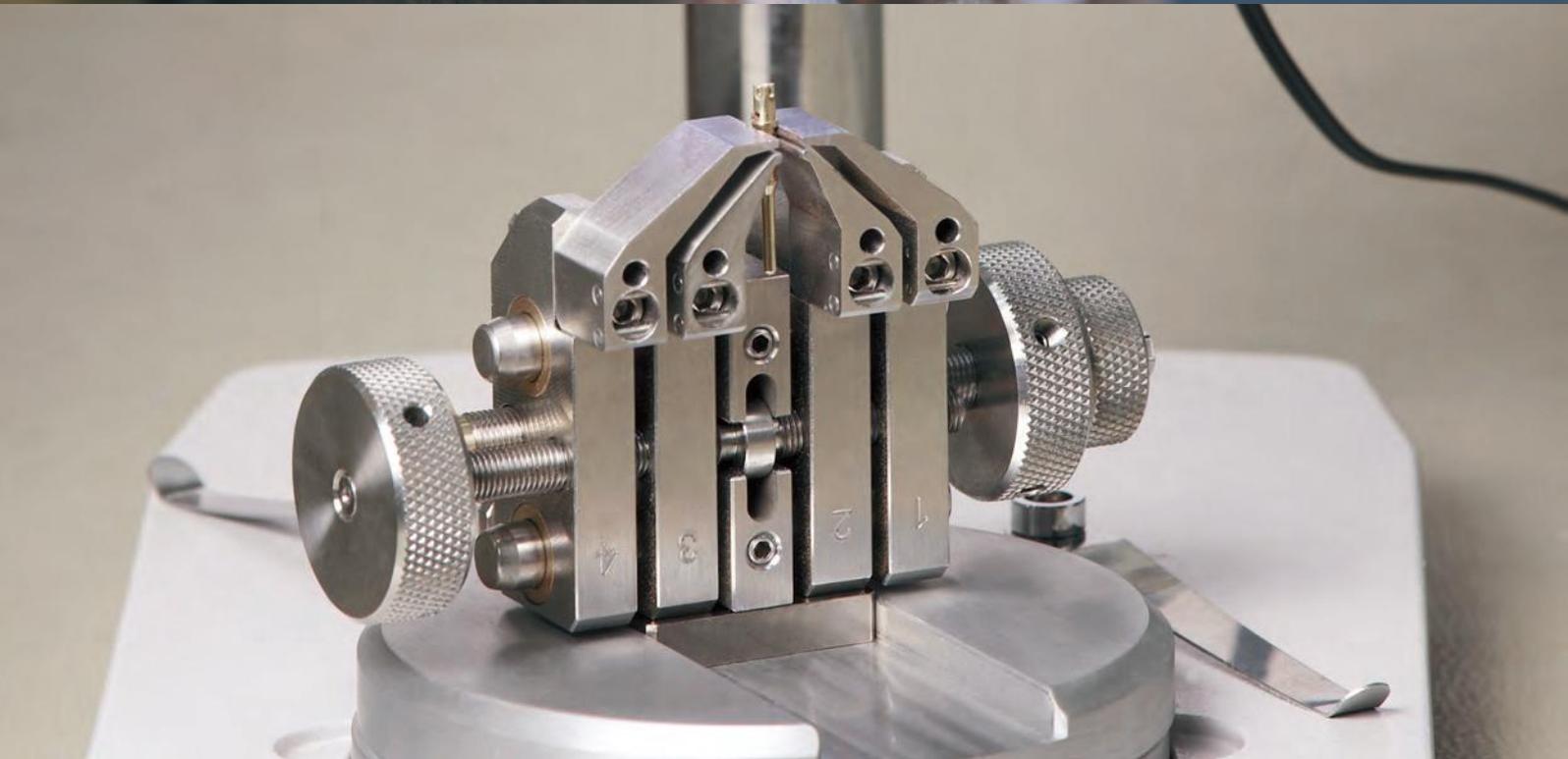
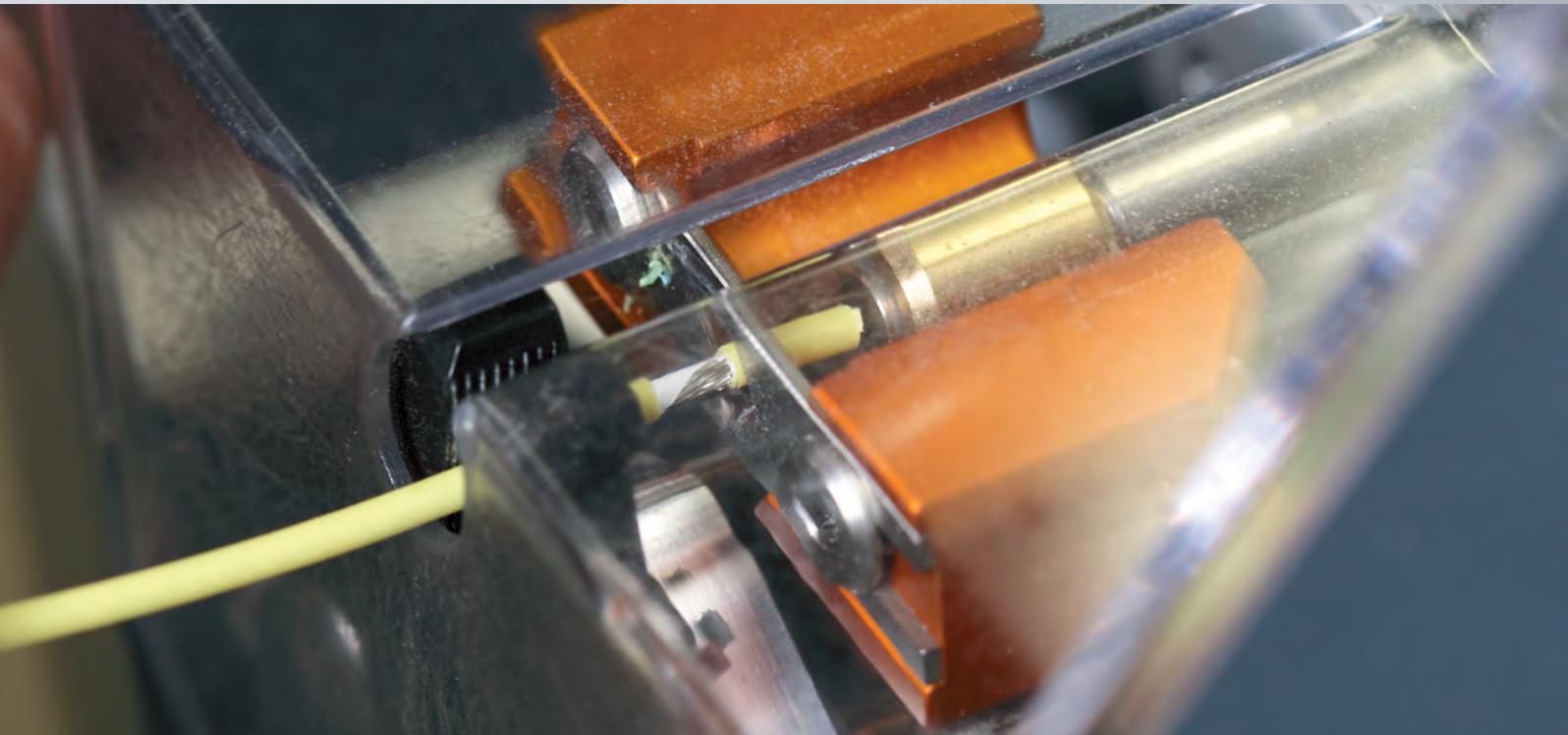




