



PACKAGING MACHINE INDUSTRY

Use cases brochure



INXPECT SAFETY RADAR EQUIPMENT

Industrial safety at its best: Inxpect safety radar protective devices (RPD) detect access or presence of operators in dangerous areas and also have the ability to dynamically set the detection and warning zones.

Safety functions:



ACCESS PROTECTION

If the operator moves closer to the dangerous area, it places machinery in a safe state.



RESTART PREVENTION

It prevents machinery from restarting while operators are in the dangerous area.

RESISTANT TO DISTURBANCES

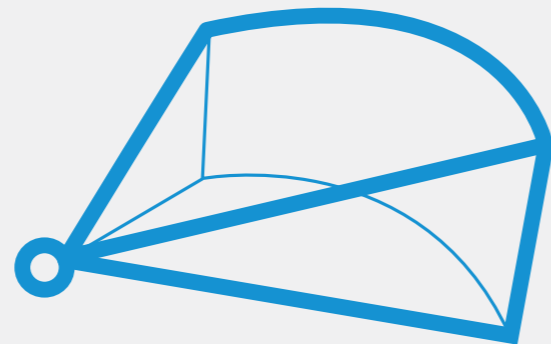
Inxpect Safety Radar Sensors are immune not only to **light, smoke, dust** and **debris**, but also to **rain** (rainfall rate up to 45 mm/h).



Inxpect works where optical sensors stop. High safety without compromising productivity.

3D VOLUMETRIC COVERAGE

The sensor is not affected by the position and the shape of objects, it can therefore protect dangerous areas volumetrically. Operators cannot elude detection by radar no matter how hard they try!



Sensors Range

FOV shapes

Up to **9m**
Range

4
Detection fields

4s
Restart timeout

Up to **4m/s**
Max target speed

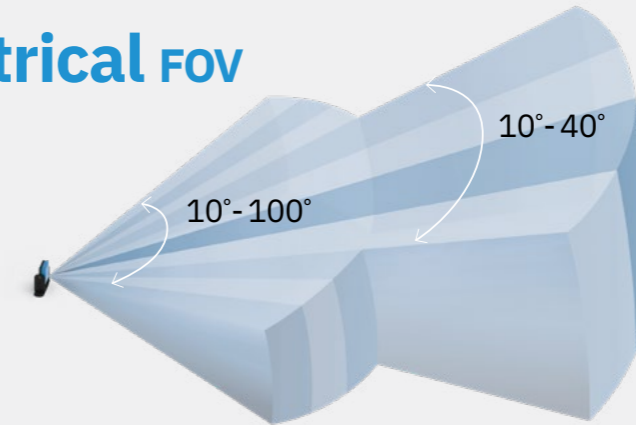
Adjustable angles

RCS
Selectable (for 9m range only)

Symmetrical fov

Available on:

- S201A
- S201A-MLR
- S201A-W
- S203A-W
- S201A-WL
- S203A-WL

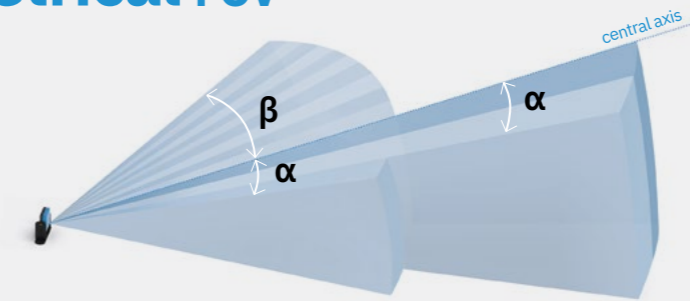


Freely adjustable angles:
Horizontal Plane: 10°-100° [0-5m]
10°-40° [5-9m]

Asymmetrical fov

Available on:

- S201A-W
- S203A-W
- S201A-WL
- S203A-WL



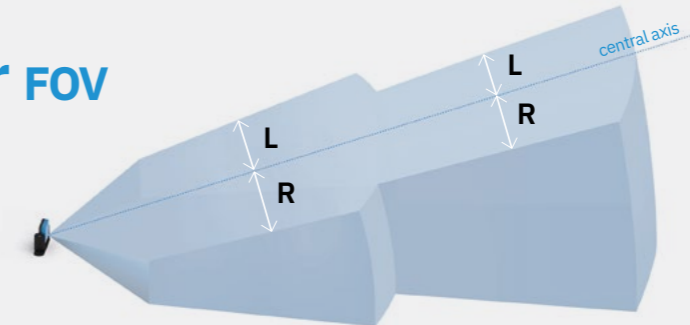
Freely adjustable angles:
Horizontal Plane: 10°-100° [0-5m]
10°-40° [5-9m]

