

Application Note

SMART Position Sensor

Accurate, Reliable, Thinking

Irrigation Equipment Position Sensing

BACKGROUND

A circular irrigation system waters crops. A method is needed to monitor equipment position to provide optimal water quantity and to control waste.

SOLUTION

The rotary configuration of the SMART Position Sensor (Figure 1) calculates the travel distance of the central shaft that drives the irrigation boom arm. Figure 2 shows how the sensor may be placed around the central shaft. A magnet may be mounted on the shaft itself.

Figure 1. Product Used in this Application

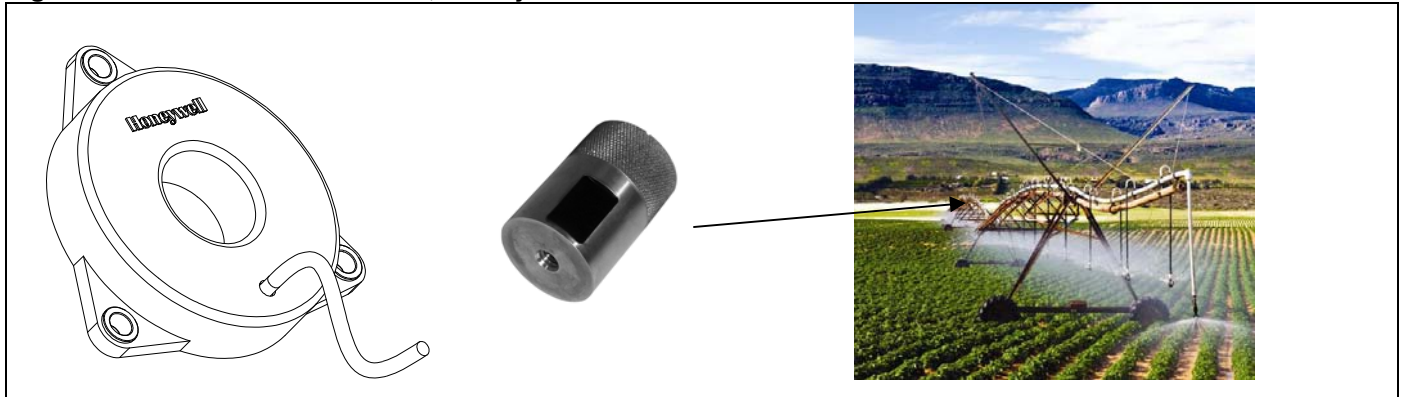
The SMART Position Sensor, Rotary Version
Sensing range: 360 degrees



SMART POSITION SENSOR BENEFITS

- High resolution of 16 bits provides enhanced accuracy
- Non-contacting technology designed to enhance product life and durability with less downtime
- Combined patented MR sensor and ASIC technology provide enhanced differentiation and performance
- Three packaging styles ease integration and compatibility with legacy systems and provides increased application flexibility
- Large air gap of up to 20 mm [0.79 in] between sensor and magnet increases application flexibility
- Self-diagnostics feature reduces equipment downtime
- Programmability increases flexibility, allowing the user to adjust the parameters without having to develop new equipment
- Small size, which takes up 50% less space than most competitive technologies, for use where space is at a premium

Figure 2. SMART Position Sensor, Rotary Version



SMART Position Sensor

WARNING

PERSONAL INJURY

DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

Failure to comply with these instructions could result in death or serious injury.

WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

WARNING

MISUSE OF DOCUMENTATION

- The information presented in this application note is for reference only. Do not use this document as a product installation guide.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.

Failure to comply with these instructions could result in death or serious injury.

SALES AND SERVICE

Honeywell serves its customers through a worldwide network of sales offices, representatives and distributors. For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact your local sales office or:

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