**Tested and ready to use
Quality from a single-source**



100% tested and ready to use for all-round certainty

Quickly assembled and reliable in operation – that is how machine components must be these days! Ready to use components with reliable final test support you!

"Plug and Play" is today not only a matter of course in computer networks. Vehicle manufacturers, machine and plant manufacturers have also discovered the advantages of completely ready to use products. Increasingly they are using components that they can quickly and straightforwardly integrate into their systems.

Your added value – our product with cable and connector

The fabrication of cables and connectors forms part of our core business. Hundreds of completely ready to use products leave our factory every day. From the simple connection cable to the complex hybrid cable, we combine a very wide range of connectors and connection cables in our products.

Irrespective of whether you need an unusual cable, special protective features are required, or you use a particular connector, we equip your product correspondingly.

As a manufacturer of sensor and drive solutions we undertake 100% testing of our devices with cables and connectors in final test and therefore ensure reliable operation. During this process, e.g. as on the MiniCODER, the sensor system is tested using a rotating target wheel. The test results are saved in a database after each test and are therefore available years later. We deliver your product completely ready to use and tested. Just as you want it.

Complete systems – sensor and target wheel

For more than 20 years we have supplied our customers with complete systems comprising a sensor, including ready to use cable and connector, as well as a target wheel. An invaluable advantage for our customers, as they receive a complete system in which the individual components are one hundred-percent matched to each other and tested.

On our highly modern production machines we produce target wheels with inside diameters of up to 500 mm specifically in accordance with your requirements.