α ≠ β
α: 0°-50° β: 0°-50° [0-5m]
α: 0°-20° β: 0°-20° [5-9m]

Corridor fov

Available on:

- S201A-W
- S203A-W
- S201A-WL
- S203A-WL

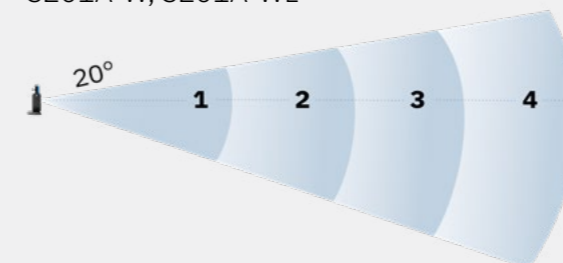


Freely adjustable widths:
Width: 20-800 cm [0-5m]
30-800 cm [5-9m]

L ≠ R
L: 0-400 cm R: 0-400 cm

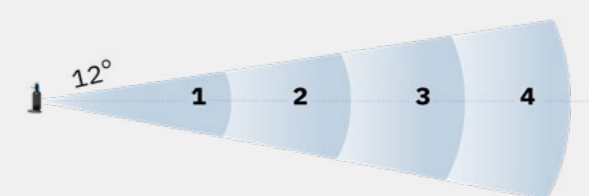
Vertical Plane: 20°

Available on: S201A, S201A-MLR, S201A-W, S201A-WL



Vertical Plane: 12°








Available on: S203A-W, S203A-WL



RADAR SENSORS

Technical specifications











		Vertical angular coverage	FOV	Max target speed	Min settable distance	Settable RCS
4M RANGE	 S101A	Wide 30° Narrow 15°	Symmetrical	1.6 m/s	1 m	-
	 S201A	20°	Symmetrical	2 m/s	0.5 m	-
5M RANGE	 S201A-W	20°	Advanced	2 m/s	0.2 m	-
	 S203A-W	12°	Advanced	2 m/s	0.2 m	-
	 S201A-MLR	20°	Symmetrical	4 m/s	0.5 m	✓
9M RANGE	 S201A-WL	20°	Advanced	4 m/s	0.2 m	✓
	 S203A-WL	12°	Advanced	4 m/s	0.2 m	✓

CONTROL UNITS

Technical specifications



	Fieldbus	Digital I/O	SD backup SD restore	Configuration	Dynamic setting of detection fields	
TYPE A	 C201A-PNS	PROFIsafe MODBUS	✓	-	Ethernet USB	Up to 32 configurations switchable in real time
	 C201A-F	FSoE MODBUS	✓	-	Ethernet USB	Up to 32 configurations switchable in real time
	 C202A	MODBUS	✓	-	Ethernet USB	Up to 8 configurations switchable in real time* <small>*from FW 2.0.0 onwards</small>
	 C203A	-	✓	-	USB	Up to 8 configurations switchable in real time* <small>*from FW 2.0.0 onwards</small>
	 C201B-P	PROFIsafe MODBUS	✓	✓	Ethernet USB	Up to 32 configurations switchable in real time
TYPE B	 C201B-F	FSoE MODBUS	✓	✓	Ethernet USB	Up to 32 configurations switchable in real time
	 C202B	MODBUS	✓	✓	Ethernet USB	Up to 8 configurations switchable in real time
	 C203B	-	✓	✓	USB	Up to 8 configurations switchable in real time

