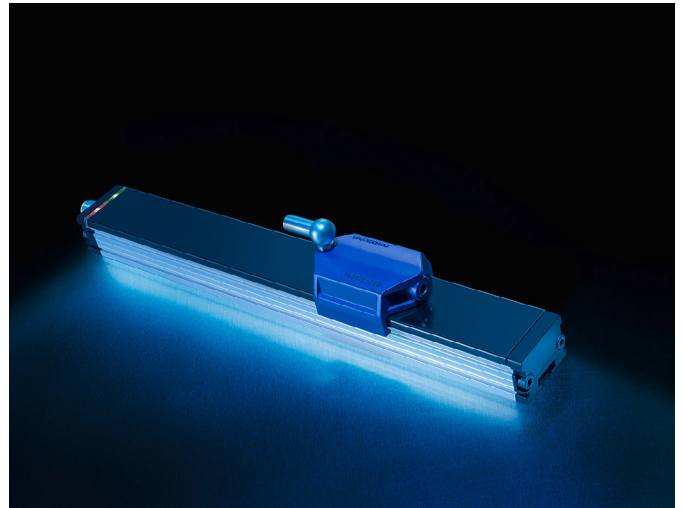
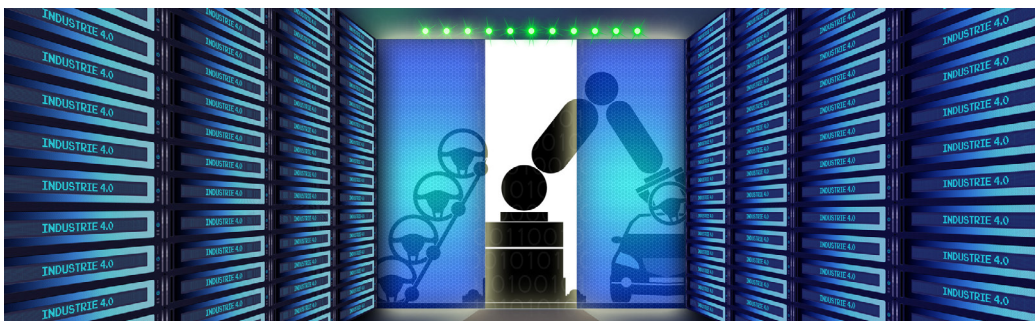


**Linear and Rotary  
Position Sensors**  
with IO-Link  
Interface



Intelligent, efficient and cost-saving:

Linear and Rotary Position Sensors with IO-Link-Interface



### Industry 4.0 - Ready for the Future, with Linear and Rotary Position Sensors

The idea and goal behind Industry 4.0 is the real-time collection of all relevant data of value-add processes, resulting in improved cost structures, resources, and availability. To this end, all the components involved in the process must be interlinked, and the required data must be available for evaluation and action.

### IO-Link Revolutionizes Communications at the Field Level

An important factor are sensors which capture the conditions within manufacturing processes and communicate them to higher-level systems, such as control units. Standardizing this communication makes great sense.

For this purpose, Novotechnik is offering linear and rotary position sensors with the independent communications standard IO-Link (IEC 61131-9), which fully utilizes the characteristics of intelligent sensors. In order to facilitate the interlinking of sensors with the most diverse systems and control units worldwide, IO-Link can be

implemented into the most various bus systems via gateways, thus facilitating considerable cost reductions through the use of intelligent diagnostics and parameter setting concepts.

### Quick and Easy Activation

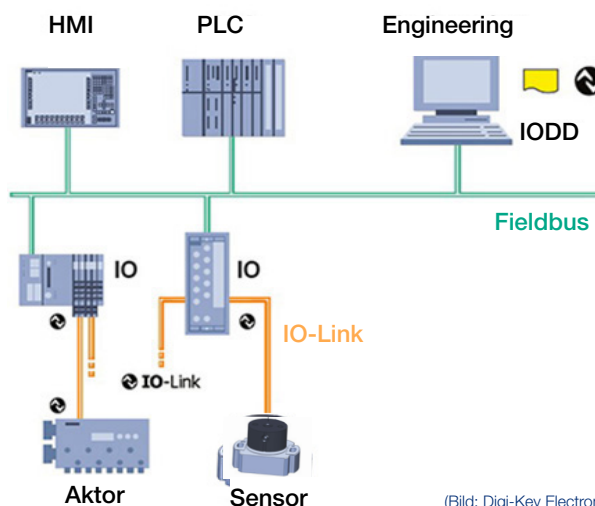
The point-to-point connection offers field bus functionality and seamless communications down to the sensor level. The standardized control software allows for quick activation.

### Intelligent IO-Link Devices Offering Self-testing Functions

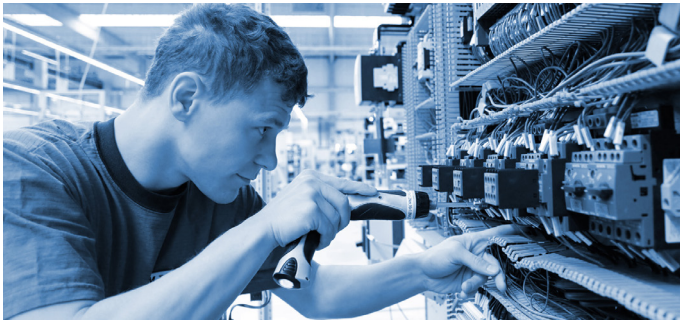
In addition to purely positional data, additional data, such as status or diagnostics messages is exchanged. This allows for quick identification of control loop errors; and thanks to the central storage of the settings, sensor replacements can be accomplished in little time. The user can modify parameters, such as zero, direction of rotation, or resolution.

