

Piher's ARC Position Sensors Help Material Handling Equipment Manufacturers Reduce Costs

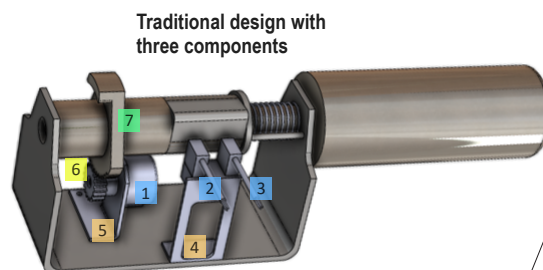
Material handling equipment manufacturers are constantly looking for ways to reduce costs and improve the efficiency of their products. Piher's ARC position sensors can help achieve these goals by providing a cost-effective and reliable solution.

Traditional pallet jack hand throttle control systems typically used one potentiometric rotary sensor coupled with gears to the pivoting shaft (1) plus two switches (2), (3).

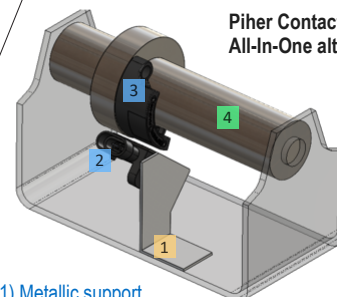
The rotary sensor feedbacks the angle while the rotary switches activate when the lower and upper limit has been reached respectively.

This design is relatively expensive and can be prone to failure as the switches can be easily damaged by debris or moisture, and the potentiometer can be affected by extreme temperatures and tear & wear caused by mechanical life and vibration.

Piher provides an alternative to this issue by using a single ARC Position Sensor that can replace these three components and furthermore provides multiple competitive advantages to the equipment manufacturer.

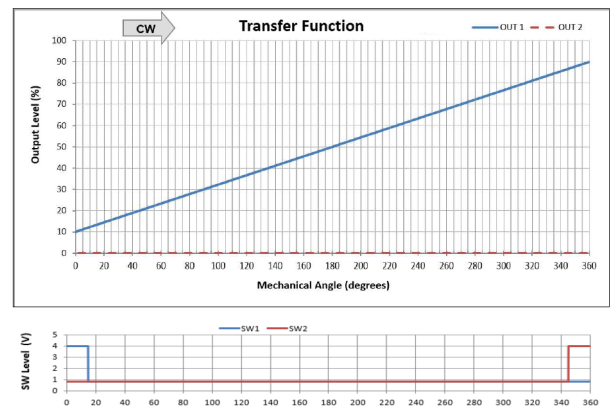


(1) Potentiometer (2),(3) Switch
(4),(5) Metallic support (6) Gears
(7) Complex lever



(1) Metallic support
(2) Sensor (3) Magnet
(4) Simple lever

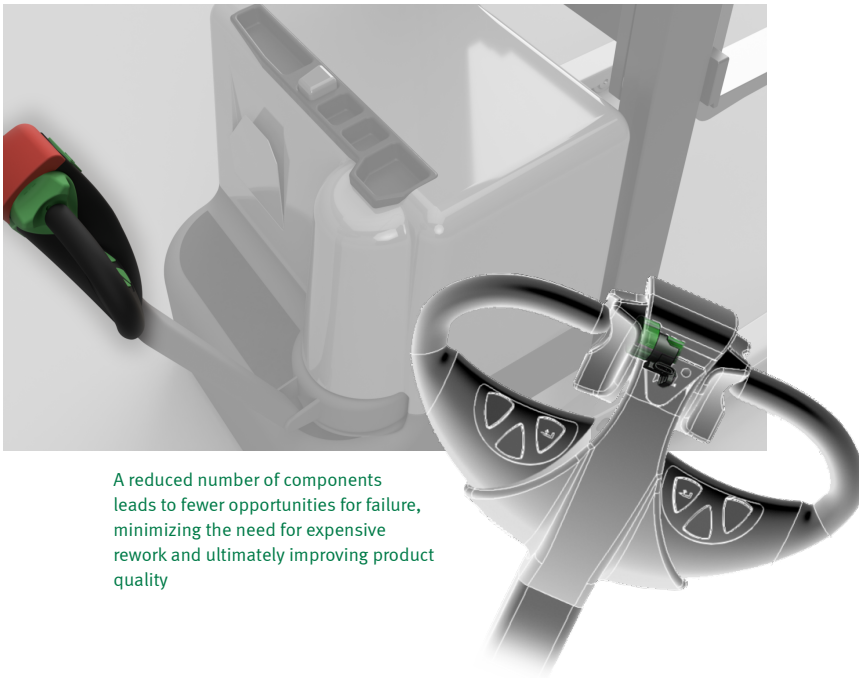
ARC Position Sensor Output Function that replaces one linear potentiometer and two switches



Benefits / Industrial-grade design

- **Non-contact working principle:** There is no contact between the target and the sensor there is no wear, so mechanical life is virtually unlimited.
- **Immunity to radial and axial play:** Maintains stable electrical output and specified linearity despite radial and axial tolerances avoiding performance loss and maintenance cost.
- **Functional safety:** IP69K sealing, built in self-diagnostics and redundancy options afford maximum safety for the most demanding applications.
- **Off-the-shelf magnets:** Pre-designed magnets in two standard configurations are consistently in stock, facilitating swift deployment and accelerated time-to-market. Custom magnets can be produced to meet the specific needs of each application

Less is MORE



A reduced number of components leads to fewer opportunities for failure, minimizing the need for expensive rework and ultimately improving product quality

Reduced Downtime and Maintenance Expenses

Piher's ARC position sensors have a flange mount for fast and simple installation during the production process of equipment, eliminating the need for additional labor costs.

Clip mount magnets can be supplied thus eliminating the need of flanges, nuts, washers and screws.

Field technical service personnel can quickly replace defective sensors, minimize stock references count, downtime and unnecessary maintenance expenses.

One ARC, Two Technologies

Piher employs two primary technologies for arc detection: **Hall Effect** and **Inductive - Eddy Current**. The selection of the most suitable technology for a particular application depends on the specific requirements of that application. For instance, Inductive technology is generally preferred for high-speed applications or environments with significant magnetic interference due to its inherent immunity to magnetic fields.

Customer-Specific Sensors

Piher's ARC Sensors specifications can be fully tailored to customer needs, including linear transfer functions, switch outputs, redundancy levels, linearity, return spring, magnet radius, wiring, connector types and form factor.

For OEMs who prefer a customized solution, our team will collaborate with you from product concept through manufacturing and certification to ensure that it meets all the requirements of the application.

Connect With Us Today

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