For high-speed spindles in machine tools that operate at up to 100,000 revolutions per minute, we manufacture precision target wheels with an H6 internal fit, an axial run-out tolerance of 0.01 mm, as well as a tolerance on the radial run-out of the teeth of 0.015 mm. The quality of the teeth is AAA and corresponds to Q7.

Our experience – your benefit

For almost 50 years, the name Lenord + Bauer has stood for the automation of industrial motion sequences. We develop, produce and market highly integrated sensor and drive systems. As a specialist for customer-specific products we manufacture individual systems in batches from small quantities to thousands of pieces per year.

Our cable fabrication shop is equipped with the latest machinery so that we can flexibly implement customer wishes.

Perfectly fabricated and reliably connected

With our carefully fabricated systems you save assembly costs and increase reliability

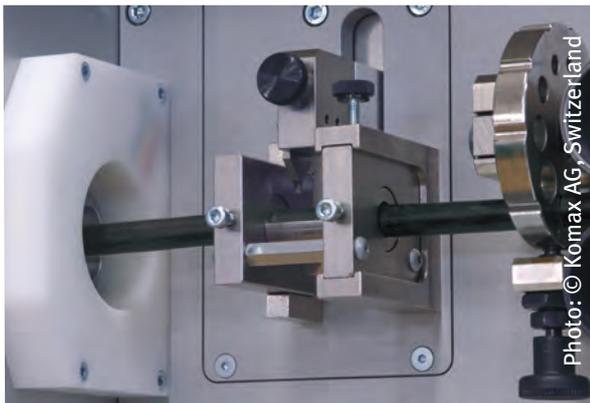
We very consciously rely on a high level of vertical integration and modern production methods. For this reason it is a matter of course for us that we also use technologies and machinery of the latest generation in cable fabrication.

Reel material cut to length precisely and quickly

We have up to 50 different cable drums always ready at hand in the paternoster. We store cable types that are not required so frequently in our modern high-bay warehouse. A high performance automatic unwinder pulls the cables off the reel. The cables are processed fully automatically with partial or complete removal of the insulation.

A highly modern automatic cutting machine processes cables with an outside diameter of up to 15 mm. The cables are pulled off the reels to suit the specific customer and order, cut to length, and then insulation on the individual cores and wires stripped.

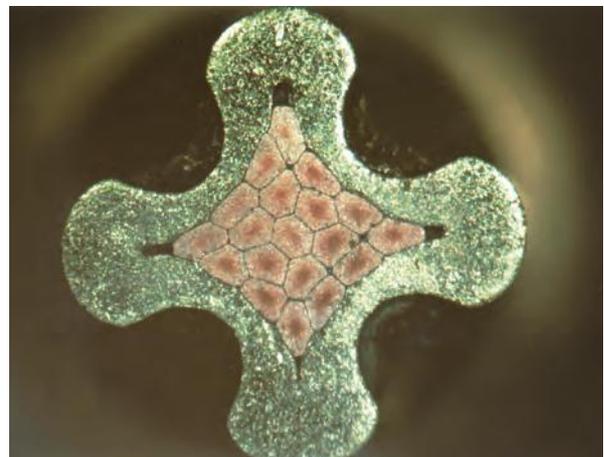
All these actions are undertaken based on programmed datasets to obtain 100 % repeat accuracy.



The cable runs from the cable paternoster through the automatic unwinder to the modern cutting and insulation stripping machine. Fully automatic cutting to length and insulation stripping make formats reproducible at any time.

A reliable connection safeguards the function

A prerequisite for the trouble-free operation of our products is correct electrical connections. Depending on the application, we crimp, solder or clamp the contacts.