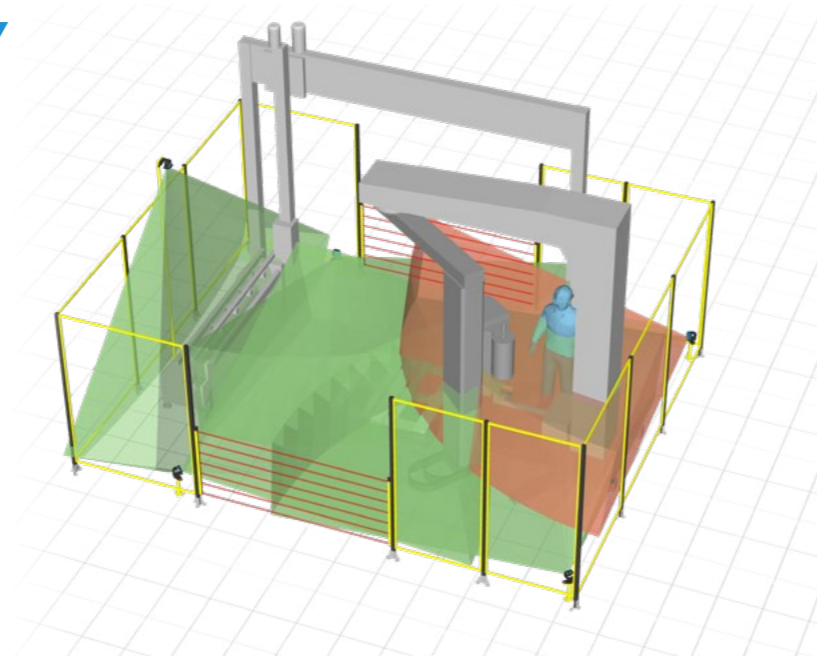
AUTOMATIC WRAPPING MACHINERY

The 3D volumetric coverage of the radar protective device (RPD) and the ability of not being affected by the position and the shape of fixed objects within the area make them the perfect solution for restart prevention.

Unlike optical technologies, the radar works perfectly and it doesn't have to be reconfigured everytime.

Product list:

Quantity	Products
1	C201A-PNS
1	S203A-W
4	S201A-W
5	Cables
1	Bus terminator



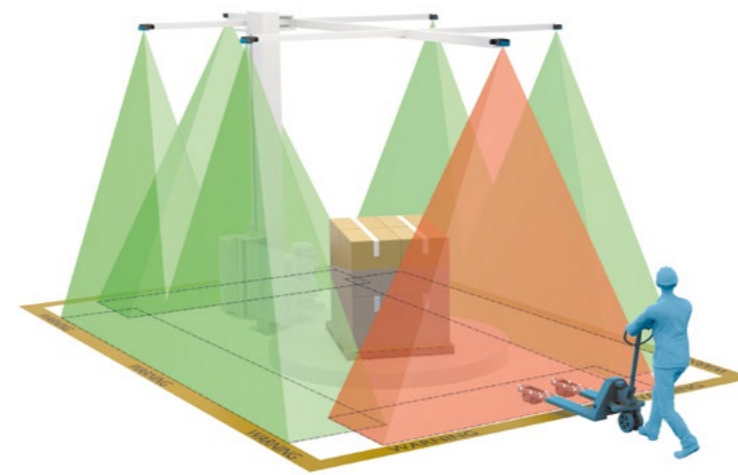
AUTOMATIC TOP-DOWN WRAPPING MACHINERY

Inxpect safety radar equipment can be installed in any position at different heights.

The top-down solution guarantees a reduced footprint. Moreover, the installation of the sensors in a high position allow to remove the risk of collisions and damage typical of installation on the ground.

Product list:

Quantity	Products
1	C201B-F
6	S203A-W
6	Cables
1	Bus terminator



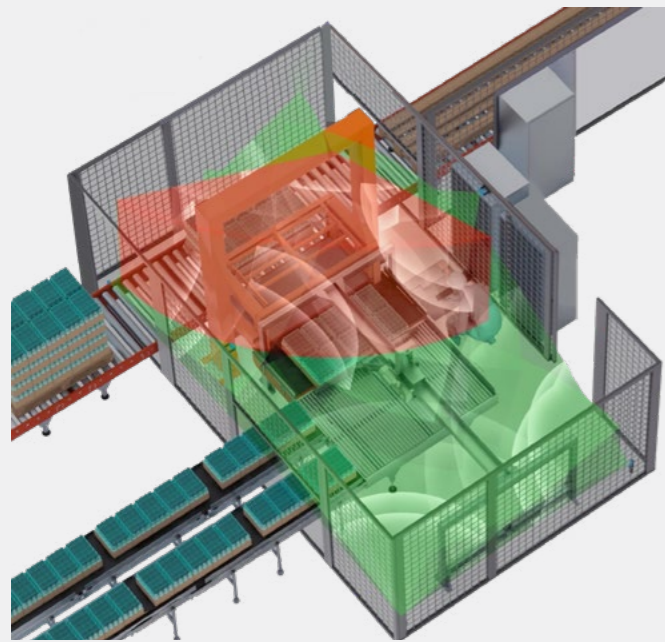
PALLETIZING STATION

Radar is effective in dynamic environments for detecting operators in dangerous areas before an operating cycle begins.

