

For farm machinery

The RK-5 C magnetostrictive transducer by Gefran is among others suitable for the agriculture sector. It complies with the CiA 301 and CiA 406 specifications.

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Tractors, combine harvesters, sprayers, balers, and other farm equipment are all subject to changeable weather and heavy working conditions (Photo: Gefran)

Gefran offers a package of sensors for the main mechanical movements of farm vehicles, such as control of steering angle, hydraulic oil pressure, and position of the cylinder that controls arm opening. The solutions designed for these position control applications include two different technologies: potentiometric (with contact) and magnetostrictive (contactless), offered in ranges with different sensor mechanics that adapt to the various needs of the agricultural market.

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The RK-5 C contactless transducer (Photo: Gefran)

The RK-5 C for example, is a contactless, magnetostrictive, linear position transducer with flanged connection (CANopen output) that installs completely inside oil-pressure cylinders. It has been designed for mobile hydraulics and is suitable for inside cylinder applications that demand precise and accurate position measurement. The absence of electrical contact on the cursor eliminates wearing and guarantees almost unlimited life, claims the company.

The communication system of CAN allows the transmission (output signal). The implementation of the CiA 301 application layer and the CiA 406 device profile provides integration of the transducer in the CANopen-based control system. Working temperature from -40 °C to +105 °C, working pressures up to 350 bar, resistance to vibration (25 g) and shock (100 g) give the sensor the strength needed for heavy-duty use, for example mobile hydraulics. The hydraulic circuit area protection is IP67/IP69K with a socket connector.