### IO-Link for Cost Reductions and Improved Productivity

The simple wiring using unshielded 3-wire cables results in considerable cost savings in comparison to expensive Ethernet lines. Thus, IO-Link ultimately offers increased productivity, benefiting automation technology as well as engineering.



(Bild: Digi-Key Electronics)

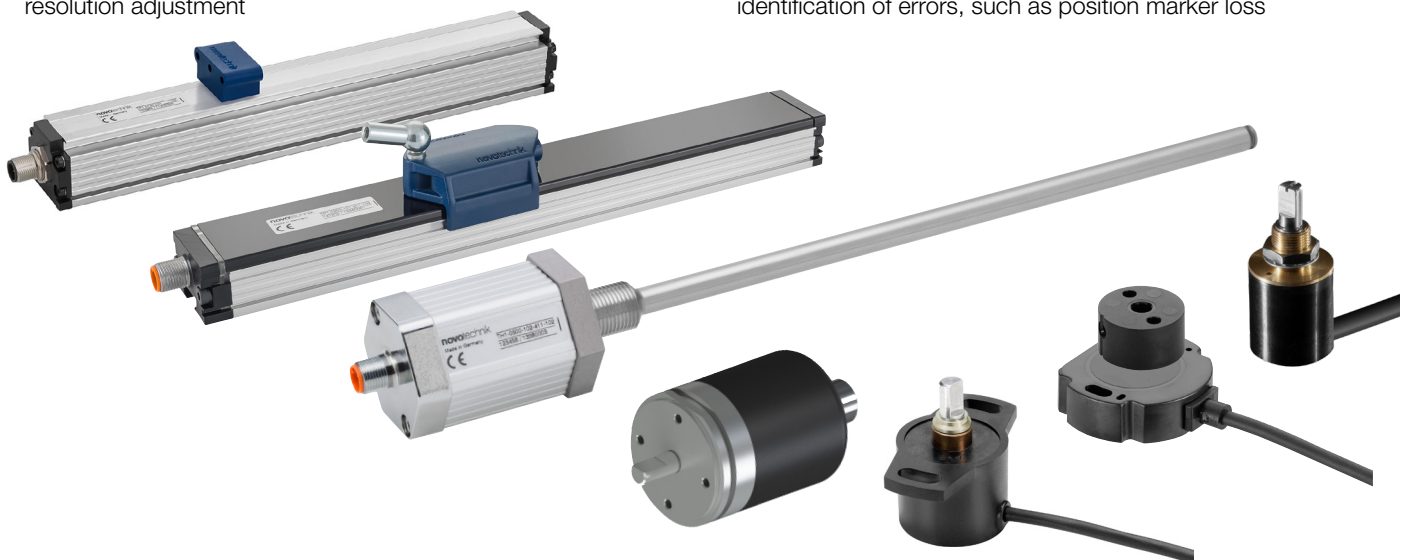


#### Activation

- Plug & Play installation: quick activation thanks to standardized software and ease of operation
- unshielded 3-wire cables with standardized pin assignment
- considerably less installation efforts as well as reduced space requirements in the control box
- reduced diversity of variants due to configuration of process data and additional parameters, such as user-determined resolution adjustment

#### Operation and Maintenance

- interference-free signal at the 24 V level
- simultaneous transmission of measurement and status data
- recall of diagnostics data for scheduled maintenance during operation
- ease of replacement due to intelligent parameter management and backup in device and master
- minimal downtime thanks to seamless device diagnostics and identification of errors, such as position marker loss



#### Linear Position Sensors with IO-Link - Series TP1, TH1, TF1

- magnetostrictive and inductive technologies
- touchless position measurement
- free of wear, unlimited mechanical life
- measuring ranges from 50 to 4250 mm
- resolution of up to 1  $\mu\text{m}$
- position signal and optional speed signal, also for multiple position markers (customer-configurable)
- internal temperature monitoring for diagnostics and preventive maintenance
- settable parameters: zero, resolution, and averaging

#### Rotary Position Sensors from the RFC-4800 series and multi-turn sensors from the MZ1-20200, MC1-2800 and MB1-3600 series

- magnetic Hall effect technology
- touchless position measurement
- with integrated shaft or two-part design
- 360° measuring range single turn up to 44 turns multi turn
- 14 bit resolution
- position and speed signals
- internal temperature monitoring
- settable parameters: zero, averaging, and direction of rotation
- Industry 4.0 smart sensor function



## Representatives worldwide

Today, Novotechnik is represented in all of the world's major markets - be it with our own subsidiaries or by approved dealers.

Wherever our customers will be, thanks to this tightly-knit network we can ensure that, they can rely on first-class service and customer care.

Wherever in the world a linear displacement or an angular position needs to be measured with the highest precision, sensors from Novotechnik are the products of choice. The measuring technology expertise that we have gathered in the course of 70 years represents just one of the secrets behind a success story that began in 1947:

The other cornerstones of our success include a passion for technology and an obsession with precision and reliability. Then, there is our love of solution-oriented thinking, coupled with a fascination with new materials and production methods. And of course, there is our constant awareness of the importance of providing sound advice and first-rate service, complementing our overall goal of continuous improvement of our measuring systems.

The greatest secret of our success, however, has been our passion for devising the best possible solution for each individual customer application. To this end, we will continue to focus on the strengths that made us the successful company that we are today.

Leading OEMs from a multitude of different industries are putting their trust in position transducers and rotary sensors by Novotechnik: be it in general engineering, in hydraulics, in pneumatics, in measuring technology, in medical technology, or in automotive engineering.

And, talking of the automobile industry: more than 50,000 of our sensor components are installed into new cars, each and every day.

Your contacts can be found <https://www.novotechnik.de/en/service/representatives>