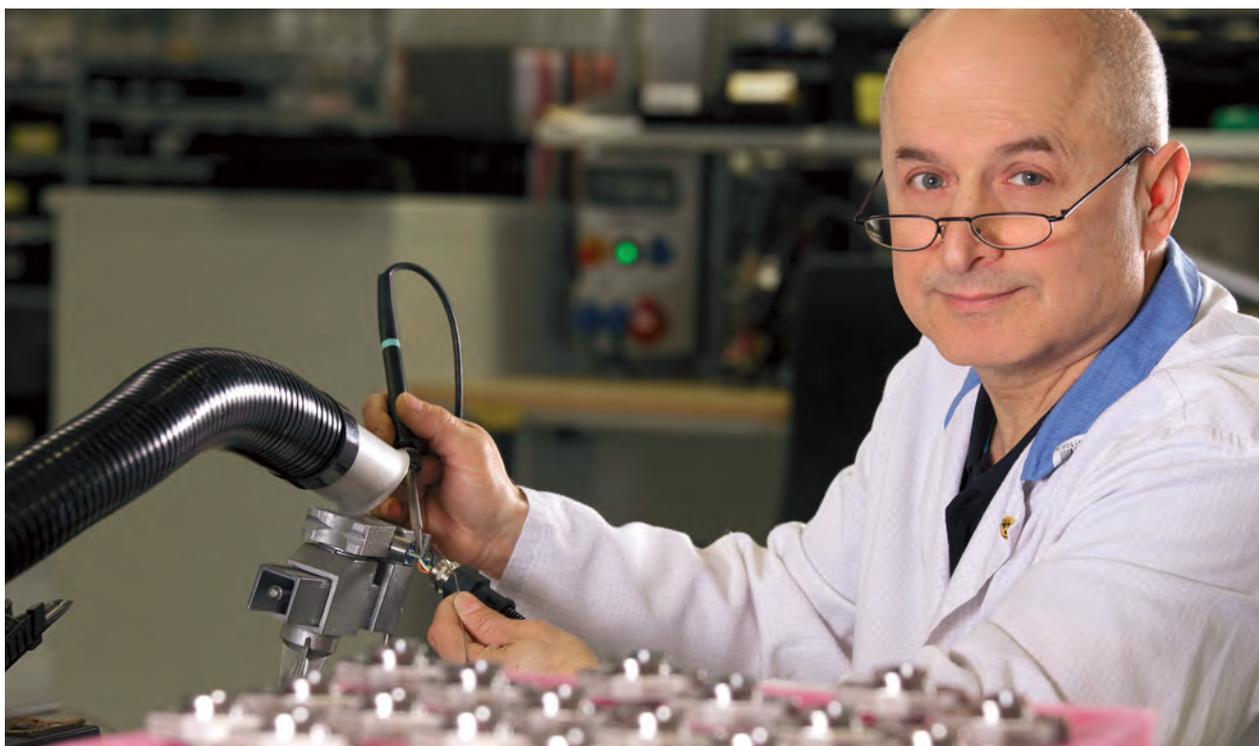


The quality of the crimp connection is right, as the contact is not damaged and there are no air inclusions in the structure.

Crimping, that is pressing together metal sleeves and wires, is state of the art these days. During this process the wire cross-section must not be reduced by excessive pressing.

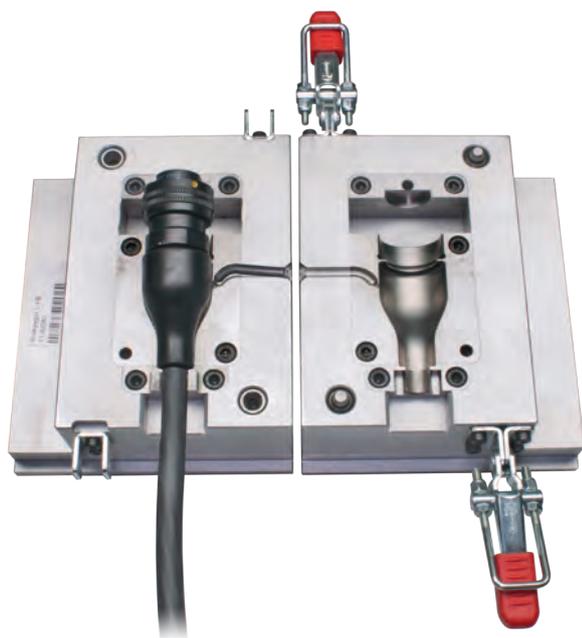
If sleeve and wire are correctly crimped, a structure almost without air inclusions is produced. Only in this way is the connection reliably protected against corrosion. To ensure a high quality connection, we rely in the latest machinery and trained staff for crimping.

High-quality, qualified contacts are a further important criterion for exact crimp connections. By means of careful supplier selection we ensure optimal pre-conditions. We also prepare microsections of the crimp connections in our test laboratory and check the quality.



Cable and connector completely sealed

To seal the joints between cables and connectors, among other methods we use the proven method of shrinking shaped parts and sleeves. As an alternative, we also use the hotmelt method. During this process the components are carefully encapsulated using injection pressures of up to 40 bar at temperatures of up to 240 °C. The encapsulation material is particularly resistant to oil, moisture, chemicals and UV radiation.



Hotmelt encapsulation method, in this way cable and connector are reliably and durably encapsulated.

Connections secured in this manner withstand even high pressure and heavy vibration. They feature high tensile strength and elongation at fracture as well as particularly good sealing. They reliably protect sensitive electrical and electronic components.

