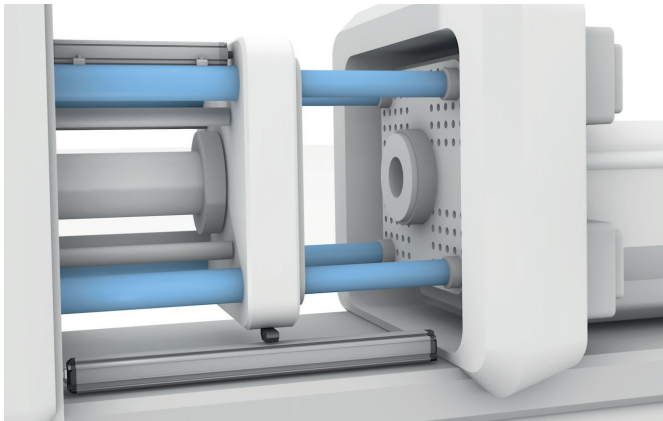


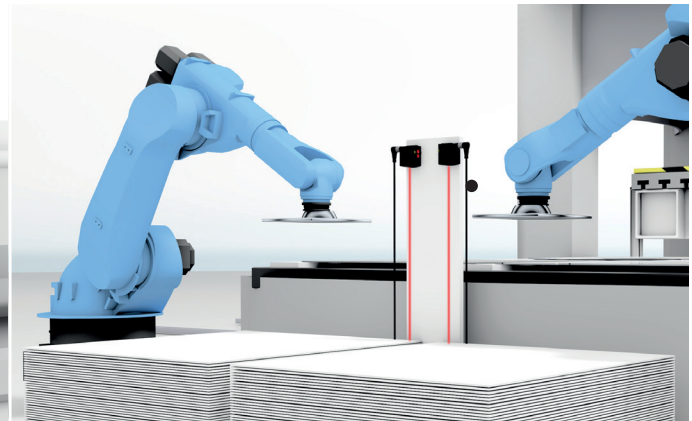
## Measuring – An introduction

# MEASURING TRAVEL, DISTANCES, ANGLES, PRESSURES, NON-CONTACT, WHETHER LINEAR OR ROTARY

Measuring travel, distance, position, angle and pressure are common tasks in automation. The measuring principles used are as varied as the different tasks. We will show you applications and possible solutions based on the magnetostrictive, magnetically coded, inductive and photoelectric technologies.



Monitoring the closing of the platen on a plastic injection molding machine



Continuous distance measurement for object positioning on a conveyor belt

High-precision magnetostrictive displacement transducers monitor the closing stroke of mold platens. A protective form fit reduces wear and extends the tool's useful life.

With photoelectric measuring devices you determine the size and position of objects in the material flow of production lines. Neither the surface properties nor the color of the target object has any affect on the measuring quality.



Precise magnetostrictive linear position sensor detects positions, travel and speeds.



Precise, absolute and incremental magnetically coded travel and angle measuring system



Inductive positioning system detects distances and positions at close range.



Photoelectric distance sensor measures distances regardless of color or surface properties of the object.

Each product technology has its own application focus areas:

- **Magnetostrictive** enables simultaneous measurement of multiple positions and can be used in challenging environments.
- **Magnetically coded** makes extreme accuracy and real-time measurement possible.
- **Inductive** is used for integration in an extremely tight space and is suitable for short distances.
- **Photoelectric** features flexible range as well as being unaffected by the color or surface properties of the target object.

Sensor interfaces such as 0...10 V or 4...20 mA analog, IO-Link and Ethernet-based are the state of the art.