Inxpect Safety Radars Sensors (SRE) detect motion, ignoring static objects, and can accurately identify an operator's movement even if the scene's layout changes during operation, ensuring machinery halts when an operator enters the hazardous zone.

Product list:

Quantity	Products
1	C201A-PNS
2	S203A-W
4	S201A-W
6	Cables
2	Bus terminators



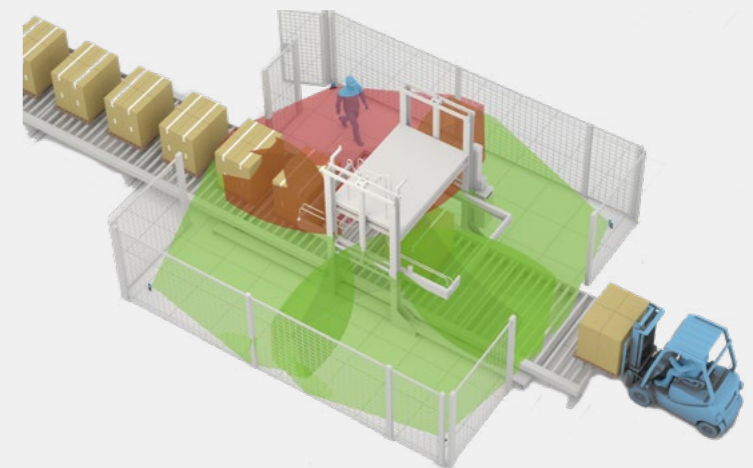
PALLET STRAPPING MACHINE

Inxpect refines the state of art of robotics cell and the world of industrial safety in general.

Inxpect 3D radars ensure maximum safety increasing efficiency and productivity preventing unintentional restart while operator is in the dangerous area.

Product list:

Quantity	Products
1	C203A
4	S201A
4	Cables
1	Bus terminator





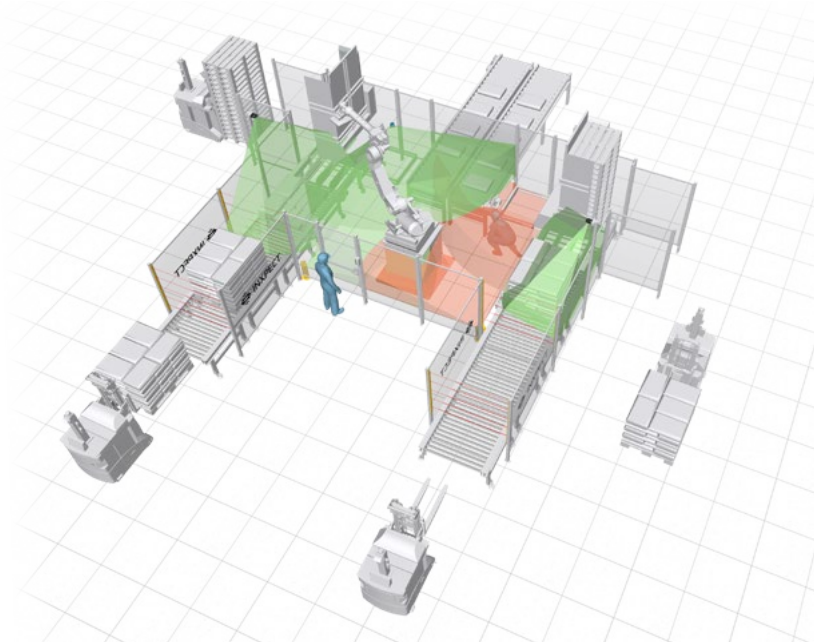
STANDARD ISO 10218-2

Safeguarding Against Unexpected Restart: Ensure visibility from each control station to all operator locations within the safeguarded space(s); if this is impractical, use presence sensing devices to detect anyone within the safeguarded space.

AUTOMATIC PALLETIZING MACHINERY

Inxpect safely monitors access to loading and unloading area. This solution combines optical barriers and radars, redefining the state of the art and reducing residual risk.

Inxpect 3D radars ensure the application safety: detecting if there is a operator in the area and stopping the machine until the area is clear.



Product list:

Quantity	Products
1	C201A-PNS
2	S203A-W
4	S201A-W
6	Cables
2	Bus terminators



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