

LiView® – The intelligent position transducer for hydraulic cylinders

- New and unique measurement solution for all cylinders
- Easy mechanical integration
- Intelligence for dynamic cylinder movements

Nussbaumen (Switzerland), March 2017 – Liebherr presents the new intelligent position transducer LiView® at Hannover Messe 2017. The robust system determines the exact piston position and speed through high-resolution absolute measurement. LiView® is especially suitable for automation of mobile machinery.

Modern measurement systems in mobile machinery face specific challenges, like fierce vibrations or extreme temperatures. Based on extensive know-how with very demanding operating conditions, Liebherr has developed the new position transducer LiView®. The completely new measurement concept can be easily integrated, is universally applicable and extremely robust.

Unique measuring concept

LiView® utilizes the piston itself as robust sensing element. The system consists of the processing electronics and two probes. LiView® measures the cylinder's scattering parameters using signals at different frequencies injected onto the cylinder itself. Piston position and speed are calculated in real-time by the processing electronics. That allows dynamic automation of machines for more efficiency and higher productivity.

This new measuring concept ensures a fixed installation of all components. No moving parts in oil (e.g. magnet), which may cause an oil contamination including a machine breakdown, are required.

Easy integration

LiView® convinces through fast and easy mechanical integration. The electronics can be installed either on the cylinder or directly on the machine. Only both probe heads require a connection to the piston rod bearing. The probe heads swim on an oil film and are

therefore wear-free. No further modifications of the cylinder or drilling the piston rod are necessary.

The integration concept of the system ensures easy accessibility of all components. In case of an external damage, this allows fast and simple maintenance – without draining oil, dismantling or even disassembling of the cylinder.

When using LiView[®], the space in the cylinder can be used entirely for the idle stroke, as the probe heads are integrated in the piston rod bearing. Therefore, the full cylinder length is available with the position transducer installed.

A customized solution for all cylinders

The LiView[®] concept allows installation on the smallest as well as in very long cylinders. Thus, the system is generally suitable for all cylinder lengths and piston diameters.

The functionality of LiView[®] can be configured in accordance with the specific application requirements. This ensures high efficiency, when using the system. For safety-relevant applications, LiView[®] is certified according to EN ISO 13849 PL d and EN IEC 61508 SIL2.

Intelligence for dynamic cylinder movements

LiView[®] is an intelligent position transducer which calculates piston speed in real time with a measurement cycle of <200 µs. This provides short latency periods for the control system, enabling high-performance position control of cylinders. This is especially advantageous, if a dynamic approach to predefined workroom borders is required.

Due to the combination of robustness, performance and fast measurement cycles, LiView[®] is the ideal position transducer for the automation of mobile machinery.

Captions

liebherr-liview-position-transducer.jpg

LiView[®] position transducer: ideal for automation of mobile machinery.

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www.liebherr.com/liview

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