

Seeing What Other Sensors Miss

How Inxpect Radar is Redefining Industrial Safety

In many plants that we walk into, the story starts the same way.
A machine builder or maintenance manager pulls us aside and says something like:



“We keep getting false trips on our scanners.”

“We have to clean our area scanners once a month or they stop working.”

“I need a safer way to ensure no one is inside the cell before restart.”

And every time we hear these frustrations, the solution that rises to the top is the same: **radar-based safety from Inxpect.**

- ❌ Not cameras.
- ❌ Not laser scanners.
- ❌ Not light curtains.
- ✅ Radar.

Because in today’s high-mix, high-speed, visually chaotic environments, radar sees what other technologies simply can’t.

The Only Radar Certified for Safety

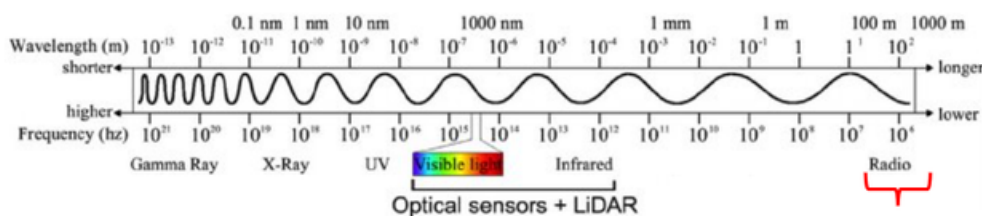
This isn’t just “cool tech.” It’s the world’s **first and only radar safety system** certified to **SIL2 / PLd**.

That certification matters, because safety devices must do more than sense motion, they must do it reliably and repeatably, in compliance with global machine safety standards.

Why Radar? Because Visibility Shouldn’t Equal Safety

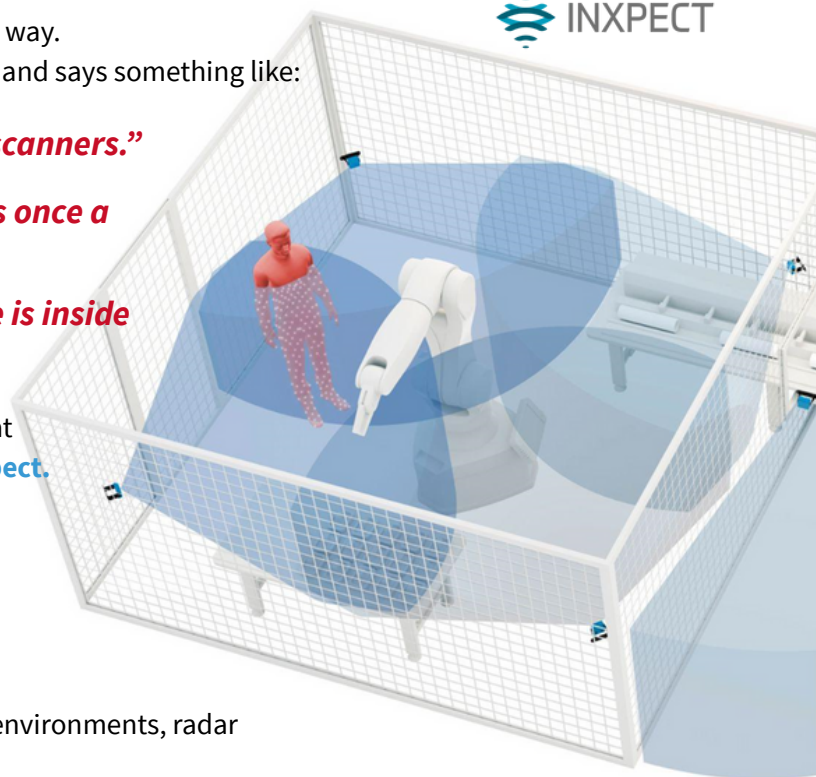
If you look at the physics, the difference becomes obvious.

Visible and infrared light can be blocked by smoke, dust, weld haze, fluids, or glare; conditions that are normal on a shop floor.



