Inductive Sensors for Rotary Actuators – Overview (Extract)

**Hysteresis:**
- Temperature drift:
- Repeatability:
- Temperature range:
- Degree of protection:
- Housing material:

**Type**

<table>
<thead>
<tr>
<th>Description</th>
<th>Code</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actuation kit (puck), end position damped, for clockwise and counter-clockwise rotating drives, displays rotate by 90°/20° on encoder: 2A, shaft extension height 30 mm/Ø max. 30 mm.</td>
<td>B6</td>
<td>2015/02</td>
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<tr>
<td>Actuation kit (puck), end position damped, for clockwise and counter-clockwise rotating drives, displays rotate by 90°/20° on encoder: 2A, shaft extension height 40 mm/Ø max. 30 mm.</td>
<td>D6</td>
<td>2015/02</td>
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<tr>
<td>Actuation kit (puck), end position damped, for clockwise and counter-clockwise rotating drives, displays rotate by 90°/20° on encoder: 2A, shaft extension height 50 mm/Ø max. 30 mm.</td>
<td>E6</td>
<td>2015/02</td>
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<tr>
<td>Actuation kit (puck), end position damped, for clockwise and counter-clockwise rotating drives, displays rotate by 90°/20° on encoder: 2A, shaft extension height 60 mm/Ø max. 30 mm.</td>
<td>F6</td>
<td>2015/02</td>
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<tr>
<td>Actuation kit (puck), end position damped, for clockwise and counter-clockwise rotating drives, displays rotate by 90°/20° on encoder: 2A, shaft extension height 70 mm/Ø max. 30 mm.</td>
<td>G6</td>
<td>2015/02</td>
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</table>
Inductive Sensors for Rotary Actuators – Versatility in a Compact and Robust Design

Position control on actuators and drives is of major importance not only in the chemical and petrochemical but also in the food industry. Thus new and open housing solutions are needed, which combine the inherent advantages of module housing while eliminating their typical disadvantages.

With the new line of dual sensors and a full range of actuator sets, TURCK now offers made-to-measure solutions which meet the specific needs of the chemical, petrochemical and the food industry.

TURCK angle sensors enable the individual 0…360° degrees angle capture and the free end position signal damped (NO) can be selected.

The local position indication is adjustable and visually simplified, local misinterpretations are thus reduced. The actuator of the angle sensor is universally usable with the full angle capture of 360° degrees.

Mounting Accessories

The interfaces for position feedback are clearly defined in the certificate ISO 5211/VDI/VE 3845. TURCK dual sensors fit on all standard sizes. Additional accessories may be required for very large drives. For this purpose we offer robust spacer plates as dual sensors. Through the Visual display module set-up and after servicing.

Accessories For Every Need

Under certain conditions, an additional mechanical protection is required – even for very specific applications. The approach is adjustable and position detectors are available in clearly stainless steel. This eliminates the costly construction on site and the in-situ end position signal without disconnection of wiring.

Base cap with direct fieldbus connection or for connection to all common fieldbus systems such as PROFINET, Ethernet and Foundation™ fieldbus. The TERCK sensor guarantees excellent system availability with the following features:

- Generous LED display for clear position indication
- Smooth and easy-to-clean plastic surfaces
- Resistant to rapid temperature changes in the range of -40°C...+150°C
- Safe protection against high pressure steam jet cleaning
- Resistance to aggressive cleaning agents

Diverse Accessories

We offer a complete range of accessories for all TURCK dual sensors, which can be combined to achieve the required functionality and at the same time improve the installation time.

Sophisticated Connection Technology

Dual sensors with standard chambers feature a container for the electronics and the data processing. The electronics chip can be equipped in various sizes which allow new in the event of servicing.

Different electrical outputs enable the basic integration in all standard process environments.

- M428 sensors, degree of protection Exi (intrinsically safe)
- 3-way DC 10...65 VDC
- 2-way DC 10...65 VDC/2..20 VDC
- Direct fieldbus connection to AL interface® and Bottom™
- Ex i (intrinsically safe) for the magnetic valve. The terminal strip can be unplugged in the energized state which safeguards time and effort and improves the compactness of the system set-up and after servicing. TURCK dual sensors with standard connections 1/2” or 7/8” can be integrated directly in existing plug-in solutions. Sensor with terminal chamber and integrated connection for isolated conduits, which are typically supplied in pressure-related installations, are also available.

Design

Compact Design

Despite their compact dimensions, TURCK dual sensors are extremely robust. Systems can be designed more compactly and lots of maintenance work are considerably reduced.

Contactless Angle Measurement

Based on the principle of inductive proximity sensors, the TURCK built-in sensor of the DSC26 series provides analog output signals (such as 0…5 V and 4…20 mA). The sensors are characterized by high broadband and high structural immunity. The contactless measuring principle won’t cause any mechanical wear for arrangement and reliability.

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Nameplate with IEC 61508

The DIN certificate must be displayed with relevant sensors. Special test and marking labels according to IEC 61508/EN 61508 are typically included in the packaging of dual sensors. The housing and the accessories are clearly defined in compliance with EN 61508/IEC 61508 and the EN 61326 standards.

IEC 61508

IEC 61508 is an international standard for the functional safety of electrical, electronic, and programmable electronic systems. It describes how these systems must be designed to prevent or mitigate the risks associated with their failure. The standard is widely used in industries such as aerospace, automotive, and process automation.

IEC 61326

IEC 61326 is a family of standards that provide guidelines for the testing and certification of electronic devices. It covers a wide range of applications, including consumer electronics, industrial instruments, and medical devices.