



How can I ensure the position of my hydraulic cylinder in my system?



Part 2 Inductive proximity switches

In many applications, reliable information about the current position of a hydraulic cylinder is required, for example for safety interrogations or to prevent different axes of movement from interfering with each other. The simplest form here is a position switch. Most commonly, inductive, pressure-resistant proximity switches (NI sensors) are used for this purpose in the end positions of the hydraulic cylinders. However, there are also pressureless proximity switches (DKS) that can be adjusted externally.

Precise and inexpensive: built-in, pressure-resistant proximity switches

When the piston position reaches one of the two end positions, this is signalled electronically by the proximity switch. Inductive proximity switches operate without contact and are therefore wear-free. This variant of end position sensing can be used with the [BLZDKS400](#) block cylinder up to 400 bar and 120°C.

What do I do if I do not know the exact end position?

Often the exact end position of the cylinder in a system cannot be determined from the outset. Either the end position is influenced by tolerances of the components to be processed, or the system is fine-tuned on completion. With the BLZDKS400, the sensor can easily be adjusted externally and thus be set to its own end position.

How an inductive proximity switch works

Inductive sensors generate an electromagnetic alternating field. When an electrically conductive object approaches, it withdraws energy from the alternating field, reducing the amplitude of the oscillation. This change is evaluated in the inductive sensor. Thus, the sensing is contactless.

Using inductive sensors to obtain intelligent cylinders

Sensors are constantly evolving. And they are also taking on more and more tasks in hydraulic cylinders. In the past, it was sufficient to know the position of the hydraulic cylinder. Today, HEB can additionally determine the temperature and the number of strokes with intelligent IO-Link sensors. And not only for the current state, but also over a period of time. This allows conclusions to be drawn about possible wear and tear and preventive maintenance to be initiated. [Contact us](#) for more information.