

## LBK Safety radar system

### Safety at Leuze



The world's first safe 3D radar system, LBK from Inxpect S.p.A., was developed for the monitoring of hazardous areas in harsh industrial environments. It detects the bodies of persons and in doing so monitors the protected area for access and presence. The system consists of sensors and controller, combining up to 6 sensors in one application.

### Areas of application

- Guarding of hazardous areas in harsh environments
- Restart protection
- Monitoring of hidden areas

### Advantages for you at a glance

- Reliable operation also under demanding environmental influences such as dirt, dust, smoke and light
- Flexible adaptation of the safety area to the application by:
  - number and position of the sensors
  - adjustable operating range and radiation angle
- Static objects are permitted in the protected area and do not cause the safety outputs to switch off
- Quick installation through simple system structure
- PROFIsafe controller with detailed output of system status
- Planning, configuration and set up service by our certified experts, on request for your application

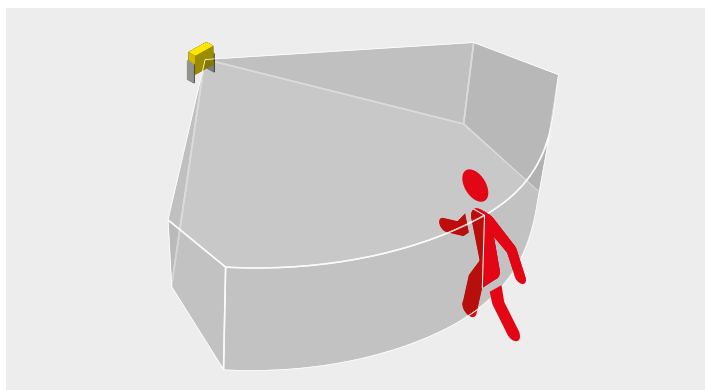
Features	Safe 3D radar system with FMCW modulation for detecting movements	
	Configuration of safety area and warning area	
	Up to 6 sensors can be combined in one application	
	3 configurable groups with 1 to 6 sensors, deactivation of groups. Additional with PROFIsafe controller: 32 switchable configurations.	
Technical data	Safety parameters	Category 2, Performance level PL d, SIL 2
	Operating range	4 m
	Angle of radiation (horizontal / vertical plane)	Wide: 110° / 30° Narrow: 50° / 15°
	Frequency range	24.0 ... 24.5 GHz
	Temperature range	-30 °C ... 60 °C
	Protection class	IP 67
	Interfaces of I/O-controller LBK-C22-LZ	- Safety: relay output, 2-channel - Configuration and diagnosis: USB 2.0, Micro-USB
	Interfaces of PROFIsafe-controller LBK-ISC-Bus-PS	- Safety: PROFIsafe and ODDSs - Configuration and diagnosis: USB 2.0, TCP/IP

## Reliable operation under demanding environmental conditions



The radar principle is resistant to environmental influences such as dirt, dust, sawdust, smoke, oil, humidity and light. This guarantees reliable operation of the machine even under demanding environmental conditions and avoids unnecessary shutdown.

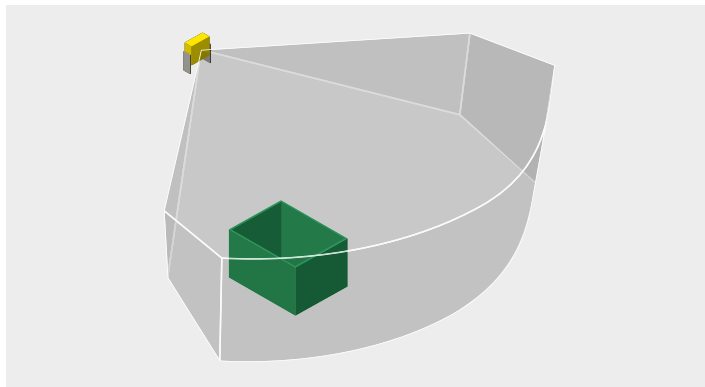
## Function of radar sensors



The LBK safety radar sensors detect movements and are used for guarding hazardous areas. They monitor the protected area for access by and the presence of persons. Even persons who are standing still are not really “static”, and are therefore detected reliably by the sensor.

Thanks to the 3D radar principle, areas on steps or pedestals and behind non-metallic shadowing can also be monitored.

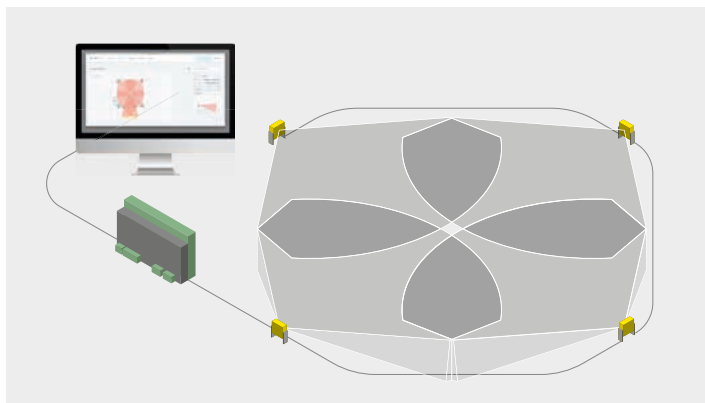
## Static objects permitted in protected area



The radar technology reacts sensitively to movements. However, static objects in the monitored area do not cause the safety signal to switch off.

Static objects such as pallets, material containers and tool trays are therefore allowed to be placed in the protected area.

## Flexible system set-up



To guard large areas, up to 6 sensors can be combined in one application using a control unit. The system parameters are set using the easy-to-use configuration software.

With the PROFIsafe controller LBK-ISC-Bus-PS the system can be easily integrated into a fieldbus. Additionally, detailed system status information is available.