

Application-Report - Hydrostatic drives



Task:

A sensor is required to measure the speed of hydrostatic drives and transfer it securely to the control system under extreme environmental conditions.

Applications:

Road construction machinery such as excavators, crawlers and rollers; Snow plows and municipal vehicles; Agricultural machines; Truck cranes and special vehicles.

Operating conditions:

The sensor is attached directly to the hydro motor. It must be resistant against high-pressure cleaners (80 bar / 80 °C), contact with hydraulic oils, salt water and diesel and high pressures (approx. 360 bar) and temperatures.



Source: Danfoss

Solution:

Special stainless steel differential hall-effect sensors are used. They are of a high protection class and can be used within a range of -40 °C to $+125\text{ °C}$. Applications of up to 360 bar are possible due to a simple, but effective seal technology. Low speeds are also detected (from 0.5 Hz).

Scanning distances of up to 2.5 mm are possible. Various variants of the M12 sensor series are available. They are available with different cable lengths or with an integrated connector.



IP67

IP69K

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