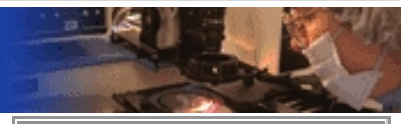
Honeywell

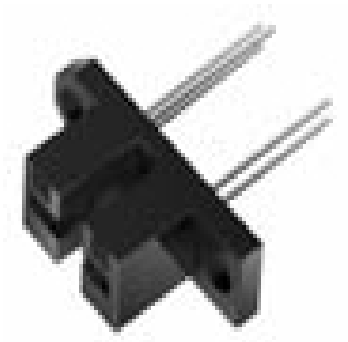
Honeywell Sensing and Control



Order Product and Get Support

- U.S. Authorized Distributors
- Global Sales & Service
- N. American Sales Reps
- Distributor Inventory
- Technical Assistance
- White Papers
- Literature Request
- Test and Measurement Catalog
- RoHS Product List
- Customer Feedback

HOA0901-012



Actual product appearance may vary.

HOA Series Infrared Transmissive Encoder Sensor, Inverting Logic Output, Two Mounting Tabs, Plastic Package

My Links

Login to iCOM
Login as Rep/AD
Login as Guest
Login to Digital University

Keyword Search

Search for product and support information.

All Sensing and Contro

Product Search

Part number search:

Use (*) to expand search

Specification Search

Features

Dual channel IC
Direct TTL interface
Inverting logic output
Resolution to 0.009 in [0.229 mm]
Internal temperature compensation
0.126 in [3.2 mm] slot width
Two mounting configurations

Description

The HOA0901 sensor consists of a dual channel IC detector and an IRED encased in a black thermoplastic housing. The device is typically used with an interrupter strip or disk (code wheel) to encode the rate and direction of mechanical motion. Applications include linear and rotary encoders; it is especially suited for the encoding function in an optical mouse. As the interruptive pattern moves, the detector generates two output signals which can be processed to provide speed and direction information.
The detector is a monolithic IC which consists of two narrow adjacent photodiodes, amplifiers, and Schmitt trigger output stages. The outputs are NPN collectors with internal 10 kOhm (nominal) pull-up resistors to Vcc which are capable of directly driving TTL loads. The IC design incorporates circuitry to compensate the sensitivity for the output power vs. temperature characteristic of the IRED. The sensing areas of the IC are each 0.008 in (0.203 mm) in width and 0.015 in (0.381 mm) in height with a 0.001 in (0.0254 mm) separation for a center-to-center spacing of 0.009 in (0.229 mm) and outside edge to edge distance of 0.017 in (0.432 mm).
Two package styles are available. HOA0901-011 is primarily intended for direct PCB mounting. HOA0901-012 has mounting tabs for chassis mounting. The HOA0901 series employs plastic molded components. For additional component information see SEP8506 and HLC2701.
Housing material is polycarbonate. Housings are soluble in chlorinated hydrocarbons and ketones. Recommended cleaning agents are methanol and isopropanol.

Supporting Documentation

Dimensions | **Block Diagram and Performance Charts** | **Engineering Drawing**

Product Specifications	
Series Name	Encoder Sensor
Product Type	IR Component
Turn-on Threshold Irradiance	0.05 mW/cm² to 2.0 mW/cm²
Output Option	Direction
Package Style	Chassis Mount
Package Components	Plastic
Continuous Forward Current	50 mA
Reverse Breakdown Voltage	3 V
Power Dissipation	100 mW
Operating Temperature Range	-40 °C to 85 °C [-40 °F to 185 °F]
Hysteresis (H)	0.28
Operating Supply Voltage	4.5 V to 5.5 V
Supply Voltage	5.5 Vdc
High Level Output Voltage	2.4 V minimum
Low Level Output Voltage	0.4 V maximum
Internal Pull-up Resistor	5.0 kOhm min., 10.0 kOhm typ., 20.0 kOhm max.
Output Rise Time	100 ns
Output Fall Time	100 ns
Propagation Delay, Low-High,High-Low	5.0 µs
Duration of Output Short Vcc or Ground	1.0 second
Comment	The radiation source is IRED with a peak wavelength of 880 nm.
Availability	Global
Resolution	0,03 mm [0.009 in]