



*Representative photograph, actual product appearance may vary.*

*Due to regional agency approval requirements, some products may not be available in your area. Please contact your regional Honeywell office regarding your product of choice.*

## HOA6972-N55

**HOA Series IR Opaque Optoschmitt Sensor, Transistor Output, No Mounting Tab, Plastic Package**

### Features

- Direct TTL interface
- Buffer or inverting logic available
- Three device output options
- Four mounting configurations
- Choice of detector aperture
- 0.125 in [3.18 mm] slot width

### Description

The HOA696X/697X series consists of an infrared emitting diode facing an Optoschmitt detector encased in a black thermoplastic housing. Detector switching takes place whenever an opaque object passes through the slot between emitter and detector. The photodetector consists of a photodiode, amplifier, voltage regulator, Schmitt trigger and various output configurations. The user can choose from available options: (1) detector aperture, (2) mounting tab configuration, (3) detector output configuration, and (4) housing material.

The HOA696X series utilizes an IR transmissive polysulfone housing which features smooth optical faces without external aperture openings; this feature is desirable when aperture blockage from airborne contaminants is a possibility.

The HOA697X series employs an opaque polysulfone housing with aperture openings for use in applications in which maximum rejection of ambient light is important, and situations in which maximum position resolution is desired. The HOA696X/697X series employs plastic molded components. For additional component information see SEP8506 and SDP8XX4.

Housing material is polysulfone. Housings are soluble in chlorinated hydrocarbons and ketones. Recommended cleaning agents are methanol and isopropanol.

Device Polarity:

Buffer - Output is LO when optical path is blocked.

Inverter - Output is HI when optical path is blocked.



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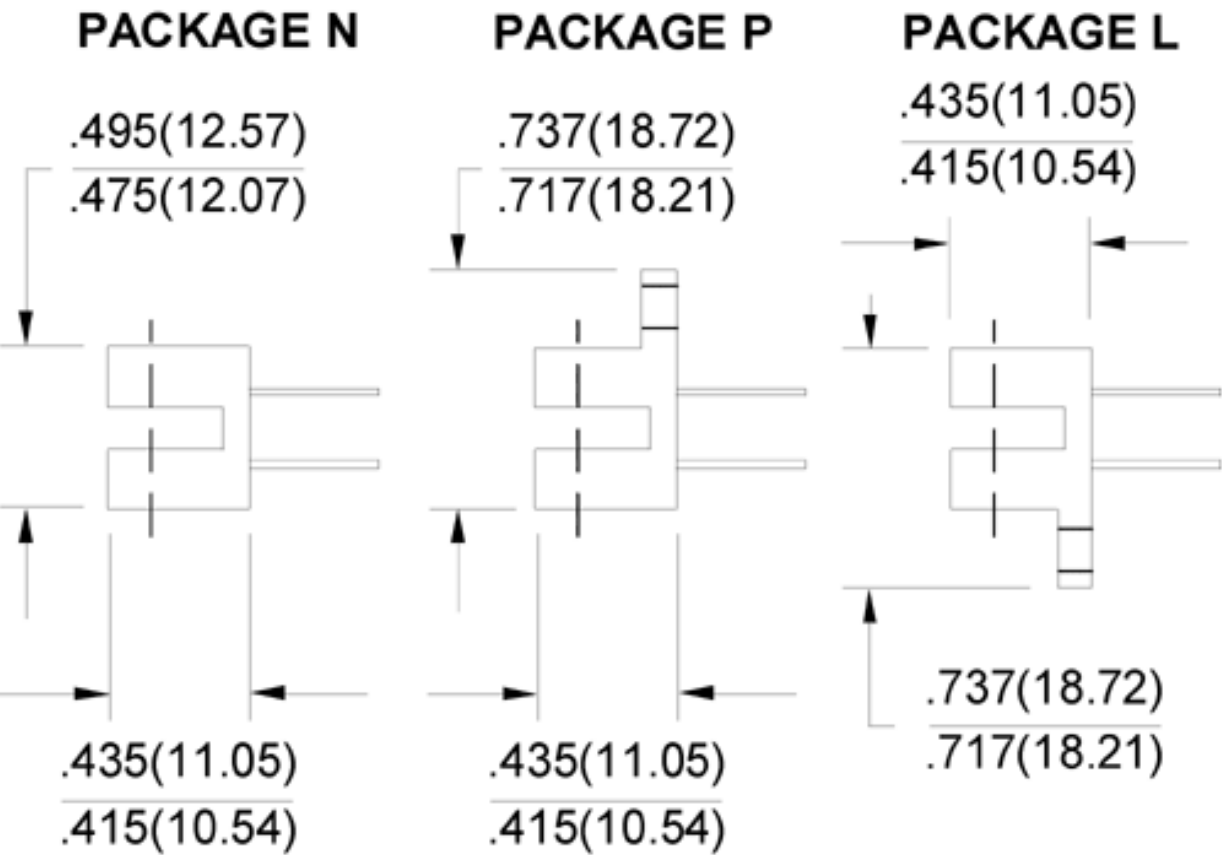
Product Specifications	
Product Type	IR Switch
Output	Totem-Pole
Output Logic	Inverter
Mounting Configuration	No Mounting Tab
Package Components	Plastic
Package Color	Black
Continuous Forward Current	50 mA
Forward Voltage	1.6 V
Reverse Breakdown Voltage	3 V
Reverse Current	10 µA
Maximum Trigger Current	15 mA
Housing Material	Polysulfone, Opaque
Power Dissipation	100 mW
Operating Temperature Range	-40 °C to 70 °C [-40 °F to 158 °F]
Hysteresis (H)	5%
Operating Supply Voltage	4.5 V to 7.0 V
Supply Voltage	7.0 Vdc
High Level Output Voltage	2.4 V minimum
High Level Supply Current	15 mA
Low Level Output Voltage	0.4 V maximum
Low Level Supply Current	15 mA
Short Circuit Output Current	-20 mA to -100 mA
Output Rise Time	70 ns
Output Fall Time	70 ns
Propagation Delay, Low-High,High-Low	5.0 µs
Duration of Output Short Vcc or Ground	1.0 second

IRED Trigger Current	15 mA
Comment	Output is HI when incident light intensity is above the turn-on threshold level.
Availability	Global
Product Name	Optoschmitt Sensor
Sensor Aperture	1,52 mm x 1,27 mm [0.060 in x 0.050 in]
Slot Width	3,18 mm [0.125 in]

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## **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.**

## **WARNING**

### **MISUSE OF DOCUMENTATION**

- The information presented in this product sheet (or catalog) is for reference only. DO NOT USE this document as product installation information.
- 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.**

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