

# Handsfree Sensors with R-Force™ Technology

Range of customizable sensors for touchless activation of a wide variety of products and applications.

## R-Force

All sensors incorporate the R-Force technology platform, which is characterized by a combination of state-of-the-art hardware design, sophisticated embedded algorithms, and real time calibration. R-Force combines high resolution with an extremely low noise impact resulting in a unique touchless experience.



### Eliminate False Activations

R-Force removes false activations by reflective surfaces, fluorescent light, sun light and electrical interferences



### Surface Color Independent

R-Force almost fully eliminates differences between the detection of white and black surfaces, a 40x better performance than the average touchless sensor



### Reflective Jacket Proof

R-Force achieves a reduction of over 99% of activations by safety vests and reflective jackets

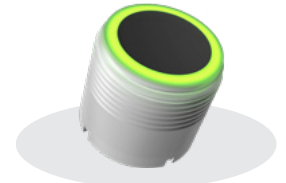
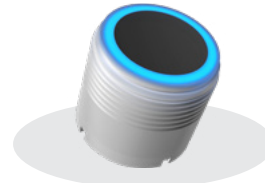
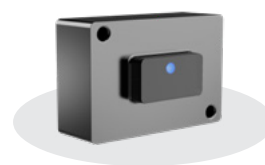


### Very Accurate Detection Range

R-Force achieves a 20x better detection resolution than the average touchless sensor.

## Fully Customizable

RNC's range of sensors are fully customizable. From housing dimensions to design, from outputs to inputs and from software functionality to IoT and cloud options. Literally any part of our sensor range can be customized to meet your requirements, optimizing your customers' experience.



## Product Specifications

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<b>Principle technology</b>	Photon impulse sensing
<b>Wavelength</b>	940nm
<b>Actuation type</b>	Optical touchless activation
<b>Object sensing range</b>	Up to 150cm
<b>Object activation range</b>	0.5-80cm
<b>Functions</b>	Momentary, on/off, prolonged ( <i>more options available</i> )

## Electrical Data

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<b>Power supply</b>	3-24 VDC ( <i>AC optional</i> )
<b>Switching voltage</b>	4.5-36 VDC ( <i>other voltage optional</i> )
<b>Switching current</b>	Up to 3A ( <i>higher currents optional</i> )
<b>Current consumption</b>	20µA in standby mode
<b>Switching output</b>	Dry contact, open collector, voltage out, latching & non-latching solenoid valves ( <i>more options available</i> )
<b>Reverse polarity protection</b>	Yes

## Mechanical Data

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<b>Lifetime</b>	>5 million actuations
<b>Minimum product size</b>	Rectangle sensor approx. 20mmx20mm Round sensor component approx. 17mmx20mm
<b>Connection</b>	Standard wires. Depending on input, output, and illumination. Different cable & connector options available

## Environmental Data

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<b>Operating temperature</b>	-20 to 85 °C
<b>Storage temperature</b>	-40 to 85 °C
<b>Protection class</b>	Up to IP68

## Communication Options

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<b>Wireless</b>	Ready for Bluetooth, WiFi, Cellular ( <i>other options available</i> )
<b>Protocols</b>	UART, RS232, I <sup>2</sup> C, SPI, RS485 ( <i>other &amp; customized protocols optional</i> )

## Illumination Options

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<b>Color</b>	Single color & RGB
<b>Shape</b>	Dot LED, ring LED & customized shapes