Visible light can be easily obstructed

Radar is more robust



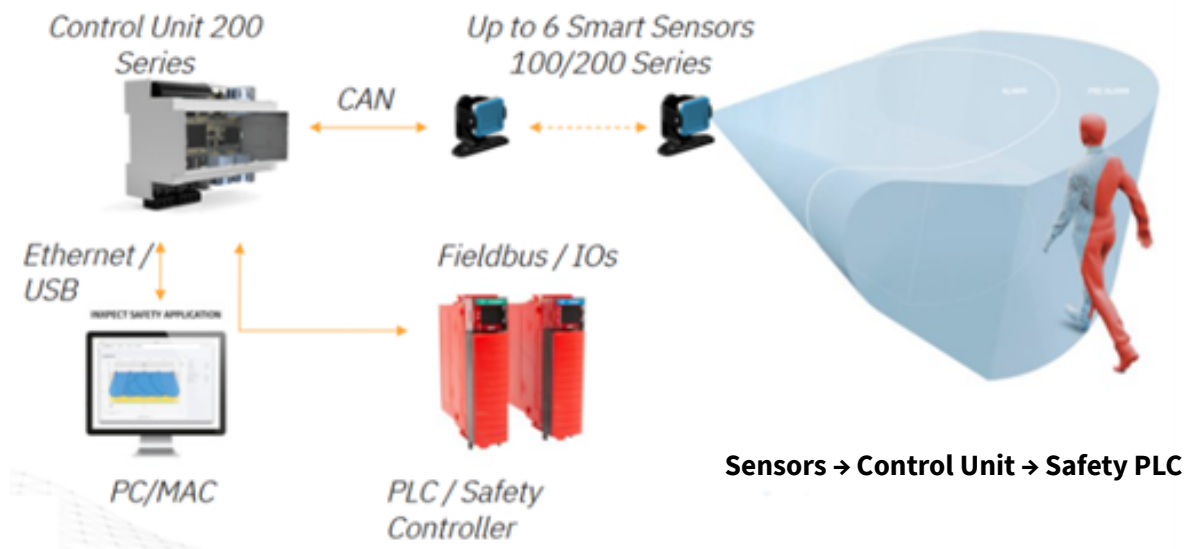
Radio waves, on the other hand, are far more robust. They pass through these obstacles and create a 3D volumetric safety zone that continues to function when optical systems would have already shut down.

And that's why Inxpect technology continues to outperform when conditions get challenging.



How Inxpect Works: A Simple Architecture That Solves Complex Problems

Each Inxpect system is built on a modular architecture as seen here:



Type A Control Unit



Type B Control Unit



Ruggedized Control Unit



Main specs:

- Type A/B Controller IP20 protection
- Ruggedized IP67 version available
- Safe Ethernet protocols (**CIP**, **PROFIsafe**, **FSoE**)
- SIL2 PLd level safety rating
- Free Software
- MODBUS available

+ MicroSD slot available for fast backup/restore

+ IP67

With these building blocks, you can tackle use cases from compact machine tools to massive automotive robot cells, as well as outdoor AGVs and high-contamination processes where traditional scanning technology fails.

Product Portfolio

Pro Line: For Tough Environments

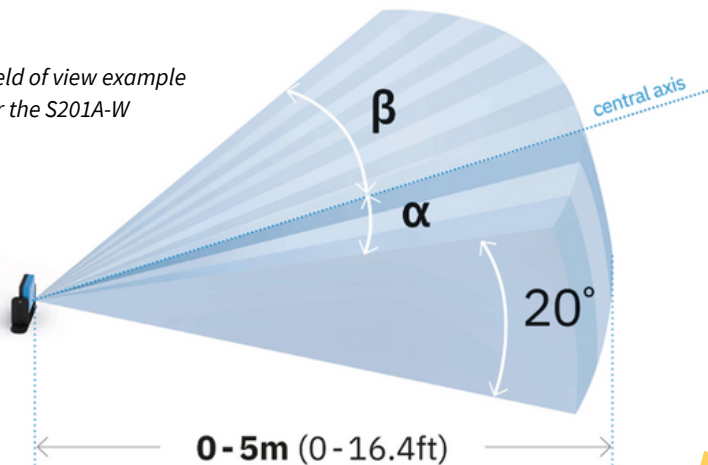


Pro Line sensors offer:

- 5m or 9m range for large cells
- Advanced field-of-view shaping
- Dynamic configurations for changing environments
- Multi-field configurations for complex layouts

If you're designing or upgrading large robot cells, automotive processes, palletizers, depalletizers, AGVs, or outdoor systems, the Pro Line provides absolute flexibility.

