corresponds to the AMS 3B and offers the same advantages in cost savings, accuracy, and reliability. AMS 4B products are the preferred choice if there is a great demand on the dynamic characteristics of the axes and rate of travel.

In summary, the MONORAIL AMSABS with an absolute interface is an integrated magneto-resistive measuring system developed on the basis of the measuring systems mentioned above. It adds new features to the proven benefits and simplifies the operation of measurement systems in industrial environments. For example, since it uses absolute distance measurement, there is no longer any need for a reference run after switching on, which saves time and money during operation.

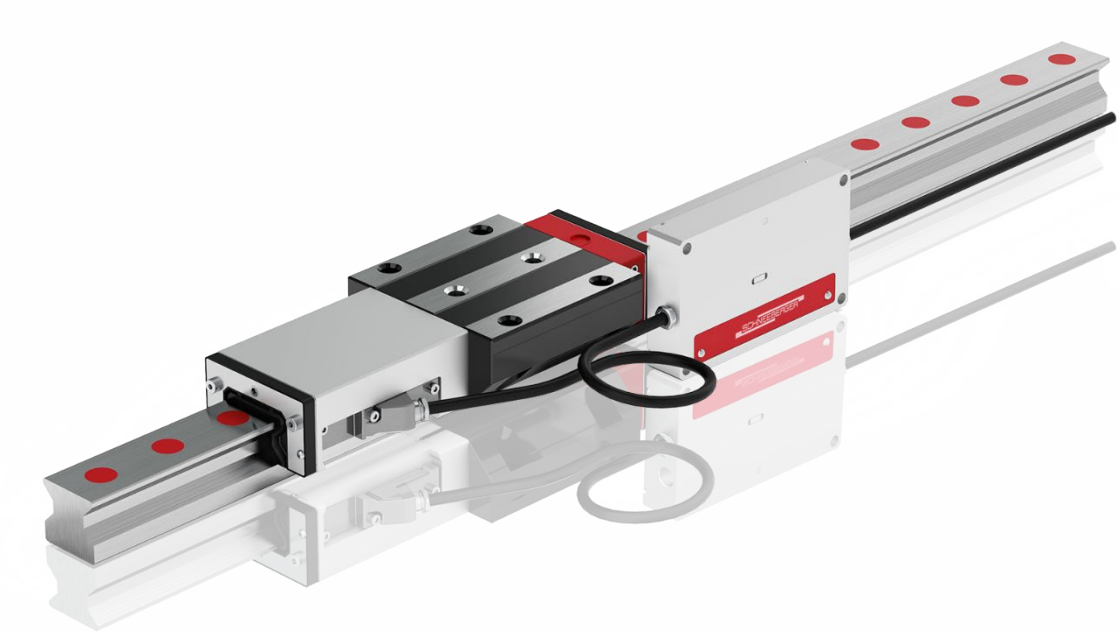
The AMSABS features an absolute interface for connection to SSI, SSI+SinCos and all Fanuc controllers. The Siemens DRIVE CLiQ®\* and Mitsubishi interface have recently been added. The Siemens DRIVE CLiQ interface is certified in accordance with SIL 1.

The latest development from SCHNEEBERGER in the field of integrated magneto-resistive measuring systems is the MONORAIL AMSA 3L, which is designed for building especially long axes on the basis of the MONORAIL MR roller guideway. SCHNEEBERGER also offers an integrated distance measuring system for combined guidance and measuring in very restricted spaces. The MINISCALE

---

<sup>1</sup> DRIVE-CLiQ is a protected trade mark of Siemens

Plus system based on the MINIRAIL guideway has a resolution of 1  $\mu\text{m}$  and can measure lengths as short as 1000 mm.



*Fig. 1: The integrated AMS distance measuring system from SCHNEEBERGER can be perfectly integrated into MONORAIL guideways – both roller guideways and ball guideways – and ensures exact travel distances with tolerances of  $\pm 5 \mu\text{m}/\text{m}$ .*

## SCHNEEBERGER group

SCHNEEBERGER® serves original equipment manufacturers operating (OEM) in various industries worldwide – from **machine tool**, **solar technology** and **semiconductor technology** to **electrical engineering** and **medical engineering** and others. Linear bearings, profiled linear guideways, **measuring systems**, **gear racks**, **slides**, **positioning systems** and **mineral casting** are all part of SCHNEEBERGER's product and manufacturing range. **A.MANNESMANN** has been part of the SCHNEEBERGER Group since October 2017. A.MANNESMANN is a leading supplier for the production of ballscrew drives, telescopic actuators and drill spindles. A further expansion of the SCHNEEBERGER Group, an additional site was founded in Poland. The new company SCHNEEBERGER Components Poland (SPO) officially started on November 19, 2020 and has already commenced operations, producing precision parts for the entire Group. The core competence lies in the production of rolling bearing rollers. Also as part of its strategic development, the Business Unit Systems has established the company "SCHNEEBERGER Precision Motion Systems (Shenzhen)". With the establishment of the new technology center for systems in Shenzhen with development, production, sales and service, SCHNEEBERGER will be closer to its Asian customers and thus be able to serve them even better with high-precision single and multi-axis systems.

Order SCHNEEBERGER product images by email or simply call us.