RPS-450

Features

- Self Contained
- Range 5 - 30" or 10 - 72"
- Narrow Sensing Beam
- High Frequency
- LED Indicator

- Operates in Hostile Environments
- Operating Voltage 120VAC (60 Hz)
- N.O. N.C. Solid State Relay Outputs
- Plastic Housing
- Potentiometer For Setup

The RPS-450 is a self-contained, 120VAC powered, ultrasonic proximity sensor in a 30mm barrel housing. The sensor is range or distance sensitive, which enables the sensor to detect objects only within the desired range and reject objects outside the desired range. The RPS-450 product line features solid state construction including the solid state relay outputs. The sensor operates in the ultrasonic spectrum and is therefore not heard. For initial setup purposes, a built in potentiometer and LED indicator are provided.

The LED indicator illuminates when the ultrasonic wave from the sensor is reflected back to the sensor within the desired range. The sensor provides precise proximity or level sensing regardless of target color, density or transparency. The sensor is equally effective on liquid, metal, plastic or glass targets.

Adjustable Detect Point
5"   30"

OBJECT DETECTED - YES
Object is inside the sensors range.

Adjustable Detect Point
5"   30"

OBJECT DETECTED - NO
Object is outside the sensors range.
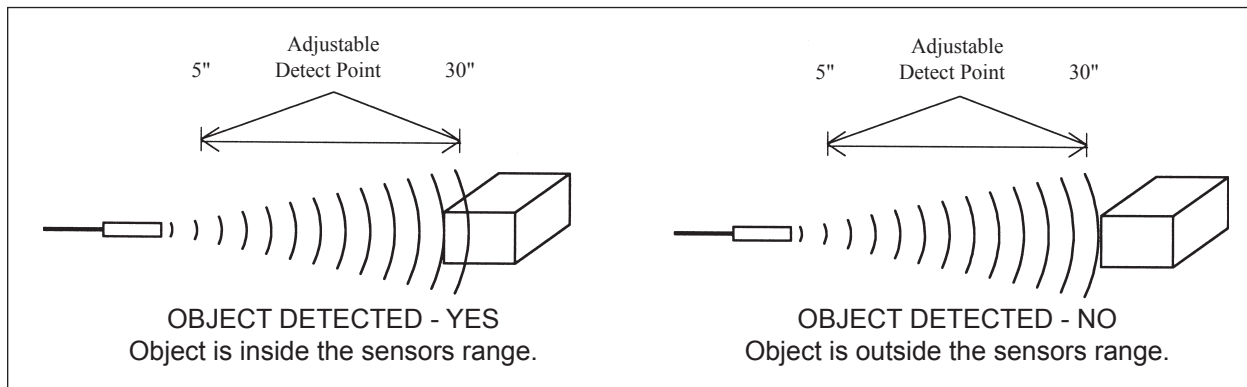
Proximity Detection

Proximity detection is the detection of an object in a given range. The detection range of the RPS-450 is controlled by a potentiometer located on the rear of the sensor. Any object within the desired range is detected, while objects outside the desired range are ignored. The detect point is independent of size, material, or reflectivity of the object.

Specifications:

Operational Range:
- RPS-450-30   Adjustable 5 - 30"
- RPS-450-72   Adjustable 10 - 72"

Power Input: 120VAC

Input Current: 30mA

Ambient Temperature: 0 - 60°C or 32 - 140°F

Humidity: 0 - 95% Non-Condensing

Transducer Housing: PBT Plastic

Transducer Face: Silicone Rubber

Output: Zero-Crossing Detection
Isolation 3750VRMS
Off State Leakage 0.001A Max.
Load Current 0.005 - 1A
Peak Current for 1 Cycle 10A Max.
Switching Voltage 120VAC

Transducer Frequency:
- RPS-450-30   212kHz
- RPS-450-72   150kHz

Response Time:
- RPS-450-30   30ms
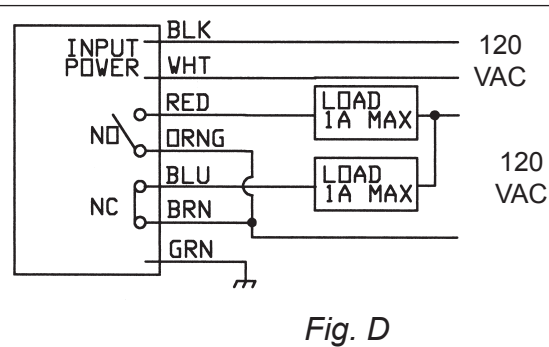- RPS-450-72   60ms

