# T30R RADAR SENSOR

Bridging the Gap Between Ultrasonics and Radar

## ((( DETECTING )))
## Where Others Cannot

The **Banner T30R series** is an industrial radar sensor that uses high frequency radio waves from an internal antenna. It detects high-dielectric targets, such as metal or large amounts of water, and lower-dielectric materials, such as wood, rock, or organic material. The sensor can be configured with software, IO-Link, remote input wires, or push buttons to sense objects up to a specific distance, ignoring objects beyond this distance (background suppression). The sensor can also be taught a reference point to detect the presence or absence of objects (retroreflective).

T30R provides a robust, longer range alternative to ultrasonics, delivering more precision and reliability than traditional 24 GHz radar with easy set up and simple integration.

The **Steiner Automation & Controls team** can help you review and select the right T30R Radar Sensor based on your application requirements.

## BANNER T30R Series Features

- Compact, rugged IP67 housing for dependable, long-term operation in harsh environments
- Unaffected by rain, wind, snow, fog, steam, sunlight, and an operating temperature of -40 to 65° C
- Detects a wider range of targets than traditional 24 GHz radar including reliable detection of high-dielectric materials like metal as well as lower-dielectric materials like wood, rock, or organic material
- Dual discrete outputs for slow / stop positions or analog and IO-Link for absolute measurement values
- Radar Configuration Software, IO-Link, remote teach, and push buttons for flexible set-up
- Pulse Pro output for direct integration with Banner lights, giving direct process feedback that only requires power; no controller needed
- Frequency Modulated Continuous Wave (FMCW) for detection of stationary and moving targets
- Crosstalk immunity, allowing for multiple sensors to be mounted in close proximity
- Up to 15 m range to detect targets from farther away while maintaining detection as close as 150 mm
- Available in 15x15 degree and 45x45 degree beam patterns to solve a wide variety of applications

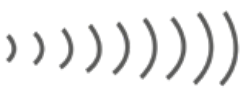

- The T30R-1515 offers the most precise measurement and ignores objects outside of a region of interest making it ideal for vehicle detection, tank level monitoring and positioning feedback
- For the most reliable detection, the T30R-4545 should be used on large, strong targets such as vehicles, trains, or airplanes

**Shop Banner T30R Radar Sensors**

## Beam Pattern Considerations

*Radar Sensors are available in narrow and wide beam patterns. Narrow beam patterns avoid false detection of objects outside of the region of interest and allow for a more precise measurement, while wide beam patterns provide coverage of larger areas and provide more robust detection of irregular surfaces and targets presented at steep angles.*

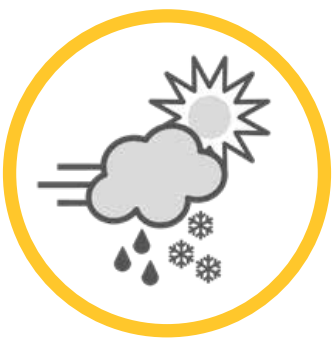
### Narrow Beam Considerations



- **Drive-through**
- **Gantry crane**
- **Overhead Crane**
- **Loading Docks**

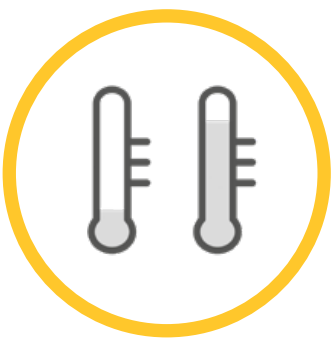
### Wide Beam Considerations

- **Mobile equipment collision avoidance**
- **Vehicle detection: train, car, boats**



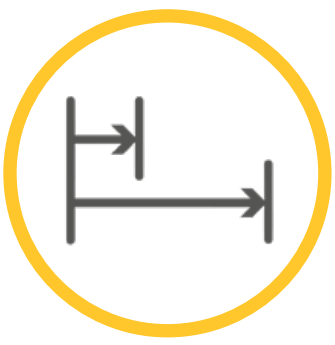
### Ideal for outdoor applications

- Resistant to rain, snow, fog, steam or sunlight
- IP67-rated



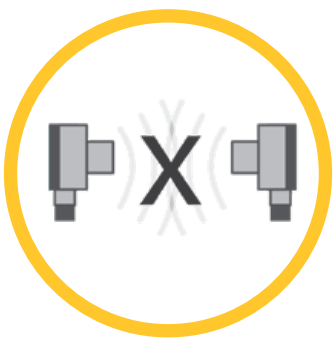
### Temperature Stability

- Radar (radio waves) not affected by temperature changes like Ultrasonic (sound waves)
- Consistent measurement: -40 to 60 °C



### Detect near or far

- Sensing range of 150 mm to 15 m



### No Crosstalk

No problem mounting multiple sensors close together

For more info about the Banner T30R Radar Sensor call **1-800-STEINER** (783-4637) to speak with a Steiner Automation & Controls application engineer or email automation@stnr.com.

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