Reliable cable protection for harsh environments

In operation our products are often subjected to extreme loads. As such, e.g. on rail vehicles, stone impacts and vibration are also the order of the day along with fluctuating temperatures and humidity. These situations require additional protection of the cables and wires. For this reason we also use corrugated tubes, rubber sleeves and other protective sleeves to protect your cable against damage.

Special connectors are our day-to-day business

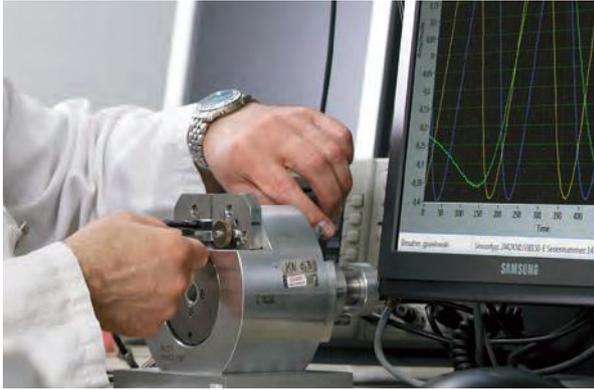
The connectors required are as varied as the fields of application of our products. We have more than 400 connector variants listed in our order system. From the simple M12 connector to the special coupling for hybrid cables - we connect all common connectors to the related cable.

Irrespective of whether provided by us or by the customer: even very unusual special connectors are not a challenge for us. Upon request we will also procure and stock these connectors for you. When needed we can supply your product quickly and reliably on demand.

Quality "Made in Germany"

Guarantor for high reliability

Reliability and efficiency characterise modern machinery and plants. For this reason we place particularly high value on high quality components and continuous quality control. This is your guarantee for durable and reliable products.



Completely ready to use rotational speed sensor MiniCODER in final test

Our path to excellent quality

For us quality management starts as early as product development and extends as a common theme through all areas of the organisation. Each year we subject our measures to internal and external audits. As such we are certified to DIN EN ISO 9001, ISO 14001 as well as IRIS.

Our quality assurance measures also include the annual training of our staff. For manufacturing, among other documents the IPC* guidelines define important regulations for manufacturing, for example IPC-A-620, for acceptance criteria for cables and cable assemblies, and IPC-J-STD, which defines requirements on soldered electrical and electronic connections.

Only tested quality leaves our factory

We test the quality of parts and components supplied as early as on receipt from our suppliers. In all our production areas we ensure only items in perfect conditions are further processed! Our employees are excellently qualified and manufacture your product with the greatest possible care and attention to detail.

Final test is a fixed element of our production. For instance we test the function of our rotational speed sensors against a rotating measuring scale at room temperature. If you require, we can also test the function at 100 °C. In the end you receive a complete system that can be used immediately.

Recognised standards are our basis

We manufacture and fabricate our products in accordance with the internationally recognised guidelines published by the IPC*.

Many of our sensors are used in very harsh ambient conditions. Cables and wires used here must meet comprehensive standards. As early as product development we clarify the suitability of the material used for the field of application.

- Fire resistance in accordance with DIN 5510, NF F 16-101
- Halogen-free in accordance with DIN EN 50267-2-1
- Flame-retardant in accordance with DIN 50265-2-1 / DIN 50266-2
- Temperature, UV and ozone-resistant
- Characteristics in accordance with UIC specification
- Characteristics in accordance with UL/CSA specification

Tell us about your requirements and we will agree with you the right material for your application.

* IPC Industry association for printed circuit board and electronics manufacturing service companies



Your component management in our hands

Relieve the load on your procurement and your logistics!

In every development project and in every new solution our focus is on the reliability of our products. For this reason we also set high quality requirements during the selection of our suppliers.

Your needs are our day-to-day business

Standard products are often inadequate for extremely demanding applications. Finding suitable material here requires specialist knowledge and expertise.

Profit from our almost 50 years of experience. If necessary we will advise you on the selection of suitable cables and connectors. If you wish, we will search for the best material for your specific application.

Our component management simplifies your logistics

Reliable, trouble-free operation of our products is only possible with qualified components. Along with the long-term availability and quality of our components, for us reliable delivery and adherence to schedule play a major role. For this reason we audit our suppliers at regular intervals.

If necessary, we also stock special components for our customers. We combine order-based stockholding, modern logistics and high added value to form a complete service. During this process we ensure that parts and components with long-term availability are used. We deliver your product at short notice on the agreed date – and that for decades.

Simplify your component and supplier management and order your completely ready to use solution directly from Lenord + Bauer.

Talk to us. We would be pleased to advise you!



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