Field of view example for the S201A-W



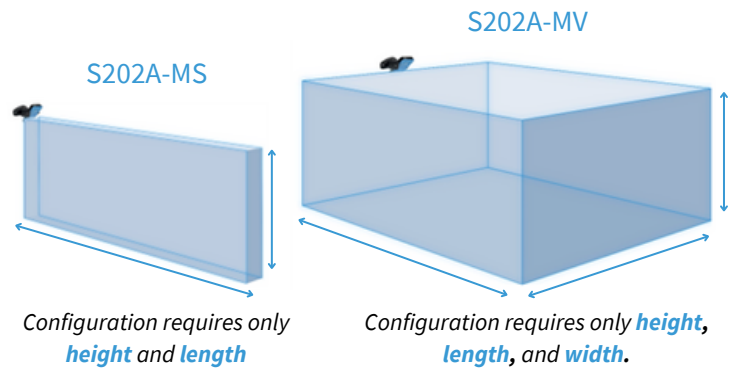
Plug & Safe: Fast Setup, High Reliability



Designed for specific applications, **access detection and restart prevention**. Plug & Safe sensors keep commissioning times low:

- Just 2-3 parameters to configure
- Full SIL2 / PL d coverage
- MS sensor works great as a light curtain alternative for **access detection**
- MV is perfect for **restart prevention** applications

This line is the go-to option when you need reliable presence detection without a long integration cycle.



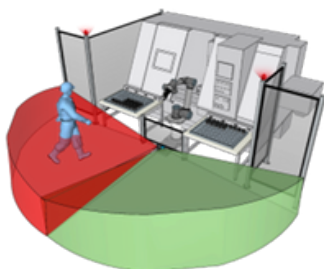
View product catalog here!



Where Inxpect Shines: Real Use Cases from the Field

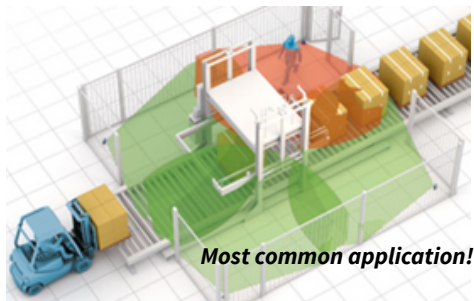
From robot cells and cobots to palletizers, cranes, and wrapping machines, Inxpect's innovative radar technology outshines traditional laser scanners in tough environments. It's also a go-to solution for:

Access Detection



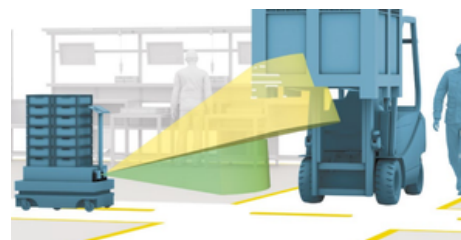
Automatically places machinery in safe mode when someone or something enters the danger zone.

Restart Prevention



Prevents machinery from restarting if movement is detected in a hazardous area.

Anti Collison



Ensures safe guidance, even in extreme conditions.

The Donald Engineering Difference



When we talk about *Partnership Driven Solutions*, Inxpect is the perfect example. Whether a customer needs a simple restart-prevention retrofit or a fully engineered multi-sensor system for a robot cell, radar gives our team the freedom to design safety around the application.

Want to See If Radar Is Right for Your Machine?

Our engineering team has designed Inxpect systems for a variety of applications. If you're evaluating restart prevention or looking for a better safety alternative to optical scanning, radar is absolutely worth a conversation.

Talk to a Donald Engineering Sales Engineer today!



sales@donaldengineering.com



(616) 538-8340