Weight: 11 ounces

Fig. A

Fig. B

Fig. C

Fig. D

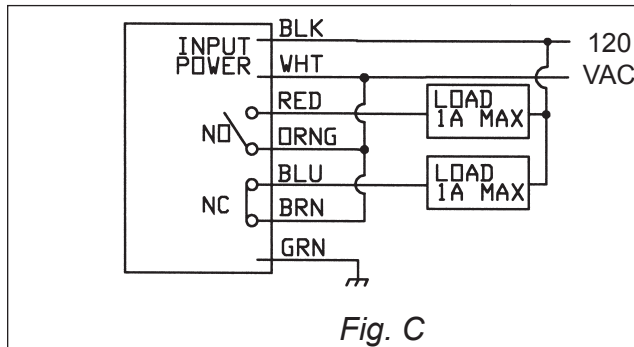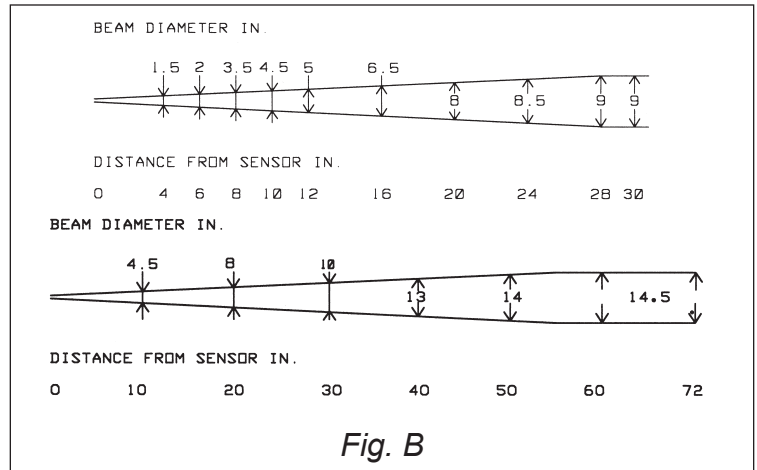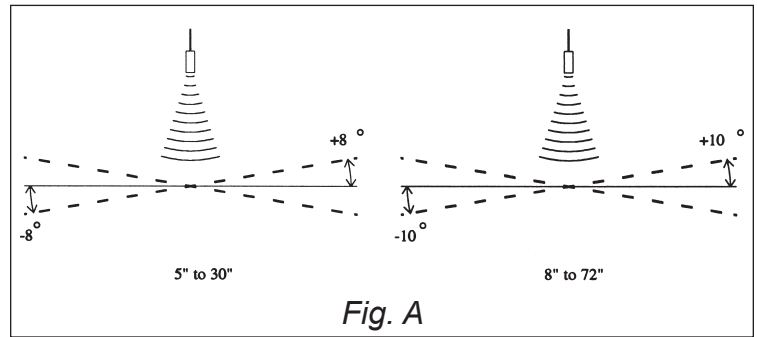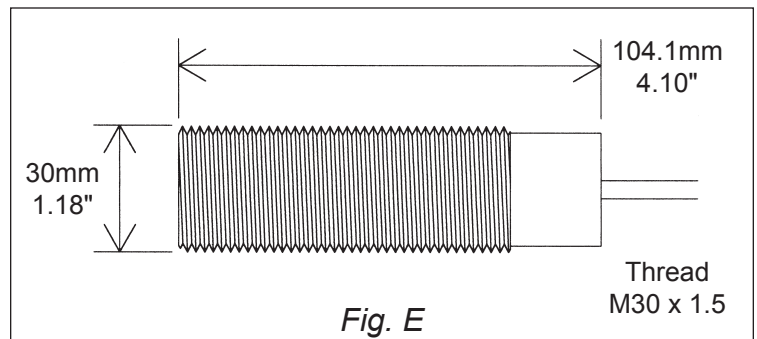## Figure:

A - Angle of Tilt
B - Beam Spread
C - Wiring Diag.- Load conn. to Sensor Power
D - Wiring Diag.- Load conn. to External Power
E - Mounting Dimensions

Fig. E

PART NUMBER	RANGE	OUTPUT / DESCRIPTION
RPS-450-30	5 - 30"	Solid State Relays, N.O. & N.C.
RPS-450-72	10 - 72"	Solid State Relays, N.O. & N.C.